

INCREDIBLE

# The Pandemic, Business Impact, & Economic Recovery

PROCEEDING of The 1st International Congress on Regional Economic  
Development, Information Technology, and Sustainable Business  
2020

Partners :

# Welcome To

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## The 1<sup>st</sup> International Congress on Regional Economic Development, Information Technology, and Sustainable Business

Covid-19 pandemic is becoming a global crisis. It has spread around the world and by this September, it is reported that more than 30 million cases are confirmed globally, with around 950.000 cases of deaths (WHO, 2020). In some countries, the outbreak curve does not seem to be flattened or declined but some are worried about the emergence of the second wave of Coronavirus. This pandemic has a massive impact on economics and human social: the worst economic crisis since the 1930s depression (IMF, 2020) and the worst recession since World War II (World Bank, 2020). Some policies to lockdowns countries such as social distancing and stay-at-home turn out to have a damaging effect on businesses and it forced industries to find more resilient ways in responding to these problematic situations (Verma & Gustafsson, 2020).

COVID-19 has a dramatic impact on several sectors of business including impact on business in general, technology, supply chain management, and service industry (Verma & Gustafsson, 2020). Cluster impact on business is related to the immediate effect of widespread restrictions policies (e.g. lockdowns, shops closure, quarantines) on the regional or national economy. These activities have increased the risks of investments and some companies are facing bankruptcy or reducing the production capacity. On a macro side, the long-term period of restrictions policies due to this pandemic has led to unemployment and fundamental finance problem on either the corporate or country level. The Covid-19 pandemic has an impact also on start-ups and trade. A large number of start-ups have new challenges to sustain their sales as a part of survival strategies. This uncertain situation has also affected some other sectors such as educations, SMEs, travel & tourism, supply chain, and digital business.

The Pandemic has lasted about seven months and it has affected the economies all over the world including the G7 countries (Baldwin et al., 2020). The term 'Black Swan' event returns labelling the Covid-19 pandemic as it has a low probability of occurring but has caused a ripple effect on many aspects including problem in a global and regional economy. World Bank stated that the East Asia and Pacific regional economy has a sharp contraction of economic activity due to domestic and external aspects. Restriction policies, tight global financial conditions, and commodity prices are some instances of the pandemic-caused economic turbulence in East Asia and Pacific, including Indonesia. Indonesia is among the country in ASEAN who faces the most difficult outlooks (Rajah & Grenville, 2020).

In response to providing a venue for scholars, leading academicians, and professionals to effectively respond to those global issues, we organize the 1st INCREDIBLE 2020, the International Congress on Regional Economic Development, Information Technology, and Sustainable Business. This forum is organized by the Faculty of Economics and Business, Universitas Sebelas Maret Indonesia in collaboration with the Regional Development Planning Agency (BAPPEDA) Central Java Indonesia. This conference has received 183 papers submissions that encompass various topics divided into 6 tracks: Economics, Management, Accounting, Social Sciences, Information Technology, and special track Covid-19: Business Impact and Economic Recovery. This conference has a series of events: Pre-Conference Workshop of public speaking and data analysis, Plenary Session inviting speakers from US, UK, Austria, and Malaysia, and also Parallel Session at the end of the congress.

Surakarta, 25 September 2020

A handwritten signature in dark ink, featuring a large, stylized 'C' followed by several vertical and horizontal strokes.

**Dr. Catur Sugiarto**

## Greetings from

# Regional Development Planning, Research and Development Agency of Central Java Province

The covid-19 pandemic has resulted in the global economy including Indonesia experiencing uncertainty and leading to an economic recession. Currently the Indonesian economy is under tremendous pressure. Pandemics have domino effects from health to social and economic problems. Currently, almost all sectors are affected.

The government continues to strive to respond to and face the conditions of Covid-19 with various precautions in the form of policies and stimuli. Various countermeasures have been carried out by the government to reduce the impact of the Covid-19 pandemic in various sectors, including providing fiscal stimulus as a form of intervention in stabilizing the economy, refocusing programs that have been planned to overcome Covid-19 and its effects and the Economic Recovery Program. National (PEN).

The Central Java provincial government supports a national program in handling the impact of the Covid-19 pandemic with a covid-19 financing scenario through refocusing the budget for unexpected expenditure allocations (BTT), delays and capital participation. The budget is focused on handling health, handling the economy and providing social safety nets. Recovery from the impact of the Covid-19 pandemic is a serious concern not only in the health sector, but recovery needs to prioritize sustainable economic development.

The Regional Development Planning, Research dan Development Agency of Central Java Province commits to promoting the knowledge exchange among the development stakeholders, i.e academics, practitioners, decision makers, urban and environment experts, social activists, policy advocates, non-governmental organization on facing the challenges of Covid-19 pandemic, business impact and economic recovery. To ensure such commitment accessible to the public, this year we work with Economic & Business Faculty, Sebelas Maret University in providing a forum where all related stakeholders could gather their ideas.

The 1 st International Congress on Regional Economic Development, Information Technology and Sustainable Business (INCREDIBLE) titled "The Pandemic, business impact, and economic recovery" is an opportunity for stakeholders to share their ideas through knowledge exchange while also strengthening and broadening their networks. This forum hopefully can help us work together in championing the best efforts that we can contribute to overcome the impact of the covid-19 in economics.



We would like to express our gratitude and appreciation to all partners, i.e. the committee, speakers and presenters, and all participants who have been participated in the 1 st International Congress on Regional Economic Development, Information Technology and Sustainable Business (INCREDIBLE) titled “The Pandemic, business impact, and economic recovery”. May the conference be beneficial to all of us.

Semarang, 19 Oktober 2020



Dr. Prasetyo Aribowo, SH, MSoc.Sc  
The Committee of International Conference

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## Speakers

### Keynote Speakers

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*Deputy Governor of Bank Indonesia*  
Suharso Monoarfa  
*Minister of National Development Planning*

### Plenary Speakers

Kuperan Viswanathan  
*Universiti Utara Malaysia*  
Andrea Moro  
*Cranfield University, UK*  
Candra Chahyadi  
*Eastern Illinois University, US*  
Alexander Bauer  
*Wittenborg University of Applied Sciences, Austria*  
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# Pre-conference workshop

October 26th, 2020

Time	Track
08.00- 08.30	Participant registration online
08.30-08.35	Opening by moderator
08.35-08.40	National Anthem of Republic of Indonesia: Indonesia Raya
08.40-09.00	Welcome speech and Opening Remarks
08.40-08.50	<b>Welcome speech</b> Chair of International Affair: Tri Mulyaningsih, PhD
08.50-09.00	<b>Opening Remarks</b> Vice Dean FEB UNS: Dr. Izza Mafruhah
09.00-12.00	<b>Data and Analysis Workshop</b> Ben Roy, PhD (National Central University, Taiwan)
12.00-12.30	Break
12.30-15.30	<b>Public Speaking Workshop</b> Alexander Bauer, PhD (Wittenborg University of Applied Science, Austria)
15.30-	Closing: Vice Dean of FEB UNS Dr. Izza Mafruhah

# International Conference

October 27th, 2020

Time	Track
08.00-08.30	Participant registration online
08.30-08.35	Opening by moderator
08.35-08.40	National Anthem of Republic of Indonesia: Indonesia Raya
08.40-09.10	<b>Opening Speech</b>
08.40-08.50	"Head of Agency for Regional Development Semarang : Dr. Prasetyo Aribowo, S.H., M.Soc.SC"
08.50-09.00	"Rector of Universitas Sebelas Maret : Prof. Dr. Jamal Wiwoho, S.H., M.Hum."
09.00-09.10	Dean of FEB UNS : Prof. Drs. Djoko Suhardjanto, M.Com.(Hons)., Ph.D., Ak
09.10-09.20	The Governor of Central Java: Mr. Ganjar Pranowo
09.20-10.50	<b>Keynote speech</b>
09.20-09.40	Minister of National Development Planning of Republic of Indonesia: Dr. Suharso Monoarfa
09.40-10.00	Deputy Governor of Bank Indonesia: Doni Primanto Joewono
10.00-12.30	<b>Plenary session</b>
10.00-10.20	Dr. Chandra Chahyadi (Eastern Illinois University, USA)
10.20-10.40	Prof. Hasan Fauzi (Sebelas Maret University, Indonesia)
10.40-11.00	Prof. Kuperan Viswanathan (University Utara Malaysia, Malaysia)
11.00-11.20	Dr. Andrea Moro (Cranfield University, UK)
11.20-11.40	Alexander Bauer, PhD (Wittenborg University of Applied Science, Austria)
11.40-12.30	Discussion session
12.30-	Closing
12.30-13.00	Break
13.00-17.30	Parallel Session

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## Financial Stability to Indonesia Economic Performance

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### Abstract

The purpose of this study is to investigate the stability between financial sector and real sector in Indonesia. The study uses quarterly data for period 2005Q1-2019Q3. The financial sector describes by House price index (HP), private debt to GDP, real effective of exchange rate (REER) and policy rate. The real sector describes by growth GDP, consumer price index (CPI) and government debt to GDP. Estimated by Vector Error Correction Model (VECM) and Impulse Responses Function (IRF) analysis, this paper uses growth GDP (output) and CPI (price) as response variable. The finding shows a strong relationship between financial sector to the real sector both in the short run and long run. Transparently and accurately measuring of financial stability help Central Bank to create effective of financial stability system and regulation.

**Keywords:** Financial stability, financial crisis, real sector

### 1. Introduction

Financial stability is an attractive long-term macroeconomy environment for each country. It is a challenging task, not only for monetary policy, but also for other macroeconomic policy. This conditions is combination of economic indicator such as stable exchange rate, low inflation rate, low political risk and safe business condition etc (Gilenko, 2018). Gadanecz & Jayaram (2009) assert that financial stability is encompass of financial and real sector. It is composites nexus of relationship financial, infrastructure, government policy and market framework. Endogenous risk and exogenous risk make financial become instability (Bank Indonesia, 2013). Gadanecz & Jayaram (2009) assert each of country has different characteristic of crisis (banking crises, currency crises, debt crises, equity crises) and has different basket indicator to measure instability (decline in real GDP, soar of inflation, exchange rate fluctuation, decline of export, soar of unemployment rate etc). However, there is many definitions of financial stability and it is not easy to make general definition and measurement (Borio, 2011).

Poor instability condition hits Indonesia in Asian financial crisis (currency crises) 1997/1998. Bank Indonesia and Central Government attempt to develop general measure to financial instability that indicated financial fragility or stress. Thereafter, Bank Indonesia uses early warning system to monitor financial instability that is recommended by IMF (Bank Indonesia, 2013). Global financial Crises 2008 impact for Indonesia economy but this negative shock not as bad as Asian Crises. It is because Bank Indonesia build executing financial stability system and regulation (macroprudential policy) in post-currency crisis. Although Central bank policy aims to improve financial stability, it is involves trades off between financial stability and economic efficiency (Angkinand, 2009). Even so, effective monetary and macroprudential policy has important role for safeguarding financial stability (Kim, 2016).

Transparency and accurately measuring of financial stability help Bank Indonesia that creates effective financial stability system and regulation. Gadanecz & Jayaram (2009) summarize measures of financial stability which is frequently used in literature. They focus in six main sectors. First, real sector is represented by GDP growth, deficit fiscal, government debt and inflation. Second, corporate sector riskiness is represented by total debt to

equity, earning to interest, net foreign exchange exposure to equity and default ratio. Third, household sectors health is represented by disposable income, debt, asset and consumption. Forth, external condition is represented by real exchange rate, foreign exchange reserve, capital flows and currency mismatches. Fifth, financial sector is represented by real interest rate, monetary aggregate, non-performing loan, capital adequacy, liquidity ratio and credit bank rating. Lastly, financial market is represented by equity indices, corporate bond, government bond, volatility and house price.

More recent study, Nasir et al. (2015) measure financial stability using seven financial aggregate indicators. There is bond market yield, domestic lending to GDP, stock market return, inflation rate, spot exchange rate, deficit to GDP and growth GDP. Kim (2016) uses micro-data to measure financial stability. There is size of household, disposable income, saving and net household asset end of year. Klingelhöfer & Sun (2018) measure financial stability uses macroeconomic and financial stability indicator. They use real GDP index and consumer price as macroeconomic policy. Then, house price and total bank loan as financial condition.

This paper examines financial stability that evidence in Indonesia's economic performance Bank Indonesia always uses financial stability as one of key objective of monetary policy. We adopt Gadanez & Jayaram (2009) method that used six main sector to measures financial stability. We use GDP growth, government debt to GDP and consumer price index representative as real economy. Then, private non-financial sector debt to GDP represent as corporate and household sector; real effective exchange rate as external sector; policy rate as financial sector and house price index as financial market. We composite corporate, household, external, financial and market representative as financial sector. Then, we follow Nasir et al. (2015) that examined relationship between financial sector to the real sector.

This paper proceeds as follows. Section 2 applied data and methodology. Section 3 discussed empirical result and recommendation to the policy. Section 4 conclusion and policy recommendation.

## 2. Introduction

This study uses quarterly data for the period 2005Q1-2019Q3. The data are obtained from Census of Economic Information Center (CEIC) data and Bank International Settlement (BIS). The adopted variables include GDP growth, government debt to GDP, consumer price index, private to non-financial debt to GDP, real effective exchange rate, policy rate and house price index. Variables definition and characteristic:

1. Growth GDP calculated by a percentage growth GDP quarterly adjust inflation. It represents real economic growth (CEIC data, 2020). The positive value indicated of the strength macroeconomic. But excessively high value might show unsustainable growth. Negative would indicate slowdown.
2. Government debt to GDP is a percentage total credit to the government sector to GDP. This sector includes Central Government, Central Bank and State-Owned Enterprise Debt (BIS, 2020). It represents of real economic vulnerability indicator. Higher value government debt to GDP indicate unsustainable government indebtedness and vulnerability of the sovereign debtor.
3. Consumer Price Index means rate of increase of various price indices. It is a proxy for inflation rate. Higher level of CPI indicates structural weakness in the economy. Lower level CPI can be interpreted as stability of commodity prices in real market. But it might signals of decreasing purchasing power parity (Bank Indonesia, 2019).
4. Private to non-financial debt to GDP is a percentage non-financial corporation (both private-owned and public-owned) household and non-profit institutions serving households debt to GDP (BIS, 2019). It is combination of corporate and household sector. High level of this ratio is signals difficulties in meeting debt obligation.
5. Real effective exchange rate is the basket trading partner of country again real value of domestic currencies (Darvas, 2012). REER is wider variety propose than real exchange rate. There are assessing the



equilibrium value of a currency, measuring the change in price or cost competitiveness, and showing the trade flows (incentives to reallocation production between the tradable and the non-tradable sectors). Over or undervalue of currencies can trigger a crisis (vast outflow or inflow of capital and export competitiveness).

6. Policy rate set up by central bank as monetary authority. It is use for stimulus the monetary variables such as inflation rate and money demand. The policy rate above threshold indicates as monetary tightening that build up from financial vulnerabilities. Then, policy rate below threshold indicates monetary easing to attract more saving deposit from society.
7. House price index is real resident property prices (base year 2010). The bubble house price means the booms of equity withdrawal consumptions. The downturn of the house price trigger potential losses in financial system.

This study adopt model from (Nasir et al., 2015) which use two equations. In equations (1) growth GDP appears as endogenous variable and equations (2) consumer price index appears as endogenous variable. VEC model specification in this study:

$$Y_t(GGDP) = U_{t-1} + \beta Y_{t-j}(GGDP) + \beta X_{t-j}(\ln CPI) + \beta X_{t-j}(GTGDP) + \beta X_{t-j}(\ln HP) + \beta X_{t-j}(PTGDP) + \beta X_{t-j}(\ln REER) + \beta X_{t-j}(R) + e_t \dots \dots \dots (1)$$

$$Y_t(\ln CPI) = U_{t-1} + \beta Y_{t-j}(\ln CPI) + \beta X_{t-j}(GGDP) + \beta X_{t-j}(GTGDP) + \beta X_{t-j}(\ln HP) + \beta X_{t-j}(PTGDP) + \beta X_{t-j}(\ln REER) + \beta X_{t-j}(R) + e_t \dots \dots \dots (2)$$

Notes:

- GGDP = Growth Gross Domestic Product (%)
- lnCPI = Natural logarithm to Consumer Price Index (base year 2010).
- GTGDP = Ratio Government Debt to GDP (%)
- lnHP = Natural logarithm to house price index (base year 2010)
- PTGDP = Ratio Private and household Debt to GDP (%)
- REER = Natural logarithm to real effective exchange rate
- R = Policy rate (%)
- J = Time lag
- Y and X = (nx1) vector of time series endogenous variables
- $\beta$  = coefficient matrix
- $e_t$  = white noise or unobservable vector process
- $U_{t-1}$  = error correction term

Using two equation above, we examine relationship between financial variable and real variable. Growth GDP in equation (1) and Ln CPI in equation (2) serve as response variables. Error correction term  $U_{t-1}$  means a one period lag residual term (short-term shock) that is a speed of adjustment back to the cointegration of long-term equilibrium. Vector autoregression (VAR) used to analyse the dynamic impact of random disturbance in the system. Then, Impulse response function (IRF) is used to trace out the behaviour of the variable in response to the various shocks in the estimation model (Enders, 2003).

VAR imposes both dependent and independent variable in the system symmetrically (endogenous).

Endogenous variables depend on its own lag and both contemporaneous value and up to k lags in others variable (Enders, 2003). We use lag length criterion to test number of lag appropriate in the system. To establish model VAR/VECM, it is important to test whether variables have stationary properties in order to avoid concerns about spurious regression. The data that show a constant pattern over time and have no unit roots be consider as stationary variable.

### 3. Estimation of Analysis

#### 3.1 Unit Root Test

This paper used Philips-Peron root test used to estimation stationary of each variables. Ariefianto (2012) explained that Philips-Perron (PP) is more advance than Augmented Dickey Fuller (ADF). PP used non-parametric approach to correct t-account while ADF used lag-term to clear up autocorrelation in the model. The result for unit root test presented in table 1 appendix. Variable GTGDP, ln HP, Ln CP are stationary 1% in the level while all variables stationary 1% in the first difference. The stationary variables in the used in this study.

#### 3.2 Determine Lag Optimal

After estimate VAR, we determine lag optimal using lag length criterion. In the VAR/VECM lag optimal used for dependent and independent variable. Determine lag optimal is useful to clear up autocorrelation problem in time series data. Those results are same both GGDP and CPI as response variable. It is presented in table II appendix. SC and HQ generate one as an optimal lag while LR and FPE generate three as an optimal lag. AIC generates fourth as an optimal lag. This paper use SC and HQ as the least lag optimum.

#### 3.3 Cointegration Test

Johansen Cointegration test used to estimate consistency in the long run. It used trace statistic to determine rank cointegration in the system. In this test we can generate more than one cointegration relationship. The results for Cointegration test both GGDP and CPI as response variable are present to table III appendix. Trace test indicate 6 cointegration at 5% significant level and Max eigen value test indicate 3 cointegration at 5% significant level. So, Null hypothesis that no-cointegration relationship was rejected.

#### 3.4 Result for VEC equation

##### 3.4.1 GGDP as Responses variable

That information past value affects the current value described in the coefficient of the error correction term. Estimation result of VECM that GGDP as response variable shows in table IV. This result indicates error correction term ( $U_{t-1}$ ) is negative and significant at 10% level. This result shows that error correction term will restore in the long run. From six independent variables in the model (as representative financial variable) just Private to non-financial debt to GDP (PTGDP) that significant in the short run at 5% level. PTGDP in the short run has negative impact to (GGDP) as representative real variable.

Figure 1 describes a one standard deviation shock in each of the six financial variables to GDP growth (as representative of real variable). A one standard deviation shock to the CPI generate to decrease economic growth (GGDP) after five quarter. It is show that CPI has not impact in real economy. A one standard deviation shock to the government bond to the GDP (GTGDP) improve economic growth. It is because Increasing government bond improve government spending to build public goods and infrastructure. It can increase real economy. A one standard deviation shock to house price (lnHP) increase economic growth. But this effect in quarter 3 until six and this impact not significantly.

A one standard deviation shock to private loan to GDP (PTGDP) decrease economic growth. This effect persistently impacts after four quarter. It indicates that improving of loan to private and household increases great risk and leverage ratio. It has impact to real economy. A one standard deviation shock to REER increasing

economic growth. Appreciation exchange rate indicate massive capital inflow and increase export competitiveness that impact to the real economy. A standard deviation shock to policy rate (R) decrease economic growth. It indicates that increasing policy rate will decrease liquidity in the financial market. And the end, it has impact to real economy.

#### 3.4.2 CPI as Responses variable

Table V shows estimation result of VECM. In the case of GGDP as response variable, error correction term ( $U_{t-1}$ ) is negative and significant at 5% level. It indicates that the error correction term will restore in the long run. In the short run, Growth GDP (GGDP), government bond (GTGDP) and private and household bond (PTGDP) has positive and significant impact to the CPI but this value of coefficient is very small. Policy rate has negative and significant impact to real economy but this value quite small.

Figure 2 describes a one standard deviation shock in each of the six financial variables to CPI (as representative of real variable). A one standard deviation growth GDP decreases CPI, and this persists for several quarter. Improvement of output capacity and investment might reduce inflation. A one standard deviation shock to the government bond to the GDP (GTGDP) improve CPI. Increasing of sovereign debt potentially affect pricing rate in the country. A one standard deviation shock house price (lnCPI) increase CPI and it persistent after four quarter. Exactly, housing price associated with consumption and it also appreciation in the asset market. It potentially affects the pricing rate.

A one standard deviation shock private loan to GDP (PTGDP) increase CPI. But this effect decreases after five quarter. Household and private loan associated with consumption and it also associated with pricing rate. A one standard deviation shock REER increase CPI. REER appreciation affect in consumption cost and purchasing power. A one standard deviation shock effect to policy rate (R) is neutral to CPI. Policy rate can approach liquidity money in the market, but it not significantly affects the pricing rate.

### 3.5 Long run estimation

#### 3.5.1 GGDP as Responses variable

Table VI estimate long run estimation using standard OLS regression. In the long run Consumer Price Index (as representative inflation) and policy rate has negative and significant correlation to the growth GDP (output). Increasing on inflation decreases purchasing power of society. In the long run it can decrease output. The increasing of policy rate can reduce liquidity money in the market. Both increasing inflation and policy rate indicate financial vulnerability. Those have risk in the real economy.

In the long run real REER appreciation in the domestic price has positive impact in the growth GDP. Positive REER indicates in the positive financial stability and has positive impact in real economic.

#### 3.5.2 CPI as Responses variable

Table VII shows growth GDP, housing price and policy rate have negative and significant affect to the CPI. Increasing output to the economy increase economic stability that indicate by stabilize of pricing rate. Increasing in house price indicate increasing price in property market. It is signals of instability and downturn in purchasing power. Then, it decreases consumption and pricing rate. Increasing in policy rate will reduce liquidity of money and decreasing of pricing rate.

Government bond (GTGDP), Private loan (PTGDP) and REER have positive and significant affect to the CPI. Increasing Government bond and Private loan will increase liquidity money in the market. Increasing of aggregate consumption (spending to government, private, and household) will increase in pricing rate. Appreciation of exchange rate indicates massive capital inflow and export competitiveness. This increase the domestic price.

#### 4. Conclusion and Policy Recommendation

Financial stability is challenging task in most country, especially in Indonesia. There is many definitions of financial stability and it is not easy to make general definition and measurement. This paper examines financial stability that evidence in Indonesia's adopt Gadanez & Jayaram (2009) method that used six main sector to measures financial stability. We examined relationship between financial sector to the real sector. Estimated by VECM and IRF, This paper use data for the period 2005Q1-2019Q3. OLS regression use to estimation relationship between financial sector to the real sector in the long run.

The result show that Growth GDP has positive impact to pricing rate (CPI) in the short run, but in the long run has negative impact. The shock of GGDP also has negative impact to pricing rate. Government loan (GTGDP) has positive impact in pricing rate (CPI) in the short run and long run. The shock of this variable has positive impact to output (GGDP) and CPI. House price index (HP) has negative impact to pricing rate in the long run but this shock has positive impact to CPI. The shock of HP has positive impact to CPI because of increasing the pricing rate in real economy in the short run. in the long run, Increasing of HP can decrease CPI because of downtown purchasing power society. In the short run, Private to non-financial debt (PTGDP) to GDP has negative impact to output. But it has positive impact in CPI in the long short run and long run. One standard deviation shock in PTGDP has negative impact to output and positive impact to price.

One standard deviation shock in REER has positive impact in output and negative impact in price. In the long run REER has positive impact both output and price. One standard deviation shock in policy rate has negative impact in output. In the long run, REER has negative impact both output and price. One standard deviation shock in policy rate has negative impact to output. In the long run policy rate has negative both output and price. One standard deviation shock in price has negative effect to output after four quarter. In the long run, this variable has negative impact to output.

Transparency and accurately measuring of financial stability help Bank Indonesia that creates effective financial stability system and regulation. (Gadanez & Jayaram, 2009) assert that accurately measuring of financial stability is benefit to (a) better monitor of degree financial stability (b) anticipate source of financial stress and crises. (c) ease government to overcome instability problems. Bank Indonesia using early warning system to overcome instability. Effective monetary and macroprudential policy has important role for safeguarding financial stability.

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## Appendix

Table 1. Philips-Perron Unit Toots Test

Variable	PP Test statistics	1% level	5% level	<i>P-value</i>
<b><i>At level I(0)</i></b>				
GGDP	-2.704824	-3.552666	-2.914517	0.0796
GTGDP	-4.773981	-3.552666	-2.914517	0.0002**
lnHP	-4.771310	-3.552666	-2.914517	0.0002**
PTGDP	-0.165083	-3.552666	-2.914517	0.9364
lnCPI	-3.702097	-3.552666	-2.914517	0.0066**
lnREER	-4.391258	-3.552666	-2.914517	0.0008
R	-1.619858	-3.552666	-2.914517	0.4659
<b><i>At level I(1)</i></b>				
GGDP	-7.125475	-3.555023	-2.915522	0.0000**
GTGDP	-3.931159	-3.555023	-2.915522	0.0034**
lnHP	-8.198433	-3.555023	-2.915522	0.0000**
PTGDP	-6.772722	-3.555023	-2.915522	0.0000**
lnCPI	-9.648517	-3.555023	-2.915522	0.0000**
lnREER	-8.323655	-3.555023	-2.915522	0.0000**
R	-6.501728	-3.555023	-2.915522	0.0000**

\*\* critical value of 1% significant, \* critical value 5% significant

Table II. Philips-Perron Test

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-102.7158	NA	1.48e-07	4.140220	4.400447	4.240291
1	375.2111	811.5741	1.41e-14	-12.04570	- 9.963886 *	- 11.24514 *
2	441.8346	95.53549	7.96e-15	-12.71074	-8.807330	-11.20968
3	502.8855	71.4180 6*	6.56e- 15*	-13.16549	-7.440491	-10.96393
4	554.8177	47.03296	1.04e-14	- 13.27614 *	-5.729551	-10.37409

\*Indicate lag order selected by the criterion. LR: sequential modified LR test statistic (each test at 5% level), FPE: Final prediction error, AIC: Akaike information criterion, SC: Schwars information criterion, HQ: Hannan-Quinn information Criterion.

Tabel III. Johansen Co-Integration Test

Hypothesized no. of CE(s)	Eigen Value	Trace Statistic	0,05 critical Value	Prob
None*	0.732576	266.9332	150.5585	0.0000
At most 1*	0.628447	194.3926	117.7082	0.0000
At most 2*	0.583028	139.9391	88.80380	0.0000
At most 3*	0.401549	91.82862	63.87610	0.0000
At most 4*	0.382029	63.59102	42.91525	0.0001
At most 5*	0.374304	37.11876	25.87211	0.0013
At most 6	0.186163	11.32975	12.51798	0.0783
Unrestricted co-integration rank test (Maximum eigen value)				
None*				
At most 1*	0.732576	72.54062	50.59985	0.0001
At most 2*	0.628447	54.45347	44.49720	0.0031
At most 3	0.583028	48.11051	38.33101	0.0028
At most 4*	0.401549	28.23760	32.11832	0.1386
At most 5*	0.382029	26.47227	25.82321	0.0410
At most 6	0.374304	25.78901	19.38704	0.0051

Tabel IV. Vector Error Correction Model to Equation (1)

Variable	Coefficient	t-statistic	Prob
CointEq1	-0.222426	[-3.07064]	(0.07244)
D(GGDP(-1))	0.029160	[ 0.21969]	(0.13274)
D(LNCPI(-1))	3.231176	[ 0.46094]	(7.00995)
D(GTGDP(-1))	0.350578	[ 2.74020]	(0.12794)
D(LNHP(-1))	1.048785	[ 0.18282]	(5.73664)
D(PTGDP(-1))	-0.043251	[-0.63709]	(0.06789)
D(LNREER(-1))	0.845952	[ 0.57118]	(1.48105)
D(R(-1))	-0.102852	[-0.96803]	(0.10625)
C	0.062753	[ 0.60285]	(0.10409)

\*\*\* critical value of 1% significant, \*\* critical value 5% significant, \* critical value 10% significant



Tabel V. Vector Error Correction Model to Equation (2)

Variable	Coefficient	t-statistic	Prob
CointEq1	-0.095734	[-2.95329]	(0.03242)
D(LNCPI(-1))	0.167705	[ 0.91682]	(0.18292)
D(GGDP(-1))	0.000445	[ 0.12856]	(0.00346)
D(GTGDP(-1))	0.008011	[ 2.39948]	(0.00334)
D(LNHP(-1))	0.124346	[ 0.83066]	(0.14969)
D(PTGDP(-1))	0.003506	[ 1.97917]	(0.00177)
D(LNREER(-1))	0.043870	[ 1.13514]	(0.03865)
D(R(-1))	-0.000766	[-0.27626]	(0.00277)
C	0.012636	[ 4.65199]	(0.00272)

\*\*\* critical value of 1% significant, \*\* critical value 5% significant, \* critical value 10% significant

Tabel VI. Long run estimation to Equation(1)

Variable	Coefficient	Standard error	t-statistic	Prob
C	4.261716	21.28642	0.200208	0.8421
GTGDP	-0.008779	0.030235	-0.290362	0.7727
LNHP	-0.516594	3.800005	-0.135946	0.8924
PTGDP	0.039952	0.050966	0.783904	0.4368
LNCPI	-3.374175	1.728571	-1.952003	0.0565*
LNREER	4.271703	1.454905	2.936070	0.0050***
R	-0.121151	0.065308	-1.855067	0.0695*

\*\*\* critical value of 1% significant, \*\* critical value 5% significant, \* critical value 10% significant

Tabel VII. Long run estimation to Equation(2)

Variable	Coefficient	Standard error	t-statistic	Prob
C	9.087451	1.081103	8.405722	0.0000***
GGDP	-0.020986	0.010751	-1.952003	0.0565*
GTGDP	0.008184	0.002087	3.921655	0.0003***
LNHP	-1.501492	0.211552	-7.097492	0.0000***

PTGDP	0.027138	0.001275	21.28774	0.0000***
LNREER	0.381165	0.111935	3.405248	0.0013***
R	-0.017298	0.004730	-3.657398	0.0006***

\*\*\* critical value of 1% significant, \*\* critical value 5% significant, \* critical value 10% significant

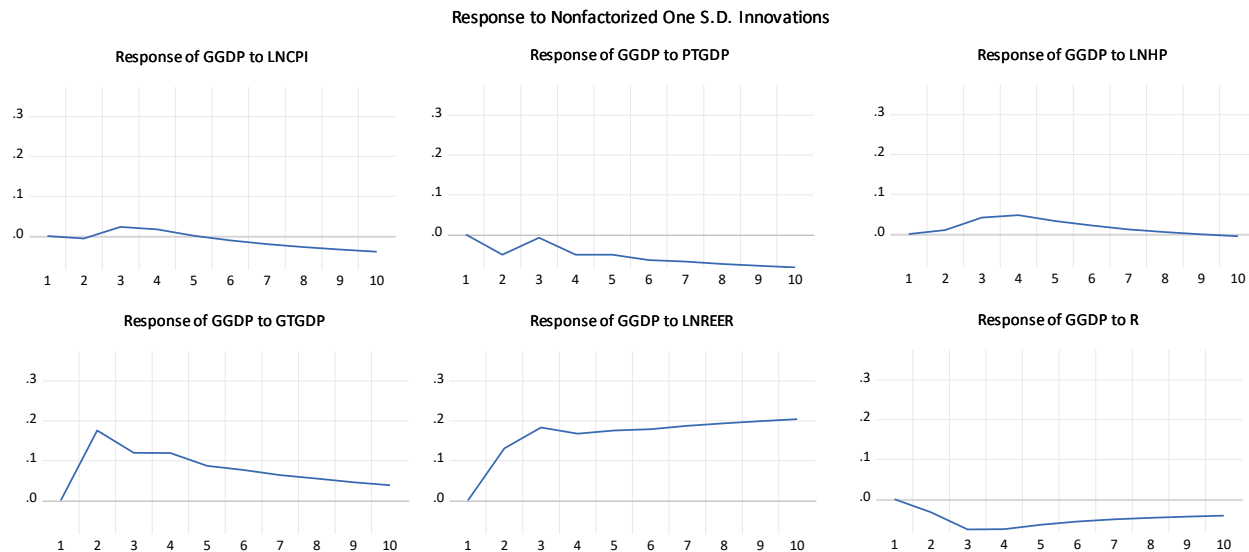


Figure 1. A one standard deviation shock in each of the six financial variables to GDP growth (as representative of real variable)

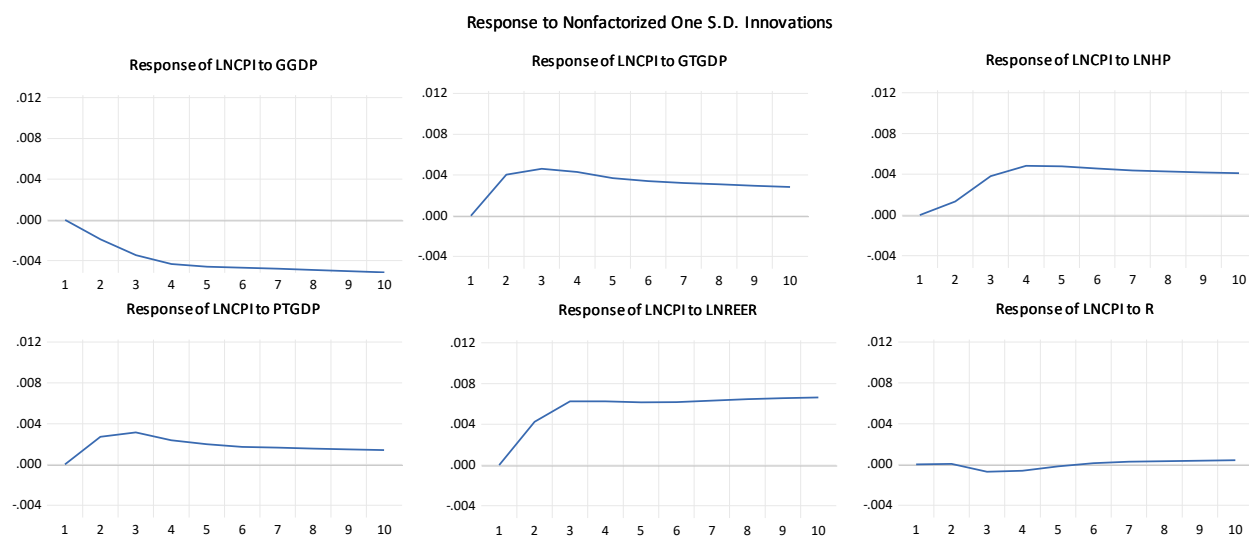


Figure 2. A one standard deviation shock in each of the six financial variables to CPI (as representative of real variable)

## Beating Benchmarks by Bundling Bouncy Baskets. An Abstract

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JEL Codes: G11 Investment Decisions; D81 Criteria for Decision-Making under Risk and Uncertainty; C63

Computational Techniques

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We consider in detail an investment strategy, titled “The Bounce Basket”, designed for someone to express a bullish view on the market by allowing them to take long positions on securities that would benefit the most from a rally in the markets. This investment concept combines macroeconomic views with characteristics of individual securities to beat the market returns. The central idea of this theme is to identify securities from a regional perspective that are heavily shorted and yet are fundamentally sound with at least a minimum buy rating from a consensus of stock analysts covering the securities. We discuss the components of creating such strategy including the mechanics of constructing the portfolio. Using simulations, in which securities lending data is modeled as geometric brownian motions, we provide a few flavors of creating a ranking of securities to identify the ones that are heavily shorted. An investment strategy of this kind will be ideal in market scenarios when a downturn happens due to unexpected extreme events and the markets are anticipated to bounce back, especially as observed during the Coronavirus pandemic in 2019-2020.

**Keywords:** Behavior; Bias; Trading Strategy; Investment Hypothesis; Bull; Market Rebound; Risk Management; Volatility

## Investigation into Millennials' Perceived Environmental Knowledge towards Intention to Use Environmental-Friendly Drinking Straws

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### Abstract

This research extends the Theory of Planned Behavior (TPB) in explaining the Millennials' (born between 1980 and 2000) intention towards using environmental-friendly drinking straws. In order to meet the objectives of the study, this research was conducted to 252 millennial respondents in the city of Jakarta and its surrounding vicinities. The findings from this study shows that environmental attitude, personal norms and social norms do influence the behavioral intention. Meanwhile, the findings indicate that there is not enough evidence to support the hypothesis that assert perceived environmental knowledge affects the usage intention. Our findings suggest a more nuanced view of the Millennials' pro-environmental behavior than is depicted in popular accounts.

**Keywords:** theory of planned behavior, environmental-friendly straws, perceived environmental knowledge, environmental attitude, personal norms, social norms, usage intention, pro-environmental behavior

### 1. Introduction

Plastic pollution, one of the causes of environmental degradation, has rapidly risen on the global environmental policy agenda (Rana, 2020). China and Indonesia are the top two contributors to marine plastic pollution, totaling up to 16% globally (Jambeck et al., 2015). A significant environmental concern for everyone, single-use plastic drinking straw consumption in the U.S. reached a frightening 500 million per day (U.S. National Park Service, 2019). Meanwhile, in Indonesia, the number is equally alarming at more than 93 million plastic straws every day (Intan, 2018).

In Indonesia, there have been numerous resolutions passed by the local authorities to encourage businesses to reduce plastic straws. Many campaigns on using fewer plastics had led the government to consider the imposition of a nationwide tax on plastic bags starting from 2018. The levy imposed had garnered a successful deed; however, counteraction has been put up by consumers and the local plastic industry (Black, 2016).

A review of the extant literature showed that no study had been conducted in testing the antecedents of usage intention based on the combination of adapting the model of Theory of Reasoned Action (TRA) and other selected variables used in the current study in the Indonesian context. Some studies have examined perceived environmental knowledge indirectly influencing behavioral intention (Yadav & Pathak, 2016). There has been an insufficient examination of this factor because knowledge should be considered essential in environmental behavior studies. Recent evidence has suggested that environmental knowledge plays an essential role in

predicting attitude and behavioral intention (Zheng et al., 2018). This research focused on identifying the determinants of usage intention of reusable drinking straws in young Indonesian consumers to close the research gap.

Generation Y was chosen for this study because it may influence the brand preferences of their peers and families (Lee, 2011). Concerning pro-environmental behavior, members of the Millennial generation (those who were born between 1980 and 2000) have been marked as “environmental-conscious” (Bernardes et al., 2018; Lu et al., 2013). Equally important, a past study emphasizes the significance of personal norms to understand people’s pro-environmental behavior (Thøgersen, 2006). Boston Consulting Group (BCG) asserted that 48% of generation Y purchase eco-friendly products to protect the environment (Kibbe, 2014). According to Parung’s (2019) study, Indonesian millennials are “ecologically conscious,” which reflects how they “value recycled products.” Nevertheless, there is some contention regarding these views. Previous studies claim that the Millennials appear to have an imbalance between attitude and behavior towards sustainability (Bernardes et al., 2018; Grønhøj & Thøgersen, 2009). Others even suggest that Millennials are environmentally unfriendly (Head, 2015; Lu et al., 2013; Naderi, 2018).

These conflicting preconceptions then raise two questions. First, what is the dominant antecedent that prompts the millennials to utilize reusable drinking straws? Second, how do governments and non-governmental organizations use this precursor to increase usage intention? This study aims to understand the influence of perceived environmental knowledge, environmental attitude, social norms, and personal norms of millennial consumers to the usage intention of environmental-friendly straws and the consequent usage behavior. This research is expected to help the environmental-friendly straw producer and seller formulate a new marketing strategy to enhance sales. Besides, the government could use this study to estimate new policies to eliminate the one-use plastic usage.

## 2. Literature Review

To analyze the factor influencing the reusable drinking straw behavior, the writers utilize the Theory of Planned Behavior (TPB) model. TPB is the theory that describes the relationship within various variables and the behavioral intention toward the environmental-friendly products (Maichum et al., 2016; Mufidah et al., 2018; Pangaribuan et al., 2020). TPB is often used in many studies on consumer behavior and is the expansion of TRA (Theory of Reasoned Action), the model developed by Fishbein and Ajzen (1975), which defines the links between attitudes, belief, intention, norms, and behavior of individuals. According to a previous study, TRA and TPB models are often used to explain the relations between attitude, belief, purchase intention, social influence, and consumer behavior toward a particular object in marketing (Setyawan et al., 2018). In TPB, the model is determined by the behavioral intention predicted by attitude, subjective norm, and perceived behavioral control. The behavioral intention then turns into the influencer of the behavior (Zhang et al., 2018).

### 2.1. Perceived Environmental Knowledge to Behavioral Intention

This research includes the extension variable for TPB, Perceived Environmental Knowledge, which is defined as the individual’s perceived knowledge/understanding about environmental and green issues and is generally related to the consumers’ pro-environmental behavior (Ahmad & Thyagaraj, 2015). Pagiaslis and Krontalis (2014) define environmental knowledge as an individual’s knowledge about the surroundings as an ecologically interconnected system and tries to get involved in environmental sustainability’s development. Based on Chen & Tung’s (2014) study, environmental knowledge significantly impacts the willingness to purchase green products between young consumers in developing countries. According to Ko and Jin (2017), the higher one’s knowledge about his/her surroundings, the higher purchase intention toward green products will be. However, a study by Indriani et al. (2019) indicated different findings of the consumers’ perceived environmental knowledge on green purchase intention. Based on these shreds of evidence, the following hypothesis is advanced:

Hypothesis 1: The millennials' perceived environmental knowledge is positively related to intention to use environmental-friendly drinking straws.

## 2.2. Environmental Attitude to Behavioral Intention

The research on green attitudes uses various terms interchangeably, e.g., environmental attitudes, ecological attitudes, environmental-friendly attitudes, and environmentally sustainable attitudes" (Coskun 2018). Environmental attitude is defined as the beliefs, affect, and intentions about environmental activities (McIntyre & Milfont, 2016). One example of the activities can be seen from people who consciously try to save energy and refuse to purchase products with additional packaging, which makes more waste to the environment (Esmailpour & Rajabi, 2016). Consumers with positive attitudes toward green products have a stronger intention to purchase green products (Mostafa, 2007). Some studies have verified that the environmental attitude can significantly increase green purchase intention (Yazdanpanah & Forouzani, 2015). Based on the discussion, the following hypothesis can be formulated:

Hypothesis 2: The millennials' environmental attitude is positively related to intention to use environmental-friendly drinking straws.

## 2.3. Personal Norms to Behavioral Intention

According to Schwartz (1973), personal norms are "attached to the self-concept and experienced as feelings of a moral obligation to perform a certain behavior." Human beings' responsibility results in meaningfulness to someone else's lives, and to be aware of is described as expectations one holds for him/herself, which is known as personal norms (Schwartz, 1975). In a behavioral context, personal norms with compliance show the association with feelings of pride, while personal norms with non-compliance are associated with feeling guilt (Onwezen et al., 2013). Zhang et al. (2014) revealed that personal norms were far more influential factors in predicting pro-environmental behaviors than any other antecedents (e.g., place attachment and personal values), reflecting that individuals with a strong sense of obligation tend to engage in environmentally responsible behaviors. Previous studies have found that the influence of personal norms on behavior is mediated by behavioral intentions (Onwezen et al., 2013). Thus, we can hypothesize the following:

Hypothesis 3: The millennial consumer's personal norms are positively related to intention to use environmental-friendly drinking straws.

## 2.4. Social Norms to Behavioral Intention

Unlike personal norms, social norms are from an individual's belief based on approval or disapproval of his/her significant people (Ajzen, 1991; McKenzie-Mohr & Schultz, 2014). Social norms, comprising subjective norms from significant people's expectations and descriptive norms, refer to real activities significant people undertake, predictive of behavioral intention (Shi et al., 2017). Ham et al. (2017) note that social norms are significant predictors of green food purchase intention. Social norms are also positively related to the intention to buy environmentally friendly products (Waskito et al., 2019). These analyses lead to the following hypothesis:

Hypothesis 4: The millennial consumer's social norms are positively related to intention to use environmental-friendly drinking straws.

## 2.5. Behavioral Intention to Pro-Environmental Behavior

The relationships between intention and green behavior have been studied in the past. According to Dolnicar et al. (2017), "actual behavior—which is what ultimately matters—is rarely measured." Previous studies found that purchasing organic goods is a precursor to organic goods purchase behavior (Kumar et al., 2017; Nguyen et al., 2016). Consumers with a stronger intention to buy green products are more likely to purchase such products (Mostafa, 2007). Kanchanapibul et al. (2014) argued that the young generation's intention in green purchasing had been positively associated with their actual purchase. Based on the above discussion, the following hypothesis is posited:

Hypothesis 5: Intention to use environmental-friendly drinking straws is positively related to pro-environmental behavior.

### 3. Methods

In this research, the researchers use the non-probability technique to select a group of respondents from a larger population. For multiple regression analyses, the desired level is between 15 to 20 observations for each predictor variable (Hair et al., 2006). Since this study employs five predictors (independent variables), the minimum sample's desired level should be 100. After removing incomplete responses and extreme outliers, the researchers managed to get 252 valid ones of the 300 questionnaires distributed, resulting in a response rate of 84%.

In the first section of the questionnaire, the researchers asked about the background of the respondents. The items include gender, age, residency, and current occupation. The questionnaire items in the second section were built based on previous literature. Perceived environmental knowledge was measured based on the "perceived knowledge of environmental issues scale" (Ellen et al., 1997). This measurement was utilized among other scales since they are "outdated or unreliable or both" (Mostafa, 2007). The environmental attitude scale was empirically developed by Ertz et al. (2017) using a seven-item scale adopted from Sparks and Shepherd (1992). The personal norm scale was measured using a seven-item scale developed by Doran and Larsen (2015). Both social norm and intention scales were empirically measured by Chan and Lau (2002) using a "two standard 7-point (-3 to 3) bipolar items" adopted from Fishbein and Ajzen (1975). Pro-environmental behavior was measured using a five-point scale from 0 (never) to 5 (always) adopted from Fishbein and Ajzen (2010).

In the second section, the researchers set the question in several statements from each variable. The following variable is perceived environmental knowledge, environmental attitude, personal norms, social norms, intention to use environmental-friendly drinking straws, and the pro-environmental behavior. The questionnaire will use a six-scale score for the respondent's answers: strongly disagree, disagree, agree, agree, and strongly agree. The variable operationalization can be seen in Table I

Table I Variable Operationalization

Variable	Definition	Items	Measurement
Perceived Environmental Knowledge (PEK)	Individual's knowledge/understanding about environmental and green issues in this world and generally related with purchase behavior of the consumer.	I am aware that I am buying a product that is safe for the environment (PEK1) I understand about being environmentally friendly compared to other people (PEK2) I understand a lot about environmental problems (PEK3) I understand how to choose products that can reduce waste (PEK4)	6 Likert Scale – Level of Agreement
Environmental	Set of	For me, using environmental-friendly	6 Likert Scale –



Attitude (EA)	individual beliefs, desires, feelings, and behaviors related to the environment	straws is... ...enjoyable (EA1) ...beneficial (EA2) ...very wise (EA3) ...a very pleasant thing (EA4)	Level of Agreement
Personal Norms (PN)	Individual self-concept or experience which have feelings as a moral obligation to do something/ to perform certain behavior	I have a moral obligation... (SN1) I feel that I really have... (SN2) I feel it is important for everyone... (SN3) Because of my own principles, I feel obliged... (SN4) ...to use environmental-friendly drinking straws	6 Likert Scale – Level of Agreement
Social Norms (SN)	Individual's belief that based on approves or disapproves of significant social surroundings like family and friends to a particular behavior	By using environmental-friendly drinking straws, people around me ... ...will agree with my actions (SN1) ...will appreciate my actions (SN2) ...will be interested in my actions (SN3) ...will support my actions (SN4)	6 Likert Scale – Level of Agreement
Intention to Use (IU)	Individual immediate antecedent / willingness to perform certain behavior. In	I would consider switching... (SN1) I will try... (SN2) In the future, I will... (SN3) For personal use, I am willing to use... (SN4) ...to use environmental-friendly drinking straws	6 Likert Scale – Level of Agreement

	this study is purchasing behavior		
Pro-Environmental Behavior (PEB)	Individual behaviors that related in contribution to environmental sustainability	<p>I refuse to use private transportation, I use public transportation instead (PEB1)</p> <p>I refuse to use plastic bags when shopping at a supermarket, I use environmental-friendly bags instead (PEB2)</p> <p>I refuse to use disposable glasses when hanging out at the café, I use a tumbler instead (PEB3)</p> <p>I refuse to use plastic straws while drinking in a restaurant, I use environmental-friendly straws instead (PEB4)</p>	6 Likert Scale – Level of Agreement

## 4. Results

### 4.1. Validity and Reliability Tests

The researchers assessed the validity and reliability through a pre-test based on inquiries from 39 respondents. The twenty-four questionnaire items are derived from the six variables (four independent variables, one mediator, and one dependent variable), and all of them are valid.

Table II Validity and Reliability Tests

Items	Alpha	KMO	Correlation
Perceived Environmental Knowledge	0.749		
PEK1		0.645	0.601
PEK2			0.626
PEK3			0.583
PEK4			0.808
Environmental Attitude	0.763		
EA1		0.694	0.841
EA2			0.682

EA3			0.634
EA4			0.596
Personal Norms	0.876		
PN1			0.786
PN2		0.787	0.776
PN3			0.791
PN4			0.798
Social Norms	0.915		
SN1			0.857
SN2		0.851	0.832
SN3			0.835
SN4			0.884
Usage Intention	0.901		
IU1			0.792
IU2		0.828	0.850
IU3			0.814
IU4			0.870
Pro-Environmental Behavior	0.856		
PEB1			0.762
PEB2		0.756	0.738
PEB3			0.719
PEB4			0.820

#### 4.2 Participants

The gender distributions are being dominated by females (67.5%) and 19-22-year-olds (65.9%). Most of the respondents are college students (67.5%) and live in Jakarta (48%).

#### 4.3 Multicollinearity Test

The multicollinearity test will check whether or not there is a high correlation between the independent variables. The dependent variable's relationship will be biased if there is a strong correlation between the independent variables. The rule of thumb for the multicollinearity test considers both tolerance and VIF as if the tolerance above 0.1 and VIF is below 10. Furthermore, the result in table III shows that the data is free of multicollinearity.

Table III Multicollinearity Test Result

Model		Collinearity Statistics	
		Tolerance	VIF
<b>1</b>	(Constant)		
	X1_PEK	0.806	1.240
	X2_EA	0.400	2.501
	X3_PN	0.319	3.133
	X4_SN	0.440	2.274
<b>a. Dependent Variable: Usage Intention</b>			
Model		Collinearity Statistics	
		Tolerance	VIF
<b>2</b>	(Constant)		
	Y_PI	1.000	1.000
<b>a. Dependent Variable: Pro-Environmental Behavior</b>			

#### 4.4. Regression Test

This research is using two types of regression tests. Model 1 employs multiple linear regression and for model 2, simple linear regression. Table IV shows a strong correlation in overall multiple linear relationships, shown from its R-value at 0.798.

The R-square value indicates that 63.7% of the dependent variable (intention to use environmental-friendly drinking straw) can be described through the independent variables (perceived environmental knowledge, environmental attitude, personal norms, and social norms). Other variables influence the rest of 36.3%.

Table IV Model Summary of Multiple Linear Regression Model 1

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Error
1	0.798	0.637	0.631	0.51897
<b>a. Predictors: (Constant), Social Norms, Perceived Environmental Knowledge, Environmental Attitude, Personal Norms</b>				

Model 2 shows a strong correlation in overall multiple linear relationships shown from its R-value at 0.397 (see Table V). The R-square value indicates that 15.8% of the dependent variable (pro-environmental behavior) can be described through the independent variable (intention to use environmental-friendly drinking straw). Other variables influence the rest of 84.2%.

Table V Model Summary of Simple Linear Regression Model 2

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Error
2	0.397	0.158	0.154	0.88321
<b>a. Predictors: (Constant), Usage Intention</b>				

#### 4.5. t-Test

Table VI shows that the t-Test result for each independent variable is used to measure the correlation significance with the dependent variable. The result indicates that perceived environmental knowledge has an insignificant correlation with usage intention with a value above 0.05. For model 2, shown in table VII the usage intention has a significant impact on pro-environmental behavior.

Table VI Coefficients of Multiple Linear Regression - Model 1

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.311	0.242		5.422	0.000
	Perceived Environmental Knowledge	-0.048	0.046	-0.045	-1.059	0.291
	Environmental Attitude	0.132	0.059	0.136	2.246	0.026
	Personal Norms	0.442	0.061	0.489	7.214	0.000
	Social Norms	0.246	0.053	0.267	4.627	0.000

Table VII Coefficients of Simple Linear Regression - Model 2

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2	(Constant)	1.957	0.348		5.624	0.000
	Usage Intention	0.446	0.065	0.397	6.837	0.000

#### 4.6. Further Discussion

As the environmental knowledge variable is insignificant, Table VIII compares each demographic using an independent sample t-test. The result shows that male respondents have more understanding of environmental knowledge. The reason is that females are more likely to have a higher expectation of sustainable development, which makes them less challenging to get influenced by others to do more sustainable development rather than learning deeply about environmental knowledge (Wallhagen et al., 2018). The age comparison shows that respondents of "non 19-22 year olds" are perceived to have a higher understanding of environmental knowledge. For the residences and occupation, non-student respondents from Jakarta are perceived to have a higher understanding of environmental knowledge.

Table VIII Independent Sample t-Test of Respondent's Data toward Perceived Environmental Knowledge (PEK)

Variable	Group	N	Mean	Std. Dev.	Sig. (Levene's Test)	Sig. (2-tailed)
Gender	Female	170	4.57	0.79	0.67	0.01
	Male	77	4.84	0.80		
Age	19-22	166	4.64	0.77	0.38	0.87
	Non 19-22	86	4.66	0.85		
Residence	Jakarta	121	4.58	0.87	0.04	0.22
	Non-Jakarta	131	4.70	0.73		
Occupation	Student	170	4.66	0.76	0.24	0.62
	Non-Student	82	4.61	0.87		

#### 5. Conclusion

This research aims to analyze the effect of perceived environmental knowledge on using environmentally-friendly drinking straws. Based on the result, the researchers found a non-significant relationship between perceived environmental knowledge and intention to use environmental-friendly drinking straws. The second until the fourth objective is to measure the effect of environmental Attitude, personal norms, and social norms toward intention to use environmental-friendly drinking straws. Based on the result, the researchers found a significant relationship between them. The last objective is the influence of intention to use environmental-

friendly drinking straw on pro-environmental behavior. The test result says that there is a significant relationship between intention to use towards environmental-friendly drinking straw and pro-environmental behavior.

The regression model shows consistent with the Theory of Planned Behavior (TPB), which is the environmental attitude, personal & social norms having significant positive predictors to the usage intention. Meanwhile, the relationship between perceived environmental knowledge as the variable extension and usage intention contradicts previous studies (Yadav & Pathak, 2016; Kumar & Anand, 2013). One possible explanation for this is that the knowledge of environmental issues measured uses perceived environmental knowledge instead of factual environmental knowledge (Rolston & DiBenedetto, 1994). Consumers may know the trendy subjects, i.e., “zero waste” or “recyclable”, but do not understand the full spectrum, and their “recycling habits have not kept pace” (Winterich et al., 2019).

The marketers are suggested to create informational campaigns (on environmental-friendly drinking straws and the benefits of using them to protect the environment) on social media or personalized content for different consumers. Another point of view is for the marketers to build up green generation communities for consumers who already purchase or have been using environmentally-friendly straws to influence others to purchase the product and join the community for a future sustainable environment.

The scope of this sample only limits the young consumers of Jakarta. The first recommendation is to take different samples from other areas, e.g., Bali, as the plastic usage regulation has been imposed since 2018. The second recommendation for future research is to study other reusable containers.

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## COVID-19 Impact On Indonesian Development Planning. An Extended Abstract

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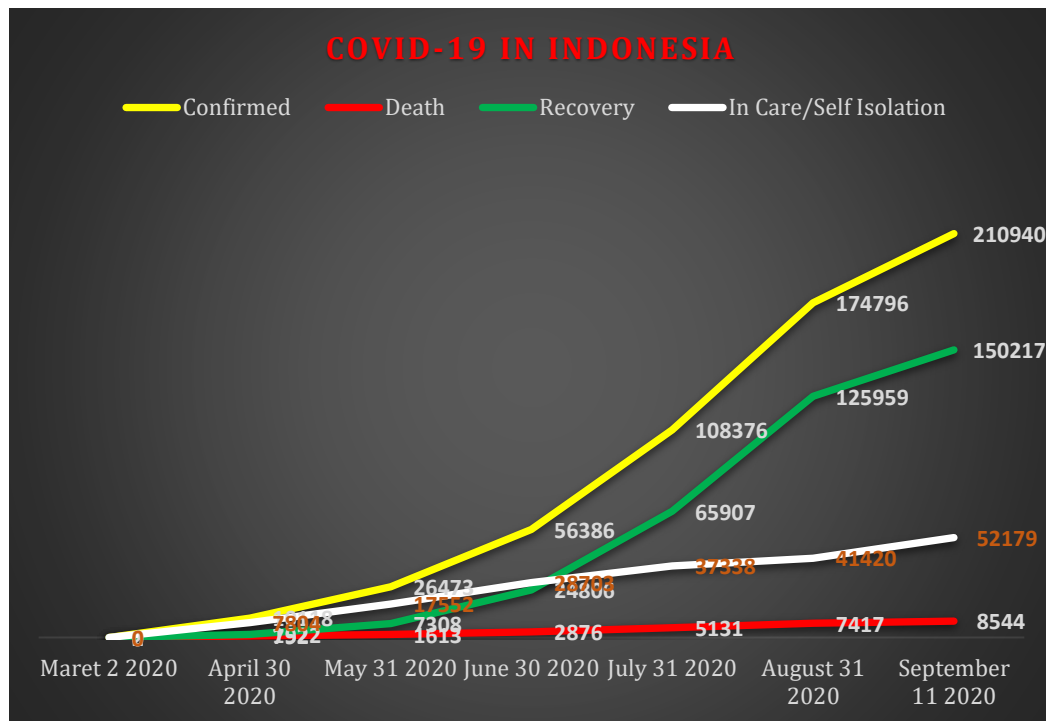
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### 1. Introduction

At the end of 2019 the world was shocked by the emergence of a new type of virus called coronavirus-19 or Covid-19 which originated in Wuhan, China. This new type of virus turns out to have a very fast spread in almost all countries in the world. According to official data from the Government of Indonesia, the number of people confirmed by the corona virus in Indonesia as of November 11 2020 is 210,940 people with a death rate of 4.1% or 8,544 residents ([covid19.go.id](https://covid19.go.id)).

Graph I. Development of Covid-19 cases in Indonesia



Source: [covid-19.go.id](https://covid-19.go.id)

The phenomenon of the emergence of the Covid-19 virus, which eventually became an epidemic and hit almost all countries in the world, was never thought of by everyone, including the government, educational institutions and international organizations so that the target of development planning and economic growth in 2020 and the year thereafter is still predicted with the assumption that it is not outbreaks and economic turmoil.

As a result of the Covid-19 outbreak, it caused an economic crisis in all countries, including Indonesia. The

economic impact that hit Indonesia due to the Covid-19 pandemic has forced Indonesia to postpone long-term strategic plans to accelerate the handling of Covid-19.

World economic institutions such as the IMF and World Bank predict that in 2020 the possibility of an economic slowdown, recession, and even an economic depression. Therefore, many countries have reviewed the State Budget and Revenue (APBN), including Indonesia, to anticipate the economic impact resulting from the Covid-19 pandemic and the acceleration of Covid-19 handling.

## **2. The Indonesian Government Policy to Response The Covid-19 Pandemic**

Lockdown policies or regional restrictions are implemented in various countries in the world to break the chain of spreading the Covid-19 virus. In Indonesia, social distancing and physical distancing policies are implemented to limit human movement and interaction so that the Covid-19 virus chain can be cut immediately. However, the habits and nature of humans as social beings who have a need to interact with other humans directly become obstacles to the implementation of the regional quarantine policy.

The Indonesian government issued a policy through the Ministry of Health to make a Large-Scale Social Restriction (PSBB) policy according to the regional severity level of each region (Province or District City).

The regulation regarding PSBB is regulated in Presidential Decree (Kepres) Number 11 of 2020 concerning Stipulation of Public Health Emergencies and Government Regulation Number 21 of 2020 concerning Large-Scale Social Restrictions.

Basically, in accordance with the Presidential Decree, the government limits some activities outside the home that have the potential to accelerate the spread of the Covid-19 virus. Some activities outside the home that are technically restricted by the government are regulated in the Minister of Health Regulation (PMK) Number 9 of 2020 concerning PSBB Guidelines as an Acceleration of Handling Covid-19. Some of these activities include closing schools and offices, limiting social cultural activities, limiting religious activities and restricting other activities.

However, Large-Scale Social Restrictions (PSBB) are not the same as regional quarantine. One thing that distinguishes it is that the PSBB allows the community to carry out activities outside the home with several restrictions, in contrast to the area quarantine which completely covers a certain area. So that with the PSBB policy issued by the government in response to the spread of the Covid-19 virus, the economy can still run and the spread of the virus can be suppressed.

## **3. The Impact of Covid-19 Pandemic on Indonesian Economic**

The Covid-19 outbreak has had a huge impact on the Indonesian economy. With the implementation of the PSBB policy, practically the real sector, tourism, service sector, offices and business activities and buying and selling in the market will slow down. The impact of this phenomenon is that state income has decreased, while on the one hand, state expenditure has actually increased to accelerate the handling of Covid-19. So the budget deficit becomes a frightening thing.

Facing the danger of a budget deficit, the government issued Regulation in lieu of Law (Perpu) No.1 of 2020 concerning State Financial Policy and Financial System Stability for Handling the Covid-19 Pandemic. In this Law, it is possible that the budget deficit will exceed 3% of the Gross Domestic Product (GDP) during the handling of Covid-19.

With the Covid-19 outbreak in Indonesia, it is estimated that the economy will experience a deeper slowdown in line with the decline in aggregate demand. Economic growth is estimated to fall at the level of 2.1% (at best) to -3.5% (Muhyidin, 2020). The Central Statistics Agency (BPS) officially announced that Indonesia's economic growth in the first quarter was 2.97% and the second quarter was -5.32%.

Graph II. Indonesia's Economic Growth (GDP)



Source: Bps.go.id

#### 4. Large Scale Social Restriction (PSBB) Policy and New Normal

The economic impact on the Indonesian people due to the Covid-19 pandemic has been felt since government policies related to the enactment of Large-Scale Social Restrictions (PSBB) since April 10, 2020 in Jakarta and followed by several regions with high levels of the spread of the virus. Therefore, in order to save the country's economy, the government began to formulate a "new normal" policy so that people can continue to do activities outside the home by paying attention to Health protocol.

"New normal" began to be introduced by the government through the Head of the National Planning Agency (Bappenas) together with the Minister of Foreign Affairs and the Expert Team for the Task Force for Handling Covid-19 on May 28, 2020. The Head of Bappenas in the press conference explained that the requirements for "new normal" to be successful are: 1) Decision making must be based on science and data, 2) PSBB adjustment must be gradual and pay attention to zones, 3) Health protocols must be strictly implemented, 4) Implementation of PSBB adjustments must be continuously evaluated so that the community is disciplined in implementing health protocols

#### 5. The Indonesian Growth Planning

The COvid-19 pandemic has made all countries revise their development planning. Short-term priorities are focused on dealing with the impact of the Covid-19 pandemic. The growth target is adjusted to the current conditions. Including capital-intensive development programs such as infrastructure, changes were made and implemented after this pandemic ended.

With the Covid-19 pandemic not being taken into account since the beginning of the preparation of the central and regional government development planning programs, the central and local governments must rearrange their development plans. This adjustment is vital for economic recovery because it will serve as a guide in making policies.

The last Indonesian planning guideline used was the 2020-2024 National Medium-Term Development Plan (RPJMN) which was drawn up before the Covid-19 pandemic as outlined in Presidential Regulation Number 18 of 2020.

In the 2020-2024 RPJMN, Indonesia is targeted to become a middle-income country and leave the middle-income country trap (the middle-income trap). Another big target is the development of the Eastern Indonesian Region which has enormous natural potential.

The vision of the 2020-2024 RPJMN is "The realization of an advanced Indonesia that is sovereign, independent and with a personality based on mutual cooperation." Then the vision is outlined in seven development agendas: 1) Strengthening economic resilience for quality and equitable growth, 2) Developing regions to reduce inequality and ensure equity, 3) Increasing quality and competitive human resources, 4) Mental revolution and development culture, 5) Strengthening infrastructure to support economic development and basic services, 6) Building the environment, increasing disaster resilience and climate change, 7) Strengthening political, legal, defense and security stability and public service transformation.

In the 2020-2024 RPJMN there are several priority projects that are expected to have high leverage. These priority projects include: eight leading tourist destinations: Lake Toba, Borobudur, Lombok, Labuan Bajo, Bromo-Tengger-Semeru, Wakatobi, Likupang, and revitalization of Bali.

The next priority project is to accelerate the reduction of maternal mortality and stunting, as well as to accelerate the development of underdeveloped areas of indigenous Papuan territories. Priority infrastructure projects include the Trans Sumatra-Lampung Toll Road, high-speed rail in Java, the Makassar-Pare Pare railway, and the main port networks in Belawan and the Kijing Port. Priority projects in the field of education are vocational training for Industry 4.0 and the development of a science techno park.

The integrated strategy used by the government to accelerate regional development in the 2020-2024 RPJMN consists of three types of policies. First, the acceleration of regional development uses two corridors. Growth corridors that emphasize the development of growth centers as the basis for regional superiority that can increase regional economic growth and corridors of equality that encourage the development of buffer areas around growth centers and fulfill the basic rights of the people in accordance with the principles of sustainable development goals (SDGs).

Second, to accelerate the development of underdeveloped areas, the development of policies and implementation of affirmative development, priority location sub-districts for border areas, and small outermost and farthest islands are carried out. The third is integrated village development as a pillar of accelerating the development of 62 underdeveloped areas

## 6. Closing

The 2020-2024 RPJMN must undergo various shifts due to the current government's focus on accelerating the handling of Covid-19 so that the economy and social conditions can recover as soon as before the pandemic. The post-Covid-19 phase is an important phase in improving the national economy.

Indonesia must have a scenario if a vaccine from this virus is not found immediately. Indonesia must be able to move the economy and form a community mindset so that it continues to follow the Health protocol with discipline.

In the medium term development plan before the question of vaccines, the government has several alternative strategies. First, overhauling all targets and programs that have been set with the assumption that the Covid-19 pandemic will have a long-term impact on the economic and health crisis. In this strategy, the government will review all programs and targets as well as the timing of their implementation in the 2020-2024 RPJMN and add a Health cultural revolution as part of the Health protocol.

Second, stick to the original 2020-2024 RPJMN plan with a few program adjustments in order to accommodate the "new normal" life. Third, moderate program and target adjustments were made based on the latest data on socio-economic conditions as a result of the Covid-19 pandemic. Programs that can support the acceleration of handling the Covid-19 pandemic and can still be adjusted in the post-Covid-19 period can still be maintained.

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# **Economic predictors for managing the energy consumption system in the sub-Saharan Africa region: Modeling of possible long-term sustainable solutions respectful the environment**

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## **Abstract**

Carbon dioxide is one of the main greenhouse gases and thus contributes greatly to global warming. The fight against this global warming is the main ecological issue of our time. Consequently the inevitable increase day by day in energy utilization and the economic development around the planet route multiple implications to the environment. According to the international energy agency, CO<sub>2</sub> emissions linked to the production and combustion of all energies increased by 1.7% to one "historic" level of 33.1 gig tons. This present study involves four important aspects related to the short and long-run patterns of carbon dioxide emissions. In the vanguard of co-integration tests and Granger causality, the outcomes give a significant relationship between economic variables and CO<sub>2</sub> emissions. It indicates also the existence of unidirectional causality from population, energy dirt index to carbonic dioxide but not vice-versa. One of the objectives of this work redefines the current mode of energy consumption by relying on a new model: sustainable, environmentally conscious, economical, and avoiding the depletion of natural resources. To this end, a great need to change the current energy system used in each sub-Saharan African countries can play an important role in controlling and reducing environmental impact.

**Keywords:** CO<sub>2</sub> emissions, environment management, clean energy, sustainability, global warming.

## **1. Introduction**

Energy consumption is a global issue that affects the extent of climate change and environmental pollution. World energy consumption contributes to pollution, environmental deterioration, and global greenhouse emissions. Increases in energy consumption are driven by population growth and economic development that tend to increase energy use per capita. Not only does polluting energy accelerate dangerous climate change around the world, but it also causes considerable harm to people, communities, workers and the environment. This energy forms the core of a failing energy system that, in addition to being unfair and unsustainable, destroys lives and the planet. The problem of the accumulation of greenhouse gases in the atmosphere led to changes in the climate, the consequences of which could be catastrophic, within a few decades. Emissions of these gases due to human activities increase their concentration in the atmosphere and the main contribution to the increase of the greenhouse effect comes from the carbon dioxide (CO<sub>2</sub>) emissions related to the production and consumption activities of energy. The increase in CO<sub>2</sub> emissions is a serious threat to the environment of the world (Zakarya et al. 2015) and SSA's minimal contribution to CO<sub>2</sub> emissions is linked to the weakness of its industrialization, but its energy needs are growing very rapidly.

Sub-Saharan Africa suffers from some serious environmental problems, including deforestation (Sharma and World Bank 1994), soil erosion, desertification, wetland degradation, and insect infestation. Efforts to deal with these problems, however, have been handicapped by a real failure to understand their nature and possible remedies. The region now finds itself afflicted the consequences of inappropriate policies, as well as by almost



endemic political instability, an inability to manage its economies effectively, and an increasingly hostile external economic milieu. As simple survival has become more problematic, it has become increasingly difficult to avoid overexploiting natural resources and degrading the environment.

Three factors strongly increase the threat of environmental degradation in sub-Saharan Africa: its poverty, demographics, its heavy burden of foreign debt, and the absence of democracy (Bradshaw and Di Minin 2019). More often than not, many international reports claim that poverty contributes to environmental degradation. Due to a lack of sufficient resources with population growth and improper knowledge poverty-stricken people tend to overuse every resource available to them when their survival is at stake. In terms of access to energy, Sub-Saharan Africa is the world's "poorest in electricity" region (n.d.). More than 620 million people (two-thirds of the population) do not have access to electricity and are thus denied the positive development effects of access to energy (WEO, 2016). Energy access remains an overarching challenge in Sub-Saharan Africa where the electricity access rate is 35 % overall and only 19% in rural areas (WEIM 2019-Africa). Nearly 730 million people in Africa still have to use inefficient and harmful cooking fuels (WEO, 2016b) such as biomass. Sub-Saharan Africa's population is 13 percent of the world population but only accounts for 4 percent of the total global energy consumed (IEA, 2014). Also, the primary source of energy in the region is solid biomass-like fuelwood and charcoal which accounts for more than 75 percent of the total energy consumed in the region (Hafner, Tagliapietra, and de Strasser 2018)

Therefore, when we point climate change and its causes, we ignore that poverty often causes people to put relatively more pressure on the environment which results in larger families (due to high death rates and insecurity), improper human waste disposal leading to unhealthy living conditions, more pressure on fragile land to meet their needs, overexploitation of natural resources and more deforestation. Insufficient knowledge about agricultural practices can also lead to a decline in crop yield and productivity. Among causes of environmental stress, lack of clean energy has taken the first range from 20 century. Energy consumption is a global issue that affects the extent of climate change and environmental pollution. Moreover, it determines whether the goal of global sustainable development can be achieved successfully. It is very important for everyone to recognize that poverty and environmental issues are interrelated. Poverty does not allow people to their needs in energy capacity and poverty among people puts stress on the environment whereas environmental problems cause severe suffering to them in back. All economic activities are directly, indirectly or remotely based on natural resources because of their free access. Africa's energy transition faces two other important challenges: modernization and expansion. Our population needs more education on environmental protection. By increasing awareness and concern, education can encourage people to reduce their impact on the environment through more efficient use of energy especially in areas of resource scarcity. Thus, any resolution to the climate change in SSA could put a hand by reducing poverty and improving energy consumption efficiency, or ensure that the intensity of energy consumption and resource utilization is in line with the Earth's capacity.

These problems require a rapid and strong change in the energy mix of the region. Faced with this constraint, gas is considered a possible transition energy insofar as the economic and institutional constraints and organizational for rapid penetration of renewable energies in place of pollutants appear strong. Under these conditions and in the presence of energy security objectives, the question of large-scale development of the potential of non-conventional resources accessible for the entire region is particularly acute, as are the necessary conditions for this development. By doing so, high socioeconomic-ecological values could be achieved at a relatively low cost of energy consumption, environmental alternation, and ecological damage.

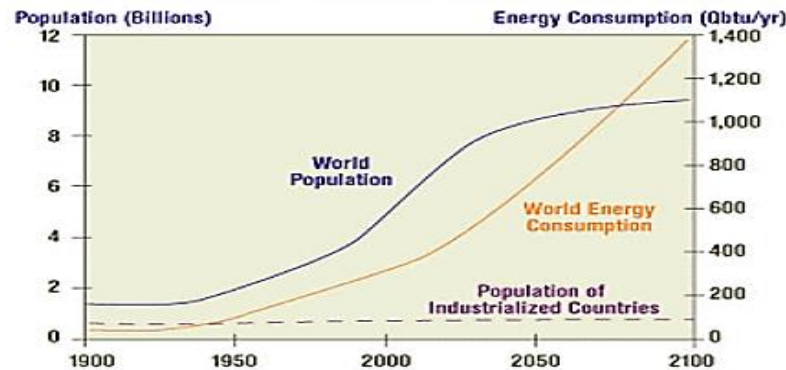


Figure 1: World Population & Energy demand growth

Source: [National Energy Technology Laboratory](#), 2019

Generally, the world population is rising rapidly, notably in developing countries. Historical trends suggest that increased annual energy use per capita, which promotes a decrease in population growth rate, is a good surrogate for the standard of living factors. If these trends continue, the stabilization of the world's population will require the increased use of all sources of energy, particularly as cheap oil and gas are depleted. The improved efficiency of energy use will, therefore, be essential in stabilizing the population, while providing a decent standard of living all over the world (Energy efficiency 2019).

Given the continuous expansion of the demand for energy, rapid population growth, and low growth in energy production in SSA, one of the top priorities for sustainable development and environmental protection is to reduce energy usage by resort to the clean energy in the energetic mixt and improve energy consumption efficiency. The lack of access to clean, cheap energy affects many African countries where the population uses mainly biomass or woods for cooking. A rising energy price to encourage reduced consumption would slow down the shift to clean energy for cooking such as electricity or LPG. Without compensatory measures, the number of people without access to clean energy could increase. Therefore, this study empirically plays around greenhouse gas emissions scenarios in Sub-Saharan Africa regions and attention will be taken on the features of energy consumption and environment variations. To do so, we will take advantage of something known as the Kaya identity.

## 2. Literature Review

Since the advent of the industrial era in the middle of the nineteenth century, humanity has been increasing its energy consumption in multiple forms to respond to the growing complexity of societies (industry, transportation, heating, electricity, etc.)<sup>1</sup>. This development was only possible thanks to the massive use of so-called fossil fuels, mainly coal and oil. The history of humanity and that of the conquest of energy are inseparable. At first, the needs were modest: to heat, cook food and probably enlighten-the energy is mainly related to the control of fire. Then, developing societies were quickly led to the use of other forms of energy. First of all, human strength and animal power for the construction, transport of various materials, transport, and agriculture (author 2019). Navigation is also an important step since, besides the human energy of the

<sup>1</sup> Jean Pierre Ulmet - Volunteer of the Museum - Posted September 30, 2014

rowers, the use of that of the wind becomes essential for centuries. The mills also use this energy or that of water.

The mid-nineteenth century saw the advent and development of industrial civilization through the use of machinery and the exploitation of new energies, first that of steam (linked to fire) than that of the electricity and finally that brought by so-called fossil fuels that are to say mainly coal and oil (later gas). The latter makes it possible to design autonomous vehicles carrying their own source of energy (locomotives then cars and airplanes). In the twentieth century to the present day, the energy needs of humanity are growing exponentially. Electricity has become more essential energy for industry and our domestic uses. Fossil fuels are used massively with the consequences that we now know about global warming (2019) due to the emission of carbon dioxide (the famous CO<sub>2</sub>) during their combustion. Human's use of fossil fuels has been blamed for warming the climate. When coal, gas, and oil are burnt, they release harmful gases, which trap heat in the atmosphere and cause global warming (Shahzad 2015). However, there has been an ongoing debate on this subject, as scientists have struggled to distinguish between changes, which are human-induced, and those, which could be put down to natural climate variability.

Sari, Ewing, and Soytaş (2008) investigated the impact of energy consumption and CO<sub>2</sub> emissions in the US using the Granger causality. They found that the income is not Granger cause of CO<sub>2</sub> in the long-run but energy use causes income. Alam (2013) used a modified version of the Granger causality test to investigate the causal relationship between CO<sub>2</sub> emissions, renewable, and nuclear energy consumption and real GDP for the US. The results of the study show there is unidirectional causality from nuclear energy to consumption to CO<sub>2</sub> emissions, but no causality from renewable energy to CO<sub>2</sub> emissions. Many scientists believe that current developments will lead to increased extreme events (high magnitude storms and cyclones, catastrophic floods or multi-year drought), as well as an increase in annual average temperatures over large areas of the globe. The primary cause of global warming would be the emission of increasing amounts of carbon dioxide in the atmosphere associated with the large-scale use of fossil fuels (coal, oil, natural gas). Alam (2013) found that in the long-run energy consumption has a positive on CO<sub>2</sub> emissions in 12 Middle East and North African Countries (MENA). Van Ruijven, De Cian, and Sue Wing (2019) have taken a study on a relationship between energy consumption and climatic change variables, the results of the study indicate that there exists a long-run equilibrium relationship between energy consumption and climatic variables which shows climatic variations due to changes in energy consumption in different regions of the world. The study find evident of unidirectional causality between the electric power consumption and climatic factors in the World's selected region. Sound and effective energy consumption strategy may reduce the burden of global warming situation in the world. Akhmat et al. investigate the relationship between greenhouse gas (GHG) emissions, energy mix and carbon emissions in the panel of 35 developed countries. The results conclude that electricity production from oil, gas, and coal sources increases the GHG emissions and air pollution in the region, however, the intensity is far less than through fossil fuel (Akhmat et al. 2014).

The future of energy is already a difficult subject, if we limit ourselves to the technical feasibility and availability of raw materials, faced with a single constraint, economic or physical, external to the process, chosen from among the main constraints invoked: safety of installations, depletion of reserves, price, and fight against global warming, protection of the environment<sup>2</sup>. Filippini et al (2013) believed that changes in economic structure, efficiency, technology, and the environment could all lead to changes in energy consumption intensity. Under current conditions, the prospective study should be focused only on energy sources, but also on the taking of these materials (oil, natural gas and, to a lesser extent, coal offer, in current state of technology, a great deal of flexibility) or the energy produced, on the elimination of the most serious environmental damage, on the channels and modes of distribution to the consumers. Due to increased pressure to reduce carbon footprints, companies in Africa are introducing new or upgraded air pollution control technologies. Checks are being made

on the main causes of air pollution, including industrial emissions, savannah fires, and biomass burning. Accordingly, a number of sub-Saharan governments including Ghana, Kenya, and Cameroon have made it a priority to provide a majority of their populations with LPG for reasons such as addressing air pollution, forest preservation and economic development (Pope et al. 2018). The Air Pollution Information Network in Africa (APINA) is instrumental in bringing about these welcome changes. South Africa is currently leading the charge among the African countries making the transition to a low carbon economy<sup>3</sup>. It has recently passed the much-awaited Carbon Tax Bill aimed at penalizing companies that emit high levels of carbon into the atmosphere. Countries such as Senegal, Ghana and Ivory Coast promote and subsidize the use of liquefied petroleum gas (LPG), rather than charcoal/biomass fuels, for cooking purposes. The role of international agencies like the WHO and the UN is also crucial. They are already engaging with local governments and trying to increase awareness, but much remains to be done.

The gradual transition from carbon-based, polluting or risky energies to clean, renewable and harmless energies (solar, wind, geothermal, hydroelectric and tidal) will respond to the effects caused by pollutants:

- Reduction of greenhouse gas emissions;
- Securing energy systems (eventually nuclear abandonment);
- Decentralization and redevelopment of infrastructure, with a better distribution of non-relocatable jobs;
- Decrease in consumption (energy efficiency);
- Reducing inequalities in access to energy and progress in energy independence;
- Protection of the health of populations.

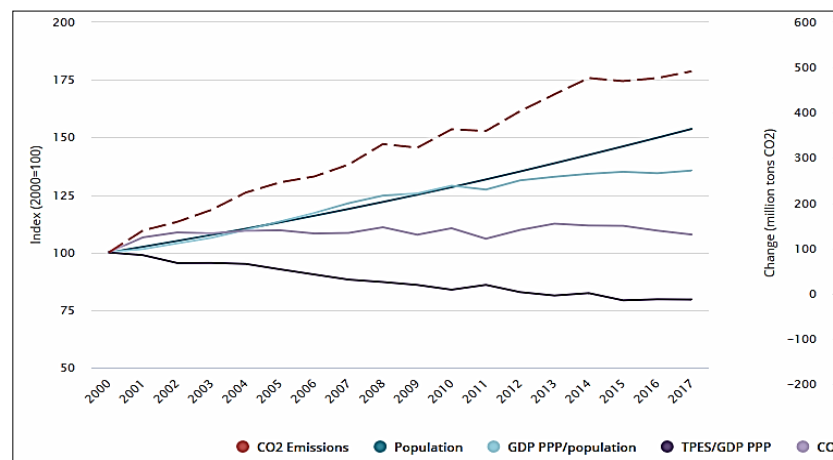


Figure 2: Drivers of CO<sub>2</sub> emissions  
Source: International Energy Agency (IEA 2019)

The diocarbonic gas(CO<sub>2</sub>)emissions from fuel combustion are affected by a range of drivers, including population growth, GDP and energy supply. CO<sub>2</sub> emissions from electricity generation, around 40% of the total, are driven by electricity output, generation efficiency, share, and carbon intensity of fossil generation. Explore

<sup>3</sup> How Africa is Tackling Pollution (Plastic/Emissions), Privon Bose (2019).

how these factors have affected emissions across a range of countries and regions in our interaction on the graph above. Khan et al.<sup>4</sup> examine the causal relationship between energy consumption and greenhouse gas emission for the seven largest regions of the World. The results show that energy consumption Granger causes greenhouse gas emission but not vice versa.

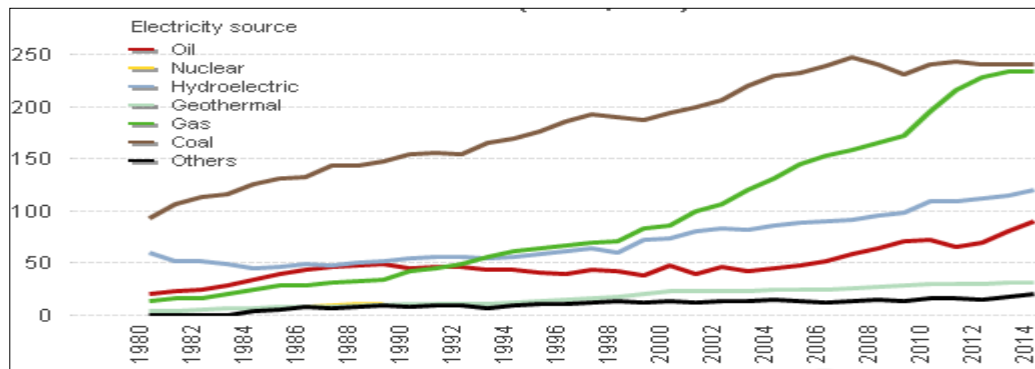


Figure 3: Electricity generation(Africa,TWh),  
Source: The Shift Project DATA PORTAL ,2019

It clearly indicates that figure that charcoal remains the main source of energy for electricity generation. In 2016, in sub-Saharan Africa, exposure to HAP from cooking with solid fuel was estimated to result in 520,000 premature deaths (6.8% of all deaths) and almost 23 million disability-adjusted life years (DALYs; 4.6% of total), from ischaemic heart disease, stroke, lung cancer and chronic obstructive pulmonary disease in adults and pneumonia in children (IHM 2016). Yet with the exception of a few countries, including South Africa, most African countries are not subject to the pressure of giving up coal energy sources for other energy sources to meet their needs. The main important aspect in facilitating the widespread transition from solid fuel to the clean fuel for cooking is to understand how best to encourage and support households to both adopt LPG and use it exclusively in a sustained way.

### 3. Methodological framework

The present study is based on annual data covering the period from 1990 to 2014 for the Sub-Saharan Africa region. For our study, we propose to study co-integration based on Kaya's identity for the case of sub-Saharan Africa. It seemed interesting to us to use this identity because it makes it possible to take into account several variables in the same equation namely: CO<sub>2</sub> emissions, the index of energetic dirt, the energy intensity, the income, and the active population. Therefore, in our study, we propose to compensate for the theoretical study (Kaya identity) by empirical study (co-integration). The data set of the variables is taken from World Development Indicator which is published by World Bank(updated 2018) and Essential Climate Variables (ECV), data access matrix which is published by Global Climate Observing Systems (GCOS).

### 4. Model specification

The specification of the model is a comprehensive model based on Kaya identity which offers a breakdown of CO<sub>2</sub> emissions according to different economic, demographic, industrial and political parameters. The most common form is based on the following theoretical specification:

<sup>4</sup> Azhar Khan M, Zahir Khan M, Zaman K, Naz L. Global estimates of energy consumption and greenhouse gas emissions. *Renew Sustain Energy Rev* 2014; 29:336–44.

$$CO_2 = \frac{CO_2}{Energy} * \frac{Energy}{GDP} * \frac{GDP}{POP} * Population$$

Where:

- CO2 emissions are a function of population (AP),
- income (GDP per capita),
- energy intensity (energy units / GDP=EI),
- the energy dirt index (CO2 emissions per unit of energy=EDI).

This equation states that population; economic growth and technology (in other words, intensities energy and CO2) are the determinants of greenhouse gas emissions. Otherwise, any upward or downward variation in the amount of CO2 emissions must correspond to an equivalent change in at least one of the decomposition factors. Thus presented, this equation is not estimable; we associate it with an additive stochastic form defined by:

$$LnCO_2 = \beta_0 + \beta_1 Ln \frac{CO_2}{Energy} + \beta_2 Ln \frac{Energy}{GDP} + \beta_3 Ln \frac{GDP}{Pop} + \beta_4 Ln(ActPop) + \varepsilon$$

$$LnCO_2 = \beta_0 + \beta_1 LnEDI + \beta_2 LnEI + \beta_3 Lngdpc + \beta_4 LnAP + \varepsilon$$

To estimate this equation, we propose to estimate the elasticity of gas emissions both in the long term and in the short term. In the first case, they give an indication of the tendency to carbonate (trend of GHG intensities in relation to economic growth).

In the short term, they assess, using an error correction model (ERM), the shocks caused by each factor on the real trajectory of gas emissions (variations around the trend). This approach will involve the integration studies of the variables.

## 5. Econometric framework

Comparable to all other techniques, that utilize time series data, it is essential to distinguish that unless the diagnostic tools used the account of the dynamics of the link within a sequential 'causal' framework, the intricacy of the interrelationships involved may not be fully confined. For this rationale, there is a condition for utilizing the advances in the time-series version. The following sequential procedures are adopted as part of the methodology used. In order to confirm the degree, these series split univariate integration properties; we execute unit-root stationary tests. Indeed, a crucial step is to test stationary using unit root tests. Once the order of integration of series is determined, we test the existence of a long-term equilibrium relationship via the cointegration test of Engle and Granger in our study.

**In general, three distinct models can be considered:**

- Model 1: a model without constant or deterministic trend
- Model 2: a model with constant without deterministic tendency
- Model3: a model with constant and deterministic trend

To pose the problem of the test for the presence of a unit root, it is useful to break a series into two types of components: a determinist component  $TD_t$  and a stochastic component  $\mu_t$

$$y_t = TD_t + u_t$$

The model that we adopted can be rewritten after substitution:

$$A(L)(y_t - TD_t) = \epsilon_t$$



It is very interesting to develop this writing in a simple case, that where  $A(L) = (1 - pL)$   
In practice, the models are estimated in the following form:

Model (1):  $\Delta y_t = \phi y_{t-1} + \varepsilon_t$

Model (2):  $\Delta y_t = \phi y_{t-1} + \gamma + \varepsilon_t$

Model (3):  $\Delta y_t = \phi y_{t-1} + \tau + \delta t + \varepsilon_t$

Where  $\phi = \rho - 1$ , and  $\varepsilon \sim N(0, \sigma_\varepsilon^2)$

We test then  $\begin{cases} H_0: \phi = 0 \\ H_1: \phi < 0 \end{cases}$

- If the value of the statistic  $t_{\hat{\phi}}$  is less than the critical value (the values reviews are tabulated by Dickey and Fuller (1979, 1981)) so we reject the null hypothesis of non-stationary.
- If the value of the statistic  $t_{\hat{\phi}}$  is greater than the critical value we accept the null hypothesis of non-stationary.

**The long-run relationship between variables exists when they are co-integrated. One of the co-integration theories is the step method** VAR-based cointegration tests using the methodology developed in Johansen (1991, 1995) performed using a Group object or an estimated VAR object.

$$\Delta y_t = \Pi y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta y_{t-1} + Bx_t + \varepsilon_t$$

**Granger's representation theorem asserts that if the coefficient matrix  $\Pi$  has reduced rank  $r < k$ , then there exist  $k \times r$  matrices  $\alpha$  and  $\beta$  each with  $r$  such that  $\Pi = \alpha\beta'$  and  $\beta'y_t$  is  $I(0)$ .  $r$  is the number of cointegrating relations (the cointegrating rank) and each column of  $\beta$  is the cointegrating vector. Johansen's method is to estimate the  $\Pi$  matrix from an unrestricted VAR and to test whether we can reject the restrictions implied by the reduced rank  $\Pi$ .**

The Engle and Granger causality test have been used to direct the causality among variables in this study. We assume that the variables are stationary at  $I(1)$ , and co-integrated. In such circumstances, Granger causality should be tested using the ECM.

**It consists then showing that there is a long-term relationship between a dependent variable and explanatory variables, then in the second step, to express these co-integrated variables in the form of a model with correction of an error, the estimation of the latter making it possible in particular to determine the short-term adjustments.**

## 6. Results presentation

The standard Augmented Dickey-Fuller (ADF) unit root test was exercised to check the order of the integration of these variables.

Null Hypothesis: the variable has a unit root					
At Level					
With Constant	t-Statistic	LNCO2 -4.1847	LNGDPC 0.8883	LNEI 1.9920	LNAP -2.8193
	Prob.	0.0036 ***	0.9935 n0	0.9997 n0	0.0705 *
With Constant & Trend	t-Statistic	-4.0567	-2.0217	-3.4923	-2.0708
	Prob.	0.0204 **	0.5607 n0	0.0630 *	0.5351 n0
Without Constant & Trend	t-Statistic	-0.3099	2.4743	-3.0388	2.2462
	Prob.	0.5633 n0	0.9952 n0	0.0040 ***	0.9919 n0
At First Difference					
With Constant	t-Statistic	d(LNCO2) -4.6934	d(LNGDPC) -2.8816	d(LNEI) -3.2653	d(LNAP) -2.4243
	Prob.	0.0012 ***	0.0630 *	0.0289 **	0.1464 n0
With Constant & Trend	t-Statistic	-4.6635	-3.0693	-3.8799	-2.6836
	Prob.	0.0059 ***	0.1365 n0	0.0301 **	0.2513 n0
Without Constant & Trend	t-Statistic	-4.7215	-2.4871	-0.8907	-0.1345
	Prob.	0.0001 ***	0.0154 **	0.3191 n0	0.6265 n0

Table I. Unit root test result

Table II. Augmented Dickey-Fuller test result

Variables	Test ADF
LnCO2	I(1)
LnEDI	I(1)
LnEI	I(1)
LnGDPC	I(1)
LnAP	I(1)

The null hypothesis is that the series is non-stationary, or contains a unit root. The rejection of the null hypothesis is based on MacKinnon critical values. The lag lengths are selected automatically based on SIC in the tool. The sequential Augmented Dickey Fuller test (ADF), shows that the difference series are stationary and are integrated of order 1.

The relationship between the dependent variable (i.e., CO2 emission) and the independent variables (i.e., **energy dirt index, energy intensity, gross domestic product per capita and active population**) is observed using the VAR co-integration methodology proposed by Johansen Julius. I(1) series are cointegrated if there exists at least one linear combination of these variables that is stationary. The presence of the co-integration vectors shows that there exists a long-run relationship among the variables. This study further examined the existence of a long-run relationship between the variables. The JOHANSEN cointegration test sheds light on the number of cointegration relationship and its functional form according to different criteria:

- The criterion of the trace and minimum eigenvalue
- The information criteria of AKAIKE and SCHWARZ.

To achieve this an eigenvalue decomposition is carried out. The rank of the matrix is given by  $r$  and the Johansen test sequentially tests whether this rank is  $r$  equal to zero, equal to one, through to  $r = n-1$ , where  $n$  is the number



of time series under test.

**Table III.** Johansen Cointegration test

Number of	Eigen	Trace stat.	Adjusted	Critical	Adjusted
r=0	0.966892	131.9032*	78.38353*	69.81889	33.87687
r≤1	0.676406	53.51970*	25.95014*	47.85613	27.58434
r≤2	0.581215	27.56956*	20.01913*	29.79707	21.13162
r≤3	0.233586	7.550432	6.118765	15.49471	14.26460
r≤4	0.060349	1.431667	1.431667	3.841466	3.841466

Trace test indicates 2 cointegration equations at the 0.05 level

\*denotes rejection of the hypothesis at the 0.05 level

\*\*Mackinnon-Haug-Michelis (1999) p-values

Source: Made by author, Eviews 2020

The first hypothesis,  $r=0$ , test for the absence of cointegration between variables. It clear that since the test statistic is below the 5% level significantly that we have strong evidence to retain the null hypothesis of no cointegration. The second  $r \leq 1$  and third  $r \leq 2$  against the alternative hypothesis of  $r > 1$  and  $r > 2$  also provide evidence to retain null hypothesis since the test statistic is below the 5% level of significant. The hypothesis of at most three co-integration vectors ( $r \leq 3$ ) cannot be rejected because the test statistic reports a value above the critical value. The test statistic therefore leads to retain a long run and co-integration relation between our variables.

Through VECM, cointegration provides a systematic framework for jointly analyzing short-run and long-run properties. Hence, the existence of cointegration may improve the long-term forecasting of economic time series.

With the long run equilibrium relationship;

$$\ln co2 = 0.913045 \ln edi - 1.049159 \ln ei + 0.070418 \ln gdpc + 0.385794 \ln ap + \varepsilon_t$$

Energy dirty index, gross domestic product and active population (labor force) have a positive impact on carbon dioxide emission while energy intensity has a negative impact on emissions. This goes beyond our theories stipulate that people use biomass fuel instead of clean efficient energy in a lot rural milieu of sub-sahara african regions.

**Table IV.** Short run Causality test results

<i>Lags</i>	<i>LnCO2</i>	<i>Ln edi</i>	<i>Lnei</i>	<i>Lngdpc</i>	<i>Lnap</i>
<i>LnCO2</i>	2.108070 (0.3485)	1.326810 (0.5151)	1.316322 (0.5178)	2.71076 (0.2579)	
<i>Lnedi</i>	130.8839 (0.0000)	1.462513 (0.4813)	1.021166 (0.6001)	0.486423 (0.7841)	
<i>Lnei</i>	5.475366 (0.0647)	7.320860 (0.0257)	0.804321 (0.6689)	1.218718 (0.5437)	
<i>Lngdpc</i>	4.788916 (0.0912)	2.789693 (0.2479)	5.474525 (0.0647)	0.153450 (0.9261)	
<i>Lnap</i>	32.05340 (0.0000)	2.776180 (0.2496)	3.962660 (0.1379)	2.869827 (0.2381)	

Source: result obtained from Eviews 9.0

Having established that the CO<sub>2</sub> is co-integrated in the long-term with other variables, this step is done to objectively examine the causal relationship between these variables, the following table summarizes all the results of causality, the results show at first an evident of unidirectional causality between population ,energy dirt index to carbonic dioxide but not vice-versa. On an other hand, the causality between energy intensity and energy dirt index is appeared in the analysis.

Analysis of variances provides information about the relative importance of innovations in the variations of each of the VAR variables. It allows us then to determine in which direction the shock has the most impact.

**Table V.** Variance decomposition

Variance Decomposition of LNCO2:						
Period	S.E.	LNCO2	LNEDI	LNGDPC	LNEI	LNAP
1	0.010118	100.0000	0.000000	0.000000	0.000000	0.000000
2	0.013649	66.88784	2.961745	1.330179	13.54786	15.27237
3	0.048156	43.90835	38.17815	8.076004	8.074660	1.762837
4	0.063480	40.30908	37.22655	16.28493	5.163998	1.015449
5	0.072850	39.28239	36.87710	17.87811	5.082367	0.880037
6	0.084141	39.18747	36.93472	18.33891	4.779212	0.759683
7	0.092722	38.78199	36.68374	19.34331	4.473928	0.717033
8	0.101060	38.61983	36.62726	19.60605	4.418236	0.728622
9	0.109219	38.50305	36.57406	19.92173	4.278661	0.722496
10	0.116482	38.36290	36.49279	20.22315	4.188586	0.732579

Source: result obtained from Eviews 9.0 software

According to the table we obtain on average an innovation of carbon dioxide pollution which, for its part contributes a value of 38.36% of its variance of the forecast error, the energy dirty index (EDI) largely contributes a 36.49% of its own variance of the error. The gross domestic product (GDPC) contributes on average 20.2% of its own variance of the error, energy intensity 4.18% of its own variance of the error and 0.7% for the active population. We therefore conclude that carbon dioxide (CO<sub>2</sub>) emissions contribute a good part in determining the variance of forecast error. The discovery of a Granger unidirectional causality between CO<sub>2</sub> emissions and its variables (EDI and Pop) suggests that per unit of energy, its consumption is the stimulating input for improving emissions of variable gases from the environment. The awareness of global environmental challenges makes it essential that there is some understanding of the causal effects of energy consumption (Energy dirt Index) on carbonic gas emission. A clear analysis of the phenomenon has been given in various texts by Dasgupta (2010): lack of access to physical or human capital, poverty leads the populations of the least developed countries which live 70% in rural areas to exploit to make a living natural capital at their fingertips (forests, minerals).

The energy dirty index (EDI) largely contributes a 36.49% of its own variance of the error. This goes with our theories that a significant share of greenhouse gas emissions is due to the supply and consumption of energy, the combustion of which is predominant in fossil fuels. The combustion of charcoal, lignite (and its derivatives such as firewood, vegetable debris) is more considered in this variable. It is this energy that human activities seek. On the other hand, CO<sub>2</sub> emissions increase more proportionally in the short term than in the long term following an increase in the energy dirt index. The relatively high elasticity values indicate that policies focusing on the use of "carbonic" fuels and pollutants as an energy source would be effective enough to reduce greenhouse gas emissions. Great attention can, therefore, be paid to the release of gases harmful to the greenhouse by the use of polluting fuels. Hence the substitution by natural gas: "Increase the contribution of natural gas in final energy consumption in the various sectors of residential, tertiary and industrial activity".

## 7. Conclusion and sustainable solutions

Eliminating or reducing greenhouse gas emissions is a major study that could be carried out anywhere in the world. Yet energy-related CO<sub>2</sub> emissions continue to rise, according to the International Energy Agency. In 2018, global energy demand increased dramatically and the production of renewable energy proved unable to absorb this increase. As a result, CO<sub>2</sub> emissions linked to the use of energy increased by almost 2%. It is therefore important to have the tools to better understand and predict their evolution. The international energy agency has studied several scenarios: the first takes into account the energy reduction objectives declared by the States

but not yet implemented. The second says "sustainable" requires "a rapid change in all energy systems around the world", and the third says "constant policy", simply prolongs current trends. However, only the second scenario (unfortunately the least likely) shows a decline in emissions from 2020. The research estimated the short-run and decompose the variance of CO<sub>2</sub>; the error correction model (ECM) pull out the corroborated outputs with the analysis of the impulse response functions which have shown that in the long term the energy intensity has a decline impact on CO<sub>2</sub> but population, per capita income and energy dirt index give respectively an increase impact on carbon dioxide emissions. Thus, environmental economic elements focused on these factors and combined with other reforms should undoubtedly contribute to the reduction of pollutants due to carbon dioxide for future horizons.

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## Green Business Model of Small-Scale Aquaculture Businesses

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### Abstract

**Purpose:** The purpose of this study is to determine the green business model and the competitive advantage of small-scale aquaculture businesses. **Design / methodology / approach:** Qualitative method with holistic multiple case study in the aquaculture based SMEs, analyzed based on the reduction and interpretation of data, the data processed are grouped into categories, patterns or themes and then interpreted the information using certain schemes. **Findings:** The findings show that green business model of aquaculture SMEs is preserving the environment by planning environmental management. Green business implements the 3 R (Reduce, Reuse, Recycle), creates product and process quality and has commitment to product and environmental quality. **Practical implications:** The results contribute to SMEs, how to manage green businesses through the process that encourages environmental governance. **Originality / value:** This finding is based on Business Models, by identifying and managing the potential resources through green business initiatives in SMEs.

**Keywords:** Green business model, Competitive advantage, Reduce, Reuse, Recycle, Environmental quality

### Introduction

Doing an environmentally friendly business is an effort to implement environmentally orientation in business (Banerjee, Iyer and Kashyap, 2003). Organizations that pay attention to the environment can last long and thrive (Baker and Sinkula, 2005). There are many business organizations that pay attention to the environment such as waste minimization, pollution control, and recycling. They have comprehensive business philosophy with the environment and direct their business to superior performance and have added value (Baker, Sinkula, 2005).

Green business is environmentally friendly as a business that combines business goals and environmental goals and achieves social and ethical transformation in their business (Willis, et al., 2007). The Schumpeterian view suggests that an environment that emerges from creative destruction can create an eco-friendly economic foundation with new innovative activities (Larson 2000 and Dean, McMullen, 2007).

The main priority of this research is to investigate the green business model of environmentally friendly aquaculture farming in Boyolali Regency empirically. The problem of this research is the superior effort through the green business model in environmentally friendly aquaculture farming. The purpose of this study is to determine the green business model carried out in environmentally friendly aquaculture businesses and to describe its distinguishing advantages.

### Literature Review

#### Green Business Model

Business performance is influenced by the changes in environmental factors and business models. Meanwhile the business model is a prototype developed by the organization to describe business processes and to create value for the company's stakeholders (Osterwalder, 2009). The problem faced by business actors is the inability

to face competition in the market. To win the competition, every business must have specific or unique business model design (Osterwalder, 2009). Business models are used for a variety of informal and formal descriptions that represent core aspects of a business, including the objectives, offerings, strategy, infrastructure, organizational structure, trade practices, and operational and policy processes (Drucker 1985). The essence of the business model is to define the way in which business firms provide value to customers, persuade customers to pay for the value, and convert these payments for profit (Osterwalder, 2009).

An environmentally friendly organization is defined as an organization that designs and produces goods and services by minimizing environmental impact, minimizing environmental damage and problems with waste disposal, noise and environmentally friendly systems (Dean and McMullen, 2007). The concept of green business is related to environmental management issues that become market demands for environment safety and sustainability. The approach taken by business people to maintain the sustainability of environmentally friendly activities is known as green business (Schaltegger, 2002). Green business is a business paradigm that advocates doing business for profit, corporations must also care, commit and be responsible for preserving the environment and the universe (planet) and improving social welfare for the community (Lako, 2013). In the context of the commitment and responsibility, Cooney (2009) states that green business is the efforts made by companies to minimize the negative impacts of the company's economic activities on the community, society, economy and the local and global environment by complying with the 3-P principles (triple bottom line of business). According to Cooney (2009), a business can be said to be green business if it meets the following four criteria. First, the company internalizes the principles of business sustainability in every business decision. Second, the company produces and offers products or services that are environmentally friendly. Third, the company is more concerned about the environment than the other competing companies. Fourth, the company has sustainable commitment to apply environmental principles in its business operations.

### **Competitive Advantage**

Michael Porter (1985) states that competitive advantage is the ability obtained through the characteristics and resources of a company so that its performance is higher than the other companies. Competitive advantage comes from the company's ability to take advantage of its internal strengths to respond to external environmental opportunities while avoiding external threats and internal weaknesses (Mooney, 2017).

As stated by Hana (2013) in a very competitive environment, the goal of the organization is to beat a competition and win new customers. Knowledgeable individuals will create innovation for the company. Personal creativity, knowledge, skills and abilities will generate new innovative ideas that help companies achieve a competitive advantage. According to Romero and Martinez-Roman (2012) there are other factors that support the company's internal competitiveness, namely motivation, financial, and support from company leaders in building the company's internal competitiveness. Meanwhile, Noruzy et.al (2013) stated that innovation ability is able to create the latest products and services, so that products are demanded by the market. This means that the competitiveness of a company is rooted in the ability of internal resources, namely the support of the company leaders, financial strength, internal motivation to increase strength, and creating innovation and competitiveness in the market.

### **Methodology**

The research design used is a Holistic Multiple case study, namely research that places several cases as the focus of the study (Yin, 2003). The number of analysis units used is more than one. In holistic multiple case study research, the number of units of analysis can be determined.

### **Informants and Data Collection**

The profiles of the key informants in this study were the owners and the managers of small and medium-size entrepreneurs and environmentally friendly aquaculture farming in Boyolali Regency. The informants were Mr.



Ali Mursid, Mr. Manshur and Mr. Darseno. The three business actors are the cultivators who actually carry out their business processes with an environmentally friendly process.

Table I Informant Profile

No.	Name	Age	Education	Position	Location
1	Ali Mursid	40	D3 Fishery	Owner and Manager	Musuk
2	Mashur Salim	40	Senior High School	Owner and Manager	Cepogo
3	Darseno	60	D3 Farming	Owner and Manager	Sawit

Source :Primary Data

According to Yin (2003), there are three principles of qualitative research data collection, namely: 1. Proof using multiple sources, 2. Creating database, 3. Building a chain of evidence. The purpose of proof by using multiple sources is that qualitative research relies on "triangulation", namely the collection of data from various sources, all of which are relevant to the phenomena being studied (Locke, 2001: 45). The evidence from various sources allows the researchers to pay attention to the issues from a broader perspective, either historical, attitudes, or behavior. That is why qualitative research emphasizes verification (compare with validity and reliability testing in quantitative research). The multiple sources referred to include "documentation, interviews, participant observation, field observations, material archives or records, and physical artifacts" (Yin, 2003: 86).

### Data analysis

Guidelines for building qualitative data analysis according to Ihalaw (2011: 62) include first; data analysis will be carried out as simultaneous activity with data collection, data interpretation and writing narrative reports. The second; process of qualitative analysis is based on the reduction and interpretation of data, the large amounts of data processed are grouped into categories, patterns or themes and then interpreting the information using certain schemes. Tesch (1990) calls this process de-contextualization and recontextualization. This process produces heightened conscious analysis because the end goal is to present a larger, consolidated picture. The third; trying to present the information in matrixes in order to see the relationship among the categories of information, describing the categories according to the informants, the order of roles and other important matters. Fourth; making coding procedures in order to facilitate grouping information into categories or themes and certain patterns can be generated. These five categories and themes form the basis for generating descriptions of qualitative research results.



## **Finding and Preposition Development**

The environmentally friendly aquaculture farming in Boyolali subdistrict illustrates the business carried out with environmentally friendly principles that explain the green business model. The green business model in aquaculture farming is illustrated from the results of in-depth interviews, observations and secondary data that the researchers have successfully conducted. Several questions were asked to the informants regarding the green business model carried out by this environmentally friendly aquaculture farmer. The question is how the green business model is carried out. Among other things, "how to integrate environmental issues into the business planning process", "how to create quality to reduce environmental impact in the business" and "how to do environmental efforts, especially compliance with current environmental regulations". The answers from these informants can be classified, categorized and can form patterns and concepts.

## **Preserving the Environment by Planning Environmental Management**

Social values and beliefs in the community direct the behavior and operations of this aquaculture farming. This means that business actors consider local wisdom in their business behavior. Among others, maintaining environmental quality by not polluting water and the environment and using water wisely by considering the interests of the surrounding community. Planning appropriately water use and safeguarding spring sources. This is the belief held by aquaculture farmers who change the behavior of this farming business to be environmentally friendly supported by skills and knowledge in managing business operations. Another meaning is that business actors consider the social situation and conditions for the benefit of the surrounding community. Among other things, taking into account the sowing of seeds so that the harvest time coincides with important times for the community such as sadranan, earth alms, religious holidays so that the community is helped by this aquaculture business.

Environmental efforts, especially compliance with environmental regulations, are manifested in natural hatcheries. The hatchery process is carried out by the cultivators themselves based on their knowledge and experience. Among others, selecting and maintaining superior quality broodstock to create superior catfish seeds. Another thing to do is to protect spring water sources by using sufficient water, protecting the surrounding environment and not polluting it. This effort is supported by the initiative and intention of maintaining a high environment from the aquaculture farmers. These initiative and independence have led to an environmentally friendly business model in aquaculture farming. All findings in the field are in line with the findings of research conducted by Shepard and Patzelt (2011), namely sustainable entrepreneurship in nature conservation, life support, and society in pursuing perceived opportunities to realize future products, processes and services, for profit. Profits are interpreted broadly as economic benefits and non-economic benefits for individuals and society.

The results revealed that the encouragement of social values and beliefs encourages aquaculture farmers to maintain their operational management so that they do not cause air pollution in the form of odors or environmental pollution. To make this happen, they use the power of environmentally friendly technology, namely the use of environmentally friendly materials (refine) in the form of providing forage around the location, for example pace, mojo fruit, papaya leaves and lompong leaves. This is reinforced by Jaffe et al., (2005) which states that a flexible and incentive-oriented policy approach tends to encourage compliance to change business models that pay attention to the environment. Filling in the findings of Scotia (1998) and Grewal & Dharwadkar (2002) that business actors study the social learning process in society which emphasizes social benefits in business. Thus, business owners tend to develop positive business models to the natural environment and adapt the existing behavior in the community in their business (Chua and Rahman, 2011).

The efforts made include planning on cleanliness, pool safety and the pond environment, maintaining the quality of pool water so that it does not smell and pollute the air, utilizing waste to generate profit, planning good environmental management, and managing waste for liquid fertilizer. Planning on the water use and protecting spring sources as well as planning the place with adequate irradiation and easy and precise water

circulation. Planning the location that meets the requirements for catfish ponds and is not in a densely populated residential area. Planning the catfish that are of healthy and hygienic quality and complementing the business with permits, namely permission from the government and permission from the community. Integrating environmental issues into the strategic planning process that is reflected in the application of environmentally friendly attitudes, skills and beliefs and knowledge in environmentally friendly aquaculture farming. All market decisions made are based on the commitment and knowledge of the environment.

### **Green Business by Implementing the 3 R (Reduce, Reuse, Recycle) by Creating Quality Products and Quality Aquaculture Businesses that Involve Empowering the Surrounding Community.**

Environmentally friendly business operations include checking water conditions, namely reducing catfish waste containing ammonia, maintaining the quality of pool water from its thickness, color and water temperature and removing dirt that disturbs the cleanliness of the pool. This reflects the knowledge and skills possessed by environmentally friendly aquaculture farmers. In addition, providing feed according to the portion or 1% of the weight of the catfish and adjust the size and weight of the catfish.

The reduction of waste by using catfish manure waste for fertilizer for vegetable crops, chili plants, and used to raise silkworms, parrotfish as well as agricultural fertilizer in rice fields. The environmentally friendly attitude of aquaculture farmers illustrates the reuse process in this business. The use of wastewater to raise catfish is by adding clean water. This illustrates the business recycle process, namely an environmentally friendly attitude in the use of the wastewater.

Next, taking back some of the waste stream for reusing in the same process (recovery), namely the formation of floc by bacteria from the dirt and leftover feed in the pond. Floc becomes healthy organic feed for catfish and pond water becomes clean and green because it contains plankton. Finally, a quality business that reduces the environmental impact is created, namely that it does not cause air pollution in the form of unpleasant odors and catfish becomes healthier and produces tastier, chewy and savory meat supported by a background in opening a business, namely creative ideas so as to succeed in creating high-value catfish. As stated by Careolaa et al., (2012) that the increasing interest of a number of small and medium enterprises in environmentally friendly technology has an impact on the success of applying technology in the daily business operations of companies and encourages organizations to have environmentally friendly businesses.

### **Commitment to Maintain Product Quality and Environment Quality.**

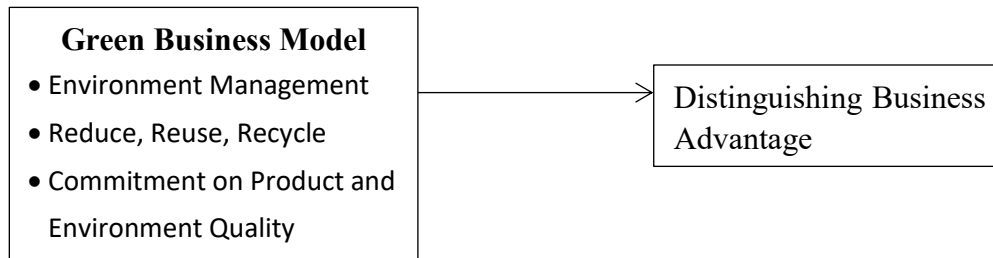
The commitment to maintain product quality and environment quality is demonstrated by natural seeding processes, feeding pellets according to SNI standards and additional leaves feed. Maximum waste treatment, making the water cleaner so it doesn't smell and regulating water and feed circulation. Using sufficient water and adhere to good water quality. Maintaining spring water sources in a way that does not pollute springs and waste that does not endanger the environment.

Creating quality business by providing a positive impact on the surrounding community. Among other things, creating jobs so that there are no more unemployed in the area and increasing people's income. The community earns an average wage of IDR 125,000-150,000 / day. Increasing the capabilities and skills of human resources, by participating in trainings and workshops from the Fisheries Office. The quality of the business that reduces the environmental impact can be seen from the belief, knowledge and attitude that is environmentally friendly and learning in the aquaculture farming process.

The obedience of catfish cultivators to the norms and values that live in the community is reflected in a business culture that is not allowed to pollute the water and the environment. The catfish business actors make clean pond water so that it doesn't smell. They do this by regulating water circulation and maintaining the right amount of feed according to the catfish conditions. Saving water usage and protecting spring water by not polluting it. The point is to use springs wisely. This effort is supported by openness to process innovation by studying environmentally friendly cultivation technologies and studying water ecosystems and water chemistry. These findings support the research of Hogan and Coote (2014), namely the values that underlie organizational

norms are the hope of doing an environmentally friendly business.

Based on the research problems on green business models, three variables are obtained, namely environmental management, reduce, reuse, recycle and commitment to product and environment quality.



The environmentally friendly technology used encourages small businesses to improve environmentally friendly business model, namely reducing waste, managing waste responsibly, using appropriate technology in processing materials into products, saving water and saving energy supported by environmentally friendly businesses by integrating environmental issues into the strategic planning process and based on quality that minimizes environmental impact. This finding is supported by Lofsten (2016) arguing that new technology-oriented businesses with a better level of business management will gain a distinguishing advantage. It is also supported by the informants' background in opening a business that are creative ideas and business flexibility so that these cultivation business actors become more creative in using environmentally friendly technology and this is the key to determine excellence in their business. Added by the ability of business actors to obtain new information and knowledge that supports this environmentally friendly business will make a distinguishing feature in aquaculture farming. This is what forms the advantages of environmentally friendly businesses that differentiate them from conventional businesses. This advantage proves that environmentally friendly aquaculture farming is more efficient and generates higher profits in terms of cost, time and energy.

The relationship between green business models and differentiating business advantages forms the proposition that the better the application of the green business model to the business, the higher the advantages of environmentally friendly businesses in their business compared to conventional cultivation.

## Discussion and Theory Implications

### Environmental Governance

Green business is a business paradigm that advocates doing business to make a profit, corporations must also care, be committed and responsible for preserving the environment and the universe (planet) and improving social welfare for the community (Lako, 2013 ). In connection with the commitment and responsibility, Cooney (2009) states that environmentally friendly business is the efforts made by companies to minimize the negative impacts of the company's economic activities on the local and global community, society, economy and environment by complying with the 5-P principles. (penta bottom line of business). According to Cooney (2009), a business can be said to be a green business if it meets the following four criteria. First, the company internalizes the principles of business sustainability in every business decision. Second, the company produces and offers products or services that are environmentally friendly. Third, the company is greener or more environmentally friendly than the other competing companies. Fourth, the company has sustainable commitment to apply environmental principles in its business operations.

### **Reduce, Reuse, Recycle**

Businesses that implement environmentally friendly strategies have the goal (Agnestia, 2013) to create healthy, safe and qualified products, to minimize the potential for contamination of toxic or hazardous materials in products, to protect worker health and safety and minimize waste. Environmentally friendly in a business, can apply 6 basic principles, namely Refine, Reduce, Reuse, Recycle, Recovery and Retrieve Energy. Business models that apply these 6 principles can be in the form of zero waste, cleaner production, green productivity or green company (Indonesia Environment Center, 2017). These models seek to increase productivity, to maintain production sustainability while maintaining environmental sustainability and worker health and safety (Indonesia Environment Center, 2017).

- Reduce is the reduction in the amount of waste by optimizing the process or operation resulting in wasteful waste.
- Reuse is the reuse of waste in a different process.
- Recycle is the reuse of resources for the same process.

### **Commitment to Product Quality and Environmentally**

According to Schiffman and Kanuk (2007), product quality is the ability of the company to provide identity or characteristics to each products so that consumers can recognize the products. According to Juran (1999) quality is a simultaneous attempt to become the level one and level two definition. Juran defines quality based on dual meaning, namely quality that consists of product features that meet customer needs and thus provide product satisfaction, and quality that consists of freedom from deficiencies. So that product quality is the suitability of product use (fitness for use) to meet customer needs and satisfaction and a dynamic condition related to products, people/ labor, processes and tasks, and the environment that meets or exceeds the customer or consumer expectations.

### **Green Business Model**

An environmentally friendly business is basically a business that applies the concept of "zero waste" to its business operations. Environmentally friendly businesses in the operational process is implementing strategies to prevent, reduce and eliminate the formation of waste as environmental pollutants (Indonesia Environment Center, 2017). This can run if the activities have been designed starting from raw materials, process technology to the end of activities that are environmentally friendly. To support the implementation of this strategy, a fundamental change is needed in the commitment and behavior of the leaders and employees, providing supporting facilities and infrastructure and enhancing HR competencies (Indonesia Environment Center, 2017).

The problems of this research are related to the green business model of aquaculture farming which designs and implements all of its business activities from raw materials, process technology to the end of activities in an environmentally friendly manner. Green business in aquaculture farming are the efforts made to minimize the negative impacts of business economic activities on local and global communities, societies, economies and the environment by fulfilling the 3-P principles (triple bottom line of business ). The green business model for small and medium-sized aquaculture farming has been carried out properly and correctly so that it has become a distinctive feature for this aquaculture farming business. The findings in this part of the green business model resulted in the concept of environmental governance, reduce, reuse, recycle and commitment to product and environment quality.

## Conclusion

The green business model in aquaculture farming is carried out by preserving the environment by planning the environmental management. Green business is conducted by implementing the 3 R (Reduce, Reuse, Recycle) by creating quality products and quality aquaculture businesses that involve empowering the surrounding community, commitment to maintain product and environment quality.

The distinguishing business advantage is shown by the aquaculture farming business without waste because the waste is used as fertilizer and used in the process of business activities again. Biofloc technology is used to create natural feed so that this business uses natural ingredients and processes. The use of green technology creates efficiency and cost savings so that business profits increase. This is what distinguishes it from conventional aquaculture farming so that the business advantages that arise from the use of green business models in aquaculture farming can be seen.

## Limitation and Future Scope

Case study research potentially emphasizes the depth of analysis on specific cases that are more specific. This method is very appropriate to be used to understand certain phenomena in a certain place and at a certain time. So the proposed conceptual point of view is how the green business model is applied to environmentally friendly aquaculture farming. However, this study requires further validation. The researchers can investigate further to develop green business models using grounded theory for a sustainable approach, to build a substantial theory and to explore better contexts.

In addition, this research involves asking business owners and managers regarding decisions to do business in an environmentally friendly manner based on general environmental awareness and not yet understanding their behavior in doing an environmentally friendly business. This means that this research only focuses on their efforts in green business, not green business behavior. Therefore, it is necessary to study the behavior of doing a green business in the future to obtain greater and more detailed information about environmentally friendly business behavior.

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## **Policies against COVID-19 and Impact on Business: The Case of Batam, Indonesia - An Extended Abstract**

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### **1. Introduction**

As efforts to tackle the COVID-19 outbreak continue in various countries, the results of the policies implemented are varied. Among the first countries to tackle the outbreak, Taiwan, New Zealand, and South Korea are still facing the threat of declining economic performance as they imposed tight restriction on movement to stop the spread of the virus. South Korea's GDP hits biggest fall in more than 22 years in the second quarter; Taiwan's GDP declines by 0,73% at the same period, the worst since the fourth quarter of 2009; meanwhile New Zealand registers its worst economic slump in nearly three decades in the first quarter. Despite being one of the economic powerhouses in Southeast Asia, Indonesia faces various economic challenges caused by COVID-19. The local government of Batam, a city only 21 miles off the coast of Singapore, is also struggling to surmount economic and business problems because of the pandemic. The city is expected to be hit hard by the coronavirus due to its proximity to its city-state neighbor, as well as one of the main gates of international business to Indonesia. Batam has detected 480 confirmed cases of which 314 have been discharged as of August 18th, with 24 deaths. Even though the fatality rate remains high, the city has yet restricted social and economic activities. Up to this point, Batam's future is unclear. This research would analyze the impact of COVID-19 pandemic on the business sector in Batam, and examine the local government policies on COVID-19 countermeasures upon it.

### **2. Background**

Ever since the news of an unknown respiratory virus emerged in Wuhan, China late 2019, Batam has actually started to restrict its border by stopping all the flights from China. Direct flights from China to Batam have been temporarily suspended since January to anticipate the spread of the new type of coronavirus. During that period, 1,979 people were reported to have been infected with the new coronavirus in Hubei. Reports of infection also came from Beijing, Guangdong, Anhui, to Hainan. The US, France, Japan, to Malaysia and Singapore have also reported virus infections in their respective regions (Kompas, 27/1/2020).

Batam also has five international ports that serve daily ferry routes from Singapore and Malaysia. Every month, an average of 150,000 foreign tourists come to Batam, 60 percent of which are tourists from Singapore and Malaysia. Meanwhile, tourists from China contributed 5 percent of the number of arrivals. Approaching the Chinese New Year, it was estimated that the number of foreign tourists would have increased by 10 percent.

The Batam City government then added health officers to tighten supervision at five international ports in mid

February following the increasing number of positive cases of COVID-19 in Singapore. The entrances at the five international ports are the most controlled. The sea route has been the main choice for residents in Singapore to come to Batam, considering that the boat trip between the two islands only takes less than 2 hours. A real-time report by John Hopkins University showed until Wednesday (12/2/2020), positive cases of corona had been found in countries directly adjacent to Riau Islands, such as Singapore (47), Malaysia (18), Vietnam (15), and Cambodia (1). Following the development of the cases, foreign nationals from 13 countries affected by the corona, including Singapore and Malaysia, were required to fill out a health alert card. A minimum of five port health officers were also stationed at each international gate to monitor passenger arrivals and yet, the city had not closed its border. Batam's steps to contain the outbreak depended a lot on how the neighbouring countries handled it. The city only decided to quarantine residents of Batam after a Singaporean citizen, VP (37), was tested positive with COVID-19. A total of 15 residents were quarantined after being found to have close contact with the patient as of February. Even so, the government had not made it mandatory for residents to wear masks outdoors. The shortage of masks supply and panic buying wave made the government to limit the purchase and ask people to prioritize the sick first. This is why a research to examine and to underline the importance of this topic, so that a better understanding of the problem can be achieved and can contribute to an improved policy recommendation in surmounting the problem.

### 3. Research Methods

This research aims to analyse the impact of Covid-19 related policies towards business sector performance in the city of Batam (and also in some part, Riau Islands Province) in Indonesia. To reach the objective, this research uses a descriptive-qualitative method with a literature study as the main source to make the analysis. Digital and physical sources and references also used to complete this research. Analysis with a qualitative approach determined to be very useful for analysing this topic, as it is viewed to be suitable with the nature of specific topic or case study-based research. However, further research may be needed, as this research will only describe the current situation and seek a compact explanation of the impact happened towards the business sector in Batam, caused by the policies created and applied by the local government.

### 4. Results and Discussion

#### *Batam Policies Against Covid-19 : Half Dosage of Restriction*

Aside from its half-dosage measures taken at the first two months in 2020, it was later revealed that Batam City Government budget was insufficient to support the patient's cost of living during monitoring. With the stipulation of Covid-19 as a pandemic by the World Health Organization (WHO), the central government was expected to immediately disburse emergency funds for the regions. The city was reported to only have Rp2 billion reserve fund for emergencies and planned to report to the Ministry of Health for an additional budget.

Batam was also struggling to observe more residents because most of them refused to do so. The residents who were under the radar were mostly informal workers who depended on daily income and the government had not yet provided compensation for the income-loss. This made the observation process hampered because the staff was also facing difficulty to track down the patient's whereabouts.

Despite the struggle, the government also claimed that the city was more prepared to face Covid-19 since one of the islands in the city was chosen by the government to be a place for observation and special isolation for infectious diseases. The construction of health facilities on Galang Island, where the former Vietnam refugee camp was located, was targeted to be completed in late March. The health facility was expected to be able to treat 1,000 patients. A total of 50 isolation rooms were prepared, 20 of which were specifically used as intensive care units (ICU). The negative pressurized air isolation room was equipped with a high-efficiency particulate air (HEPA) filter. When Batam confirmed its first Covid-19 case in mid March, the government didn't directly



roll out large-scale restrictions. As the positive cases of Covid-19 continued to increase, Batam City Government chose to distribute basic necessities to 290,000 families starting mid April. It was done so people obey the advice to stay and work from home. The government also had prepared a Rp. 280 billion budget to provide social assistance for middle-income families. At that time, Batam recorded 40 positive cases, 14 of whom were the crew from PELNI's Kelud.

The decision to not propose large-scale social restrictions was the result of the city's struggle in mapping the distribution of Covid-19 cases since it didn't have adequate test kits. For the time being, residents were only advised to wear masks orderly and reduce outdoor activities. Batam City Covid-19 Task Force Spokesperson pointed out that the examination using the rapid test method had only reached 197 people at the beginning of April. That number was very small, considering that in the previous search, 2,065 people had symptoms similar to Covid-19. Previously, hopes that early detection could be accelerated had emerged when Singapore provided the assistance of two polymerase chain reactions (PCR) and 20,000 test kits. However, these tools could not be used due the absence of supporting components. In order to implement the PSBB, districts/cities must meet a number of criteria. One of the criteria is the number of deaths due to Covid-19 has increased significantly. The condition must also meet epidemiological links with similar incidents in other areas.

The unstoppable traffic of people makes it difficult for the Batam City Government to reduce the level of Covid-19 transmission. Now, the draft for large-scale social restrictions is being rushed. Basic aid has also begun to be distributed to hundreds of thousands of households most affected. Also, during the pandemic, only cargo ships and maritime toll ships are allowed to dock. According to the local government, a different strategy is needed to deal with the pandemic in an area consisting of small islands. Referral hospitals are only on the main islands, so a special boat with a sufficient number must be provided to carry Covid-19 patients to the city center. Without any forced restriction measures, Batam finds it harder to contain the virus. The mass testing using the PCR is urgently carried out in Batam. About 80 percent of Covid-19 positive patients in the city were people without symptoms or asymptomatic. It is advisable to use PCR mass testing to track the spread of the virus. However, the limitations of costs, equipment and manpower are said to be the main obstacles. The government said that it wouldn't conduct a mass PCR test because it could be very costly. The task force prefers to maximize contact tracing and tighten the implementation of health protocols which are now regulated through Batam Mayor Regulation No. 49/2020 concerning the Application of Discipline and Law Enforcement. In August, Batam recorded 422 positive cases and the number almost doubled on September 1st when there were 738 positive cases in the city. A total of 406 patients recovered, 309 were still being treated, and 31 died.

#### *The Growing Uncertainty and Impacts on Business*

As an industrial city and tourist destination, Batam's economic power relied much on people movement and physical activities. This condition led to the economic decline that had already been experienced at the first quarter of 2020 due the limited number of tourists from neighbouring countries and the termination of local flights. The number of tourists in Batam throughout 2019 was 1.9 million people. About 50 percent of them came from Singapore. This means, under normal conditions, there were around 2,000 Singaporean tourists who come to Batam in a day. The positive corona case in Singapore also had an overall impact on tourist arrivals from other countries to Batam. This is because Singapore is often chosen as a transit location by travelers from almost all over the world. Representatives from the local Hotel and Restaurant Association (PHRI) noted that hotel occupancy in Batam on weekdays fell to 30 percent from the normal 60 percent. Meanwhile, on weekends, hotel occupancy dropped from 80 percent to around 50 percent.

The difficulties experienced by most of the factories in Batam prove that the local manufacturing industry is very dependent on the supply of raw materials from abroad. The business association urged the government to start building raw material factories so that the domestic industry can survive if another outbreak occurs in the future since Batam City contributed 62 percent of the gross domestic product (PDRB) of the Riau Islands Province.

Following the situation, Batam also faces the uncertainty as Singapore's economy shrank 41.2 percent on a quarterly basis and minus 12.6 percent on an annual basis in the second quarter of 2020. The impact of the recession is predicted to spread to Batam, Riau since Singapore is the main export destination and the largest contributor to Batam's tourism sector. Singapore is the main export destination for Batam. During the period of January to May, total export value reached US\$1.5 billion or 40.62 percent of the cumulative export. Export to main destination countries has reportedly declined since March 2020.

Batam's manufacturing industry has also been under pressure since the beginning of the year when the Singapore economy in the first quarter of 2020 experienced negative growth of 10 percent and minus 2 percent on an annual basis. Shipments of raw materials for industries in Batam have also been hampered as long as Singapore limits mobility from March 18 to June 1.

#### *Blessing in Disguise and the Opportunity Ahead*

The Covid-19 pandemic has sparked a question whether China, the first country to witness the outbreak, could sustain its role as manufacturing hub. The shutdown in Wuhan had resulted in the disruption of supply chain, causing industries in emerging markets unable to continue its production. During the crisis, the reaction from the business world was swift. Many companies were later encouraged to shift their manufacturing operations out of China to diversify the production bases. The shifting is seen as a big opportunity. This chance is captured in the industrial area in Batam to attract new investors. Foreign investment can increase employment amid the surge of unemployment due to the Covid-19 pandemic. However, Indonesia is not alone on the run to catch the investment, Vietnam is also considered to have the same opportunity to hook the companies that have planned to relocate. However, there were no companies from China that were interested in moving factories to Batam. Meanwhile, since several months ago Vietnam has managed to attract 33 factories that had relocated from China. This is a warning for the Batam City Government to immediately clean up its Covid-19 turmoil if they still want to benefit from the wave of factory relocation out of China.

However, Batam City Government had to be careful in choosing companies that were relocating from China. The government should focus on finding foreign investment in the industrial sector that can still thrive amid the Covid-19 pandemic. Industries that have the potential to continue to grow during a pandemic are industries engaged in information technology, energy, health, food and chemical producers. This is important so that the new investment that comes in can actually create new jobs, not even increase the already high unemployment rate. Based on data from the Central Statistics Agency (BPS), as of February 2020 there were 6.88 million unemployed in Indonesia. The Batam Manpower Office data shows that as many as 13,000 workers in Batam have been affected by Covid-19.

Batam is actually still very attractive for foreign investors to invest because it is located in the Strait of Malacca, which is one of the busiest shipping lanes in the world. The city is also the gateway to Indonesia, a country with the largest domestic market in Southeast Asia. However, the messy handling of Covid-19 has become a weighing consideration for foreign investors to invest in Indonesia. The government's policies to tackle the pandemic is directly proportional to economic recovery. As long as Covid-19 has not been resolved, the threat of an economic recession and increasing unemployment will continue to haunt.

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## **An Empirical Evidence of Economic Growth During COVID-19 Pandemic in Indonesia**

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### **Abstract**

The study attempts to estimate Solow Growth Model during COVID-19 Pandemic in Indonesia. There are about 68 observations cover 34 provinces and 2020:q1 – 2020:q2 period. Static panel data was employed. The findings exhibit that fixed effects model is more appropriate than random effects model and pooled OLS. Fixed effects model expresses that Solow Growth Model does not exist during COVID-19 Pandemic. In contrast, random effects model and pooled OLS confirm that ICT, number of COVID-19 and inflation have significant and a positive impact on economic growth. It means that ICT usage, number of COVID-19 and inflation rate lead higher level of economic growth in Indonesia. Indeed, the central and local government should facilitate the availability and accessibility of ICT. However, the governments should control number of COVID-19 and inflation in the long-run.

Keywords: economic growth, COVID-19, inflation, Solow Growth Model

### **Introduction**

The transmission of COVID-19 to all countries in the world in early 2020 is a health issue. However, the prevention and control of COVID-19 cases have direct implications for global economic conditions and individual countries. This shows that health issues have become an important part of economic issues at both the macro and micro levels.

The impact of the COVID-19 pandemic on the macro-economy is a crucial issue that has received serious attention (Jordà, Singh & Taylor, 2020). The World Health Organization (WHO) reported that COVID-19 was first detected in China in December 2019 and in September 2020 there were 216 countries around the world infected with COVID-19 with 28,918,900 cases of which 922,252 people died (WHO, 2020). Indonesia is one of the countries with significant COVID-19 sufferers in the ASEAN Region. This shows that health and economic issues are important and urgent.

The Indonesian government has published that the number of COVID-19 cases until September 2020 has reached more than 220 thousand people, of which 8,800 died. The spread of COVID-19 cases throughout Indonesia tends to fluctuate. DKI Jakarta Province has the highest number of COVID-19 cases, followed by East Java, Central Java, and West Java Provinces. Furthermore, the development of the number of COVID-19 cases has significant implications for the economy and business actors, both on a micro and large scale. According to BPS (2020), the position of the Indonesian economy in Quarter II-2020 towards Quarter II-2019 experienced a growth contraction of -5.32 percent (yoy). Monthly inflation data during the COVID-19 pandemic tends to fluctuate. For example, in January 2020 the inflation rate of Indonesia was 0.39%, April was 0.08%, and August was -0.05%.

The purpose of this study was to estimate the effect of COVID-19 on economic growth in Indonesia in the 2020 period: q1-2020: q2. There are about 68 observations cover 34 provinces and 2020: q1 - 2020: q2 period. This

study used the Solow Growth Model. This study defined inflation as an explanatory variable to analyze the implications of price dynamics during the COVID-19 pandemic in Indonesia.

Contributions to the existence of literature include the effect of COVID-19 on economic growth based on the Solow Growth Model, a data panel that reflects the estimation results at the provincial level. In addition, contributions to policies include handling and controlling the COVID-19 pandemic in the long term to ensure increased economic growth. This shows that health and economic policies cannot be contradictory (mix policy).

In general, the significant implications of the COVID-19 pandemic for the economy at the provincial level occurred in the second quarter of 2020. Only two provinces were able to maintain a positive level of economic growth, namely: West Papua and Papua Provinces. This means that COVID-19 as a health issue has damaged local economic conditions significantly and evenly. This explanation can be seen in Table I.

Table I. Economic Growth Based On Provinces in Indonesia in Quarter II-2020 (%)

Province	y-o-y growth	Province	y-o-y growth
Aceh	-1.82	West Nusa Tenggara	-1.41
North Sumatra	-2.37	East Nusa Tenggara	-1.96
West Sumatra	-4.91	West Kalimantan	-3.40
Riau	-3.22	Central Kalimantan	-3.15
Jambi	-1.72	South Kalimantan	-2.61
South Sumatra	-1.37	East Kalimantan	-5.46
Bengkulu	-0.48	North Kalimantan	-3.35
Lampung	-3.57	North Sulawesi	-3.89
Bangka Belitung Islands	-4.98	Central Sulawesi	-0.06
Riau Islands	-6.66	South Sulawesi	-3.87
DKI Jakarta	-8.22	Southeast Sulawesi	-2.39
West Java	-5.98	Gorontalo	-0.27
Central Java	-5.94	West Sulawesi	-0.78
DI Yogyakarta	-6.74	Maluku	-0.92
East Java	-5.90	North Maluku	-0.16
Banten	-7.40	West Papua	0.53
Bali	-10.98	Papua	4.52

Source: BPS (2020).

BPS (2020) published that at the national level, COVID-19 significantly impeded three economic sectors, namely: the accommodation and food and beverage sector by 92.47%, other services by 90.90%, and transportation

and warehousing by 90.34%. During January-August 2020, the national export rate has decreased by -6.51% compared to the same period the previous year. Meanwhile, during the same period, several types of imported goods also experienced a decline such as consumer goods by -7.86%, raw or auxiliary materials by -18.85%, and capital goods by -20.13%.

Economists are paying attention to the impact of the COVID-19 pandemic on economic growth. For example, Suryahadi, Al Izzati & Suryadarma (2020) stated that COVID-19 has an impact on increasing the poverty rate in Indonesia. In general, COVID-19 can have an impact on the macroeconomy both in the medium and long term (Jordà, Singh & Taylor, 2020). In detail, an empirical finding by Chaudhary, Sodani & Das (2020), showed that the impact of the COVID-19 pandemic in India has shifted social and economic life, for example, the impact on the aviation, tourism, retail, capital market, MSME, and mining sectors.

An empirical study by McKibbin & Fernando (2020) described that intervention to the COVID-19 pandemic through improving health services will only affect the global economy in the short term. Therefore, there are several policies that can be carried out such as the closure of public facilities and policies for specific purposes that are effective at both local and national levels such as policies that have been implemented in China, South Korea, Italy, Iran, France, and the United States (Hsiang, et al., 2020).

## Literature Review

### Covid-19

Covid-19 (previously 2019-nCoV) was caused by the SARS-CoV-2 virus which was first discovered in Wuhan City, Hubei Province, China in December 2019, and in early 2020 continued to spread throughout the world. Therefore, WHO has declared an international health emergency that has become a pandemic (McKibbin and Fernando, 2020). China, with the second-largest economy in the world and a GDP of \$ 13.6 trillion, has experienced a sharp decline in the first quarter of 2020, while China is an important country in the world as a source of supply and demand (Açıkgöz and Günay, 2020, Norouzia, de Rubensb, Choupanpieshehc, and Enevoldsenb, 2020). On the other hand, Anderson, Mckee, and Mossialos (2020) stated that the International Monetary Fund (IMF) predicted a 6.1% decline in the gross domestic product in developed countries in 2020 due to social restrictions policies so that costs would increase on the economic balance. According to Oldekop, et al. (2020), COVID-19 has changed the global order and shows a failure to provide public goods, in this case, health facilities, thus having an impact on global economic and social life.

Nicola, et al. (2020) stated that COVID-19 has changed the condition of education from pre-school to higher education levels worldwide, physical restrictions also limits mobility in the world of education. In Indonesia, the effect on the education sector is felt for the lower middle class, where many people cannot access the internet properly for schools during the pandemic, in addition, the lack of preparedness in the budget provision and lack of facilities hampered the education process in Indonesia during the pandemic. According to UNESCO, COVID-19 threatens 577,305,660 students from pre-primary to high school education and 86,034,287 students worldwide. Norouzia, de Rubensb, Choupanpieshehc, and Enevoldsenb (2020) stated that COVID-19 has a significant effect on electricity and energy consumption, such as a decrease in energy demand due to restrictions on transportation use around the world. Buheji, et al. (2020) explained the projection of an increase in the unemployment rate above 10% at the end of 2020. In detail, Chaudhary, Sodani, and Das (2020) stated that there is an impact on increasing unemployment due to shifts in supply (production of goods and services) and also demand (consumption and investment). COVID-19 has had a significant impact on several important sectors such as manufacturing companies, hospitality and travel services, health, retail, banks, property, education, health, information technology, recreation, media, and others. McKibbin and Fernando (2020) showed that if COVID-19 is intervened with an increase in health services, it will only affect the global economy in the short term.

Gupta, et al. (2020) with county cross-sectional regressions saw a trade-off between health policy and economic



activity in America. Chaudhary, Sodani, and Das (2020) analyzed the impact of COVID-19 on the Indian economy using the global model of the G-Cubed (Asia-Pacific) method, which shows a significant decline in economic growth, lower interest rates, lower foreign investment, lower oil demand, lower informal sector income, and lower tourism sector. The COVID-19 cases in Malaysia (Chia, Liew, and Rowland, 2020) reduce industrial profits and the stock market in Malaysia. Hasanat, et al., (2020) found that COVID-19 has a huge impact on e-commerce in Malaysia, especially since the largest supply and demand comes from China. Karim, Haque, Anis, and Ulfy (2020) also found a sharp decline in the tourism, aviation, and hospitality industry in Malaysia due to COVID-19. Suryahadi, Al Izzati, and Suryadarma (2020) used shock patterns in Indonesia in 2005-2006 to measure the distribution impact in 2019-2020 due to COVID-19 on household expenditure which showed that COVID-19 could reduce the economic growth of Indonesia to between 4, 2% and -3.5% based on simulations and patterns of past shocks, so that the poverty rate will increase from 9.2% in September 2019 to 9.7% by the end of 2020.

### Economic Growth

In general, economic growth requires efficient production factors such as physical capital, labor and human capital, technological progress, and institutions. Neoclassical economists emphasize input accumulation and technology as endogenous factors. Kaldor (1957) stated that the difference in economic growth between countries is determined by economic and non-economic factors, where productivity and innovation are the keys to growth. Productivity encourages development carried out by the government to be successful in an effective manner, so as to achieve the prosperity of the people. The Solow Growth Model (1956) can be stated as follows :

$$(\ln y_{i,\tau} - \ln y_{i0})/\tau \cong c_i - \frac{(1-e^{-\lambda i\tau})}{\tau} \ln y_{i0} + \frac{(1-e^{-\lambda i\tau})}{\tau} \left( \frac{\alpha}{1-\alpha} \right) x \{ \ln(s_i) - \ln(\delta + g_i + n_i) \}$$

Where  $\lambda_i = (\delta + g_i + n_i)(1 - \alpha)$  dan  $c_i = g_i + (1/\tau)(1 - e^{-\lambda i\tau}) \ln A_0$ .

Based on this equation,  $i$  is the country in the  $(0, \tau)$  period,  $n_i$  is the growth of workers,  $s_i$  is the ratio of investment to GDP,  $\delta$  is depreciation,  $g$  is the growth of technology,  $\alpha$  is the coefficient of capital, and  $A_0$  is technology.

The Solow Growth Model believes in long-term growth so it pays attention to population and technology. Humans as the main factor in economic development are represented by health. COVID-19 has a significant impact on the physical condition of humans, such as by limiting productivity with social restrictions to reduce the impact of transmission. Household consumption is still the largest contributor to national income. During the pandemic, there is a drastic decline in the household consumption sector, this condition occurred in all provinces thus reducing aggregate economic growth.

### Method

This study used macroeconomic data and data on COVID-19 cases at the provincial level for 2020: q1-2020: q2. Economic growth is the percentage change in the gross domestic regional product (GRDP) in percentage. Labor force data is the publication data of the total workforce for 1 semester. Meanwhile, investment is divided into domestic and foreign investment. This can be explained in Table II.

This study used the data on the users of information and communication technology (ICT) which reflects technology or knowledge in economic growth theory. In addition, the inflation variable will detect the effect of price dynamics and COVID-19 which expresses pandemic conditions in the study period.

Table II. Definition of Operational Variable

Variables	Description	Source
GRDP growth (grdpg)	Local economic growth at province level (% ,yoy).	BPS
Foreign investment (fi)	Total of foreign investment in million USD. Data will be transformed into logarithm.	BPS and BKPM
Domestic Investment (di)	Total of domestic investment in billion IDR. Data will be transformed into logarithm.	BPS and BKPM
Labor Force (lb)	Total of labor force in person. Data will be transformed into logarithm.	BPS
Information and Communication Technology Observers (icto)	Number of observers for ICT in a region at a certain time (index). Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. A score of 0 means there was not enough data for this term. Data will be transformed into logarithm.	google trend
Inflation (inf)	Inflation in %.	BPS
COVID-19 cases (covid19c)	Total of COVID-19 cases/confirmed (person).	Ministry of Health

This study used a panel data estimation model. The basic concept of data panels refers to Pesar (2015). Meanwhile, economic theory is used as the basis for forming the panel data estimation model was the Solow Growth Model. Equation 1 describes the effect of COVID-19 and inflation on economic growth in Indonesia at the provincial level based on the Solow Growth Model. GRDPG is provincial economic growth, LB is the labor force, DI is a domestic investment, FI is foreign investment, ICTO is ICT user, INF explains the inflation rate while COVID-19C reflects the number of COVID-19 cases. The influencing variables of economic growth will be transformed into logarithms (L). Meanwhile, GRDPG, INF, and COVID-19C are not transformed into logarithms. Thus, the static panel data estimation model that has been transformed into a logarithm is as follows:

$$GRDPG_{it} = \alpha_0 + \beta_1 LFI_{it} + \beta_2 LDI_{it} + \beta_3 LLF_{it} + \beta_4 LICTO_{it} + \beta_5 INF_{it} + \beta_6 COVID-19C_{it} + \varepsilon_{it} \quad (1)$$

Equation 1 expresses the Pooled OLS or Common Effects Model (CEM) which will be formulated into a Fixed Effects Model (FEM) and Random Effects Model (REM). The final result of the FEM equation is described in Equation (2) while Equation (3) is the REM equation. In addition, REM assumes that all parameters are random, so the error term of REM is w, where  $w = \varepsilon + u$ .

$$GRDPG_{it} = \alpha_0 + \alpha_1 D_{nit} + \beta_1 LFI_{it} + \beta_2 LDI_{it} + \beta_3 LLF_{it} + \beta_4 LICTO_{it} + \beta_5 INF_{it} + \beta_6 COVID-19C_{it} + \varepsilon_{it} \quad (2)$$

$$GRDPG_{it} = \alpha_0 + \beta_1 LFI_{it} + \beta_2 LDI_{it} + \beta_3 LLF_{it} + \beta_4 LICTO_{it} + \beta_5 INF_{it} + \beta_6 COVID-19C_{it} + w_{it} \quad (3)$$



The  $\alpha_0$  is the intercept while  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ , and  $\beta_6$  are the parameters/slope of the equation. The value of  $\beta_{1-4}$  are  $> 0$  while  $\beta_{5\&6}$  are  $< 0$ . In addition, the 'i' is the cross-section of 34 provinces while 't' is a time series of period 2020:q1-2020:q2.

## Result and Discussion

### Descriptive Statistics

Descriptive statistics explain the distribution of study data. The distribution of the data can be seen from the mean, minimum, maximum, and standard deviation values. The results of descriptive statistics on all variables are shown in Table III.

Economic growth at the provincial level in Indonesia has a mean of -0.049% as a result of the COVID-19 pandemic. The level of investment, both domestic and foreign, tends to decline. Nevertheless, the rate of COVID-19 cases is increasing.

Table III. Descriptive Statistics

Variable		Mean Dev.	Std.	Min	Max	Observations
grdp	overall	-0.049 4.012		-10.98	5.68	N = 68
	between	4.542		-3.26	3.16	n = 34
	within	2.373		-7.77	7.73	T = 2
fi	overall	199.752 264.789		0.00	1352.20	N = 68
	between	0.501		199.40	200.11	n = 34
	within	264.789		-0.35	1352.55	T = 2
di	overall	3044.416 4836.527		0.90	26562.80	N = 68
	between	383.674		2773.12	3315.72	n = 34
	within	4828.798		-270.40	26291.50	T = 2
lf	overall	1926821 2749274		174329.50	11200000.00	N = 68
	between			1926821.00	1926821.00	n =

		0.000			34	
	within		174329.50	11200000.00	T	=
		2749274			2	
icto	overall	37.324 18.878	16.00	100.00	N =	68
	between	14.641	26.97	47.68	n	=
					34	
	within	15.735	13.65	110.35	T	=
					2	
inf	overall	1.999853 0.899	-0.37	3.67	N =	68
	between	0.590	1.58	2.42	n	=
					34	
	within	0.794	-0.29	3.59	T	=
					2	
covid19c	overall	1402.015 3685.723	0.00	22947.00	N =	68
	between	886.358	775.26	2028.77	n	=
					34	
	within	3631.236	-625.75	22320.25	T	=
					2	

Source: Secondary data (processed)

#### Determinants of Economic Growth During COVID-19 Pandemic

The Solow Growth Model emphasizes the important role of technology or knowledge in forming economic growth. Thus, economic growth is not only determined by the number of workers and the value of the investment but also the use of technology in the production process. In addition, health issues such as the COVID-19 pandemic can also contribute to a contraction in economic growth. For this reason, the estimation of data panel equations (1), (2), and (3) carried out can be seen in Table IV.

Table IV. Summary of Static Panel Estimation

Variables	Pooled OLS	Fixed Effects	Random Effects
LFI	0.1269781 (0.51)	0.0805282 (0.45)	0.1269781 (0.51)
LDI	-0.2311881 (-0.73) 0.73)	-0.3178115 (-1.37)	-0.2311881 (-0.73)
LLF	-0.6463625 (-1.05)	-0.1754024 (-0.39)	-0.6463625 (-1.05)

LICTO	4.871523 (5.15)***	0.8967867 (1.03)	4.871523 (5.14)***
INF	0.9936426 (1.94)*	-0.3751339 (-0.90)	0.9936426 (1.94)*
COVID-19C	0.0002362 (1.89)*	0.000145 (1.59)	0.0002362 (1.89)*
CONSTANT	-9.460838 (-1.20)	1.595879 (0.27)	-9.460838 (-1.20)
R-square:			
Within		0.1786	0.0744
Between		1.0000	1.0000
Overall	0.4591	0.1608	0.4591
F-statistics (Wald chi2)		2.10*	50.08***
BP LM Test	0.00		
Hausman Test		200.17***	
Observation	68	68	68

Source: Author's estimation

Note: () denotes t-statistics; \*\*\*, \*\* and \* are 1%, 5% and 10% respectively.

Table IV confirms that the fixed effects model (FEM) was more feasible than the pooled OLS and random effects model (REM). This is indicated by the significance of the Hausman Test. FEM showed that the Solow Growth Model was not proven in COVID-19 because the partial test results (t-statistics) were insignificant. However, the F-test statistics indicated significant results. This shows that overall, the independent variables significantly influenced the economic growth of provinces in Indonesia. In contrast, the R-square value both within and overall was low in the range of 16-18%. This means other independent variables can determine economic growth during the COVID-19 pandemic outside of the estimation models in equations (1), (2), and (3).

Furthermore, statistically, the estimation results of REM and pooled OLS tend to express the technological implications of the Solow Growth Model Theory. This can be seen from the significant and positive influence of the LICTO variable on economic growth. This means the higher the use of ICT, the higher the rate of economic growth. In addition, inflation and the COVID-19 case also have significant implications for economic growth at the provincial level. However, the effect of both was positive or not in accordance with the hypothesis. This indicates that the higher the inflation rate and the number of COVID-19 cases, the higher the economic growth at the provincial level. Thus, the estimation results of REM and pooled OLS need to be scrutinized and interpreted carefully.

An empirical study by Chaudhary, et al (2020) described that COVID-19 caused financial markets and foreign investment in India to contract and decline significantly. This means the economic growth of India is contracting. In addition, the proof of the Neoclassic Growth Model theory during the COVID-19 pandemic shows that capital is not significantly affected, but labor and public debt will contract the level of the domestic economy (Jorda, et al, 2020).

## Conclusion and Policy Implication

COVID-19 is a global health issue that directly contracts the economic growth rate of Indonesia. This suggests that there is a strong indication of a relationship between health and the national economy. For this reason, the purpose of this study was to estimate the effect of COVID-19 on economic growth at the provincial level in Indonesia during 2020: q1-2020: q2. Static panel data was used to explain empirical findings.

The results showed that the feasible panel data model was a fixed effects model (FEM). The FEM estimation showed that COVID-19 was insignificantly influenced by economic growth at the provincial level. In addition, the Solow Growth Model was not proven because the determinants of economic growth were insignificantly influenced.

The policy implication that can be formulated is that both central and local governments can focus more on controlling COVID-19 cases and increasing economic activity prudently. This means health and economic policies become mixed policies. Economic activities must continue to be carried out by carrying out strict supervision of the community to comply with health protocols. In addition, the central and local governments are an integrated system in implementing a mixed policy of domestic health and economy.

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## **Determinants of Secondhand Clothes Repurchase Intention: Indonesian Consumer's Perspective**

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### **Abstract**

The dilemma of purchasing secondhand clothes has been discussed for a long time. On the one hand, it may help the environment, while on the other hand it also carries some risks. The purpose of this study was to examine the factors that influence secondhand clothes to repurchase Intention among Indonesian. Based on the consumers' preferences, seven factors that influence repurchase intention are proposed in terms of individual preferences and economic perspectives. This study provides a comprehensive perspective of purchasing secondhand clothes, including the eco-consciousness, frugality, need for status, perceived concern or risk, originality, and bargain hunting. From 373 total questionnaire responses, 253 valid responses were collected from across Indonesia. Partial Least Square (PLS) path modelling approach and structural equation modelling (PLS-SEM) technique was performed to test the proposed hypothesis. This study found that eco-consciousness, frugality, need for status, and originality influence people to purchase secondhand clothes, with frugality as the most significant factor. However, perceived concern and bargain-hunting are found insignificant in shaping the intention to purchase second-hand clothes. Further, there is a positive relationship between secondhand purchase intention and second-hand repurchase intention. The practical and managerial implication is discussed.

**Keywords:** Eco-Consciousness, Frugality, Need for Status, Perceived Concern, Originality, Bargain Hunting, Secondhand Purchase Intention

### **1. Introduction**

Secondhand clothes generally are bought by people with low income as a bargain (Cervellon, Carey, & Harms, 2012). However, now the secondhand clothes have become a trend in the fashion business; according to ThredUp's 2019 Resale report, conducted by GlobalData, the secondhand clothing resale has grown 21 faster than the new clothes market in the last three years and predicted to reach USD 51 billion in the next five years (Turner, 2020).

The growth of the Fashion Industry in Indonesia has been an enormous contribution to the Indonesian creative economy that has contributed around 18.01% or 116 Trillion Indonesian Rupiah (Andrea, 2019). Currently, the Secondhand industry is one of the fast forward growing industries in Indonesia. It even has a considerable potential to be a country with the largest secondhand market, as stated by the Carousell Co-founder and

President Marcus Tan (Azizah & Rezkisari, 2017). In 2018 Tinkerlust, as the company that focused on selling secondhand apparel has 15-20% revenue growth every month with the site record of 100.000 visitors and 1.000.000 unique visitors monthly (The Finery Report, 2018).

Knowing the factors that drive the purchase intention towards secondhand clothes is essential in order to know the secondhand business even more because, as stated in previous research, the consumers' will trough several processes before they decide to buy something (Nugraha, Kusumawardani, & Octavianie, 2018). Nevertheless, it is not enough to just knowing about the purchase intention; we also need to influence the peoples to have the intention for doing repurchase, as stated by the previous research that when the consumers are satisfied with what they had gotten, the possibilities to do a repurchase will become higher (Akhter, 2010).

Based on the research conducted by Cervellon et al., (2012), one of the factors that drive peoples to purchase secondhand is their awareness of the environment, with the mindset of if they are buying secondhand clothes that still good enough to wear can help the environment. In the current era, many peoples are more concerns about the environmental destruction that drive them to change their lifestyle to become more eco-friendly, this reason is one that makes the potential of secondhand business rises (Khoer, 2020). The previous researches also find that the sense of frugality is influencing the secondhand clothes; peoples who are concerned about their economic will prefer to buy the secondhand clothes that often comes with a lower price compared to the newly manufactured clothes (Cervellon et al., 2012; Guiot & Roux, 2010). Because of secondhand clothes are often come with a low price, the business owner can buy it with a massive amount from the distributor and will get a discounted price when they buy it in a huge amount; because of the cheap capital, the amount of profit can be increased as well (Khoer, 2020).

The next essential factors on secondhand clothes are the Need for Status; people that care about their status in society, but did not have much money will prefer to buy secondhand clothes rather than buying ordinary new clothes (Cervellon et al., 2012). Secondhand clothes often come from a famous brand at a low price, and people will prefer to buy that as long as the items are still good to wear (Salbiah & Virdhani, 2019). One of the reasons for peoples buying secondhand clothes is because of the originality value; by purchasing secondhand clothes, people will get a chance to found a nowhere to find a piece of clothes that fit their sense of fashion (Guiot & Roux, 2010). Lastly, Bargain Hunting can be included as the factor that drives the purchase of secondhand clothes. Peoples that shops for secondhand pieces often search for a bargain to fit their economic condition (Cervellon et al., 2012; Guiot & Roux, 2010).

Before peoples buying secondhand clothes, they often concern about what if the clothes contain germs or they are afraid that the clothes that they buy have an imagined body marking or odours that can give them discomfort feeling (Roux & Korchia, 2006; Xu, Chen, Burman, & Zhao, 2014). While the other people will be uncomfortable by wearing secondhand clothes by imagining that people around them will look down on them by thinking that they cannot afford to buy new clothes, those reasons also become the reasons on why several people prefer to have a few clothes rather than buying secondhand clothes (Liang & Xu, 2018; Xu et al., 2014).

Identifying the consumers' driver is vital in order to know the intention to purchase and repurchase towards



secondhand clothes in Indonesia. Perceived concerns often become the driver before they purchase secondhand clothes (Xu et al., 2014). Secondhand clothes often become the solution for people that search for a bargain before they purchase something (Cervellon et al., 2012). Hence, in order to found the other factors that drive the purchase intention towards secondhand clothes, this research adds Eco-consciousness, Frugality, Need for Status, Bargain Hunting (Cervellon et al., 2012); Perceived Concerns (Xu et al., 2014); and Originality (Guiot & Roux, 2010). Secondhand clothes have become a trend in Indonesia from different income levels. This study assesses the eight factors mentioned above through an integrated model and provides a new perspective of repurchase of secondhand clothes among Indonesian consumers.

## 2. Literature Review

### 2.1 Eco-Consciousness

Eco refers to the process of action to intentionally lessen the impact of human behaviour towards the natural environment (Zelezny & Schultz, 2000). Previous research mentioned the overconsumption habit of consumers harms the environment (Cozer, 2018). Those comprehensions took overtime and made consumers more sensitive about the impact of purchasing environmentally harmful products (Mishal, Dubey, Gupta, & Luo, 2017). The fashion industry also took effect on those problems by started to produce their products using recycled material such as Adidas in 2016, Burberry with their non-plastic material brand by 2025, and Victoria Beckham that campaigning the refusal of using animal leather and fur (Dmytrenko, 2019).

The previous research was measuring eco-consciousness through environmental saving, natural resource-saving, and pollution reduction through recycling and reusing used clothes (Seo & Kim, 2019). Qu, Liu, Guo, Zhuo, & Tseng (2018) measuring the environmental influence in reproduced items purchases based on consumers' subjective norms and reducing consuming habits of non-renewal resources items needs to save the environment. According to Cozer (2018), environmental consciousness is measured by the consumers' belief in a secondhand clothes store that can save the environment from pollution by reusing old clothes instead of throwing them away.

The research conducted by Cervellon et al. (2012) found that eco-consciousness significantly affected bargain hunting negatively on secondhand shopping, but inapplicable on vintage shopping. According to Sengmanee (2016), Eco-consciousness has a significant value to be included in bargain hunting towards the decision on buying secondhand luxury products in Bangkok. According to Cervellon et al. (2012), the consumer's intention for bargain hunting towards secondhand clothes purchases is related to their awareness of the environment that drives their intention even more.

Xu et al. (2014) found that environmental value is affecting purchase intention towards secondhand clothes for Chinese respondents. In contrast, American respondents ignored that but more focusing on economic values. This statement contradicted the statement on research by Cervellon et al. (2012) that stated eco-consciousness did not have a direct influence on secondhand purchase. Previous research found that the post-80s generation



cohort pays attention to the environmental value towards their secondhand clothes consumption (Liang & Xu, 2018). Cervellon et al. (2012) were also state that consumers' awareness of the environment becomes the drive for them to purchase secondhand clothes even more. Based on the supported results from previous research, this research proposes the following hypothesis:

**H1a:** Eco-consciousness affecting Bargain Hunting

**H1b:** Eco-consciousness affecting Secondhand Purchase Intention

## 2.2 Frugality

Frugality refers to a disciplined and careful use of money and object (Roux & Guiot, 2008). Lastovicka, Bettencourt, Hughner & Kuntze (1999) stated that frugality is not pure deprivation but reflects short-term sacrifices in buying and using consumer goods to achieve longer-term personal goals. The previous study also found that frugality was commonly used as an excuse because people did not want to pay a 'newness premium' that's why they naturally suggest frugality as a reasoned approach (Guiot & Roux, 2010). Chen, Ren, Gu & Zhang (2019) also define frugality as a psychological factor of the latent buyer.

Cervellon et al. (2012) measured frugality from consumers' willingness to save more money before they are buying things and related to secondhand items because they can get excellent quality goods with lower prices compared to the new one. Chen et al. (2019) exploring frugality in the new energy vehicles industry and measured it with the consumers' belief on new energy vehicles are more cost-wise decisions because they can get subsidies from the government. Based on the two previous studies, frugality was measured by the consumers' will on buying more things if the items they found things come with lower price and buying the secondhand items become the alternatives, because there are many things often being thrown away while still having tolerated condition (Fernando, Sivakumaran, & Suganthi, 2018; Hansson & Morozov, 2016).

The research conducted by Cervellon et al. (2012) found a significant influence of frugality through bargain hunting. The other research found that frugality to be one of the significant components in bargain hunting that can affect the consumers' decision towards the secondhand luxury brand in Bangkok after done the rotated component matrix test (Sengmanee, 2016). When consumers' searching on secondhand items, they were also doing a bargain hunt, and frugality is the primary stimulus for them (Cervellon et al., 2012). The research conducted by Cervellon et al. (2012) found that there are positive relationships between frugality and consumers' secondhand clothes purchase intention. Frugality was found to be the main reason in the analysis for secondhand consumption and proven through the interview with some of the secondhand luxury store managers (Almeida, 2019). Cervellon et al. (2012) also state that frugality is the main driver for consumers to purchase secondhand clothes but cannot be applied in vintage purchase intention. In this research, the main focus will be the secondhand market and supported by the relationship between those variables. This research proposes the following hypothesis:

**H2a:** Frugality affecting Bargain Hunting

**H2b:** Frugality affecting Secondhand Purchase Intention

## 2.3 Need for Status

The need for status can be described as the consumer's desire that seeks to gain prestige by consuming luxury goods (Young, Nunes, & Drèze, 2010). The previous study was defining the status consumption as a desire for status and conspicuous consumption that generally applied to people that having a struggle with their self-respect that lead them to purchase of status symbol that can increase their status and get social approval (Eastman, Goldsmith, & Flynn, 1999). Another research state if the consumer will pay a higher price for the same function item with status because they were craving for status (Young et al., 2010).

Based on the previous research, status consumption was measured based on the item's status image, consumers' economic value towards the status item, and consumers' preferences towards status items (Bakhshian, Lee, & Cao, 2019). Meanwhile, Eastman, Iyer, Sherpherd & Heugel (2018) measuring status consumption by consumers' interest towards the status item and consumers' economic value towards a status item.

The previous research put the need for status as one of the factors that influence the bargain hunting in the decision to shop secondhand luxury products (Sengmanee, 2016). The need for status was found to influence negatively significant trough bargain hunting (Cervellon et al., 2012). When consumers purchase luxury products, the economic value becomes one of the reasons to get alternative by buying secondhand trough bargain hunt to fulfil their need for status (Sengmanee, 2016).

Based on research conducted by Cervellon et al. (2012), the need for status did not have a direct influence on secondhand purchase intention but had an indirect impact trough secondhand purchase intention from bargain hunting. Sengmanee (2016) also states that bargain hunting significantly influences the shopping decision toward secondhand products. Some secondhand clothes from certain brands and circumstances were likely to have a social status that will drive more intention to purchase (Appelgren & Bohlin, 2015). However, status consumption influence purchase intention was not supported on the research conducted by Bakhshian et al. (2019) on counterfeit products. This research will focus on the secondhand products, and based on previous results; the following hypothesis will be:

**H3a:** Need for status affecting Bargain Hunting

**H3b:** Need for status affecting Secondhand Purchase Intention

## 2.4 Perceived Concerns

According to Xu, Chen, Burman & Zhao (2014), Concerns that felt by people before they were buying secondhand clothes are including germ contamination and negative impact on the public image because of wearing items that have been worn by others. Previous research state the concerns on wearing secondhand clothes are because the secondhand clothes may contain real or imagined body markings, such as stains or odours that can be felt as a territorial encroachment of the previous owner (Roux & Korchia, 2006). Another study also stated that the other concerns for people not buying secondhand clothes are because they do not want to ruin their image and seen as people that financially unable to purchase newly produced clothes (Xu et al., 2014). Concerns on buying also may come from their felling towards the social image that makes them prefer

to have fewer clothes rather than purchasing secondhand (Liang & Xu, 2018).

Previous research measuring consumers' concerns about buying secondhand clothes mostly because of the germ contamination and sanitary matter, environmental judgment on secondhand shoppers, and society's images of secondhand clothes may have a lower quality than the new one (Ma & Li, 2018). The other research measured secondhand' concerns based on the sense of belonging and the history of the clothes itself (Roux & Korchia, 2006).

Xu et al. (2014) found a strong influence on perceived concerns towards secondhand purchase intention for Chinese respondents, while American respondents were more aware of economic values. Perceived concerns were found to have relationships with secondhand clothes consumption without significant differences between generation cohorts from the 60s until the 90s. These statements strengthen the statements on previous research before (Liang & Xu, 2018; Xu et al., 2014).

Previous research found that originality is one of the factors of hedonic motivation for people when they go to purchase secondhand clothes (Hansson & Morozov, 2016). Another research also found originality to be one of the factors that influence secondhand purchase motivation after conducting a non-hierarchical cluster analysis (Guiot & Roux, 2010). Hansson & Morozov (2016) conclude that when people went on secondhand shopping, they are driven by the originality factor on experiencing to find a rare piece of clothing. Based on previous supported results, this research proposes the following hypothesis:

#### **H4: Perceived Concerns affecting Secondhand Purchase Intention**

##### **2.5 Originality**

Originality is defined as a concept referring to the quality of being new and inventive (Gatignon & Xuereb, 1997). Guiot & Roux (2010) stated that there is a desire for consumers to purchase something if the items have a unique and unusual value that matches their individuality. In terms of secondhand clothes hunt, people hope that by searching good secondhand clothes, they can found a rare piece of clothes that nowhere to find in mainstream stores, and they will have a special feeling on owning those pieces of clothes (Hansson & Morozov, 2016).

Based on previous research by Guiot & Roux (2010), the originality is measured trough the people's tough on newly produced clothes are being too ordinary. By searching secondhand clothes that mostly came from the older article can make their way on dressing style can be different from most people nowadays, and found pieces that will only belong to them and strengthen their sense of fashion (Guiot & Roux, 2010). Hansson & Morozov (2016) measured originality trough consumers' desire to have products that nowhere to find and consumers' willingness to have an item that only belongs to them.

Previous research found that originality is one of the factors of hedonic motivation for people when they go to purchase secondhand clothes (Hansson & Morozov, 2016). Another research also found originality to be one of the factors that influence secondhand purchase motivation after conducting a non-hierarchical cluster analysis (Guiot & Roux, 2010). Hansson & Morozov (2016) conclude that when people went on secondhand shopping,

they are driven by the originality factor on experiencing to find a rare piece of clothing. Based on previous supported results, this research proposes the following hypothesis:

**H5: Originality affecting Secondhand Purchase Intention**

**2.6 Bargain Hunting**

Bargain hunting can be defined as the shopping motivation to find the lowest prices or to find products with unbeatable prices (Cervellon et al., 2012). Bargain hunting also can be defined as the wish to pay less and spend less on doing transactions (Roux & Guiot, 2008). Previous research also states that bargain hunt is linked with a sense of achievement when gaining a product at a lower price (Hansson & Morozov, 2016). Based on previous research by Roux & Guiot (2010), bargain hunting can be measured by economic motivation where people want to pay less for their wanted items. Acquisition transaction theory is used as the theoretical perspective to find possible relationships between female South African consumer and luxury bargain hunting (Van Heerde, 2018).

Cervellon et al. (2012) found a bargain-hunting load significantly on secondhand purchase intention. However, when tested on vintage items purchase, bargain hunting is showing irrelevant results between those relationships. Based on previous research, bargain-hunting was found to have a significant influence on the decision to purchase secondhand luxury products in parameter estimate summary test (Sengmanee, 2016). Consumers are influenced by price sensitivity and frugality when they search on secondhand clothes, and because of that, they will search for a bargain before purchasing one of them (Cervellon et al., 2012). Based on the relationship between those two variables, this research proposes the following hypothesis :

**H6: Bargain Hunting affecting Secondhand Purchase Intention**

**2.7 Secondhand Purchase Intention**

Purchase intention means the willingness to purchase a product based on the consumers' perceived product value, evaluation of performance, and financial risk (Agarwal & Teas, 2001). Purchase Intention can be defined as consumers' intention to purchase a product or to patronise a service firm (Lin & Chen, 2009; Shao, Baker, & Wagner, 2004). Those definitions can be implied in the secondhand market also (Mubarak & Sanawiri, 2018; Seo & Kim, 2019; Xu et al., 2014).

Based on previous research, several items can be used as measurement items to measure the Purchase intention on secondhand clothes such as consumer beliefs that include environment, frugality, and beliefs in the Non-profit Thrift store, Attitude, subjective norms, and perceived behavioural control (Seo & Kim, 2019). According to previous research, purchase intention toward secondhand clothes can be measured from consumers' perceived sustainability, economic motivation, distance from the cons system, and Attitude toward buying secondhand clothes (Ek Styvén & Mariani, 2020). The other research was measuring the purchase intention on new energy vehicles by the supportive policy, price factor, functional quality, service quality, frugality, and belief of "Mianzi" or consumer status. (Chen, Ren, Gu, & Zhang, 2019). Also, before consumers decide to buy something, they will trough some process until they finally purchase specific products (Nugraha et al., 2018).

Based on the previous research, purchase intention found to be strongly supported to have a positive effect on

repurchase intention (Lin & Chen, 2009). This research also supported the previous statement, according to Akhter (2010), the impact of purchase intention towards repurchase behaviour found to be positive and significant. Thus if the consumers are satisfied with what they got, they tend to do repurchase for that kind of product (Akhter, 2010). This research focusing on the secondhand clothes market in Indonesia, and based on the relationship between those two variables; this research proposes the following hypothesis:

**H7: Secondhand Purchase Intention affecting Secondhand Repurchase Intention**

## 2.8 Secondhand Repurchase Intention

Repurchase intention can be explained as the individual's judgment about buying a designated service again from the same company (Hellier, Geursen, Carr, & Rickard, 2003). Based on the previous statement, repurchase intention is a consideration to purchase something more than once (Pramataty, Najib, & Nurrochmat, 2015). Varga et al. also state that the more loyal customers, the more possibilities for repurchase intention to occur (Varga, Dlačić, & Vujičić, 2014). If people become more loyal to a particular brand or company, the more future purchase will occur (Savila, Wathoni, & Santoso, 2019).

Based on the previous research conducted by Swapana & Padmavathy (2018), the repurchase intention towards secondhand clothes can be measured through consumers' shopping experience on Online secondhand store, Attitude, and trust. Meanwhile, Ashfaq, Yun, Waheed, Khan & Farrukh (2019) measuring the repurchase intention of used products through expectation, consumer perceived enjoyment, perceived ease of use, and consumers' satisfaction.

## 3. Research Methods

### 3.1 Research Design

In this research quantitative research approach was being used. Quantitative research can be defined as research that based on analysed statistics data that are consisting of variables measured by numbers in determining the theory. Meanwhile, qualitative research is defined as the research that produces findings but without using statistical procedures (Yilmaz, 2013). Since this research are using statistical data and analysing it in statistical software, then the Quantitative method is preferred and more effective than using the Qualitative method. This research head to find out the consumers' repurchase intention for secondhand clothes in Indonesia, and in order to achieve the goal, a theoretical framework is required. Theoretical frameworks are describing the theory developed in the research, including the origin of the theory, and can guide the whole research and inform about the research itself (Ngulube, Mathipa, & Gumbo, 2015). This research framework is presented in Figure 1.

This research was held from May until August 2020 in Indonesia. The researcher initiating the research by observing the trends in society to find out the matters that need to be addressed, and later on proceed to study the literature to find the gap for the research. Thereupon, the researcher creates the research design by determining the research type, sampling design, and operational definition that originated from previous

studies. After that, the researcher gathers the primary data from the respondents and analyse it. Later on, after the analysis has been done, the researcher presents the analysis and explain it throughout secondary data, and then proceed to create the conclusion and implication of the research.

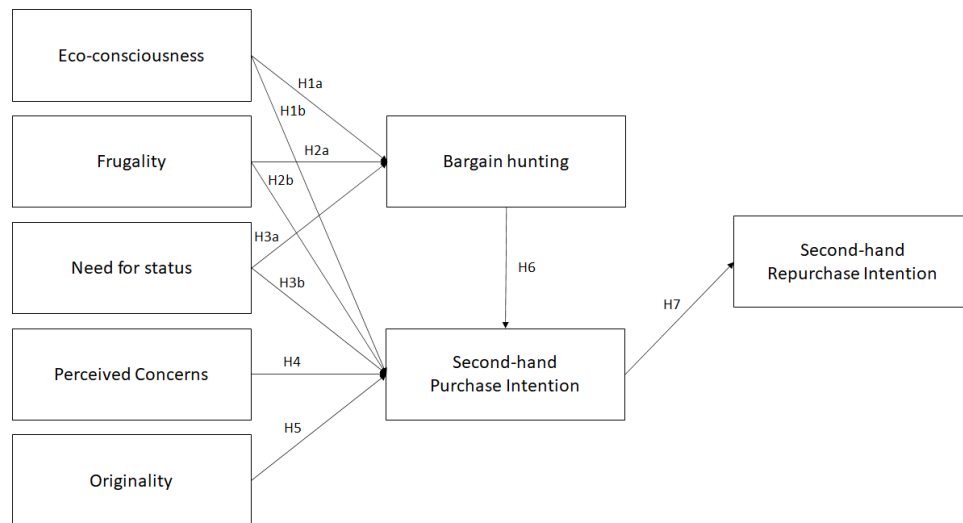


Figure 1. Research Framework

### 3.2 Sampling

The research population comes from Indonesian people who have purchased secondhand clothes at least twice in the past three years from online stores (websites), online social media platform (Facebook and Instagram), offline stores (Secondhand markets and Thrift shops), or other places such as garage sale and their acquaintance. The sample is coming from both male and female, with age restriction from 12 until above 50 years old without any occupation restriction, and only applied for Indonesian citizen. The sample size of 200 can be deemed as adequate for ten indicators or less measurement (Siddiqui, 2013). This research is using a purposive sampling technique with non-probability sampling to filter targeted samples from a particular population. Non – probability sampling technique was chosen because this technique is useful for large population sample and also useful if the researcher has limited resources (Etikan, Musa, & Alkassim, 2016).

In this research, the dominant respondents are female, with a total of 162 persons (64%), while male with 91 persons (27%). For the platform chosen to purchase secondhand clothes varied from Social Media online store (150 people; 59.3%), offline store (77 peoples; 30.4%), and others, which include the website, friend, and secondhand market (12 people; 4,8%). For the age, the dominant age range is 19-25 years with 209 people (82,6%), followed by 12-18 age groups with 19 people (7,5%), 26-35 with 12 people (4,7%), above 50 years old with ten people (4%), and 36-50 with three people (1,2%). The respondent's occupations are students (201 people, 83%), employee (16 people; 6,3%), freelancer (12 people; 4,7%), entrepreneurs (9 people; 3,6%), and housewives (6 people; 2,4%).

### 3.2 Research Instrument

This research was using close-ended questions through an online questionnaire to found the potential respondents as the instrument for the study. A questionnaire survey was suggested because this method can increase accessibility, decrease potential reduction in bias, and respondents' privacy can be kept if the questions may be a bit sensitive (Gratton & Jones, 2010). The researchers created the survey using Google form as the primary tool, and the survey is using 7- points Likert scale with "strongly disagree" in number 1 and "strongly agree" in number 7. There are 45 questions in total, which contain 5 to 7 items on each variable. 7- points scale was chosen because empirical studies have stated that reliability and validity are improved rather than using fewer points (Dawes, 2008).

The Operation Definition of Variables are originated from Seo & Kim (2019); Qu et al. (2018); Cozer (2018); Chen et al. (2019); Hansson & Morozov (2016); Fernando et al. (2018); Bakhshian et al. (2019); Eastman et al. (2018); Ma & Li (2017); Guiot & Roux (2010); Van Heerde (2018); Styvén & Mariani (2020); Swapana & Padmavathy (2018); and Ashfaq et al. (2019). The adjusted question can be seen in Note 1.

### 3.3 Data Analysis

In this study, Google Forms are being used to built the questionnaire while using the prior research as the formula. Since the primary data is the main component to complete this research, the survey method is used to elaborate with it. Every question was adjusted, and the Indonesian translation is also given to avoid misunderstanding and bias from the respondents. After the questionnaire is ready, the researcher using social media and instant messaging apps to gather the targeted respondents. Within one month, the data are collected to be researched. Later on, the data was exported to Microsoft Excel and then analysed using SMART PLS software. SMART PLS is being used to do the data analysis and see the correlation between each variable. The data can be called as valid and reliable if the results are meet the criteria in outer loadings, Composite Reliability, and the square root of Average Variance Extracted (AVE). However, the data will become meaningless if the latent variables were made up of uncorrelated measures (Kwong & Wong, 2013).

Furthermore, to test the reliability and validity of the data, all of the collected data from the questionnaire are exported to Microsoft Excel before inputted to the statistical software to analyse if the questionnaire can precisely measure the variable relations for further findings. The reliability and validity test has a specific requirement to be accepted (Kwong & Wong, 2013). Moreover, to check the Indicator Reliability, the outer loadings numbers are preferred to exceed 0.70 or higher, but 0.4 or higher were also accepted (Hulland, 1999). For Internal Consistency Reliability, the composite reliability numbers are preferred to exceed 0.70 or higher, but 0.6 or higher were also can be accepted (Bagozzi & Yi, 1988). For the Validity test, Convergent validity with AVE numbers must exceed 0.5 or higher and Discriminant validity with AVE numbers and Latent Variable Correlation; the square root should be higher than the correlations among latent variables need to be checked (Fornell & Larcker, 1981).

In order to do the data test and hypothesis significances, Structural Equation Modelling (SEM) is chosen for this study. The bootstrapping process is used to know the test significances on both Outer and Inner Loading results,



and to do this process, we need to go to calculate menu section then choose “bootstrapping” (Kwong & Wong, 2013). After done the Bootstrapping process, we need to check the “T-Statistic” value in the “Path Coefficients” section and can be called significant if the value is greater than 1.96 (Kwong & Wong, 2013). Two criteria need to be fulfilled in order for the data to be accepted; those criteria are the AVE and Composite Reliability (Ringle, Da Silva, & Bido, 2014). Composite reliability with a value above 0.70 and 0.90 are considered good (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). For the hypothesis, the R square value and path Coefficients are needed to be checked (Hair et al., 2014).

## 4. Findings

### 4.1 Validity and Reliability

The measurement items for each variable were gathered from the past studies that related to the used dimensions. The first step is gathered all of the required responses through the questionnaire, and later on, all of the collected responses are calculated using software to know the data’s validity and reliability.

The first conducted test in this study was for the PLS algorithm test. PLS Algorithm test is used to check the data’s validity and reliability (Kwong & Wong, 2013). The validity test is tested using Smart PLS version 3. The first need to check was the Construct Reliability and Validity that consist of several requirements to pass for data to be called valid and reliable (Kwong & Wong, 2013). The Construct Reliability is a central equilibrium of a scale that is used to statistically measure the latent variable (Garver & Mentzer, 1999). According to Bagozzi & Yi (1988), the AVE results should be at least 0.5 or higher. This research’s test result for independent variables show 0.670 for Eco-consciousness, 0.537 for frugality, 0.749 for Need for Status, 0.716 for originality, and 0.551 for Perceived Concerns. For the mediating variables, results were 0.721 for Bargain Hunting and 0.734 for Secondhand Purchase Intention. Last for the dependent variable Secondhand repurchase Intention show 0.830 as the results, which means all of the variables are valid. Hence the Construct Validity and Reliability results can be seen in table 1.

Table I. Construct reliability and validity

	Cronbach’s Alpha	Rho-A	Composite Reliability	Average Variance Extracted (AVE)
Bargain Hunting	0,903	0,904	0,928	0,721
Eco-Consciousness	0,876	0,878	0,910	0,670
Frugality	0,851	0,856	0,889	0,573
Need for Status	0,916	0,923	0,937	0,749
Originality	0,900	0,905	0,926	0,716
Perceived Concern	0,865	0,869	0,895	0,551
Secondhand Purchase Intention	0,927	0,927	0,943	0,734
Secondhand Repurchase Intention	0,949	0,950	0,961	0,830



The next results to check are from the Discriminant Validity Test that is used to verify that the proposed scales are measuring different constructs (Garver & Mentzer, 1999). Discriminant validity is stood for the level to construct the measures that it is intended to be measured (Hair et al., 2014). The Discriminant Validity requirement is the square root of AVE of each latent variable need to be higher than the correlation among the latent variables to be called valid (Fornell & Larcker, 1981). The results of the test have shown promising results with all of the square roots of AVE, which is the diagonal number is greater than the rest of the latent variables' AVE. The discriminant validity results in table 4.2 show the square root AVE results of Bargain Hunting (0.849), frugality (0.819), Need for Status (0.865), originality (0.846), Perceived Concerns (0.742), Secondhand Purchase Intention (0.857), and Secondhand Repurchase Intention (0.911). Since all of the square root AVE's are higher than all of the correlations of the latent variables, these results indicated that all variables are valid.

Table II. Discriminant Validity - Fornell-Larcker Criterion

	BG	EC	FG	NS	OR	PC	SPI	SRI
Bargain Hunting (BG)	0,849							
Eco-Consciousness (EC)	0,653	0,819						
Frugality (FG)	0,745	0,735	0,757					
Need for Status (NS)	0,416	0,293	0,367	0,865				
Originality (OR)	0,615	0,497	0,563	0,529	0,846			
Perceived Concern (PC)	0,476	0,415	0,476	0,623	0,464	0,742		
Secondhand Purchase Intention (SPI)	0,597	0,588	0,651	0,457	0,576	0,439	0,857	
Secondhand Repurchase Intention (SRI)	0,581	0,515	0,577	0,430	0,597	0,338	0,789	0,911

To check the reliability of the variables, the values of the outer loading need to be higher than 0.70, but 0.4 were also accepted (Hulland, 1999). The next item that is needed to check is Composite Reliability, the value in Composite Reliability results needs to exceed 0.7, but 0.6 is also accepted (Bagozzi & Yi, 1988). Each variable outer loading value has exceeded the minimum value, the data can be defined as reliable; bargain hunting (ranged from 0.789 - 0.888), Eco-consciousness (ranged from 0.729 - 0.838), Frugality (ranged from 0.722 - 0.801), Need for Status (ranged from 0.814 - 0.896), Originality (ranged from 0.792 - 0.883), Perceived Concerns (ranged from 0.648 - 0.789); Secondhand Purchase Intention (ranged from 0.791 to 0.904), and Secondhand Repurchase Intention (ranged from 0.899 to 0.920). Next, we need to see the Composite reliability Values to recheck the variables' reliability. All of the results for both Outer Loadings and Composite Reliability already passed the minimum criteria; all of the variables are found to be reliable. The Outer Loadings results can be seen in Note 3.

#### 4.2 Inferential Analysis

The inferential analysis is done using a complete bootstrapping test through Smart PLS version 3. Table 3 and 4 are showing the results of the Path Coefficients and R square in the Bootstrap test, showing the T-statistic values and p values to test the hypothesis significances. The interpretation of Goodness of Fit is not recommended to be used universally for a study involving the formative measurement model (Henseler & Sarstedt, 2013). Hence there is no model fit test in PLS-SEM, but this method is recommended to use if the research has a complex model, but the sample size is small (Hair et al., 2014).

In order for the hypothesis to be called significant, the T statistics value needs to surpass the value of 1.96. (Kwong & Wong, 2013), and the P values must not more than 0.05 (Ringle et al., 2014) in both Path Coefficients and R square (Hair et al., 2014). As shown in Table 3, 8 out of 10 hypotheses are accepted.

Table III. Hypothesis Testing – Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics ( O/STDEV )	P-Values
BG → SPI	0,073	0,074	0,079	0,931	0,352
EC → BG	0,222	0,220	0,073	3,037	0,003
EC → SPI	0,180	0,181	0,086	2,102	0,036
FG → BG	0,523	0,519	0,066	7,874	0,000
FG → SPI	0,301	0,290	0,083	3,615	0,000
NS → BG	0,159	0,160	0,050	3,205	0,001
NS → SPI	0,167	0,164	0,066	2,532	0,012
OR → SPI	0,185	0,188	0,071	2,610	0,009
PC → SPI	-0,004	0,008	0,063	0,058	0,954
SPI → SRI	0,789	0,791	0,031	25,821	0,000

Table IV. R Square

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics ( O/STDEV )	P-Values
BG	0,601	0,595	0,075	7,992	0,000
SPI	0,527	0,540	0,054	9,715	0,000
SRI	0,622	0,624	0,051	12,121	0,000

#### 4.3 Discussion

This study aims to know how eco-consciousness is affecting the bargain hunting in secondhand shopping among Indonesian. Cervellon et al. (2012) mentioned that consumers are already acknowledging the importance of having eco-friendly behaviour to not throwing away or wasting something and buying the secondhand product as a lifestyle is respectful to the environment and also can save their economic expenses. In this study, hypothesis testing results were also found that the consumers' consciousness toward the environment is affecting the bargain hunting on secondhand shopping. This hypothesis result is also strengthened by the statement in the research conducted by Sengmanee (2016), that showing Eco-consciousness is significantly influence the bargain hunting towards secondhand luxury products in Bangkok. This study also found that Eco-consciousness is affecting the 'consumers' preferences in purchasing secondhand clothes among Indonesian. This result also supported by Xu et al. (2014) that found environmental value is affecting the intention to purchase secondhand clothes among Chinese respondents trough their awareness on the serious air pollution when there are often used clothes being burned. Lastly, the other research conducted by Liang & Xu (2018) found that the environmental value is one of the concerns to purchase secondhand clothes trough Chinese environment conditions and media that highlight the impact of apparel.

Frugality is found to influence bargain hunting in this research. The previous research conducted by Cervellon et al. (2012) was found that consumers with price sensitivity and frugality will search for bargain prices. The other research conducted by Sengmanee (2016) was found the consumers are overly concerned with economic value that makes them purchase secondhand clothes. This research's hypothesis test also found a positive influence on Frugality towards Secondhand Purchase Intention. Almeida (2019) has found frugality to be the main reason for the consumer's intention to purchase secondhand clothes with the motivation to acquire luxury while saving money. Hence the previous researches strengthen this research hypothesis on frugality towards secondhand clothes bargain hunt among Indonesian people.

The next accepted hypotheses in this research are Need for Status trough Bargain Hunting and Need for status as one of the drivers in secondhand shopping among Indonesia. Cervellon et al. (2012) have stated that the need for status is having an inverse relation with the bargain hunting that indirectly influence the secondhand purchase intention. Sengmanee (2016) has found that the need for status can be related to both bargain hunting

and secondhand purchase intention because the consumers' main concern is on their economy, and then the need for status is coming after that. Sengmanee (2016), found the consumers are buying secondhand luxury products because of the price can be lower than buying the new one, and luxury items still can boost their status even though the items is secondhand.

According to Xu et al. (2014), perceived concerns were found to have a strong influence on secondhand purchase intention for Chinese respondents. Previous research conducted by Liang & Xu (2018) is also found relationships between perceived concerns and secondhand purchase intention. Meanwhile, in this research hypothesis on how perceived concerns affecting secondhand purchase intention is rejected. Ma & Li (2018), in their research, said that Chinese people who are buying secondhand clothes would be looked down by the people with buying power around them as people that cannot afford new clothes. Different in Indonesia, currently purchasing secondhand clothes in thrift stores have become a trend among various peoples in different economic class, purchasing secondhand clothes has become a new way for peoples to find a various rare piece of clothing that can match their fashion preferences and no longer have a bad image of only people that cannot afford new clothes that buying secondhand clothes (Azizah & Rezkisari, 2017). Also, the concerns toward hygiene and health in Indonesia is still low compared to other countries (Rahmat, 2017). In other words, the concern on secondhand clothes is not being seen as the aspect to stop the purchase of secondhand clothes in Indonesia. Also, the level of concern towards hygiene is caused by different income level as well, since many people cannot afford a new and original piece of clothes. Many people think it is okay to purchase secondhanded as long as the products are still good to wear (Salbiah & Virdhani, 2019). That statement makes the concern towards secondhand clothes becomes not significant

The hypothesis on how originality affected Secondhand Purchase Intention is accepted in this research. According to Hansson & Morozov (2016), originality is one of the factors to people when they want to purchase secondhand clothes; hence this statement supported the results of this test. Previous research by Guiot & Roux (2008) also found originality as the factors that influence 'consumers' purchase intention on secondhand clothes. As not many people can afford the new and original piece of clothes, then purchasing secondhand is become an alternative.

The hypothesis of bargain hunting affecting secondhand purchase intention is rejected in this research. The result is contradicted to the research by Cervellon et al. (2012) that found bargain hunting to influence secondhand purchase intention significantly. Sengmanee (2016) found significant results on the influence of bargain hunting towards secondhand repurchase intention. Hence the insignificant results towards the hypothesis are driven by the secondhand purchase that has become the trend in Indonesia, and the price has not become the only reason for buying secondhand clothes this day. Indonesian people started to take a look at secondhand clothes to fit their sense of fashion, as there are many pieces of rare clothing products that are limited and only released once. Thus, so many people want the product to become theirs, even though it is secondhand and sometimes even priced at a premium level (Salbiah & Virdhani, 2019). The other reason that affected this hypothesis is that in Indonesia, it is easy to get counterfeit products with affordable prices that

make people see this as a bargain (Rahmadiane, 2016).

Secondhand purchase intention got the significant results on how it is influencing the secondhand repurchase intention among Indonesian. Lin & Chen (2009) has found purchase intention to be strongly affecting repurchase intention because of when the consumers' knowledge about what they will buy, they will have the ability to measure their intention. By that, the repurchase decision will be higher. Akhter (2010) has found the fact that repurchase intention will occur if the consumers are satisfied with the product they have purchased before or their previous purchase experience. Since the secondhand clothes have already become a lifestyle, as stated by Mubarak & Sanawiri (2018), in the future opening, a secondhand clothes store can be a business opportunity.

## 5. Conclusion and Limitation

### 5.1 Implication for Policy and practice

Based on this research analysis test, the results show that 2 out of 10 hypotheses are rejected. Furthermore, there are a total of eight hypotheses, similar to previous studies. From a theoretical perspective, this research has found exciting results. In the secondhand clothing industry in Indonesia, the consumers' secondhand purchase intention is highly influenced by the sense of frugality. Indonesian consumers tend to search the products at a lower price; that is why the secondhand items become the alternative because the secondhand items are known to have a lower price compared to the brand-new item. This research has found that originality is influencing the secondhand purchase intention. Afterwards, secondhand purchase intention is influencing the intention to do repurchase on secondhand clothes. Although perceived concerns are found to be insignificant to influence secondhand purchase intention. The findings are showing that in Indonesia, the concerns on buying secondhand clothes is not a burden for people to buy secondhand clothes in the marketplace. While originality is one of the reasons for buying secondhand clothes because many people see this as an opportunity to have a good product at an affordable price compared to the brand-new price that generally higher. Repurchase Intention occurs when people are satisfied with the secondhand product that they previously buy and will make more purchases on secondhand clothes in the future. The concern in buying secondhand clothes does not matter in Indonesia, and people still buy secondhand clothes as long as the products are still good to wear (Salbiah & Virdhani, 2019). The other influencing factor in the secondhand purchase is the need for status because many Indonesian people have seen secondhand items as an alternative to fulfil their desire for prestige. After all, some of the branded clothes will become cheaper if it is secondhand (Salbiah & Virdhani, 2019). Moreover, according to Mubarak & Sanawiri (2018), purchasing secondhand has become a lifestyle in Indonesia that makes knowledge of secondhand items becomes broad. Lin & Chen (2009), stated that if the consumers know about what they will buy, the decision on doing repurchase will be higher.

Furthermore, by adding construct like secondhand repurchase intention, we know that currently, secondhand fashion has already become a lifestyle and driven by their first impression and satisfaction on buying secondhand clothes. Although in Indonesia, the concerns on buying secondhand in Indonesia did not become a

burden to buying a secondhand product, because of in Indonesia, the hygiene concerns rates are still low (Rahmat, 2017). Also, in Indonesia, it is effortless to get a counterfeit product that comes with a low price that makes some people in Indonesia do not think of purchasing secondhand products as a bargain. Furthermore, secondhand clothes become the choice of people since they can be the fashion trend that can provide an immense business opportunity with correct execution.

## 5.2 Practical Implication

As for the government, this research can help the government of Indonesia to understand more toward the secondhand clothes business in Indonesia. In some way, secondhand clothes have a good impact on the environment, and the government can educate more people to hold their excessive consumption habits in order to help the environment. Besides helping to preserve the environment, the secondhand business can be used by a charity foundation to help other people who have already done in many developed countries (Colley, 2012). Thus, the government only needs to have a precise regulation regarding this. The business will help the environment as long as if there is a precise regulation regarding the safety and hygiene factor, which particularly crucial in this kind of business.

Secondhand clothes sellers have to understand several practical implications in this study. The environmental consciousness, frugality, and need for status are the driver for customers that search for a bargain, but not the reason to see secondhand clothes as the bargain. Meanwhile, the consumers that aware of the environment situation and economic value but with a lot of status desire will still look secondhand clothes as a reconsideration compared to newly manufactured clothes. The originality is also the main reason for people to buy secondhand clothes. Although in Indonesia, people did not have concerns about buying secondhand clothes. If the consumers are satisfied with their secondhand shopping experience, the repurchasing habit will occur. Besides the affordable value of secondhand clothes, many people still did not think secondhand clothes as a bargain and still prefer to buy new counterfeit products (Rahmadiane, 2016). However, secondhand clothes shopping has already become the trend in Indonesia, and the opportunity to open the business related to secondhand or thrifting will have a more substantial possibility of success (Mubarak & Sanawiri, 2018). Secondhand clothes business owners also need to pay attention to the function and comfort of the clothes itself, despite paying attention only to the design and model to increase the consumers' purchase intention. However, first, owners need to make sure that their business is compliant with government rule. However, the owner also needs to know the fashion lifestyle trend in choosing the products to be sold in their store (Mubarak & Sanawiri, 2018). Lastly, business owners need to have much knowledge regarding the products provide, because consumers' with much knowledge about the products have a bigger chance to do a repeat buying (Lin & Chen, 2009).

## 5.3 Research Limitation

As in any other studies, several limitations are found from this particular study. Furthermore, there are possibilities to extend further research by using this research in order to get more profound results to these findings. This research found contradict results from researches conducted by Xu et al. (2014) and Liang & Xu

(2018) that found perceived concerns as the variable that influences the secondhand repurchase intention. However, this research found an insignificant result of perceived concerns toward secondhand repurchase intention from Indonesia respondents. This research also found an insignificant result from bargain hunting toward secondhand purchase intention in Indonesia that contradict with the research conducted by Cervellon et al. (2012) and Sengmanee (2016) that found the relationships between bargain hunt and secondhand purchase intention. Future research could try to deepen the research to find more reasons on why those two variables did not affect the secondhand purchase intention in Indonesia or other countries such as Thailand since this research construct the research model by combining several research models from the previous research and add secondhand repurchase intention as the dependent variable. Thailand was chosen because this country is known to have a big secondhand industry (Katharangsiporn, 2020). Future research could also try to find more variables that could affect the secondhand repurchase intention besides secondhand purchase intention from this research. For example, fashion lifestyle could be added to the model for the factors that are affecting the secondhand purchase intention just like the findings from Mubarak & Sanawiri (2018) that found fashion lifestyle to be one of the drivers that influence the secondhand purchase in Indonesia.

This research's valid respondents mostly are Indonesian people with moderate income. Future studies should test the study's findings by adding more respondents with people from people with lower income or even high income in order to find the other possibilities of the findings. Since this study only focused on the secondhand clothes industry, most of the respondents are giving data based on their own experience. The reality could be different from what they have experienced if they choose different stores or places. Because of it, this research would like to suggest to improve the knowledge according to the fashion trend in order to sort the products to be sold, such as design, brand, product condition, and colour mix, especially in the secondhand clothing industry. Future research could also put interest in different categories, such as the fast fashion industry. According to the current fashion trend in Indonesia, the creative economy in Indonesia is significantly influenced by the fashion industry that giving 18.01% contribution to Indonesia's economical, and mostly by ready to wear clothes that are mostly carrying the fast-fashion concept (Andrea, 2019). The researcher also suggests future research to concentrate on one theory or using a different methodological approach, such as a qualitative approach with an in-depth interview to know other possibilities driver on secondhand clothes purchases among Indonesian. With regard, it is hoped that this research will provide a better chance for future research with related topics.

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## Notes

### Note 1. Operational Variable

No	Variable	Adjusted Question
1	Eco-consciousness	I believe that recycling is essential for the environment
		I believe that recycling can reduce waste
		When I need to purchase clothes, I always consider the environment factors
		I want to purchase some products that environment friendly
		Because the non-renewable resources are necessary for the human's future, I believe that humans should change their purchase behaviour towards new products
		I believe that secondhand stores are saving the environment from pollution because they are reusing the clothes instead of throwing away or burn them
2	Frugality	I believe in being careful when I about to spend my money
		I am willing to wait on purchasing something so that I can save my money
		Purchasing secondhand clothes is more cost wise choice
		Before purchasing secondhand clothes, I will walk around to compare the price among shops
		If I buy a clothing item at a cheaper price, I can buy more other things
		There are many things that are still useful are being thrown away
3	Need for status	I would buy apparel just because of the status
		I would pay more for apparel with status
		Apparel is more valuable if it has a high material status
		I am interested in new products that have the status
		A product will be more valuable if it has some material appeal
4	Perceived Concerns	I have a deep concern about the hygiene safety problem
		I am afraid if the secondhand clothes that I buy are carrying disease from the previous owner

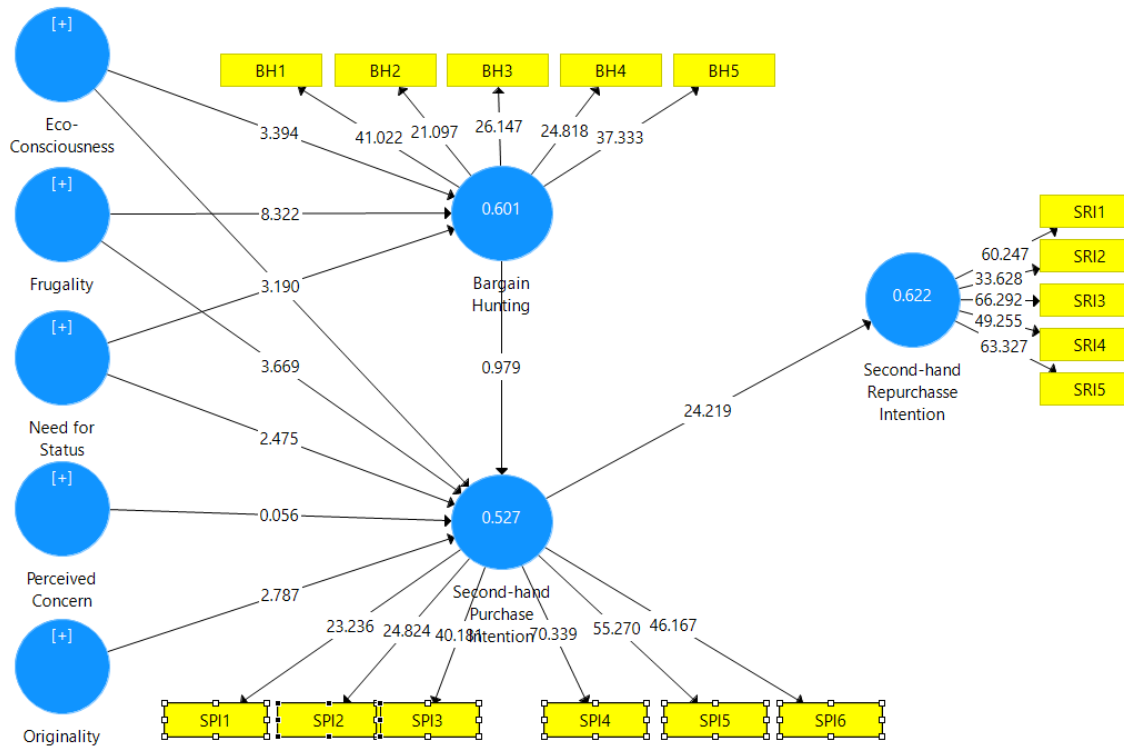
		I am afraid of the people with buying power around me will look down on me if I buy secondhand clothes
		I do not feel like buying secondhand clothes if I did not know its origin
		I feel that if the quality of secondhand clothes is not as good as the new one
		I fear if I buy secondhand clothes, the items is not the same with my expectation
		I feel like if I'm wearing secondhand clothes will make my psychology discomfort
5	Originality	I find that secondhand clothing is attractive because I can find things that most people do not have, and new clothing is way too ordinary
		I find that secondhand shopping clothing can make me different from other people when it comes to clothes styling
		I like things that are original and different, with secondhand shopping I can find a thing that will only belong to me
		I hope to find something that nobody else has when I buy secondhand clothing
		I hope to find original clothes design that cannot be found in general stores when I buy secondhand clothing
6	bargain Hunting	I feel good when I am buying things with an extremely low price that cannot be found anywhere
		I find that clothes at a low price, but high quality is interesting
		I feel good if I can take advantage of the luxury price deal
		I would feel that my money is worth if I purchase branded secondhand clothing at a discounted price
		I feel like the pleasure from bargaining clothing items are exceeds the financial gains
7	Secondhand Purchase Intention	If I see a thrift-store, I intend to visit the store to purchase some products
		The next time I purchase clothes, I would give priority to secondhand clothes



		I would like to recommend friends to purchase secondhand clothes
		I am likely to choose the store that offering secondhand clothes the next time I need a clothing item
		In the future, I would prefer secondhand clothes over the new ones
		In the future, I am likely to choose secondhand clothes instead of buying newly manufactured clothes
8	Secondhand repurchase Intention	I will continue shopping secondhand clothing in the future
		I have a strong intention to go for secondhand shopping in the future
		My intention trough buying secondhand clothing is high
		I intend to continue shopping of used products rather than discontinued it
		I intentionally to buy secondhand than buying the new one.

Note 1. Adjusted Question.

## Note 2. Structural Model



### Note 3. Outer Loading

	Bargain Hunting	Eco-Consciousness	Frugality	Need for Status	Originality	Perceived Concern	Second-hand Purchase Intention	Second-hand Repurchase Intention
BH1	0.888							
BH2	0.836							
BH3	0.857							
BH4	0.789							
BH5	0.873							
EC2		0.827						
EC3		0.867						
EC4		0.729						
EC5		0.826						
F1			0.763					
F2			0.792					
F3			0.801					
F4			0.729					
F5			0.730					
F6			0.722					
NFS1				0.814				
NFS2				0.890				
NFS3				0.863				
NFS4				0.896				
NFS5				0.862				
O1					0.853			
O2					0.883			
O3					0.881			
O4					0.817			
O5					0.792			
PC1						0.648		
PC2						0.733		
PC3						0.714		
PC4						0.789		
PC5						0.781		
PC6						0.773		
PC7						0.749		
SPI1							0.791	
SPI2							0.804	
SPI3							0.871	
SPI4							0.904	
SPI5							0.892	
SPI6							0.873	
SRI1								0.912
SRI2								0.909
SRI3								0.920
SRI4								0.916
SRI5								0.899
EC1		0.838						

## **Predicting the Revisit Intention at Private Hospitals Mediated by Perceived Service Quality and Satisfaction**

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### **Abstract**

Analyzing and understanding the driving factors for patient loyalty in private hospitals is very important for hospital management. Since, the hospital can continue to improve their performance in helping and serving patients, especially during a pandemic. Several researchers have conducted studies regarding patient loyalty when using hospital services. The purpose of this study was to examine the driving factors for patient loyalty through the brand image, trust, word of mouth, perceived service quality, and satisfaction among private hospitals in Greater Jakarta. Therefore, we hypothesize several factors as a set of predictors of patient loyalty in the private hospital with satisfaction as a mediating variable. A total of 259 valid respondents was collected from several private hospital patients in the Greater Jakarta area that we took randomly using an online survey, and then we analyzed using Partial Least Square (PLS) path modelling approach, a structural equation modelling (PLS-SEM) technique was performed to test the proposed structural relationships. The empirical assessment shows that brand image and word of mouth have little effect on the mediation variable, namely satisfaction, while trust, perceived service quality have a very high effect on satisfaction. However, if connected directly, brand image, perceived service quality, and satisfaction, both have a strong influence on patient revisit intention or loyalty. Further, the practical and managerial implications are discussed.

**Keywords:** Brand Image, Trust, Word of Mouth, Perceived Service Quality; Satisfaction; Revisit Intention; Hospital

### **1. Introduction**

In the global market, the healthcare industry is increasing rapidly from year to year. In 2018, the global healthcare market value reached nearly \$ 8,452 billion, with a compound annual growth rate (CAGR) of 7.3% since 2014. For the rest of 2022, it is expected that the CAGR will increase to 8.9%, nearly \$ 11,908.9 billion (Business Wire, 2019). In 2025, Asia is expected to replace Europe as the second-largest healthcare market in the world (Healthcare Asia Daily News, 2016). In Indonesia, the growth in the number of hospitals is not only due to the emergence of public awareness of the importance of health but also due to the growing population in Indonesia (Lawi, 2016). Most of the growth in hospitals has occurred in the private hospital sector; almost every year, there is an increase in the construction of private hospitals, until April 2018, the average growth is 17.3% (Trisnantoro & Listyani, 2018). In 2018, there were 1800s hospitals or equivalent of 63% of hospitals in Indonesia are private hospitals; only a few are public or government-owned (Buol, 2019).

Nowadays, private hospitals are trying to figure out ways to stay competitive by improving patients' revisit intention through a brand image, trust, and word of mouth. Brand image is defined as a reflection of customer perceptions about the brand association (Wu C.-c. , 2011; Keller, 1993).. In comparison, trust means the belief of the patient to healthcare providers and their personnel that they will provide the best for their patients and

provide the most suitable treatment (Platonova, Kennedy, & Shewchuk, 2008). Moreover, word of mouth can be defined as post-purchase behaviour, where consumers will spread information and messages to others (Silverman, 2001).

Brand image may significantly affect the revisit intention through perceived service quality. Brand image is commonly used as a reflection of the quality of product or service. The better the brand image of the hospital, the better the public perception of hospital services, and this triggers hospitals to improve quality of their services, and by providing superior quality service would lead to revisiting intention (behavioural intention) (Huei, Mee, & Chiek, 2015). According to Faaghna, Lita, & Semiarty (2019), the better the brand image, the more it will increase the patient's desire to return to use the services of the hospital.

According to Ruswanti, Eff, & Kusumawati (2020) in a study stated that if a sick patient starts to trust the hospital, it will affect patient's satisfaction, which in turn will increase the intention to revisit. This means that trust plays an essential role in the running of the healthcare industry, especially in the hospital sector. Most people believe in private health service providers because providers are considered to be more comfortable, safe, more sympathetic, and more accessible in financial matters, and this kind of trust can lead to patient satisfaction (Ozawa & Walker, 2011). Moreover, when the patients have put their trust in the service provider for service, integrity, and also the patient has put hope, it will increase patient loyalty to the hospital (Djohan, 2015). Patient loyalty is critical in running a hospital because patients are a major factor in the operation of a hospital.

There is still a lack of study that researched word of mouth, especially word-of-mouth communication. Word of mouth can also be related to brand image; WOM can instil a better overall impression and understanding regarding hospital brands (Huei C. T., Mee, Chiek, & Meng, 2016). However, several studies, such as the one conducted by Ruswanti, Eff, & Kusumawati (2020) found that word of mouth has an indirect dominant effect on revisit intention through satisfaction. Word of mouth itself can affect satisfaction by feeling satisfied with the services provided and spreading positive information to potential patients. Furthermore, because of the increasingly competitive market, healthcare providers are looking for opportunities to achieve competitive advantages, and word of mouth seems to provide an excellent opportunity for that because word of mouth has a significant influence on consumer attitude and behavioural intention (Mazzarol, Sweeney, & Soutar, 2007).

A good brand image, and right attitude of trust and spread of word of mouth will be essential for the service industry because this can be a measurement of service quality and satisfaction (Ruswanti, Eff, & Kusumawati, 2020; Huei C. T., Mee, Chiek, & Meng, 2016). Furthermore, perceived service quality and satisfaction can lead to increased patient revisit intention (Sibarani & Riani, 2017). Therefore, to better understand the problem, this study examines and confirms the relationship between brand image, trust, word of mouth (Ruswanti, Eff, & Kusumawati, 2020; Wu C.-c., 2011); perceived service quality, and satisfaction (Shahijan, Rezaei, Preece, & Ismail, 2015); revisit intention (Amin & Nasharuddin, 2013). The retail sector, especially in the health industry, continues to grow from year to year. This study devotes to the body of knowledge of the six constructs mentioned earlier, which resulted in a more comprehensive framework to predict customers' revisit intention of private hospitals.

## 2. Literature Review

### 2.1 Brand Image

Brand image is a perception that reflects the overall impression of the customer that is kept well by the customer (Wu C.-c., 2011). According to Keller (1993), brand image is a perception stored in the customer's memory, which is a reflection of the brand association. Brand image has an important role in a business strategy because brand image reflects the tangible and intangible aspects of a company, such as a healthcare company (Huei C. T., Mee, Chiek, & Meng, 2016). Based on previous research conducted in 2013, brand image can be measured by consumer's awareness, association, attachment, activity, and a hospital's attitude (Sukendro,

2012). According to the research conducted to examine the impacts of word-of-mouth and social media on hospital brand image, brand image is measured by the hospital's medical service and facilities, reputation and good image, service experience (Huei C. T., Mee, Chiek, & Meng, 2016).

According to Wu (2011), brand image is used by consumers as a reference for the quality of any service or product, the stronger the brand image, consumers felt the more perceived quality. The research conducted by Huei, Mee, Chiek (2015) found that brand image has a positive relationship with perceived service quality. Moreover, it is also revealed from Dewanto & Rochman (2014) that perceived service quality is significantly affected by brand image. This research is mainly focusing on the relationship between corporate brand image and perceived service quality, which is healthcare.

In the study to examine the relationships of brands with their customers of the branded hospital, Solayappan & Jayakrishnan (2010) found that brand image significantly influences patient satisfaction. This statement is also supported by another research conducted in 2017, which shows that brand image does have a positive effect on patient satisfaction (Puspitasari & Suhermin, 2017). It means the relationship between these two variables is very strong because they are important factors in creating patient loyalty to repurchase or revisit in the future (Juhana, Manik, Febrinella, & Sidharta, 2015). Based on the relationship between variables, this research posits the following hypothesis:

H1: Brand Image influences Perceived Service Quality

H2: Brand Image influences Satisfaction

## 2.2 Trust

Trust is defined as the idealistic acknowledgement of a circumstance where the truster believes that the trustee will think about the truster's advantages and interests (Hall, Dugan, Zheng, & Mishra, 2001). Trust also defined as the customer expect where they trust the provider, that they will fulfil its promises to their customer (Sirdeshmukh, Singh, & Sabol, 2002). Trust has an important role in healthcare because health providers know more about medical matters and stuff, while patients know more about their preferences and financial resources (Ozawa & Walker, 2011). Based on previous research conducted in 2007, trust can be measured by a firm's attitude (Tenner, 2007). According to the research conducted to illustrate the importance of trust as a unique concept that can affect people's choice of health care providers shows that trust can be measured by hospital's employee interaction, relationship, and hospital's quality of care and service to the patient (Ozawa & Walker, 2011).

In the study of trust and satisfaction, Platonova, Kennedy, & Shewchuk (2008) found that patient trust has a significant impact on patient satisfaction. This was also revealed by research conducted in 2010 that trust positively influences patient satisfaction (Shabbir, Kaufmann, & Shehzad, 2010). According to Ruswanti, Eff, & Kusumawati (2020), trust and satisfaction have a close relationship because the patient has confidence with the service provider, and they are satisfied with the service, then they will come back. Thus, based on the relationship stated above, this research posits the following hypothesis:

H3: Trust influences Satisfaction

## 2.3 Word of Mouth

Word of mouth is defined as the exchange of information, communication, or dialogue between two individuals (Ruswanti, Eff, & Kusumawati, 2020). In this research, word of mouth relates to a person's communication with those closest to him or her about medical services provided by a service provider (Huei C. T., Mee, Chiek, & Meng, 2016). Word of mouth has an important role in the business; it can give a better understanding to the consumers about the brand and have a positive impact on brand image and impression. Consumers rely on word of mouth to reduce their level of risk and hesitation to make purchases (Murray, 1991; Jalilvand & Samiei, 2012). Based on previous research conducted in 2016, word of mouth can be measured through the attitude of the customers who are influenced by those closest to them (Huei C. T., Mee, Chiek, & Meng, 2016).

Whereas, another researcher measured word of mouth through the attitude of customers who want to spread or recommend a place to others according to their experience (Filieri, Alguezaui, & McLeay, 2015).

Based on research conducted by Gounaris, Stathakopoulos, & Athanassopoulos (2003) found that word of mouth has a little influence on perceived service quality. Only a few studies have examined the relationship between these two variables. Then, according to Boulding, Kalra, Staelin, & Zeithaml (1993), service quality has a positive relationship with talking about positive things about the company and its services to other people. The research conducted in 2016 shows that word of mouth has a positive effect on satisfaction (Shi, Tang, Zhang, Gao, & Zhu, 2016). This statement is also supported by the research conducted by Shabbir, Kaufmann, & Shehzad (2010), they found that word of mouth positively influences patient satisfaction. In contrast, the research conducted in 2013 reveals that word of mouth does not have a significant impact on patient satisfaction (Naik, Anand, & Bashir, 2013). Furthermore, this research is focusing on word of mouth communication, which includes consumers' attitudes after they get recommendations and is influenced by those closest to them. Thus, based on previous research, this research posits the following hypothesis:

H4: Word of Mouth influences Perceived Service Quality

H5: Word of Mouth influences Satisfaction

#### 2.4 Perceived Service Quality

Perceived service quality is an attitude assessment of service, and it is related to individual subjective because it is relative (Alrubaiee & Alkaa'ida, 2011). Service quality is also defined as a situation when excellent service is provided by service providers and fulfil customer satisfaction (Kusumawardani, Elsyah, & Kumar, 2017). In healthcare, many researchers try to develop service quality and find various dimensions to measure the relationship between service quality and its impact (Shabbir, Malik, & Malik, 2016). The present study found perceived healthcare service quality (HCSQ) dimensions, which are physicians' care, nurses' care, supportive staff, operational activities, and physical maintenance, suggested by (Chahal & Mehta, 2013). Based on research conducted in 2016, service quality can be measured through a brand image (Wu C.-c., 2011). On the other hand, research conducted to examine the relationships between brand image, perceived service quality, patient satisfaction, and behavioural intention shows that perceived service quality can be measured through tangible, reliability, responsiveness, assurance, and empathy aspects (Huei C. T., Mee, Chiek, & Meng, 2016).

According to Kumar & Zikri (2018) service quality is considered as the standard measurement for satisfaction in the service industries. In their study about patient satisfaction and patient loyalty, Juhana, Manik, Febrinella, & Sidharta (2015) found that there is a relationship between service quality and satisfaction. According to Neupane & Devkota (2017), the main purpose of the firm to provide good service is to satisfy customers, and by measuring the quality of service, the firm can see whether the service that has been provided is good or bad based on customer satisfaction. It is also revealed in the research conducted in 2018 that perceived service quality does have a positive effect on satisfaction (Dewanto & Rochman, 2014).

Furthermore, According to Huei C. T., Mee, Chiek, & Meng (2016), health service providers are obliged to improve the quality of their services because the better the quality of the service will have a significant effect on customer loyalty. This statement, also supported by research conducted by Shahijan, Rezaei, Preece, & Ismail (2015), shows that service quality positively influences revisit intention in the context of healthcare. In another research also found that service quality significantly gives an impact to revisit intention (Wu C.-c., 2011). Thus, this research posits the following hypothesis:

H6: Perceived Service Quality influences Satisfaction

H7: Perceived Service Quality influences Revisit Intention

#### 2.5 Patient Satisfaction

Customer/patient satisfaction is a condition that involves positive or negative feelings about the services they obtain (Neupane & Devkota, 2017). According to Chen & Tsai (2007), satisfaction is the overall level of



satisfaction felt by consumers, which results from the ability of the service experience to meet their wants, hopes, and needs. On the other hand, Customer satisfaction is often seen as representing the brand image, position, and reputation of the company or organization in order to compete with each other (Zarani, Tarigan, & Santoso, 2019). In the healthcare sector, patient satisfaction is defined as a measurement of how well medical service providers serve and meet patient needs (Wu C.-c., 2011). Moreover, patient satisfaction is considered vital because it is a sign of achievement and the key to the success of the business, which can shape the intention of consumers in the future to repurchase or revisit (Pollack, 2008; Neupane & Devkota, 2017; Fuchs & Weiermair, 2004). Based on research conducted in 2010, there are several factors to measure patient satisfaction, which are service quality, word of mouth, and trust (Shabbir, Kaufmann, & Shehzad, 2010). According to research that conducted to examine the influence of hospital service and image quality on patients' satisfaction and patients' loyalty towards the service provider (hospital) shows that patient satisfaction can be measured through hospital image and service quality (Asnawi, Awang, Afthanorhan, Mohamad, & Karim, 2019).

Based on research conducted in 2018 found that there is a relationship between satisfaction and patient loyalty (Meesala & Paul, 2018). It means the more satisfied patients are with the hospital, the more they will have the desire to return, and that will create customer loyalty that will benefit the hospital because they may share their experiences with others. The positive influence of patient satisfaction on behavioural intention also revealed from the research conducted by Amin & Nasharuddin (2013). Based on the relationship between the two variables, this research posits the following hypothesis:

H8: Satisfaction influences Revisit Intention

## 2.6 Hospital Revisit Intention

Behaviour intention is defined as visitors' judgments about the possibility of revisiting the same place or the intention to recommend the place to others. In the healthcare sector, patients' behavioural intentions can be divided into two intentions, which are the intention to revisit and recommend. The intention to revisit for further treatment and the intention to recommend the hospital to friends, family, and others (Jeong, Yu, & Kim, 2020; Rahman, Mannan, Hossain, & Zaman, 2018). Furthermore, Behavioral intention becomes an important goal because it is the key to the success of the company's sustainability (Wu, Li, & Li, 2016). revisit intention can be measured through several variables, which are destination image, hospital service quality, and patient satisfaction (Shahijan, Rezaei, Preece, & Ismail, 2015). According to research conducted to examine patient's behavioural intention in a comparative analysis between public and private hospitals in the context of a developing country shows that revisit intention/behavioural intention can be measured through perceived service quality, corporate image, emotional satisfaction, and experience economy (Rahman, Mannan, Hossain, & Zaman, 2018).

## 3. Research Methods

### 3.1 Research Design

This research is using quantitative because this research examines the relationship between one variable with another, which would be more effective if using a quantitative research method. This research aims to examine the drivers of loyalty in private hospitals in Greater Jakarta and to achieve the study objectives, and a theoretical framework is needed. A theoretical framework is a framework based on an existing theory in a field of inquiry that reflects the hypothesis of a study (Adom, Hussein, & Joe, 2018). Without a theoretical framework, the structure and vision for a study is unclear; a research plan that contains a theoretical framework built the study to be strong and structured with an organized flow from one chapter to the next (Grant & Osanloo, 2014).

This research is conducted from May until August 2020 in the Greater Jakarta area. The researcher begins the research by observing the phenomena in society to find out the problem that needs to be addressed and then studying the literature to find a gap in the research. Next, the researcher creates a research design by deciding

the research type, sampling design, and operational definitions derived from previous researches. Afterwards, the researcher gathers the primary data from the respondents and analyzes it. Once it has been done, the researcher presents the data analysis and explains it through secondary data, and then creates the conclusion and implication of the research.

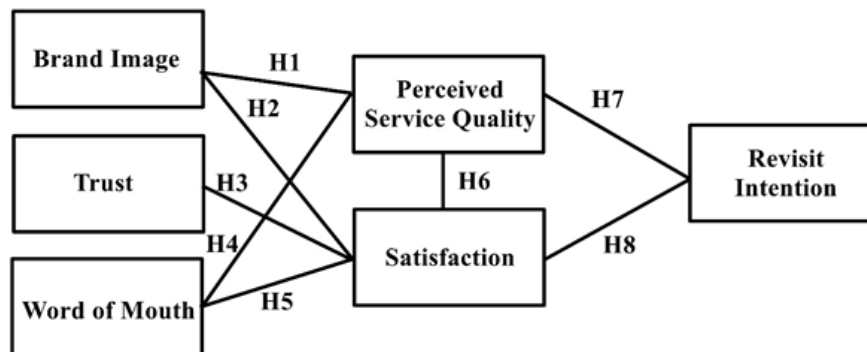


Figure 1. Research Framework

### 3.2 Sampling

In this research, the population is people who have been a patient in a private hospital in Greater Jakarta at least once in the past two years. Both genders of males and females are selected, with an age restriction, and only for people who live in the Greater Jakarta area. According to Hoyle (1995), a good minimum sample size when using SmartPLS is around 100-200 sample sizes, while this study has 259 sample sizes, which exceed the minimum criteria. This research is using non-probability sampling with a purposive method because the researcher wants to collect data from people that have particular criteria that are relevant to the research (Etikan, 2016).

In this research, most of the respondents were female with a number of 184 (71%) and 75 (29%) male respondents. As for the age, most respondents who filled in were around 19-30 years old, with a total of 179 (69.1%), aged 31-50 years, namely 47 respondents (18.1%), aged 15- 18 years with 23 respondents (8.9%), and ten respondents (3.9%) aged 51-64 years. Most of the respondents who answered were students with 157 people (60.6%), 69 (26.6%) respondents who were permanent employees, 15 entrepreneurs (5.8%), ten non-permanent employees (3.9%), and eight housewives (3.1%). The majority of respondents have used the hospital service twice in two years, with 51% of respondents. Meanwhile, 35.1% of respondents used the hospital service several times a year, followed by 7.7% of respondents who used the hospital service several times in the past six months. Finally, 6.2% of respondents used hospital services once in the last six months.

### 3.3 Research Instrument

The researcher used close-ended questions on an online questionnaire among the corresponding potential respondents as the instrument in this study. A questionnaire is suggested to provide data that have quantifiable answers and more accessible for the researcher to analyze the data. Google Form is used to build the survey, and a 7-points Likert scale is chosen as the measurement with 1 being "strongly disagree", and 7 being "strongly agree" (Boshoff & Gray, 2004). There are 44 questions, which one variable comprises 5-8 questions. Operation Definition of Variables are derived from Sukendro (2012) for brand image variable; Cham, Lim, Aik, & Tay (2016) for brand image, word of mouth, perceived service quality, satisfaction, and revisit intention variables; Tenner (2007) and Ozawa & Walker (2011) for trust variable; Maxham (2001) for satisfaction variable; Wu, Li, & Li (2018) for revisit intention variable.

### 3.4 Data Analysis

SmartPLS is currently developing as an alternative to statistical modelling techniques. Within the SmartPLS, there are methodological features that can be used for the more popular covariance-based SEM approach (Hair, Hult, Ringle, & Sarstedt, 2014). To test the validity and reliability, data collected from respondents are exported to Excel, which is then analyzed by statistical software to measure or analyze whether the questionnaire can be used to measure concepts for further research.

For analysis, PLS-SEM uses the terms "outer model" and "inner model". The outer model examines how each indicator relates to its latent variable. Meanwhile, the inner model examines the relationship between latent constructs (Wong, 2013). The outer model is used to test the validity and reliability of the items measuring all the constructs in this study. For this study, there are some criteria to measure validity and reliability and discriminant validity. The criteria to be considered as valid based on the Average Variance Extracted (AVE) value should be higher than 0.50. Furthermore, to test the reliability, the Composite Reliability (CR) value must be greater than 0.70, but 0.60-0.70 still can be acceptable. Composite Reliability is used as an alternative to Cronbach's Alpha. And to test discriminant validity, this study used the Heterotrait-monotrait (HTMT) criterion, and the HTMT value must be lower than 0.90. HTMT is also used as an alternative to the Fornell & Larcker criterion (Hair, Ringle, & Sarstedt, 2011; Peterson & Kim, 2013; Ab Hamid, Sami, & Mohamad Sidek, 2017).

To analyze the data and test the significance of the hypothesis, Structural Equation Modeling (SEM) is applied in this study. SEM is used to test the proposed relationships among the variables (Doosti, Jalilvand, Asadi, Pool, & Adl, 2016). In PLS-SEM, if we want to test the hypothesis, we must use bootstrapping with a minimum sample of 5000. After we run the bootstrapping, path coefficients will appear, where the criteria for determining whether the proposed hypothesis is significant or not is seen from the T-statistic value, the value must be greater than 1.96, and the P-value must be less than 0.05 (Natalia, Hoyyi, & Santoso, 2017; Wong, 2013).

## 4. Finding

### 4.1 Validity and Reliability

The first test conducted was Convergent Validity. This is an assessment to measure the correlation of several of the same indicators. This is measured by SmartPLS, which has criteria where the Average Variance Extracted (AVE) value must be greater than 0.5 (Wong, 2013). After being tested, in table 2 shows that the AVE values of this research model have fulfilled the criteria, whereas 0.596 for Brand Image, 0.673 for Trust, 0.753 for Word of Mouth, 0.607 for Perceived Service Quality, 0.779 for Satisfaction, and 0.721 for Revisit Intention.

Reliability tests typically use Cronbach's alpha criteria, where the value must be greater than 0.7. However, currently, Cronbach's alpha is considered as a lower bound on true reliability. Therefore, researchers are now switching to using composite reliability (CR) as the criterion for testing internal consistency. With the condition that the CR value must be greater than 0.7, CR can be used as an alternative if the CR value is greater than the Cronbach's Alpha value. In this study, the reliability test showed that the Cronbach's Alpha and CR values were greater than 0.7, and the CR values also exceeded the Cronbach's Alpha values, which are both of criteria still can be used (Peterson & Kim, 2013). Table 4.1 shows the Construct Reliability (CR) results of Brand Image (0.881), Trust (0.943), Word of Mouth (0.938), Perceived Service Quality (0.939), Satisfaction (0.946), and Revisit intention (0.928). Furthermore, the results of 'Cronbach's alpha values are also seen as Brand Image (0.831), Trust (0.930), Word of Mouth (0.918), Perceived Service Quality (0.928), Satisfaction (0.929), and Revisit intention (0.903).

Table I. Validity and Reliability Testing

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Brand Image	0,831	0,841	0,881	0,596
Perceived Service Quality	0,928	0,929	0,939	0,607
Revisit Intention	0,903	0,905	0,928	0,721
Satisfaction	0,929	0,930	0,946	0,779
Trust	0,930	0,932	0,943	0,673
Word of Mouth	0,918	0,940	0,938	0,753

#### 4.1.1 Discriminant Validity

Discriminant validity refers to a measure of the extent to which constructs differ from one another empirically. The discriminant validity test can be measured through the cross-loading indicator, Fornell & Larcker, and Heterotrait-monotrait (HTMT) criterion (Ab Hamid, Sami, & Mohmad Sidek, 2017). Recent research has found that the Fornell & Larcker criterion is not very effective under certain circumstances. Therefore, HTMT is proposed as an alternative to this critical problem. If using the HTMT criterion would involve comparing it to a predetermined threshold. The specified threshold is 0.90, and it means that if the HTMT value is above the threshold value, it means that there is a lack of discriminant validity. This study is using the criteria from HTMT, as these criteria have also been recommended by several researchers (Henseler, Ringle, & Sarstedt, 2014). Table 4.2 shows the result of discriminant validity, the construct of Brand Image – Perceived Service Quality (0.912), Brand Image – Word of Mouth (0.540), Perceived Service Quality – Satisfaction (0.955), Perceived Service Quality – Trust (0.916), Perceived Service Quality – Word of Mouth (0.601), Revisit Intention – Satisfaction (0.929), Revisit Intention – Word of Mouth (0.645), Satisfaction – Trust (0.935), Satisfaction – Word of Mouth (0.560), and Trust – Word of Mouth (0.571).

Table II. Discriminant Validity

	Brand Image	Perceived Service Quality	Revisit Intention	Satisfaction	Trust	Word of Mouth
Brand Image						
Perceived Service Quality	0,912					
Revisit Intention	0,878	0,899				
Satisfaction	0,870	0,955	0,929			
Trust	0,897	0,916	0,854	0,935		
Word of Mouth	0,540	0,601	0,645	0,560	0,571	0,000

#### 4.2 Inferential Analysis

The inferential analysis is conducted through SmartPLS-SEM. Figure 4.47 shows the model in PLS testing, which involves exogenous variables like BI, TR, WOM, and endogenous variables such as PSQ, ST, VI, and RI.

In PLS-SEM, there is no Goodness of Fit (GoF); this is what distinguishes PLS-SEM from CB-SEM. This is because the fit statistic for CB-SEM is derived from the difference between the empirical and implied covariance matrix of the model (theoretical), whereas PLS-SEM focuses on the difference between the observed (in the case of the manifest variable) or the estimated (in the case of the latent variable) variable values, dependent and the value predicted by the model concerned (Hair, Sarstedt, Ringle, & Mena, 2012).

Even though it doesn't have GoF, PLS-SEM also has many advantages that make it still recommended for use as an alternative to CB-SEM. Namely, the sample size is small, non-normal data, the application has little theory, predictive accuracy is paramount, and formatively measured constructs (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014; Wong, 2013).

##### 4.2.1 R Squared

R squared is the model prediction of the accuracy of the combined effect of exogenous variables on endogenous variables (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). The value of R square range from 0 – 1, where the greater the value, the more accurate the prediction is. R square values of 0.75, 0.50, 0.25 can be grouped into strong, medium, and weak effects on variables (Hair, Ringle, & Sarstedt, 2011). In table 3, the R squared result shows that the values range from 0.69 - 0.83, which means that exogenous variables have a moderate to strong effect on endogenous variables.

Table III. R Square

	R Square	R Square Adjusted
Perceived Service Quality	0,699	0,697
Revisit Intention	0,747	0,745
Satisfaction	0,835	0,833

#### 4.2.2 Hypothesis Testing

In this hypothesis testing, all variables will be tested to determine whether the relationship between variables is significant or not, in SmartPLS to see the significant results of this hypothesis testing; bootstrapping must be used (Hair, Ringle, & Sarstedt, 2013) (see table 4). According to Wong (2013), this test is done on two sides with a significant level of 5% or 0.05, and the path coefficient will be significant if the T-statistic value is greater than 1.96. Six out of eight hypotheses were accepted, with P-value lower than 0.05 and T-statistic > 1.96, namely: Brand Image to Perceived Service Quality (0.000, 18.395); Perceived Service Quality to Revisit intention (0.000, 4.228); Perceived Service Quality to Satisfaction (0.000, 8.727), Satisfaction to Revisit Intention (0.000, 6.624); Trust to Satisfaction (0.000, 6.200); On the other hand, there are two hypotheses rejected due the P-value is greater than 0.05 and the T-statistic lower than 1.96, namely Word of Mouth to Satisfaction (0.882, 0.149), and Brand Image to Satisfaction (0.557, 0.588).

In PLS, to see significant results the hypothesis must use bootstrap with a minimum sample of 5000, it is taken from the Original Sample which will ultimately provide an estimated T-value for testing the significance of the structural pathways (Wong, 2013). Table 4 shows the results of the path coefficients. It appears that there are two hypotheses which are not significant when seen from the value of the Original Sample that is small because only 0.032 or 3.2% and 0.005 or 0.5%, which ultimately affects the t-statistic value, which is lower than 1.96 (not significant). Meanwhile, for other variables, the original sample value is relatively high that the t-statistic value is also high above 1.96 (significant).

Table IV. Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
<b>Brand Image -&gt; Perceived Service Quality</b>	0,701	0,701	0,038	18,395	<b>0,000</b>
<b>Brand Image -&gt; Satisfaction</b>	0,032	0,028	0,054	0,588	<b>0,557</b>
<b>Perceived Service Quality -&gt; Revisit Intention</b>	0,329	0,335	0,078	4,228	<b>0,000</b>
<b>Perceived Service Quality -&gt; Satisfaction</b>	0,523	0,524	0,060	8,727	<b>0,000</b>
<b>Satisfaction -&gt; Revisit Intention</b>	0,558	0,554	0,084	6,624	<b>0,000</b>
<b>Trust -&gt; Satisfaction</b>	0,395	0,397	0,064	6,200	<b>0,000</b>
<b>Word of Mouth -&gt; Perceived Service Quality</b>	0,227	0,232	0,047	4,829	<b>0,000</b>
<b>Word of Mouth -&gt; Satisfaction</b>	0,005	0,006	0,032	0,149	<b>0,882</b>



#### 4.3 Discussion

This study seeks to enrich the literature on how Brand Image can influence Perceived Service Quality. This study found that Brand Image has a significant impact on Perceived Service Quality, this finding is also supported by the research conducted by Wu (2011), it shows that hospital's brand Image can make perceived service quality increase by its patient. According to Huei, Mee, & Chiek (2011), this might be due to the fact that the brand image is significant for the hospital, this can affect the perceived service quality, because the better the brand image, the more the hospital has the desire to provide better service to patients to maintain the brand image. Moreover, sometimes, patients already have high expectations for hospital services if they come to a hospital that has a good brand image. They also argue that a good brand image can be formed by improving its services and perfecting current marketing strategies. Furthermore, the hospital must also play an active role in community relations, active in social media, and advertising.

The finding that brand image affects satisfaction has the contrary results as previous studies conducted by Sibarani & Riani (2017). This study found that there is no significant relationship between brand image and satisfaction, which is quite surprising. On the other hand, Wu (2011) on his research, also has found that there is no significant effect. This might be due to the lack of promotion or advertisement or further introduction to hospitals, many patients who do not know about the hospital will think that the hospital is not as good as they think, so that this perception develops and makes patients not interested in the hospital (Ago, Suharno, Mintarti, & Hariyadi, 2015). However, a few patients also use the brand image as their comparison to choosing a hospital for their satisfaction, because from the indirect effect it shows that the relationship between brand image and satisfaction is positively significant.

There is a positive relationship between trust and satisfaction; this is also supported by the research conducted by Shabbir, Kaufmann, & Shehzad (2010). In the healthcare sector, patients may be able to trust hospitals/health service providers because of the creation of personal relationships and their interactions with doctors, nurses, cleaners that make them feel safe and comfortable, and because patients put their whole trust in the healthcare provider system (Bloom, Standing, & Lloyd, 2008). This positive relationship between trust and satisfaction might be created because patients who have put their trust in the hospital or people in it, such as doctors, will think that the doctor will do the best for them, which is a fundamental element of expected in the relationship, and when the patient begins to trust with the hospital, it also means the hospital has provided a good service and image, which has impressed customers, and it will have an impact on increasing customer satisfaction (Platonova, Kennedy, & Shewchuk, 2008).

Word of Mouth shows significant influences on Perceived Service Quality. This finding can still be considered new because only a few previous studies have the same hypothesis as this study. (Gounaris, Stathakopoulos, & Athanassopoulos, 2003) in their research on the banking industry also found that Word of Mouth significantly influences Perceived Service Quality.

The hypothesis that word of mouth affects satisfaction is contrary to the previous study done by Ruswanti, Eff, & Kusumawati (2020). Naik, Anand, & Bashir (2013) stated that customers find discipline, high service quality, and trust are highly important to them, whereas word-of-mouth is of little importance. Whereas, Setiawan, Troena, Armanu, & Noermijati (2014) argues that positive word of mouth will be significant if the customer has never visited a hospital or destination. Thus, it was found that word of mouth does not significantly influence satisfaction.

The finding of this relationship between perceived service quality and satisfaction is significant. This also supported by the research conducted by Juhana, Manik, Febrinella, & Sidharta (2015) they argue that service quality and satisfaction are closely related because customer satisfaction with a service is measured before the customer feels the service, customers have their own perceptions before they use the service, which if the reality they get exceeds their perception or expectations, that is where satisfaction arises. Sibarani & Riani (2017) explains more briefly about the relationship between these two variables. This might happen because



if the patient gets fast, responsive and precise service and the quality of hospital facilities, the quality of doctors, nurses and people who work at the hospital can be considered acceptable then automatically it will increase patient satisfaction with the hospital.

This study found the positive influence of perceived service quality to revisit intention, which relationship has also been affirmed by Cham, Lim, Aik, & Tay (2016). According to Sibarani & Riani (2017) this might be due to the fact that the patient will come back if he feels the service provided by the hospital is very good. They have also supported that Service quality will encourage a customer to do a repurchase, purchase more, or purchase other services. Moreover, in the service industry, the customer must feel/experience the service first so that they can judge, whether or not they will come back or use the service again. Thus, service quality is a crucial factor to influence the revisit intention, especially in the hospital industry. Hence, it can be said that perceived service quality is one of the most crucial factors that influences revisit intention (Shahijan, Rezaei, Preece, & Ismail, 2015).

Satisfaction has also positively influenced revisit intention (Meesala & Paul, 2018). This is due to the fact that most of the patients will return to the hospital again because they are satisfied with the services provided, doctors, staff, nurses (Sadeh, 2017). Hospitals also assess the level of satisfaction of their patients through suggestion boxes, surveys, and feedback programs, which will be evaluated by management to make improvements if there are still patients who are not satisfied with the services provided. Because satisfaction is the primary key of customer loyalty and the point of determining whether the patient will return for medical services or not, therefore customer satisfaction must be maintained appropriately (Huei, Mee, & Chiek, 2015).

## 5. Conclusion

### 5.1 Implications for policy and practice

From the analysis, the outcome of the research shows that 2 out of 8 hypotheses are rejected. Therefore there are a total of six hypotheses similar to prior researches. This study found that Revisit Intention is influenced by Perceived Service Quality and Satisfaction, with satisfaction as the highest factor. At the same time, satisfaction is affected by several factors; Trust and Perceived Service Quality. On the other hand, Perceived Service Quality is only affected by Word of Mouth. These findings are indicating that satisfaction is the primary factor that influences Revisit Intention. This might refer to nowadays in the pandemic situation. Private hospitals are competing to provide the best service in dealing with patient diseases, including the most deadly is CoronaVirus disease. If the services provided by the hospital are excellent and responsive, the patient at the hospital will be more satisfied. According to Sihalo (2020), after conducting the survey, as many as 89.2% of informants were satisfied with the performance of hospital medical personnel in treating and treating patients infected with Covid-19. Therefore, from the satisfaction felt by patients with the services provided, the performance of medical personnel will trigger the patient's desire to use the same hospital services (Sadeh, 2017).

From a theoretical perspective, interesting results were discovered. Findings of the study affirm that Brand Image and Word of Mouth does not influence satisfaction. According to Ago, Suharno, Mintarti, & Hariyadi (2015), this might refer to a lack of promotion and advertisement. Because of the economic crisis during the pandemic, which made hospitals tend to relocate their money to provide more optimal services, rather than having to do advertising and promotions that made people have low perceptions or expectations of the hospital. Additionally, Word of Mouth might not influence Satisfaction because Word of Mouth is less critical for disciplined patients and more concerned with the quality of service and their trust in the hospital (Naik, Anand, & Bashir, 2013).

Hospitals' management must understand several practical implications in this study. As in this study, it was found that satisfaction has a big influence on revisit intention, and is followed by Perceived Service Quality, so hospital's management must pay more attention to these two things. Management should provide premier service to patients, improve the performance of medical personnel, and provide better facilities to improve customer satisfaction. Furthermore, management must also properly maintain customer satisfaction which is

closely related to revisiting intention by creating a feedback or survey program. In addition, hospital management can also initiate promotions or advertise and be active on social media to increase brand image and brand awareness that affects public perceptions of the hospital.

## 5.2 Research Limitations

As in any study, this research also has several limitations that can warrant future research investigations. Moreover, there are opportunities within this research to extend the investigation in order to add more significant support and depth to these findings. Since this research only takes respondents from the Greater Jakarta area and focuses only on private hospitals, the future researcher should expand the research area and research objective. Researchers can expand the research area to the island of Java or all regions in Indonesia in order to access the generality of the findings. Future research could also research different categories of health care providers, such as public hospitals, integrated healthcare centres (Posyandu), or medical clinics. However, despite its limitations, it contributes to a more systematic understanding of driving factors of revisit intention in the context of a private hospital. In this regard, it is hoped that this research will provide a better foundation for further research on related topics. As this study only focuses on the variable brand image, trust, word of mouth, perceived service quality, and satisfaction as the driving factors for patient revisit intention. Perhaps, the future researcher could add two other variables such as price, because private hospitals' price is quite sensitive for patients because it is indeed more expensive (Arianto, 2017; Yolanda & Sumedi, 2018) and perceived value can be considered as one of driving factors of revisit intention (Chen & Chen, 2010; Zainal, 2012-2013; Chen, 2008).

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# The Effect of Firm Size, Leverage, Capital Intensity and Corporate Social Responsibility on Tax Aggressiveness

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## Abstract

This study aims to examine the effect of firm size, leverage, capital intensity and corporate social responsibility on tax aggressiveness. Firm size is proxy by logarithm of total asset. Leverage is proxy by debt to equity ratio. Capital intensity is proxy by fix asset divide by total asset. CSR is proxy by CSR disclosure with GRI G4 as the indicator. Tax aggressiveness is proxy by ETR and Cash ETR. This study uses secondary data in companies listed on the Indonesia Stock Exchange (IDX) in addition to construction and financial companies for the period 2012-2017. The sample used in this study was 468 companies. The analysis technique used is panel data regression analysis. The results of the study found that: First, firm size has not effect on ETR and Cash ETR. Second, leverage has negative effect on ETR and Cash ETR. Third, Capital intensity has negative effect on ETR and Cash ETR. Last, CSR has not effect on ETR and Cash ETR.

**Keywords:** *Tax Aggressiveness, Firm Size, Leverage, Capital Intensity, Corporate Social Responsibility*

## 1. Introduction

Tax is the most potential state revenue, because it is useful to cover general expenses, so it does not provide direct benefits for the society (Suandy, 2011). Based on data from the Ministry of Finance of the Republic of Indonesia (2019) shows that the state budget and revenue expenditure (APBN) in 2018 which reached Rp1.894,7 trillion, as Rp1.618,1 trillion of which is contributed by taxes. However, according to the Finance Ministry tax revenue in 2018 only reached Rp1.315,9 trillion, or 92% realization of the budget target in 2018 which amounted to Rp1.424 trillion, where there was a shortage of tax revenue by Rp108.1 trillion. The lack of tax revenue, according to research Kurniawati (2017) can be caused by many factors, one of these factors is tax aggressiveness.

Tax aggressiveness is an act of tax planning without breaching taxation namely with presence activity tax evasion by using the weak point of taxation rules, thereby reducing the tax payable by the taxpayer (Hlaing, 2012). Tax aggressiveness usually utilizes the weak points of taxation rules so that the more regulations that support the imposition of weak corporate tax, the more aggressive the tax reduction is (Pranoto et al., 2016). According to research of Harjito et al., (2017) there are factors that could affect the company in carrying out tax aggressiveness, these factors include characteristics of the company and corporate social responsibility (CSR).

Research CSR and characteristics of the company on tax aggressiveness has been conducted by researchers Harjito et al., (2017), Dewi et al., (2014), Mulyani et al., (2014), and Yunistiyani et al., (2017) with mixed results. Harjito et al., (2017) using CSR variables and characteristics of the company is measured using a proxy firm size, leverage, and capital on tax aggressiveness, the result is that firm size and capital intensity has positive effect on tax aggressiveness, leverage and CSR has negative effect on tax aggressiveness. Dewi et al., (2014) found that firm size has not effect on tax aggressiveness. Mulyani et al., (2014) found that leverage has effect on tax aggressiveness and capital intensity has not effect on tax aggressiveness. Research of Yunistiyani et al.,

(2017) that discusses the influence of CSR on tax aggressiveness states that CSR has effect on tax aggressiveness.

This research is a development of Harjito et al., (2017) research that examines the relationship between characteristics of the company, CSR and tax aggressiveness. Researchers want to reexamine this research because there is inconsistency in the results with the results of previous studies conducted by Harjito et al., (2017), Dewi et al., (2014), Mulyani et al., (2014) as well as Yunistiyani et al., (2017), so we need to do further testing to determine consistency.

As for the difference with previous research: first, in observational studies. Research of Harjito et al., (2017) observing a sample of manufacturing companies listed in Indonesia Stock Exchange (IDX) from 2011-2015 then in this study, researchers looked at companies listed on the Stock Exchange in addition to the construction company as well as finance from the years 2012-2017. In 2012 there is a global crisis that must be aware that according to the Directorate General of Taxes (2012) need to be taking some steps to improve the VAT system.

Second, in research of Harjito et al., (2017) the tax aggressiveness variable is only measured by ETR, so in this study, the researcher added another measurement, namely cash ETR which refers to the research of Hanlon et al., (2010). The use of Cash ETR is because there is no influence with changes in the estimated tax valuation allowance. Third, researchers use the latest CSR reporting standard, the fourth generation of GRI (Global Report Initiative) which refers to the research of Anggraeni et al., (2017), different from research of Harjito et al., (2017) that uses the third generation of GRI.

This study aimed to analyze and obtain empirical evidence about the influence of firm size, leverage, capital intensity and CSR to tax aggressiveness. The results of this study are expected to add to the relevant literature firm size, leverage, capital intensity, CSR and tax aggressiveness in Indonesia's company. This study is limited to variable firm size, leverage, capital intensity and CSR. Measuring instrument of tax aggressiveness in this study using Effective Tax Rate and Cash Effective Tax Rate. The sample used in this research that companies listed on the Indonesian Stock Exchange (BEI) in addition to construction companies and finance in the year 2012 to 2017 (six years).

## **2. Theoritical Framework and Hypothesis development**

The Agency Theory was coined by Jensen and Meckling (1976) suggests that the owner gives trust to the agent to carry out all operational activities that occur in the company due to differences in interests. The manager as an agent certainly wants to maximize his own interests by taking undue actions, this is what can lead to information asymmetry, namely the onset of conflict between the owner and manager. One of the concerns is corporate tax policy. The taxation system in Indonesia that adopts self-assessment is that companies can calculate and report their own taxes paid to provide an opportunity for managers as agents to manipulate taxable income that can affect the value of a company, so that good management is needed to achieve the wishes of the company owner.

The legitimacy theory was first introduced by Spence Dowling et al., (1975), legitimacy defined that the importance of analysis related to organizational behavior by paying attention to the surrounding environment due to the limitations that are emphasized by the existence of social norms and values in society. In the perspective of legitimacy, the company's image is considered important for management so that the company will voluntarily report its activities on the environment in order to achieve a good level of image popularity among the public. Based on these definitions, legitimacy exists because there is a match between the activities or objectives of the organization and the expectations of the community.

Capital structure is the entire long-term funding source used by the company (Alfandia, 2018). Indications of a capital structure to create a mix of permanent sources of funds in such a way as to be able to increase the value

of the company. The problem with capital structure is that it can balance the benefits and costs of using debt. Debt savings come from tax savings, which allow the company to reduce its tax payments.

Tax aggressiveness is any form of activity that has an effect on tax obligations, whether the activity is permitted by taxation or special activities to reduce taxes (Dyrenge et al., 2008). The practice of tax aggressiveness usually exploits the weaknesses of tax law and does not violate taxation laws. Basically, taxpayers always want a small tax payment. This is what makes taxpayers avoid tax, both legal and illegal. Legal tax avoidance is called tax avoidance or tax aggressiveness, while illegal tax avoidance is the smuggling of tax (tax evasion).

Firm Size is the size of the total assets of a company so that companies that have relatively large total assets indicate that the company has a large size both physically and operationally. Companies with large sizes will be balanced with large operational activities as well, so that the company's revenue or profits will also be large. Large companies will tend to try to avoid profits that are too drastic so as not to cause an increase in tax burden that is too large (Healy, 1985). Leverage is the intensity of the use of debt used by companies as a source of funds that aims to show the use of debt to the level of profit (Husnan and Pudjiastuti, 2002). Capital intensity is the amount of capital invested by a company so that it can be measured using the ratio of fixed assets divided by sales (Sartono, 2001). Capital intensity can function to show information on the level of efficiency of capital use that has been invested by the company.

Corporate social responsibility is a social responsibility undertaken by the company to the surrounding environment by taking actions that can provide welfare for the surrounding community as well as to protect nature (Nahar, 2012). There are various motivations for companies to disclose CSR including to increase profits viewed from the instrumental approach. CSR has a positive impact on companies and the community, but sometimes it can create biases so that many companies that disclose CSR are only to cover up the various frauds committed, one of which is tax aggressiveness.

### **3. The Effect of Firm Size on Tax Aggressiveness**

There is a relationship between the total assets of the company with the size of the company. Large companies were able to have experts in managing its resources for a long period of time compared with small companies that are still not optimal in managing their resources. Good management allows large companies able to make arrangements in terms of production and sales. When incomes rise drastically, large companies were able to defer income to the next period or in other words, the revenue would not be recognized in this period but are recognized for the period selanjutnya. The revenue deferral impact on earnings that visible more small so that resulting in less tax payments. The technique used by company managers in minimizing profits is done by choosing an accounting method so that income can now be recognized in the next period (Watts and Zimmerman, 1986).

Results from previous studies of Pratt (2017) and Tiara, (2015) showed firm size positive and significant impact on the tax aggressiveness. Based on these results, the company that was included in the large enterprise scale will have an abundance of resources that can be used for specific purposes such as tax evasion. So the first hypothesis the researchers propose is as follows:

**H<sub>1</sub>:** Firm Size has a positive effect on Tax aggressiveness (ETR and cash ETR)

### **4. The Effect of Leverage on Tax Aggressiveness**

The company's operational and investment needs can be funded by debt. corporate debt is obtained from banks and bond issuance. In line with the capital structure theory which states that a company that has a debt will have an interest expense regulated in the legislation Article 6 paragraph (1) letter a of Law No.36 of 2008 where the interest expense is recognized as a deduction of PKP (taxable income). This can be indicated that the greater the debt, the higher the level of tax avoidance practices.

Results from previous studies of Suyanto et al., (2012) and Putri (2016) show that leverage has a positive effect on tax aggressiveness. Based on these results, the researchers argue that the leverage of a company will increase the practice of tax avoidance. So the second hypothesis that the researchers propose is as follows:

**H<sub>2</sub>:** Leverage has a positive effect on Tax Aggressiveness (ETR and Cash ETR).

### 5. The Effect of Capital Intensity on Tax Aggressiveness

Capital intensity can be analyzed by looking at the amount of capital invested by the company so that it can be measured using the ratio of fixed assets divided by sales. Depreciation of fixed assets owned by companies can reduce the tax burden with the burden of depreciation due to the Useful Life of fixed assets. The company utilizes the depreciation expense as a deduction from profit before tax to obtain the possibility of lower tax payments compared to companies with fewer fixed assets (Jaya, 2018).

Results from previous studies of Andhari et al., (2017) and Harjito et al., (2017) indicate that there is an influence of capital intensity on tax aggressiveness. Based on these results, the researchers argue that the capital intensity of a company will increase the practice of tax avoidance. So the third hypothesis that researchers propose is as follows:

**H<sub>3</sub>:** Capital Intensity has a positive effect on Tax Aggressiveness (ETR and Cash ETR).

### 6. The Effect of CSR on Tax Aggressiveness

Companies that have large profit indicated will pay more taxes to the government and will lead to many lawsuits against companies such as corporate social responsibility (Rini et al., 2015). Companies that commit acts of tax aggressiveness tend to express greater CSR due to the transfer of the tax burden borne by the CSR (Octaviana, 2014). Companies are required to do a CSR in order to gain legitimacy from the public and to earn profits. The more companies to maximize CSR disclosure, the company's tax aggressiveness will increase (Yunistiyani and Tahar, 2017). Results from previous studies of Yunistiyani et al., (2017) and mustika (2017) showed that CSR has a positive influence on tax aggressiveness. Based on these results, the researchers suggest that the more a company discloses CSR, the more aggressive a company in the practice of tax evasion. So the researchers propose that the fourth hypothesis is as follows:

**H<sub>4</sub>:** CSR has a positive effect on Tax Aggressiveness (ETR and Cash ETR).

Based on the explanation of the hypothesis development above, the research model is as follows:

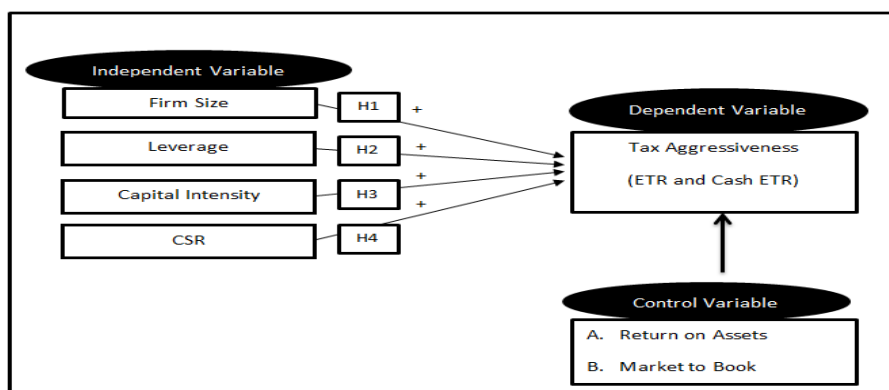


Figure 1. Model Research

## 7. Research Methods

This study uses secondary data by collecting and analyzing data of financial statement and the sustainability of companies listed on the Indonesia Stock Exchange in the period 2012-2017. The dependent variable in this study is tax aggressiveness which is proxied by ETR and Cash ETR. The independent variables are firm size, leverage, capital intensity and CSR. This study uses 2 control variables, namely profitability and market to book.

**Dependent Variable** is tax aggressiveness proxied by using ETR where ETR is measured by comparing the total income tax expense with profit before tax, which includes current tax expense and deferred tax expense (Harjito, 2017). The formula for determining the value of ETR:  $ETR = (Income\ Tax\ Expense) / (Pre - Tax\ Income)$ . This study also uses other measurements in predicting tax aggressiveness that is cash ETR. Researchers used two models intend to strengthen predictive models in findings research. proxy cash ETR represents the percentage of actual total income tax paid by the company of the total pre-tax income earned from cash flow. Hanlon and Heitzman (2010). The formula for determining the value of cash ETR:  $Cash\ ETR = (Current\ Tax\ Paid) / (Pre - Tax\ Income)$

**Independent Variable are Firm Size, Leverage, Capital Intensity and Corporate Sosial Responsibility.** Large or small scale companies that can generally be known through the amount of company assets are referred to as company size. Firm size measurement model can be calculated from total assets because company size is proxied by Ln total assets (Harjito, 2017). The natural logarithm of total assets is used in this study to reduce data fluctuations without changing the proportion of original values.

**Leverage**, relationships that describe a company's debt to capital or assets are referred to leverage. Researcher measure leverage use debt to assets ratio (Harjito, 2017).  $Leverage = (Current\ Liabilities) / (Total\ Assets)$ . **Capital Intensity**, How big is the company investing in assets can be indicated by capital intensity, which measured using a comparison between the assets to total assets (Harjito, 2017).  $capital\ intensity : (Total\ fixed\ Assets) / (Total\ Assets)$ .

**Corporate Sosial Responsibility.** This study uses the latest CSR reporting standard, the fourth generation of GRI (Global Report Initiative) which refers to the research of Anggraeni et al., (2017), with 91 disclosed information indicators measured using a 0-3 scale. The following are the scoring categories regarding CSR disclosures, which are 0 if not disclosed, 1 if disclosed without explanation or the company only gives a statement about the disclosure indicators briefly, 2 if disclosed and provides a qualitative explanation, and 3 if express and explain qualitatively. Disclosure related to the quality of CSR information disclosed by the company is expected to be indicated on that scale. The company's CSR disclosure quality index is obtained from a comparison between the total score of the CSR disclosure quality of each company and the maximum total disclosure score.  $CSR = SQCSR_i / 273$ .  $QCSR_i$  :The quality of I's corporate CSR disclosures.  $SQCSR_i$  :Quality score of I's corporate CSR disclosure. 273 :Maximum score of CSR disclosure quality.

In this study, there are two types of control variables, the first variable is profitability as measured by the ratio return on assets (Hidayanti and Laksito, 2013).  $Return\ on\ Assets = (Net\ Profit\ for\ the\ year) / (Total\ Asset)$ . The second variable is the market to book which is measured by the value of common shares per book value of equity.  $market\ to\ book = (Market\ Value) / (Book\ Value)$

The data in this study were processed using Eviews version 9. The analytical method used is descriptive statistical methods and regression analysis, namely the classical assumption test consisting of multicollinearity and heteroscedasticity tests. Testing the first hypothesis to the fourth hypothesis using the statistical t test with multiple linear regression analysis, and see how the coefficient of determination between variables.

The population of this study is all companies listed on the Indonesia Stock Exchange (IDX), while the sample is companies on the IDX in addition to construction and financial companies with a sampling technique that is purposive sampling with the following criteria:

- a. Companies on the Indonesia Stock Exchange other than construction and financial companies in 2012-2017, did not experience delisting during the study period, and the company did not conduct an IPO in 2012-2017.
- b. The company issued financial reports and sustainability reports for 2012-2017 using the rupiah currency
- c. All related variables are available in full both in financial statements and sustainability reports.
- d. The company did not experience a loss or Pre Tax Income (negative) during the study period.

## 8. Results and discussion

Population data in this study used publicly listed companies listed on the Indonesia Stock Exchange in 2012-2017 with a total of 566 companies (Table I Sample). The amount is reduced by the specified sample criteria, namely companies included in the construction and financial sectors, as many as 158 companies. There were 98 companies that conducted IPOs in 2012-2017, 5 companies that were delisted during the observation year, and 51 companies that did not submit Annual Reports and Sustainability Reports.

<b>Table 1 Sample Description</b>	
Description	Number of Companies
Number of companies registered in the study period (2012-2017)	566
Number of Property, Real Estate and Building Construction Companies and financial sectors listed on the Indonesia Stock Exchange in the period for 2012-2017	(158)
The company was first registered (IPO) in 2012-2017	(98)
Companies experiencing delisting in period 2012-2017	(5)
Companies that do not submit annual reports and sustainability reports	(55)
Companies that use currencies other than Rupiah (Rp)	(62)
Annual report data is not available in full according to the required variables	(2)
Companies that have a negative Pre-Tax Income value	(108)
<b>Selected companies to be samples per year</b>	<b>78</b>
<b>Total Sampel Periode 2012-2018</b>	<b>468</b>

Companies that use foreign currency as many as 62 companies, financial statement data are not available in full, namely the variable tax payments of 2 companies, and companies that have a negative profit before tax rate of 108 companies. So, the total sample that meets the established criteria is 78 Companies per year, so the total number of observations during the 2012-2017 period is 468 observations (78 companies x 6 years).



Based on the descriptive statistical test results in table 2, it can be seen that the amount of research data is 468 observations (78 companies x 6 years). This study examines the dependent variable, tax aggressiveness, which is measured by two proxies, namely ETR and Cash ETR. From the two tax aggressiveness proxies, the mean value is ETR of 0.25 and Cash ETR of 0.30. So overall the average company does not avoid taxes because the average value is above 25% (0.25). The independent variables in this study consisted of four variables, namely firm size, leverage, capital intensity and corporate social responsibility (CSR).

The first independent variable is firm size measured by the natural logarithm of total assets from the company's annual report which has an average size of the company of 13,961 billion rupiah, which shows that the average total assets of the sample companies have a larger majority size. The second independent variable is leverage which is measured through a comparison between Current Liabilities and the total assets of the company's annual report. The average leverage value of the company is 0.276, which shows that the observation company in financing assets by 27% comes from debt.

**Table II. Statistik Deskriptif**

Variables	Mean	Max	Min	Std. Dev
ETR	0,250	0,721	0,0040	0,084
CETR	0,303	0,980	0,0006	0,144
SIZE	27,31	32,49	21,647	1,998
SIZE(Rp Miliar)	13,96	295,6	46,000	34,46
LEV	0,276	0,774	0,019	0,160
CAP_INT	0,273	0,783	0,008	0,155
QCSR	0,299	0,747	0,150	0,111
CSR1	0,431	0,851	0,111	0,145
CSR2	0,285	0,794	0,029	0,143
CSR3	0,324	0,791	0,833	0,143
CSR4	0,230	0,750	0,000	0,156
CSR5	0,220	0,666	0,060	0,118
CSR6	0,371	0,962	0,000	0,139
ROA	0,128	0,742	0,004	0,095
MTB	2,698	22,29	0,001	2,826
Sampel (N)	468			

The third independent variable is capital intensity which is measured through a comparison between fixed assets and total assets from the company's annual report. The average value of the company's capital intensity of 0.273 shows that the observation company invested its assets in fixed assets at 27% of the total assets. The fourth independent variable is CSR. CSR measurements are based on GRI G4, with each indicator of information disclosed measured on a 0-3 scale. GRI G4 includes 6 dimensions of corporate social responsibility disclosure



reporting activities which include: CSR1 economic performance categories 9 items which have an average of 0.431. CSR2 work environment category 34 items which have an average of 0.285. CSR3 categories of labor practices 16 items that have an average of 0.324. CSR4 categories of human rights 12 items which have an average of 0.230. CSR5 categories of social items 11 items that have an average of 0.220 and CSR6 categories of product responsibility 9 items that have an average of 0.371.

From table II it can be seen that the quality of CSR disclosure of the most widely expressed by companies observation lies in the economic category. The average value of a company's CSR observation of 0,299, this shows that the average observation company of 29% has revealed social responsibility where the most points are economic indicators.

This study also uses two control variables namely ROA and market to book. The first control variable uses profitability and is measured using the ratio of return on assets (ROA) that is net income divided by total assets. The average value of the company's ROA of 0.128 shows that the observation company can generate a profit of 12% of the total assets owned. The second control variable is market to book which is measured by using market value divided by book value which has an average market value of the company's book of 2,698 which indicates that investors value the book value of the company more by 2,698.

Based on the results of hypothesis testing between independent variables, control variables and the dependent variable, a summary of the results of the hypothesis test can be seen in the table III. as follows:

### The Effect of Firm Size on Tax Aggressiveness (H1)

Hypothesis 1 states that firm size has a significant positive effect on Tax Aggressiveness measured using ETR and Cash ETR. Based on table III shows that the probability value (F-statistics) is 0.0000, the value is much smaller than the level of significance. This means that the regression model can be used to predict tax aggressiveness through ETR and Cash ETR or it can be said that firm size influences ETR and Cash ETR. The R-Squared value in the table above shows that the tax aggressiveness variable through the ETR proxy is influenced by the independent variable namely the firm size of 52.37% (0.5237) and the remaining 47.63% is explained by other causes outside the model, the tax aggressiveness variable through the Cash ETR proxy is influenced by independent variables namely the firm size of 47.82% (0.4782) and the remaining 52.18% is explained by other causes outside the model.

**Table III. Test Results of Hypothesis**

Description	P-Value		Coefisien		Result
	ETR	Cash ETR	ETR	Cash ETR	
H1: Firm Size has a positive effect on Tax aggressiveness ( ETR and cash ETR)	0,3548	0,2336	0,0105	0,0138	Not Supported
H2: Leverage has a positive effect on Tax Aggressiveness (ETR and Cash ETR)	0,0048***	0,0343**	0,1472	0,1974	Supported
H3: Capital Intensity has a positive effect on Tax Aggressiveness (ETR and Cash ETR)	0,0862*	0,0320**	0,0879	0,1958	Supported
H4: CSR has a positive effect on Tax Aggressiveness (ETR and Cash ETR)	0,4214	0,6358	0,0649	0,0681	Not Supported
Return on Asset (ROA)	0,0000****	0,0000****	-0,8761	-0,3974	Supported
Market to Books (MTB)	0,7472	0,9344	-0,0009	0,0004	Not Supported
R-squared					0,5237

Adjusted R-squared					0,4782
F-statistic					0,000
N (Sample)					468
Result Test					FIXED Effect

\*\*\*Significant of level 1%, \*\*Significant of level 5%, \*Significant of level 10%

Based on the results of hypothesis testing H1a and H1b show that firm size has no effect on tax aggressiveness in the measurement of ETR (H1a) and Cash ETR (H1b). Therefore it can be concluded that **hypotheses 1a and 1b are not supported**, thus it can be said that the behavior of companies in Indonesia to carry out tax aggressiveness is not influenced by the total assets of a company. The average size of the company in this study can be said to have a large resource (total assets). This can be seen from the average value of total assets of 13,961 billion rupiah. Large companies, even though they have the ability to manage their resources, including tax management, generally tend to be a focus or special concern for fiscal parties to pay more attention to taxation (Watts and Zimmerman, 1986). This makes companies with large sizes more careful and not take risks that have long-term impacts in order to maintain the good name and public trust in the company. The results of this study do not support the research of Pratama (2017) and Tiaras et al., (2015) who found that firm size has a positive and significant effect on tax aggressiveness. Instead the results of this study are in line with the results of Rusydi's (2013) study which states that the behavior of companies in Indonesia to carry out tax aggressiveness is not influenced by the size and size of a company's total assets. Large companies will sometimes consider compliance with tax payments as a momentum to build public image and trust because they are able to contribute indirectly to the development of a company's residential area through taxes.

### The Effect of Leverage on Tax Aggressiveness (H2)

Hypothesis 2 states that leverage positively influences tax aggressiveness measured using ETR and Cash ETR. Based on table III. the results of testing the hypothesis H2a and H2b show that leverage has a positive effect on tax aggressiveness in the measurement of ETR (H2a) and Cash ETR (H2b) at a significance level of 1% for measuring ETR (H2a) and 5% for measuring Cash ETR (H2b). These results indicate that leverage affects the ETR and Cash ETR which are proxies of tax aggressiveness with positive coefficient values. The effect of leverage on ETR and Cash ETR shows the positive coefficient direction, meaning that the higher the value of leverage, the higher the value of ETR and Cash ETR. The higher the value of ETR and Cash ETR, the lower the tax aggressiveness action. However, this is not in accordance with the H2a hypothesis and the H2b hypothesis which states that leverage has a positive effect on tax aggressiveness as measured through ETR and Cash ETR so that the **H2a hypothesis and the H2b hypothesis are supported**.

These results support the research of Putri (2016) which proves that the higher the level of debt of a company, the lower the tax avoidance measures taken. This is because corporate debt affects the value of interest expense which will reduce the value of the company's taxable income. Large companies tend to use loans from third parties. This is because the funds from third parties lent are usually of considerable value. So the company has the opportunity to further expand its business. However, the greater the size of a company, the greater the resulting profit value, so that the utilization of the value of interest from third party loans can be used as a deduction from the company's taxable income. This study does not support the results of research by Suyanto and Supramono (2012) and Siswianti (2016).

### The Effect of Capital Intensity on Tax Aggressiveness (H3)

Hypothesis 3 states that capital intensity has a positive effect on tax aggressiveness measured using ETR and Cash ETR. Based on table III. The results of hypothesis testing H3a and H3b show that capital intensity has a positive effect on tax aggressiveness on the measurement of ETR (H3a) and Cash ETR (H3b) at a significance level of 10% for measuring ETR (H3a) and 5% for measurement of Cash ETR (H3b). The effect of capital intensity on ETR and Cash ETR shows the positive coefficient direction, meaning that the higher the value of

capital intensity, the higher the value of ETR and Cash ETR. The higher the value of ETR and Cash ETR, the lower the tax aggressiveness action. However, this is not in accordance with the H3a hypothesis and the H3b hypothesis which states capital intensity has a positive effect on tax aggressiveness as measured through ETR and Cash ETR so that **the H3a hypothesis and the H3b hypothesis are supported.**

The results of this study support the research of Dharma and Ardiana (2016) who found that the negative effect of the variable capital intensity on tax aggressiveness shows that the higher the fixed assets owned by the company, the lower the level of tax avoidance, this condition is likely to be caused by the greater number of assets. However, the company will increase the company's productivity which is effective and efficient in generating large profits or profits for the company, so that the amount of depreciation expense arising from depreciation is not able to significantly influence or reduce the amount of taxable income, thus the tax burden will remain high. This study does not support the research of Andhari and Sukartha (2017) and Harjito et al., (2017).

#### **The Effect of CSR on Tax Aggressiveness (H4)**

Hypothesis 4 states that CSR has a positive effect on tax aggressiveness as measured using ETR and Cash ETR. Based on table III the results of hypothesis testing H4a and H4b show that CSR has no effect on tax aggressiveness in the measurement of ETR (H4a) and Cash ETR (H4b). Therefore it can be concluded that **hypotheses 4a and 4b are not supported.** This shows that the company's CSR activities do not affect the company so that the company pays the company's tax burden smaller. The average CSR value carried out by the company in disclosing social responsibility information in this study can be said to be still low. This can be seen from the average CSR value of 29% which has revealed social responsibility. This value is deemed insufficient or still limited, causing the possibility of CSR has not been able to reduce tax aggressiveness actions undertaken by the company.

The results of this study support the research of Jessica and Toly (2014), Dewi et al., (2017) and Harjito et al., (2017) which show that the company's CSR activities do not affect the company so that the company pays a smaller corporate tax burden. CSR is a form of part of corporate responsibility towards the surrounding community. The company will not make its image decrease by doing tax aggressiveness. The company considers that the company's image needs to be maintained in order to increase public trust in the company. Instead the results of the results of this study do not support research Mustika (2017).

### **9. Conclusions and Suggestions**

This study aims to provide empirical evidence and find a picture of tax aggressiveness in companies on the Indonesia Stock Exchange (BEI) by examining the effect of firm size, leverage, capital intensity, and CSR. This study uses secondary data consisting of financial statements and sustainability reports of companies listed on the IDX in addition to the construction and financial companies for the 2012-2017 period. The sample used amounted to 468 observations (78 companies x 6 years). The analysis technique used is panel data regression analysis. Tax aggressiveness variables are measured using two proxies, namely effective tax rate and cash effective tax rate.

Some conclusions that can be drawn from the test results in this study are, first the firm size has no effect on tax aggressiveness if measured through the Effective Tax Rate (ETR) and Cash Effective Tax Rate (Cash ETR). This means that the company's behavior to carry out tax aggressiveness is not influenced by the size or total of the company's total assets. Second, leverage negatively affects tax aggressiveness if measured through the Effective Tax Rate (ETR) and Cash Effective Tax Rate (Cash ETR). This means that the higher the value of leverage, the lower the tax aggressiveness of a company. Third, capital intensity has a negative effect on tax aggressiveness if measured through the Effective Tax Rate (ETR) and Cash Effective Tax Rate (Cash ETR). This means that the higher the value of capital intensity, the lower the tax aggressiveness of a company. Finally, CSR has no effect on tax aggressiveness if measured through the Effective Tax Rate (ETR) and Cash Effective Tax

Rate (Cash ETR). This means that the Corporate Social Responsibility activities of a company does not affect the company so that the company pays a smaller corporate tax burden.

This research has limitations that can affect research results and are useful for similar research in the future. The limitations in this study include: First, the measurement of variable tax aggressiveness is only measured using 2 proxies namely ETR and Cash ETR. Second, this study is limited to 4 independent variables (firm size, leverage capital intensity, and CSR) and 2 control variables (ROA and market to book). Third, this research is only limited to companies listed on the Stock Exchange other than construction and financial companies so the results of the study do not represent the results of all companies listed on the Stock Exchange. Fourth, the research period is only six years, 2012-2017, so the results cannot be generalized for the years before or after.

Based on the limitations of the problems outlined above, there is a suggestion for further research which is to add tax aggressiveness measurement proxies such as Current effective tax rate (Current ETR) to see tax payments made by companies in that year, adding free variables that are predicted to affect tax aggressiveness such as earnings management which refers to the research of Suyanto and Supramono (2012), adding a sample using the construction sector and corporate financial sector on the IDX, and adding a longer period of time can illustrate the direct effect of tax aggressiveness by the company.

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## **Do the universities implement university social responsibility (USR)? Study at state universities in Indonesia. An Abstract**

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This research is an descriptive research with the aim to find out whether state universities in Indonesia have implemented university social responsibility (USR). The USR variable was measured by indicators developed by Vallaey's et al. (2009) with four dimensions: responsible campus, professional training and citizenship, social knowledge management, and social participation. This research is a case study in 3 (three) state universities in Indonesia: Universitas Gadjah Mada (UGM), Universitas Sebelas Maret (UNS), and Universitas Pahlawan Negara Yogyakarta (UPN). This research data is secondary data sourced from the internet. Data analysis uses description analysis and Kruskal Wallis test. The results showed that in general the three state universities had applied all dimensions of USR even though not all of the dimensions had been applied. Statistically, the three state universities did not have a significant difference in the application of USR in universities. However, the three state universities have significant reputation differences. Furthermore, universities that have applied more USR dimensions show better university reputation. This means that the implementation of USR can improve university reputation.

**Keywords:** university social responsibility (USR); state universities; university reputation



## **Mediating role of green innovation on green market orientation-business performance relationship: Evidence from MSMEs in East Java Province, Indonesia. An Abstract**

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This study aims to investigate the antecedents of business performance by investigating the effect of green market orientation on business performance. If so, whether the relationship is mediated by green innovation. As a quantitative research, partial least squares structural equation modeling (PLS SEM) was employed to test the hypotheses that have been formulated. Data were collected using both online and offline questionnaires from owners/managers of the manufacturing micro, small and medium-sized enterprises (MSMEs) in the East Java Province of Indonesia. A total of 175 respondents were participated in this study. The results show that green market orientation has a positive and direct effect on business performance. Furthermore, the result reveals that green innovation partially mediates the effect of green market orientation on business performance. This study provides empirical evidence for the development of sustainability and entrepreneurship theories. The results also imply that MSMEs need to balance environmental, social and economic issues in their business. In the era of sustainable development and environmental awareness, the manufacturing MSMEs need to adopt a green market orientation and carry out green innovation in their business processes to obtain a better business performance.

**Keywords:** Green Market Orientation, Green Innovation, Business Performance, Sustainability Theory, Entrepreneurship Theory, MSMEs.

## **Firm Characteristics, Corporate Governance and Tax Avoidance: Study on Mining Companies in Indonesia. An Abstract**

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This research was conducted with the aim of: (1) to determine whether firm characteristics and corporate governance affect tax avoidance in mining companies in Indonesia, and (2) to determine whether corporate governance moderates the relationship between firm characteristics and tax avoidance. The research sample is all mining companies listed on the IDX for the period 2015 to 2018, totally 156 observations. From 156 observations, 84 observations can be analyzed. This research data is secondary data in the form of mining company Annual Reports obtained from the official website of the IDX, namely [www.idx.co.id](http://www.idx.co.id) and the official websites of the respective companies. Data analysis to test data normality used the Kolmogorov-Smirnov test. Hypothesis testing uses moderated regression analysis (MRA) with SPSS. The result of the analysis shows that firm characteristics consisting of leverage and ROE have an effect on tax avoidance, while company size has no effect on tax avoidance. Another result is that CG as measured by the proportion of independent commissioners does not moderate the relationship between firm characteristics and tax avoidance.

**Keywords:** Firm Characteristics, Corporate Governance, Tax Avoidance

## **Developing Employee Innovative Work Behavior through The Role of Psychological Empowerment and Learning Agility : A Generational Diversity Perspective. An Abstract**

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### **Abstract**

This research is an experiment to develop a model of employees innovative work behavior through the role of psychological empowerment and learning agility from the perspective of generational diversity, therefore the respondents used in this study are employees who belong to the Y and Z generations from manufacturing companies located in Salatiga. Data were collected from 152 employee by means of a self – administered questionnaire. Using path analysis the results of this study revealed that psychological empowerment and learning agility have a significant and positive relationship on employees innovative work behavior. Second, age diversity climate as a mediating construct, not fully mediate the relationship between psychological empowerment and learning agility toward employee innovative work behavior, it's only mediating the relationship between psychological empowerment and employee innovative behavior. Finally this study offers the empirical evidence on how to develop employee innovative work behavior in manufacturing concerns through generational diversity perspective. Other facts that should highlight from this study is is that innovative behavior is one of the key towards company improvement and generational diversity, especially the domination of generations Y and Z, is an relevant matter that cannot be avoided and must be one of particular concern to Human Resouces Managers.

**Keywords:** Innovative work behavior, Generational diversity, Psychological Empowerment, Learning Agility

## **Analysis of Factors Affecting Regional Economic Growth (Case Study in Regencies / Cities in Solo Raya)**

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### **Abstract**

This study aims to determine the effect of the degree of fiscal decentralization, capital expenditure, and human development index as factors that influence regional economic growth.

The analytical method used is multiple linear regression test using panel data using the Fixed Effect Model (FEM) and conducted in the Solo Raya region in 2010-2018.

The results of research conducted indicate that the degree of fiscal decentralization and individual human development index have a positive and significant effect on regional economic growth. While capital expenditure has a positive but not significant effect on regional economic growth. In addition, the level of fiscal decentralization, capital expenditure, and the human development index simultaneously have a significant influence on regional economic growth.

Increasing the efficiency of tax revenue to encourage regional fiscal aspects, balancing the budget and the realization of capital expenditures, and improving quality in the aspects of health, education, and community work to improve human development are recommended.

**Keyword:** Regional Economic Growth, Degree of Fiscal Decentralization, Capital Expenditure, Human Development Index, Solo Raya

### **1. Introduction**

Economic growth is an indicator that is often used to assess the level of community welfare and the economic condition of a region. According to Meier (in Satria, 2016) economic growth is a requirement for regional development. Regional economic growth in the region in Solo Raya in a period of 9 years from 2010-2018 can be said to be good because every year there is an increase in gross regional domestic product which is a representative indicator of regional economic growth. Based on this, relatively good regional economic growth can be used as a reference for other regions that have relatively low economic growth rates to increase the level of regional economic growth so that it will facilitate their efforts to create community welfare.

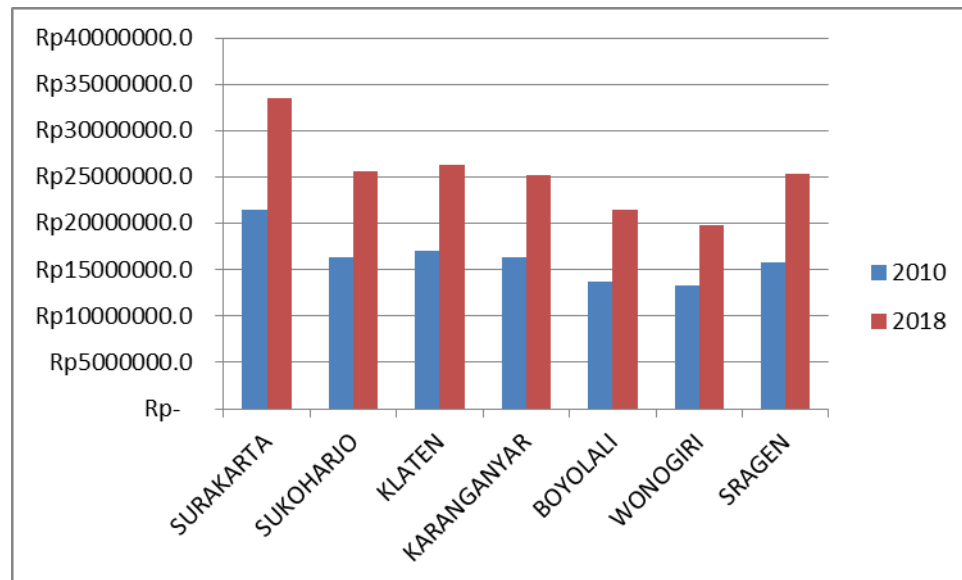


Figure 1. Gap of gross regional domestic product of Regencies / Cities in Solo Raya in 2010 and 2018

Table I. Average Gross Regional Domestic Product in Solo Raya in 9 years (2010-2018)

Regencies / Cities in Solo Raya	Average Gross Regional Domestic Product
SURAKARTA	Rp27,186,542
SUKOHARJO	Rp20,673,119
KLATEN	Rp21,497,447
KARANGANYAR	Rp20,438,009
BOYOLALI	Rp17,340,440
WONOGIRI	Rp16,290,812
SRAGEN	Rp20,358,534

Courtesy : Badan Pusat Statistik

The graph and table above as a whole illustrate the pattern or trend of gross regional domestic product growth in the regions in Solo Raya in 2010 and 2018. It can be seen that in general the regions concerned experienced an increase in gross regional domestic product or regional economic growth by the number of which is significant and has a good level of economic growth with the reference value of the average gross regional domestic product for 9 years received by each region in Solo Raya. This illustrates the condition of regional economic growth with GRDP as a representative indicator.

In line with this research, the researcher determined that the degree of fiscal decentralization and capital expenditure as representative of the financial aspects and human development index as representative of the non-financial aspects as factors affecting regional economic growth in Solo Raya in 2010-2018.

### **Regional Economic Growth**

Prof. Simon Kuznets (in Jhingan, 2018) said that economic growth is an increase in the ability of a country to multiply types of economic goods and distribute these economic goods to its residents in the long term. This capacity grows with advances in existing technology and the institutional and ideological adjustments that the country requires. This statement can then be concluded that economic growth has three main components, namely the amount of stock of goods, the existence of technological advances to support the supply of goods, and the widespread and efficient use of technology in the institutional and ideological fields. Economic growth can be seen from the amount of gross domestic product (GDP) produced by a country in a certain period of time. Gross domestic product (GDP) is an indicator used to observe a country's economic growth. Mankiw (in Kresnandra, 2016) says that gross domestic product is calculated in two ways, namely by the total income generated by the production of goods or services and the total expenditure generated by the production of goods or services.

Conceptually regional economic growth can be explained as a concept of economic growth that emphasizes or places a special focus on the economy of a region or region. By using the same assumptions as economic growth in general or in the national scope where in calculating national economic growth, gross domestic product is needed as a reference in calculating national economic growth, regional economic growth uses the gross regional domestic product as a reference in its calculations.

By using this understanding, this study uses growth theory as presented by Prof. Simon Kuznets. According to him, economic growth is not necessarily influenced by specific economic aspects but other aspects such as institutional aspects. Institutional efficiency is also the focus of this theory in its contribution to economic growth. A good and efficient decentralization pattern will make institutional performance more effective and efficient in managing finances. If this is achieved, the process of economic growth can be guaranteed and economic development will also be realized in the long term.

### **Fiscal Decentralization**

Slinko (in Siagian, 2010) argues that fiscal decentralization is a form of handing over of power from the central government to the governments in the regions to independently manage their government, which includes the granting of authority or authority to take care of expenditure and revenue for their respective regions. In addition, Prawirosetoto (in Siagian, 2010) said that fiscal decentralization is the transfer of responsibility and authority from the center to the regions to manage regional fiscal aspects such as revenue in the form of tax collection and expenditure in the form of regional expenditure.

Specifically related to this research, there is a theory that touches on fiscal decentralization and its effect on economic growth. This theory is known as the theory of fiscal federalism, which is a theory that emphasizes the aspects of fiscal decentralization in its contribution to economic growth. One of the initiators of this theory, Oates (in Kresnandra, 2016) said that economic growth and social welfare in a country can be achieved by delegating authority from the center to the regions in the fiscal aspect. This is because local governments are considered more efficient in terms of providing goods and services to the community. In addition, with the existence of fiscal decentralization, the implementation of fiscal policy at the regional level can run according to planning in order to increase regional economic growth.

### **Degree of Fiscal Decentralization**

The degree of fiscal decentralization is one of the indicators of regional financial performance which is broadly defined as a term used to describe the level of independence of a region by using the consideration of a region's fiscal capacity as the basis for consideration of the regional independence assessment. The degree of fiscal

decentralization is obtained by comparing the original regional income (PAD) in an area to the total regional income from which a ratio value or degree of fiscal decentralization is obtained.

Bisma (in Sumardjoko, 2019) said that fiscal decentralization is a picture that shows the level of authority and responsibility that local governments have on the basis of appointment from the center to implement regional development. where local revenue (PAD) is a component that affects the success of a region in implementing decentralization.

Sudarti (in Kristina, 2017) says that the size of the fiscal decentralization indicator is influenced by the region's own revenue. According to him, the attention of the regional government to its own regional revenue in its efforts to increase local revenue through fiscal policy so that making the region independent in managing the fiscal aspects in the form of regional income and expenditure will increase the degree of decentralization. By increasing the degree of fiscal decentralization, these regions are deemed feasible and independent in implementing regional fiscal aspects and will be considered more competent in their efforts to improve the regional economy.

### **Capital Expenditure**

Halim (in Suryantini et al., 2018) states that capital expenditure is a component of regional spending where regions will benefit from it more than one fiscal year and add regional assets and improve regional welfare. With the existence of capital expenditure, it will generate routine expenses for maintenance costs of assets that have been spent from the capital expenditure budget.

In line with Halim, Mahmudi (in Maulida and Zuhroh, 2017) argues that capital expenditures are expenditures made by local governments that provide benefits for more than one fiscal year, for example, expenditures for the procurement of capital goods. In its application to economics, according to the Directorate General of Financial Budget of the Republic of Indonesia, capital expenditure is a component of government expenditure which can be interpreted as government investment. As in the equation of national income or economic growth in a macro context where government income is an accumulation of consumption, investment and expenditure, it can be concluded that capital expenditure in its role as investment and expenditure has a directly proportional relationship with economic growth.

### **Human Development Index**

Machmud and Sidharta (in Maqin and Sidharta, 2017) say that humans are seen as a subject and object at the same time. In a development concept it means that he has the ability to increase his capacity and quality of life. Therefore, it is very necessary for the role of the government to implement policies that focus on human development where human development contributes to economic growth both on a regional and national scale.

The hypothesis in this study are as follows:

The degree of fiscal decentralization partially has a positive and significant effect on regional economic growth in districts / cities in the former Surakarta residency in 2010-2018.

Capital expenditure partially has a positive and significant effect on regional economic growth in districts / cities in the former Surakarta residency 2010-2018.

The Human Development Index partially has a positive and significant effect on regional economic growth in districts / cities in the former Surakarta Residency in 2010-2018.

The degree of fiscal decentralization, capital expenditure, and human development index simultaneously or together have a significant effect on regional economic growth in districts / cities in the former Surakarta residency in 2010-2018.

### **Methodology**

The scope of this research is all districts and cities which are included in the former Surakarta residency, which includes Sukoharjo Regency, Karanganyar Regency, Sragen Regency, Boyolali Regency, Wonogiri Regency, Klaten



Regency, and Surakarta City. The total observation units in this study were 7 areas with an observation time of 9 years from 2010-2018. This research uses a quantitative approach using multiple linear regression analysis. Research with this method aims to determine the effect of the independent variables on the selected dependent variable. There are two kinds of variables in this study, namely the independent variable and the dependent variable. The independent variables in this study include the degree of fiscal decentralization (the ratio of local revenue to total regional revenue), capital expenditure, and the human development index. While the dependent variable in this study is the gross regional domestic product (GRDP). Model of the Analysis can be written as follows:

$$\text{LNGRDP}_{it} = a + b_1\text{DFD}_{it} + b_2\text{LNCE}_{it} + b_3\text{HDI}_{it} + e_t$$

Notes:

- a : intercept
- b : Coefficient / Slope
- DFD : Degree of Fiscal Decentralization
- LNCE : Capital Expenditure
- HDI : Human Development Index
- LNGRDP : Regional Economic Growth
- t : time
- i : observation unit

## 2. Empirical Result

Table II. Result of t-Test (Significance Test)

Independent Variable	Coefficient	Significance
DFD	0.000279	0.0000
LNCE	0.018779	0.0620
HDI	0.002082	0.0000

Courtesy : Analyzed Panel Data Using Eviews

The test result with the best estimation model in this study is the fixed random effect (FEM) as shown in Table 1. The table above shows that the probability value for the t-statistic of each independent variable where the value of the DFD and HDI variables is below the level of significance. 5% (0.05), namely for the variable degree of fiscal decentralization (DFD) and the human development index (HDI) of 0.000. while the capital expenditure variable (LNCE) is above the 5% significance level of 0.0620, this value implies that the variable degree of fiscal decentralization (DFD) and the human development index (HDI) partially has a significant effect on the variable regional economic growth (LNGRDP).

Meanwhile, the capital expenditure variable (LNCE) does not have a significant effect on regional economic growth (LNGRDP). The effect given by each independent variable on the dependent variable is positive, which means that if there is an increase in the value of the independent variable, the value of the dependent variable will also increase. These positive traits can be seen in the coefficient column. The independent variable degree of fiscal decentralization (DFD) has a coefficient of 0.009731, which means that if the independent variable the

degree of fiscal decentralization (DFD) increases by 1 unit, regional economic growth (LNGRDP) increases by 0.009731 units. The independent variable for capital expenditure (LNCE) has a coefficient of 0.031267, which means that if the independent variable for capital expenditure (LNCE) increases by 1 unit, regional economic growth (LNGRDP) increases by 0.031267 units. The independent variable human development index (HDI) has a coefficient of 0.054044, which means that if the independent variable human development index (HDI) increases by 1 unit, regional economic growth (LNGRDP) increases by 0.009731 units. Based on this, H1 and H2 are accepted, while H3 is rejected, which means that partially the degree of fiscal decentralization and the human development index has a positive and significant effect on regional economic growth but capital expenditure does not have a significant effect on regional economic growth.

In Addition, based on the simultaneous test or the f-statistic test, the f-test significance value is  $0.0000 < 0.005$ , which means that the degree of fiscal decentralization, capital expenditure, and the human development index simultaneously or collectively has a significant effect on regional economic growth. On the basis of these results, H4 is accepted. Another result obtained is the coefficient of determination of 0.989670 or 98.96%, which means that the independent variable which can explain the model is 98.96% while the remaining 1.04% can be explained by other variables outside the independent variable.

## **2.1. The Effect of the Degree of Fiscal Decentralization on Regional Economic Growth**

Based on the results of regression analysis and statistical testing, it can be concluded that partially or individually the degree of fiscal decentralization has a positive and significant effect on regional economic growth. The results of this test are supported by studies conducted using related variables.

Bodman and Ford (in Albehadili and Hai, 2018) find that the degree of decentralization has a positive and significant effect on economic growth and human development. The same results were obtained by other researchers using the same theme. Sumardjoko (2019) found that the degree of fiscal decentralization had a positive and significant effect on economic growth in the archipelago in Indonesia. The high degree of fiscal decentralization will increase the ability of the APBD (Regional Revenue and Expenditure Budget) in creating better quality regional spending.

Sakata and Akai (in Albehadili and Hai, 2018) found that regional autonomy is the main key that contributes to the positive impact of fiscal decentralization on economic growth. Regional autonomy is an indicator to determine the degree of fiscal decentralization of a region. The degree of fiscal decentralization is the ratio of total local revenue to total regional income. Besides that, Ganaie et al. (2018) also found that there is a positive relationship between fiscal policy and economic growth if the expenditure component is the benchmark, conversely there is a negative relationship between fiscal policy and economic growth if the income component is the benchmark. The central government is considered to be more efficient in managing revenue while local governments are more efficient in managing expenditure.

Meanwhile Pradana and Sumarsono (2018) in their research on areas in East Java found that the degree of fiscal decentralization had an insignificant and positive effect on economic growth. This is because the degree of fiscal decentralization is a factor that determines regional financial performance rather than economic growth. That is why the degree of fiscal decentralization has no significant effect on economic growth. In line with the results of research conducted by Pradana and Sumarsono, Pantas et al. (2019) in a study conducted on regions in North Sulawesi also found that fiscal decentralization had a positive effect, but its effect on economic growth was not significant in areas in North Sulawesi Province.

In the other side, research conducted by Carion and Silvestre (in Albehadili and Hai, 2018) found that in the case of Spain a high degree of fiscal decentralization has a negative and significant effect on economic growth and at the same time has a positive effect on people's welfare. Tarigan (in Ganaie et al., 2018) in his research on 34 countries including China, India, and Indonesia found that the degree of fiscal decentralization had a negative

and insignificant effect on economic growth. In line with the existing hypothesis, it can be concluded that partially or individually the degree of fiscal decentralization has a positive and significant effect on regional economic growth. The existence of research results with similar themes but different results is a reason for choosing different research locations with different patterns of government and political and economic conditions will produce different research results.

## **2.2. The Effect of Capital Expenditure on Regional Economic Growth**

Based on the results of regression analysis and statistical testing, it can be concluded that partially or individually, capital expenditure has a positive and insignificant effect on regional economic growth. The results of this test are supported by studies conducted using related variables.

Suryantini et al. (2018) in his research conducted in Bali Province found that capital expenditure had no significant and positive effect on regional economic growth in Bali. According to him, the allocation in capital expenditure determined by a region does not determine regional economic growth.

Meanwhile Wardhiah (2018) found that capital expenditure did not have a significant and negative effect on regional economic growth in Aceh. This means that the level of capital expenditure allocation has no significant effect on regional economic growth.

In addition, Pradana and Sumarsono (2018) in their research conducted in East Java found that capital spending has a significant and positive effect on regional economic growth. According to him, the capital expenditure issued by local governments is an important factor in increasing regional economic growth.

In line with Pradana and Sumarsono, Alfi and Nuraini (2018) find that capital spending has a positive and significant effect on regional economic growth in districts and cities in South Kalimantan Province. This result is also supported by research conducted by Pantas et al. (2019) in which research he conducted in North Sulawesi found that capital spending had a positive and significant effect on regional economic growth.

The latest previous research supporting this study was conducted by Susetyo et al. (2018) where in his research found that capital spending has a positive and significant effect on regional economic growth. They also emphasized that the government should emphasize more on the allocation of capital expenditures, especially for public facilities, both in terms of quality and quantity so as to stimulate regional economic growth in the region.

The existence of research results with similar themes but different results is a reason for choosing different research locations with different patterns of government and political and economic conditions will produce different research results.

## **2.3. The Effect of Human Development Index on Regional Economic Growth**

Based on the results of the regression analysis and statistical tests carried out, it can be concluded that partially or individually the human development index has a positive and significant effect on regional economic growth. The results of this test are supported by studies conducted using related variables.

Appiah et al. (2019) found in a study conducted in 5 (five) countries in Africa, it was found that the human development index has a positive and significant effect on economic growth. From their research, they suggested that the governments of the 5 countries in Africa should focus more on human development.

In line with research conducted by Appiah et al., Pradana and Sumarsono (2018) found that the human development index has a significant and positive effect on economic growth. According to him, to manage natural resources optimally so that increasing economic growth requires high human quality.

Similar results are also found in research conducted by Maqin and Sidharta (2017) which found that the human

development index has an effect on economic growth. The growth of the human development index is in line with the growth in people's purchasing power through the per capita income of the community, which ultimately affects economic growth.

The last research that supports the results of this study is research conducted by Gustav (in Maqin and Sidharta, 2017) which found that there is a positive and significant two-way relationship. According to him, economic growth has a positive and significant effect on the human development index by providing output which can then be used for human development. On the other hand, the human development index also has a significant and positive effect on economic growth. They argue that the sustainable development of human qualities is a factor that supports economic growth.

Meanwhile, on a different side Kristina (2017) in research conducted in East Java found that the human development index has a significant and negative effect on economic growth. This means that if there is an increase in the human development index, economic growth will decline and vice versa.

In line with the existing hypothesis, it can be concluded that partially or individually the human development index has a positive and significant effect on regional economic growth. The existence of research results with similar themes but different results is a reason for choosing different research locations with different patterns of government and political and economic conditions will produce different research results.

#### **2.4. The Effect of the Degree of Fiscal Decentralization, Capital Expenditures, and Human Development Index on Regional Economic Growth**

Based on the results of the regression analysis and statistical tests carried out, it can be concluded that partially or individually the human development index has a positive and significant effect on regional economic growth. The results of this test are supported by studies conducted using related variables.

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In line with the existing hypothesis, it can be concluded that partially or individually the human development index has a positive and significant effect on regional economic growth. The existence of research results with

similar themes but different results is a reason for choosing different research locations with different patterns of government and political and economic conditions will produce different research results.

### 3. Conclusions

Based on the results of the research and discussion carried out in the previous chapter regarding the effect of the degree of fiscal decentralization, capital spending, and the human development index on the regional economic growth of districts / cities in the former Surakarta residency in 2010-2018, the following conclusions were drawn:

1. Degree of Fiscal Decentralization affects both significantly and positively on regional economic growth in Surakarta Ex-Residency in 2010-2018. **(H1 approved)**
2. Capital expenditure partially has no significant and positive effect on regional economic growth in districts or cities in the former Surakarta residency in 2010-2018. **(H2 is approved)**
3. Human Development Index affects both significantly and positively on regional economic growth in Surakarta Ex-Residency in 2010-2018. **(H3 is rejected)**
4. Degree of fiscal decentralization, capital expenditure, and human development index simultaneously have a significant effect on regional economic growth in districts or cities in the former Surakarta residency in 2010-2018. **(H4 is approved)**

Based on the existing conclusions, the suggestions that can be recommended from this study are as follows:

1. In terms of fiscal decentralization, local governments in districts / cities in Solo Raya should be able to increase local revenue (PAD) through intensive fiscal policy through tax collection efficiency and so on so that the contribution of local revenue to total regional revenue increases which can be beneficial for regional fiscal independence so that in terms of expenditure policies and regional revenue policies can be independent and adapted to regional priorities in an effort to increase regional economic growth in the region.
2. In terms of capital expenditure, local governments in districts / cities in Solo Raya are expected to increase the allocation of capital expenditures, which in reality must be balanced with those budgeted in the Regional Budget (APBD) so that government programs related to infrastructure and asset spending regions undertaken in the context of increasing regional economic growth can run properly.
3. In terms of the human development index, it is hoped that local governments in districts / cities in Solo Raya will take the right steps by implementing policies that have a significant impact on health, education and economic aspects so that the human development index in the regions is at the right level for support regional economic growth in their respective regions. It is advisable to increase the number of hospitals and increase the quality and quantity of provision of medical devices in the regions to ensure health facilities provided by the local government for the community. In addition, local governments are advised to establish good relationships with Small Micro and Medium Enterprises (MSMEs) and various companies so that they can create synergy between them and allow the creation of more jobs so that it will benefit the community to earn income. Improving the quality of education through increasing the number of schools, increasing the quality of teachers, and implementing an implemented learning system is also recommended for local governments in the Solo Raya area so that education as a support for human development can contribute more optimally.

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# The Importance of Millennial Organizational Commitment and Loyalty Study in Indonesia

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## Abstract

Millennial generation started to play an important part in Indonesia's economy. According to Indonesia Central Bureau of Statistic, 33.75% of Indonesia's population are part of millennial generation, and extraordinarily among 67.02% of the Indonesia Workforce, 50.36% are millennial. Apart from having a great potential, managing millennial generation is not an easy task. Several study pointed how millennial have several differences compare to their predecessor, and even have a problem when it comes to dealing with organizational commitment and loyalty. This paper aim to bring up the importance of millennial organizational commitment and loyalty study, considering the impact that this generation could have in Indonesia. An in-depth analysis and compilation form previous study are used to construct the theoretical framework between organizational commitment and loyalty, and how understanding the millennial view of this issue is important. This paper provide an understanding about this certain issue and help develop the millennial generation study, along with study in organizational commitment and loyalty.

**Keywords:** Millennial Generation, Organizational Commitment, Loyalty

## 1. Introduction

Indonesia is one from several country that expecting a demographic bonus. It is shown in either the country component or the size of its workforce. Around 66.02% of Indonesia's population are becoming a part of the country workforce, and 50.36% of that workforce are part of the millennial generation (Indonesia Central Bureau of Statistic, 2018). This phenomenon are part of bigger event happened around the world, where the millennial generation are preparing and entering the economic world, where several expert predicted that this generation even able to outnumber baby boomer generation when the later started to enter the workforce after the war (Frey, 2018). The difference is, that while the other part of the world started to define and understand the millennial generation better, by conducting several research (Kim, 2018; Kurz et al., 2019; Pyöriä et al., 2017) the same cannot be said in Indonesia.

Millennial in Indonesia are expected to play an important role. Indonesia 2045 golden generation is a scenario when Indonesia's demographic bonus started to take effect and bring the prosperity to the nation (Rokhman et al., 2014). Certainly it can only happen if the stakeholder of this country actually understand the nature of said generation (Stewart et al., 2017). The millennial had quite distinctive attributes compared to their predecessor, this could happen firstly because their attachment to technology (Graybill, 2014; Kim, 2018) this make the millennial as arguably the first generation that called the digital natives (Kurz et al., 2019; Fry, 2018). Secondly, there is several value that believed by this generation, ranged from fashion until worldview that quite unique and never seen before (Stewart et al., 2017). This uniqueness is what provide the business world with their view for this generation, and somewhat business world still quite skeptic when it comes to millennial commitment and loyalty (Holtschlag et al., 2020). This could be shown by this generation usually related by attitude like job hopping (Pyöriä et al., 2017) and even willingness to just left the job in the pursuit of their own ideals (Stewart et al., 2017) and this including started their own business (Liu et al., 2019).

Organizational commitment and loyalty is an important aspect for the business. Organizational commitment is one of defining factor in organizational behavior (Robbins and Judge, 2013), but loyalty had a broader aspect. Loyalty can related with the employee loyalty which driven from a human resource study (Yao et al., 2019), but it also a prevalent aspect in marketing study as part of consumer behavior (Bandyopadhyay and Martell, 2007). In this study, either of those concept are very important, but the employee loyalty become a dominant factor because this study weighted more to human resource study side. But eventually, this study tried to depict both loyalty study evenly, because how the millennial generation could also play important role as a consumer.

Both, especially organizational commitment and employee loyalty actually providing the basis of several organizational citizenship behavior that could help the business to develop and even grow (Robbins and Judge, 2013). Several aspects including company safety practices and employee wellbeing could greatly improve with the help of organizational commitment and employee loyalty (Liu et al., 2020; Yang and Chang, 2008). Even millennial generation are no stranger for this effect, with different approach millennial could also develop their organizational commitment and employee loyalty (Scales and Quincy Brown, 2020), but all in all, it is only possible if only the understanding about the millennial itself is present.

Indonesia need to address this issue quickly. The millennial already played a part in Indonesia's economy, shown in how some of Indonesia's very own unicorn startup actually started and owned by millennial, like Gojek and Bukalapak. Moreover with recent global pandemic Covid-19 that changed mostly everything including economics condition and even people attitude. The pandemic showed how to cope with the modern technology just like what millennial did since they were born. Indonesia's millennial probably become the generation that could play a great role in the recovery process after the pandemic, and understanding them becoming a paramount issue, because the stake when Indonesia's economics stakeholder failed to manage this generation is too high. Entire hope for a country prosperity in year 2045 could be in high risk.

## **2. Literature Review**

### **2.1 The Millennial Generation Profile**

Millennial generation defined in several way. What year this generation born are becoming one of the most popular definition. Some experts defined millennial as a person that born between year 1981 to 1992, like U.S Census Bureau and Pew Research Center (Stewart et al., 2017). Others defined millennial as a person that born in between year 1980-1997 (Fry, 2018). With so many definition, Indonesia using the Central Bureau of Statistic compiled and concluded their own version of millennial, stated that millennial are those that born between year 1980 to 2000 (Indonesia Central Bureau of Statistic, 2018). This definition by year of birth basically gave the millennial quite distinctive attribute, which contributed by what happened in the years they born.

The digital native is one of many names experts put to the millennial generation. This is simply coming from facts that millennial born in the very moment there is a technology boom in human civilization (Pyöriä et al., 2017). Direct and never ending interaction with technology, including witnessing technology development resulting quite intimate and dependent interaction between millennial and technology (Kim, 2018). There is even a new attitude among CEO's that coming from this background, which is quite acute use of smartphone even i=at work, that reduce the employee trust to said boss or CEO (Roberts and David, 2020).

With the greater access of information using their capability in dealing with technology come with several good effect though. Millennial tend to be more creative, are quite brave in sounding their ideas (Stewart et al., 2017). In the other hand, when a company could utilize this ability, their adaptability in the ever-changing business environment will positively affected (Holtschlag et al., 2020). In the other hand, millennial will also have less dependency toward their workplace, simply because they have better information utilization. They simply could just find other places that offer them a better working experiences and benefits, or just started their own business (Holtschlag et al., 2020). Moreover, several companies are just cannot deal with millennial world-view and attitude (Stewart et al., 2017). This is partly because the lack of information, lack of understanding with millennial, though this generation started to take a greater part in world economy (Liu et al., 2019).

## 2.2 Organizational Commitment and Loyalty Among Millennial

Organizational commitment and loyalty especially among employees are important factor that resulted in company wellbeing. Both played an important role to ensure that employee could do more, and even having and implementing in themselves the Organization Citizenship Behavior (Robbins and Judge, 2013). Several studies also shown how this attitude even improve the safety practices within the company and among the employee themselves (Liu et al., 2020). Furthermore, attitude like choosing their own company product than others (Yao et al., 2019) and several others like employee performance (Yang and Chang, 2008).

Loyalty itself had a broader meaning. Loyalty mainly directed towards the employee loyalty, which the likeliness an employee remain on its workplace or organization (Robbins and Judge, 2013). Loyalty could also related to consumer attitude, this mainly seen as a how a consumer did their purchasing decision (Bandyopadhyay and Martell, 2007). Both played important role in economy, in the condition that employee could also become a consumer himself (Yao et al., 2019). Even though this study weighted more toward the human resource study, which make the employee loyalty become the main loyalty focus, but it is also important to acknowledge the study of loyalty the broader aspect, hence it could better describe the importance of millennial loyalty study either from the human resource or marketing perspectives.

With studies that pointed out how organizational commitment and employee loyalty affect the workplace, with the new breed of labor called millennial, scientist started to pick interest in this particular generation. At the very first, millennial usually related to unpleasant attitude like job hoping (Pyöriä et al., 2017). Recently, it is found that millennial could stay longer, have a great commitment toward organization and even loyal to the employer. This could start with changing the method to approach millennial, started by offer them a clear benefit and a long run attainable experience (Holtschlag et al., 2020). Even in the voluntary work, using different approach like that could increase the millennial likeliness to remain in the organization, it also supported with providing a better foundation and understanding for organization goal (Scales and Quincy Brown, 2020). Tweaking and making the training more fun, and have clear directions also improved the millennial likeliness to remain in organization (Tews and Noe, 2019).

It is concluded that organizational commitment and employee loyalty still played an important role in organization. Forming a foundation for organizational citizenship behavior, to ensure a better business practices in the organization all started from organizational commitment and employee loyalty. In millennial case, it is found that millennial also have this traits, the only difference is there is different approach and method to flourish the organizational commitment and employee loyalty among them.

## 2.3 Importance of Millennial Study

Dealing with millennial needed several steps and processes, but it started with understanding the millennial. Millennial have quite distinct point of view about what is what, and what is important in their life, and the best possible way to provide certain level of understanding is to embrace the generational differences (Stewart et al., 2017). Secondly, company and organization could started to utilize their competitive advantages, through better management in technology use (Graybill, 2014; Kim, 2018). Results from this simple approach by provide a better understanding and better utilization of millennial strength could result in even better organization practices and most importantly, cultivate millennial organizational commitment and loyalty as an employee. (Scales and Quincy Brown, 2020).

But throughout history of mankind, there is no ultimate generalization. Even though the millennial could define simply by looking through their birth year, the differences in how technological advancement in between country is quite apparent (Kurz et al., 2019; Liu et al., 2019). This result in there could be different breed of millennial all over the world, with similar traits but quite different background (Liu et al., 2019). The result is apparent in how millennial in different parts of the world shaped their own business or the business environment in their own respective country (Liu et al., 2019). With this context, the millennial study and even generational study could still have great potential for further development.

This condition mean, that in Indonesia, there is several way to provide the world with better information about millennial. Indonesia's millennial showed several quality, including their view about their heritage, especially in their consumption preferences (Fibri and Frøst, 2020). With a very strong religious background that even included in the way millennial learn in Indonesia, a more inclusive, more open minded religious people could appear among Indonesia's millennial (Masuda and Yudhistira, 2020). With different cultural between Indonesia and other nation, the millennial study still pretty much hold their own importance in Indonesia. Considering how this country is still in the path for reaching it potential (Rokhman et al., 2014), and with the recent pandemic that hit the world hard especially in developing country like Indonesia, studying and providing a better understanding about millennial could be a great catalyst for Indonesia's future.

### 3. Discussion

It is very clear that Indonesia should put further effort to understanding its own millennial generation. With fantastic population and high percentage of millennial generation in Indonesia's population the millennial generation really become an important and integral part Indonesia's development plan (Indonesia Central Bureau of Statistic, 2018). It is also on the similar track globally, where it is visible to see a lot of young CEO's especially that coming from the millennial background, like Mark Zuckenberg from Facebook.Inc (Liu et al., 2019). Indonesia had its own share of millennial CEO, and basically they thrive in digital business, which is still become the millennial generation competitive advantage.

Understanding their attitude, their preferences could become an important step to ensure Indonesia could reach its planned prosperity. Understanding the basis of millennial attitude could provide a better generational differences in workplace. Managing and maximizing millennial potential in modern technology could provide a huge benefit for company. All of this benefit could reach a greater potential if millennial generation organizational commitment and loyalty could coming through.

The organizational commitment and employee loyalty could provide a basis for organizational citizenship behavior, which bring greater benefit for company. On the other hand, understanding how millennial consumer attitude toward purchasing decision, could provide a greater insight in how to promote product to this generation (Rossiter, 2008). It also worthy noted, with several research conducted in consumer loyalty (Dehghan and Shahin, 2011) exploring further in millennial attitude could expand the consumer behavior study itself.

with the recent change both in the technological and economic sector, the business world could greatly shaped by millennial. With the information technology, it is possible for any model of business to get their own market niche, which is also expanding with the help of information technology (Anderson, 2007.). it is shown in several occasion like how Blockbuster failing to compete against more modern and user friendly film streaming services (Anderson, 2007.), and in Indonesia, invention of Gojek really disrupting how the transportation sector should function, and it is happening because Indonesia are in the disruption age (Ohoitumur, 2018). Indonesia is really geared toward how this country make the best out of its millennial generation.

Technological and business that complement each other finally pushed further because of the pandemic that occurred in late 2019. It is possible that attitude of certain generation affected by the world event that happen at that moment, this is exactly happened in the baby boomers (Kurz et al., 2019). The baby boomers are generation that mainly comes from the feeling of its predecessor after the wartime, it fueled with a hope that the world will finally get some peace and prosper, that is the reason why a lot of baby is being born that time, hence it come the terms, baby boomers (Phillipson, 2008). Baby boomers also become a bridge generation, to provide for more sophisticated, more technologically advance generation X and more (Leach et al., 2013). With the recent pandemic, Covid-19 that shaken and even more disrupting countries economic structure all over the world, it is apparent that millennial will take something out of this pandemic.

While the entire world are resort and forced to maximize the use of technology because of the pandemic, simply

said, millennial are just thrive. They become the forefront of positivity with kind like starting up online business, helping older generation to further utilize the technology and many more. It is possible, because simply put, the technology is their domain (Matta, 2014). It is no different in Indonesia.

With the position of millennial in Indonesia's economy, how important it is for company to utilize organizational commitment, employee and consumer loyalty. Understanding the millennial become an important issue that could provide a basis for better practice in managing this generation. With the massive change in economic structure, the disruption that happening right now, the study of the main actor, the millennial becoming even more important. And with the recent pandemic while millennial take a great portion of positivity, keep moving with their technological adaptability it is no point for waiting another time for conducting study on the Indonesia's millennial generation. But everything is started with the basic understanding, and this why, understanding the millennial perspective for organizational commitment and loyalty is most important.

#### 4. Conclusion

The importance of millennial organizational commitment and loyalty study in Indonesia is clear. With the country plan to reach it prosperity, global economic structure at this moment and most importantly the role that millennial play in the near future, it is just impossible not to conduct any research in this issue. This study aim to bring forth this issue and it certainly did what it supposed to do.

Millennial study could include the broader scope of study, but it could be better if it started with a comprehensive exploratory study for this generation. It is needed to build a concrete knowledge foundation for further research. It is also worth noting that because millennial are unique, a quantitative study to test the relations between variables is worth conducting with the millennial as the main object. It is possible that researcher will found interesting responses and further expanding the study itself.

The human resource study and marketing research could benefit much from the millennial, considering their part in the economy. But contemporary issue like environmental and climate study, and green business practices could also gain a great input with studying the millennial (Wang et al., 2018). Simply put, emphasizing in generational perspective of the millennial there is a whole new information and knowledge researchers could get.

Lastly, this study mainly aim for the researchers and experts in Indonesia. Standing from the uniqueness that held by Indonesia and its millennial generation, it could provide a variation and even different insight in the millennial study especially, and business study broadly, this study hope to ignite that great potential.

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## **Sustaining the Local Sport Products' Competitiveness from the Perspective of Emotional Value**

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### **Abstract**

Globalization has carved out a path for easier access to exchanges of information, knowledge, culture, and every aspect of human's life. In business context, globalization creates opportunities for one and causes threats for the other. Moreover, in the current pandemic-world, with economic damage felt by everyone, every step a business takes is considered a risky move, one wrong step and it may end everything. Supply chain producing international products is in a challenging phase. To survive currently, companies should diversify their suppliers and find the nearest supply chain for production to be more competitive. Hence, this study aims to investigate how local businesses, especially local sport shoe brands are able to sustain and compete with international brands during this difficult period, and get ready for the post-pandemic market. As people in the age of 15 – 29 are considered the biggest consumers of sport products in Indonesia, this study is focused on their preference to choose local sport shoes products over international brands. To examine how emotional value influences the decision making process, structural equation modelling is applied. The result exhibits that emotional value has a positive relationship to purchase intention. This finding reveals the opportunity for local businesses to create emotional relatedness with potential consumers, so as to captivate their purchase intention. It also provides an alternative outlook for local businesses to compete with international brands and get ready for the post-pandemic world.

**Keywords:** Emotional Value, Globalization, Local Products, Purchase Intention

### **1. Introduction**

Globalization is a phenomenon marked by the world becoming one. This is an inevitable part of human civilization where exchange of communications, knowledge, information and technology, goods and services, between countries, communities, even individuals becomes quicker and easier (Rehman, Latif, & Rana, 2018). Globalization creates opportunities and also threats for businesses. With the increasing trend to globalize business, the threat from competitors will surely be high, coming from either local or even international competitors (Sarmad, 2015). Businesses need resources, capabilities, and core competencies to compete, their goal is nonetheless to maximize profit (Hitt & Ireland, 2018).

Minimization of trade barriers and maximization of interactions are two of the factors which push global trading. New market will emerge and it will create a different kind of competition. Opportunities that business may have is that every business now has the chance to enter new markets, has more choices of suppliers, and wider range of consumers, which helps in the growth of the business. While having opportunities, businesses will also face threats, such as: competitors' competition, cultural differences when joining new markets, and rapid changing of global political and economic conditions.

COVID-19 (coronavirus disease) is a disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The World Health Organization (WHO) reported that COVID-19 originated from Wuhan City,

Hubei Province, China. On 11<sup>th</sup> of January 2020, China reported their first death caused by COVID-19. On 30<sup>th</sup> of January 2020, WHO declared the COVID-19 as a public health emergency of international concern (PHEIC), which is WHO's highest alarm. On 11<sup>th</sup> of March 2020, after assessment of the levels of spread and severity, WHO made the COVID-19 status as a global pandemic, not only a public health emergency (World Health Organization, 2020). The first 2 positive cases found in Indonesia were reported on 2<sup>nd</sup> of March 2020. Up till 3 September 2020, Indonesia has a total of 184,268 positive cases with 7,750 (4.2 percent) reported deaths (Kementerian Kesehatan Republik Indonesia, 2020).



Figure 1. Confirmed daily COVID-19 cases in Indonesia

This pandemic has caused great changes to the global economy. The World Economic Outlook (WEO) provided by the International Monetary Fund (IMF) predicted that the global economic growth will be - 4.9 percent (IMF, 2020). The recovery path will be a slow process as greater social distancing measures hit the economic activities recovery. Every country, whether those who have controlled the spread of the disease or those who are still struggling to fight the disease, needs to make sure that they have enough medical and healthcare resources. Countries will focus more on citizens' health then followed by economic rebuilding. The Organization for Economic Cooperation and Development (OECD) predicted that Indonesia's Gross Domestic Product (GDP) in 2020 will decrease by 2.8 percent - 3.9 percent (OECD, 2020). This is also supported by the World Bank data that shows Indonesia's GDP growth in Q1 2020 is 3.0 percent, compared to 5.1 percent growth in Q1 2019 and 5.0 percent growth in Q4 2019 (The World Bank, 2020). Indonesia's GDP in 2019 is worth 1,119.19 billion US dollars (The World Bank, 2020). Trading Economics (2020) predicted that it will only reach 970.00 billion US dollars for the year 2020.

In such challenging moments, there are even more challenges for the local businesses. Consumers tend to spend less and save more. Indonesia's Finance Minister, Sri Mulyani Indrawati, expressed that Indonesia may face recession should the GDP in Q3 2020 shrinks again (followed by GDP shrinking in Q1 and Q2 of 2020) (Akhlas, 2020). The loop in which GDP and consumptions are in may force Indonesia into technical recession. The Indonesia government provided stimulus to encourage spending so as to increase Indonesia's GDP, but more people tend to save money to prepare themselves before the recession that Indonesia might face rather than spending it. Decrease in consumption is not only a problem faced by the government, by looking from the microeconomic scope we can see that this is also a problem for local businesses. Firstly, businesses will earn less, they may need to cut costs to cancel out their expenditures (or even loss). Second, local businesses will also need to face competition from international brands, which have more resources to compete.

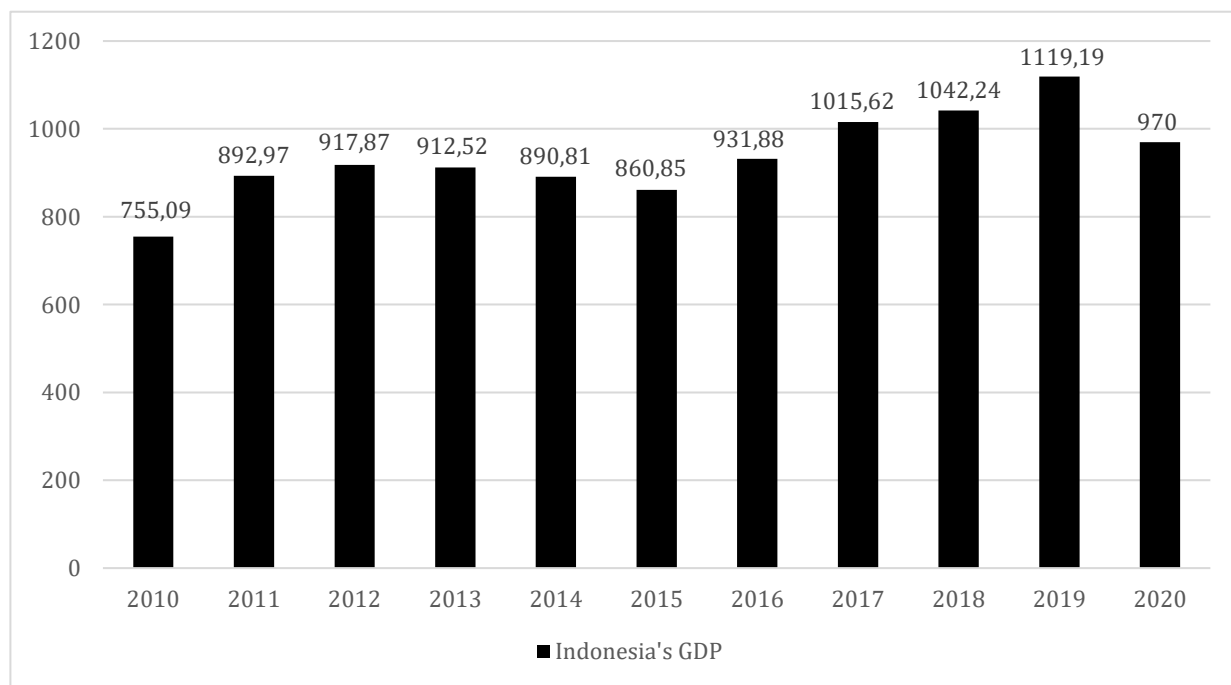


Figure 2. Indonesia's GDP 2010 – 2020

Emotional value is one of the factors that influences purchase intention as suggested by many previous researches. Humans as a social being will be more attracted to things that have an emotional relation to us. In branding context, businesses try to combine emotional branding which caters to consumers' emotions together with the utilitarian value a brand has so that it creates maximal impact to influence consumers' purchase intention (Singla & Gupta, 2019). Businesses focus on creating an image for the brand that 'attacks' their target consumers' emotional feelings. Thus concluded that local businesses may also make use of emotional value factors to plan and deploy appropriate strategy that can attract consumers.

Many Indonesians are using counterfeit products of international brands rather than genuine products of local brands. A report published by the International Trademark Association (INTA) targeting those 18 to 23 years old, stated that "Indonesia ranks as having the fourth highest percentage of Gen Z-s who have purchased counterfeit products in the year prior to the study—at 87 percent of respondents, compared with a global average of 79 percent" (International Trademark Association (INTA), 2019). In the same report, INTA's study shows that 53 percent of the respondents uses counterfeit goods because "others will not know even if I use fake products", and 73 percent agrees that "counterfeit products are easier to find" (International Trademark Association (INTA), 2019).

Consumers' behavior in consumption can be divided into two types: utilitarian value and non-utilitarian value. Utilitarian values are the value that comes from the functionality of the product (rational), while non-utilitarian values are the value that comes from subjective and personal experiences (emotional) (Andarini & Kurnia, 2014). This study will discuss on dimension the consumers' consumption behavior – the emotional value.

Availability, similarity, emotional value (influencing creation of brand image), symbolic meaning, and needs for uniqueness, these factors encourage Indonesians to use counterfeit products of international brands. While availability and similarity is the dimension of utilitarian value, the other factors belong to the non-utilitarian value. International brands usually present an image of superior quality and unique design for their products. These dimensions are the reasons why counterfeit products of international brands consumption in Indonesia is high. Consumers value the 'feeling when using the brands' and the 'representation of higher social status'

more over the authenticity and quality provided by the original product (Fenitra & Haryanto, 2020). We can conclude that emotional value plays a vital part in shaping consumers' purchase intention for international brands, and one point lacking from local brands is the emotional value that brands create.

The main purpose of this study is to investigate how local businesses, especially local sport shoe brands are able to sustain and compete with international brands during this difficult period, and get ready for the post-pandemic market. We will focus on the aspect of emotional value which influences purchase intention. This may help local businesses understand better on how to capture consumers' purchase intention through creating emotional value to their brand, how can local businesses sustain and compete with foreign brands, and how can local businesses prepare for the post-pandemic economy.

## **2. Theoretical Foundation and Hypotheses**

### **2.1 Indonesia's Market**

In 2019, data released by Indonesia Central Bureau of Statistics (Badan Pusat Statistik – BPS) shows that Indonesians aged 15 – 29 stands at 65.4 million (24.4 percent) from the total population (268 million) (BPS-Statistics Indonesia, 2020). The subject of this study will mainly focus on Indonesians from this age group as they belong to the productive age, are able make their own purchase decisions, and also are most likely to purchase sport products – shoes in particular.

### **2.2 Emotional Value**

In the theoretical aspect, there is no single definite theory and dimension that can explain emotional value. Emotional value is the enjoyable and fun experience consumers feel when using certain products (Sarmad, 2015). It relates to emotional rewards like pleasure and happiness feeling, positive feelings relate to positive experience, and vice versa (Asshidin, Abidin, & Borhan, 2016). Lee, Kim, Pelton, Knight, & Forney (2008) also define emotional value as a benefit from feelings (such as enjoyment or pleasure) that a product generates. Thus, it can be concluded that emotional value is the feeling generated when a certain product is used.

The dimensions of emotional value are wide, different theories are proposed to examine the dimensions of emotional value. By reviewing previous studies, the author narrowed down these dimensions into: social status, need for uniqueness, and symbolic meaning, as discussed as follows. Emotional value is related to the needs of consumers to show their social status through their purchase, which in turn will create an enjoyable sensation for them (Andarini & Kurnia, 2014; M.-Y. Lee et al., 2008; Soh, Rezaei, & Gu, 2017). Need for uniqueness as one of the most mentioned dimension of emotional value is because that people try to be distinct and different (in a positive way) from the crowd, the purpose of being different is to stand out which would enhance their social-image (Andarini & Kurnia, 2014; Kumar, Lee, & Kim, 2009; Soh et al., 2017). Another dimension discussed in this study is the symbolic meaning in creating emotional value, a product may have certain symbolic meaning attached to the consumers' emotion. The symbolic meaning may be in a form that symbolizes certain experience, as a display of wealth and status, and other meanings related to the consumers' personal self (Asshidin et al., 2016; Soh et al., 2017).

### **2.3 Brand Image**

Brand image can be defined as the thought that arises in people's mind when they come across certain brands (Saidani, Muztahid, & Haro, 2017). It is the impression shaped by information, and understanding of that brand through previous experiences, which also provides self-expression (Fenitra & Haryanto, 2020). Brand image can be concluded as a way how consumers perceive a brand, this particular view can be shaped by emotion felt by consumers and also previous experiences related to the brand. Singla & Gupta (2019), explained that there are different levels of strategies to create brand image, the first level is by reflecting brands' functional benefits (utilitarian value) and the second level is by reflecting brands' emotional connections with consumers. Emotional branding is used to evoke consumers' emotions in creating a brand image by building a brand that

communicates messages which matches consumers' emotions.

## **2.4 Purchase Intention**

The word 'purchase intention' itself is self-explanatory enough. Purchase intention is a planned behaviour that stimulates and drives the consumer to purchase a particular brand based on their evaluation. It represents the possibility that consumers will plan to purchase a certain product or service in the future (Andarini & Kurnia, 2014; Calvo-Porrall & Lévy-Mangin, 2017). When consumers perceive something they gain from the previous purchase, whether it is from the emotional value or the utility value, this will create purchase intention for them to keep using the same brand in the future (Calvo-Porrall & Lévy-Mangin, 2017).

## **2.5 Hypotheses and Conceptual Framework**

### **2.5.1 Relationship between Emotional Value and Purchase Intention**

Emotional value is usually associated with experience when using certain products, thus, information is a key aspect in forming emotional value. Information (including past experiences) will create an emotional relatedness towards a certain product, then emotional relatedness will in turn influence purchase intention. Previous researchers also found out that the more consumers feel emotionally related to a product of a brand, then the more likely they will purchase and use it (Khan, Memon, & Kumar, 2019). Besides emotional relation, emotional benefits also influence consumers' purchase intention (M.-Y. Lee et al., 2008). Some researcher proposed that emotional value is more important than how consumers perceived the quality of a product (Kumar et al., 2009). Consumers tend to seek the value and the meaning behind the product they purchased. This is why some advertisements use techniques that evoke the emotion of consumers, rather than emphasizing on its utilitarian value, to achieve the marketing purpose (Savic, Perić, & Šomodi, 2019). Another thing is the need for uniqueness, consumers try to stand out and be different from the crowd (Kumar et al., 2009; Soh et al., 2017). Fashion affects ones' personal image, and human beings have this certain needs to feel special, fashion then becomes a platform for people to express their image in a special way, in a way that could impress many, and in a way to feel the pleasure of being special. Once emotional value is built behind the brand, which is an enjoyable feeling as an emotional reward, or even when consumers are emotionally related to the brand, this will influence consumers' purchase intention. Thus, the first hypothesis will be:

H1: Emotional Value significantly influences Purchase Intention.

### **2.5.2 Relationship between Emotional Value and Brand Image**

The shaping of a brand image starts from obtaining information, creation of value, assessment, and eventually image established. Emotional value related to a brand can shape up the brand image created (Singla & Gupta, 2019). Studies found that emotional value is associated with brand image, where the higher the emotional value, the better the brand image is in the thought of the consumers. Brand image can be created by: reflecting brands' utilitarian value, and reflecting brands' emotional value (Savic et al., 2019). Recent studies have proposed that businesses should go beyond creating only functional brand image, businesses can start creating emotional connection with consumers. Branding now can't only focus on introducing a product's functions, branding must be able to relate to consumers' emotion to be successful. The second hypothesis is built on the fact that emotional value will have an influence on brand image built by consumers. Thus,

H2: Emotional Value significantly influences Brand Image

### **2.5.3 Relationship between Brand Image and Purchase Intention**

Brand image is one of the most discussed factors that influences purchase intention. It is a way the brand builds itself around the consumers thought, a way the consumers perceive a certain brand (Fenitra & Haryanto, 2020). Businesses spend a lot trying to build a brand with a good image. Positive image is associated with a higher level of purchase intention (Fauziyyah, Dimiyati, & Suryaningsih, 2018). Brand image revolves not only on providing utilitarian value of the products, a business brand image also provides self-expression for their users (Fenitra & Haryanto, 2020). Consumers would like to express themselves and build a positive self-image by

using a brand with a good image. The way the public perceives a brand image is also an important factor contributing to consumers' purchase intention (Singla & Gupta, 2019). A good image is needed for a brand to attract their consumers, accordingly the third hypothesis will be:

H3: Brand Image significantly influences Purchase Intention

#### 2.5.4 Relationship between Emotional Value and Purchase Intention, mediated by Brand Image

The relationship between emotional value and purchase intention may be mediated by brand image. As explained above, brand image may be created and influenced by emotional value, and brand image will influence purchase intention. Based on their relationship, we will aim to find out the indirect relationship of emotional value with purchase intention, which is mediated by brand image, and also compare it with the direct relationship between emotional value and purchase intention. Based on that, the fourth theory for this research is formed, which is:

H4: Brand Image mediates the relationship between Emotional Value and Purchase Intention

#### 2.5.5 Conceptual Framework

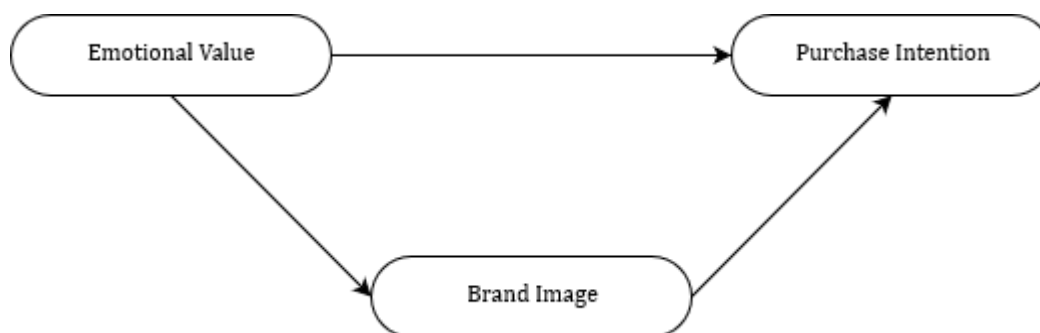


Figure 3. Conceptual Framework

### 3. Research Methodology

The research design used will be the quantitative method. The quantitative method will collect numerical data that can be measured by instruments and analysed using statistical procedure. The data for this research will be obtained through distribution of questionnaires to the sample defined for this study. The items in the questionnaire are adopted from previous research done by Calvo-Porral & Lévy-Mangin, (2017); Kumar et al., (2009); M.-Y. Lee et al., (2008); and Soh et al., (2017). The target sample for the research will be Indonesians belonging to the 15 – 29 age group who understand the research subject. The minimum number of samples needed are 150 respondents, based on the reference from Hair Jr, Hult, Ringle, & Sarstedt (2017) by using the 10 times rule. Sample will be obtained by using the convenient sampling method, as cost and time being one of the limitations for this study. Data will then be analysed using Partial Least Squares (PLS) analysis with Structural Equation Modelling (SEM) technique. Hair Jr, Black, Babin, & Anderson (2019) define PLS-SEM as “a variance-based method to estimate structural equation models that uses total variance and focuses on maximizing the explained variance of the endogenous latent variable(s)”. PLS-SEM seeks to explain the relationships among multiple variables simultaneously. SPSS v. 26 and SmartPLS v. 3.2.8 are tools used to analyse the data.



## 4. Results

### 4.1 Respondents' Demography Statistics

The respondents for the study are collected through distribution of online questionnaires, as much as 200 valid responses are gathered and analysed. The respondents consist of 89 (44.5 percent) male and 111 (55.5 percent) female respondents. As the study tried to explain the purchase intention of the 15 – 29 years old, the responses gathered were also from those of this age group, mostly by the 17 – 22 years old (184 respondents – 92 percent). The professions answered by the respondents consist mainly of two groups: workers (98 respondents – 49 percent) and non-worker (98 respondents – 49 percent). The income from the data provided stands at 41.5 percent having income above IDR 3,500,000.00, and the others 58.5 percent has an income below IDR 3,500,000.00. As the respondents are mostly college students, they all have a high school degree as their latest education background – standing at 91 percent. As much as 163 respondents stated that they have experience using or at least they have the intention to use local sports products, standing at 81.5 percent. The other 37 respondents answered no to the question mentioned above. Table 1 shows the summary of the respondents' characteristics.

Table I. Respondents' Characteristics Summary

Characteristics		Frequency	Percent
Gender	Male	89	44.5
	Female	111	55.5
Age	<17	1	.5
	17 - 22	184	92.0
	23 - 28	15	7.5
Profession	Others	4	2.0
	Working College Students	89	44.5
	Not Working College Students	98	49.0
	Private Sector Worker	8	4.0
	Entrepreneur	1	.5
Educational Background	Bachelor Degree	16	8.0
	Doctor Degree	2	1.0
	High School	182	91.0
Income	< Rp 3,500,000	117	58.5
	> Rp 5,000,001	23	11.5
	Rp 3,500,001 – Rp 5,000,000	60	30.0



## 4.2 Model Evaluation

According to Hair et al., (2019), the SEM-PLS technique analyses data in two parts: first the measurement model (outer model), then the structural model (inner model). The data collected are processed with a bootstrapping procedure of 5,000 samples.

### 4.2.1 Measurement Model (Outer Model)

#### Indicator Loadings

The outer loading of an item should have a value of  $> 0.708$  to indicate that the item is reliable (Hair et al., 2019, 2017). The test result shows that all the items have an outer loading of at least 0.709 which proves that all the items are reliable.

#### Construct Reliability (Internal Consistency Reliability)

The construct reliability is measured using Cronbach's alpha and composite reliability, where both should show a value of above 0.70 to indicate satisfactory reliability (Hair et al., 2019, 2017). Table 2 shows the test result for both Cronbach's alpha and composite reliability is satisfactory.

Table II. Construct Reliability Results

	Cronbach's Alpha		Composite Reliability	
	Original Sample	Sample Mean	Original Sample	Sample Mean
BI	0.829	0.828	0.886	0.885
EV	0.871	0.869	0.906	0.905
PI	0.892	0.891	0.932	0.932

#### Convergent Validity

Next will be the test for convergent validity which uses the Average Variance Extracted (AVE) as a measure, the AVE should show a value above 0.50 to indicate the validity of the test item (Hair et al., 2019, 2017). Brand image, emotional value, and purchase intention shows an AVE value of 0.661, 0.659, and 0.821, respectively. This indicates all the test items are above 0.50 which means the items are valid.

#### Discriminant Validity

Discriminant validity implies that the construct is unique and it is not represented by other constructs in the model, this is assessed using the heterotrait-monotrait ratio (HTMT) which should show a value below 0.90 (Hair et al., 2019, 2017). The constructs in this study all stay below the value of 0.90 which indicates that the constructs are all distinct from each other.

### 4.2.2 Structural Model (Inner Model)

#### Collinearity

Collinearity issues in SEM-PLS are measured using the Variance Inflation Factor (VIF) the suggested VIF value is  $< 5$  (Hair et al., 2019, 2017). Such as the case in this study, the analysed data shows the highest VIF is 2.563 which indicates that critical collinearity issues are not present in this study.

#### Coefficient of Determination

$R^2$  is used to measure the predictive power of the model which ranges from 0 to 1, the higher the value of the  $R^2$  indicates better predictive power.  $R^2$  values of 0.75, 0.50, and 0.25 can be considered substantial, moderate, and weak, respectively (Hair et al., 2019, 2017). Brand image has a value of 0.613, and purchase intention has a value of 0.657, which indicates that they have moderate to high predictive power.

### Effect Size

As the name suggests, it measures the effect of exogenous construct toward the endogenous construct. The  $f^2$  values of 0.02, 0.15, and 0.35 indicate small, medium, or large effect, respectively (Hair et al., 2019, 2017). Table 3 shows the effect size of exogenous construct toward the endogenous construct in this study.

Table III. Effect Size of the Constructs

	Original Sample	Sample Mean	Effect Size
BI -> PI	0.347	0.359	Large
EV -> BI	1.563	1.663	Large
EV -> PI	0.100	0.107	Medium

### Cross-validated Redundancy

The next criterion for assessing the structural model is the predictive relevance of exogenous construct towards the endogenous construct.  $Q^2$  value should be higher than 0 to indicate that the predictive relevance is acceptable (Hair et al., 2019, 2017). The result in this test shows  $Q^2$  value of 0.369 for brand image and 0.498 for purchase intention.

### Hypothesis Testing

#### Direct Effects

The test results show that emotional value influences brand image the greatest (0.782), followed by brand image influencing purchase intention (0.553), and emotional value towards purchase intention has the least influence (0.299). Table 4 shows the direct effects from the conceptual framework proposed.

Table IV. Path Coefficients

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
BI -> PI	0.554	0.553	0.079	7.047	0.000
EV -> BI	0.781	0.782	0.042	18.555	0.000
EV -> PI	0.298	0.299	0.081	3.690	0.000

### Indirect Effects

Although the direct effect shows little influence from emotional value towards purchase intention, but when they are mediated through brand image, the value of the influence increases to 0.432. Concluded, the total effect of emotional value towards purchase intention is 0.731. All the results show significance effect with T-value > 1.96 and P-value < 0.05.

Table V. Indirect Effect

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
EV -> BI -> PI	0.433	0.432	0.061	7.065	0.000

Table VI. Total Effects

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
BI -> PI	0.554	0.553	0.079	7.047	0.000
EV -> BI	0.781	0.782	0.042	18.555	0.000
EV -> PI	0.731	0.731	0.042	17.333	0.000

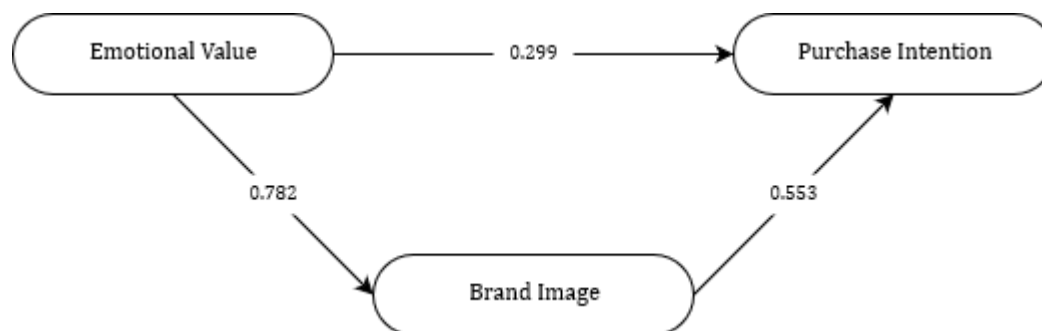


Figure 4. Direct Effects

## 5. Discussion

The respondents are mostly 17 – 22 years old college students which are the most likely group to purchase local products especially sport products, they also belong to the active age which is more likely to engage in sport activities than other age groups.

The first discussion highlights the influence of emotional value towards purchase intention. From the result, we can see that the first hypothesis is accepted as emotional value influences purchase intention in a positive significant way. Emotional value can create emotional relatedness and pleasure of a consumer towards a product. The same thing was also mentioned by M. Y. Lee et al., (2008) that once a consumer feels emotionally pleased by a product, purchase intention is likely to happen. The emotional value in this study is measured by three dimensions: social status, need for uniqueness, and symbolic meaning.

Social status can create emotional value in consumers by giving them a feeling of happiness and enjoyment when they are perceived as someone having a higher social status when using the product. People enjoy the feeling of respect given by others, they enjoy the proud feeling when using an original local brand which may raise their social status. This is in line with the study of Kumar et al., (2009) and Andarini & Kurnia, (2014) which proves that emotional value is associated with status and esteem than may enhance emotional rewards. Soh et al., (2017) also suggested that a stronger feeling of presence among the social group is also an enjoyable feeling which then relates to the next dimension – the need for uniqueness.

The need for uniqueness is another thing that may influence emotional value too. Humans are born the same, but they don't want to be the same with each other. People tend to try and create a self-image that leaves a good impression and is not easily duplicated by others. Theory of Uniqueness as quoted by Soh et al., (2017) also revolves around the desire of an individual to be distinct from others in the purpose of improving self-image. Fashion then becomes an instrument on how to create that self-image as it is a thing that leaves an impression for others. Standing out from the crowd can be created by using a distinct product, the feeling of standing out is an enjoyable experience thus it creates an emotional value for the consumers (Soh et al., 2017).

Symbolic meaning of certain products also influence the feeling of consumers, a certain product may have a certain value attached to consumers thoughts, where it is shaped by previous usage experiences or by public perception. A certain product of a brand may be used to symbolize something, such as the usage of local products may be used to symbolize patriotic feelings for the country. Another example can be seen from the usage of luxury goods to symbolize the status and wealth of the user. The symbolic meaning behind the product may increase consumers' intention to purchase the brand (Asshidin et al., 2016; Soh et al., 2017). All the dimensions above are used to satisfy and create emotional benefits needed by the consumers, as M.-Y. Lee et al. (2008) suggested that these kinds of emotional benefits generated will influence consumers' purchase intention. In conclusion, this hypothesis is accepted.

Next, we will discuss how emotional value significantly influences brand image. The second hypothesis is also accepted with the highest influence compared to other relations. Emotional value related to a brand can shape up the brand image created. The dimensions of emotional value discussed above may directly or even indirectly create a brand image. Brand image can be defined as the image that arises in consumers mind when they encounter products from a certain brand (Fenitra & Haryanto, 2020). The creation of brand image may come from different factors with emotional value being one of them. Feeling of happiness and enjoyment when using a product creates a happy and comfortable image in the consumers' mind. So the next time consumers are faced with the brand, they'd associate it with the positive feelings that they felt when they used it before. Some advertisers create advertisements which try to engage directly towards the emotions of the target audience, the reason behind this is to create a good impression by creating uniqueness and this is also used to guide the target audience in creating a positive brand image (Savic et al., 2019). We can see that in this case, emotional values do influence consumers' creation and perception towards a brand. By looking over the fact that their relationship has the highest influence over other relationships, we can conclude that businesses need to take note of consumers' emotional value when they are trying to build up their brand image.

Here we will be discussing how brand image significantly influences purchase intention. The way how a business is perceived by the consumers is one important factor that influences their purchase intention. A positive brand image is more likely to be purchased than a negative brand (Fauziyyah et al., 2018). Consumers tend to prefer a brand over the other because of the image they have on that certain brand (Putra & Suprapti, 2019). Other than emotional value, there are many ways a business can create a positive brand image – quality, services provided, social program, and others. As mentioned by Singla & Gupta (2019) the conventional method of creating brand image is by reflecting functional benefits of the product (such as products' quality), but as it develops, brand image shall be created to satisfy both consumers' needs for functional benefits and also their emotional needs. Fenitra & Haryanto (2020) also suggested that brand image can create emotional benefits by providing their users with a chance for self-expression. Brand image may also be created to attract nationalist, who feel proud when using local products. Brand image may also be created to attract quality hunters, who value quality more than other things. Brand image may also be created to attract value seekers, who think that product's value is important. There are many ways to create a brand image, and businesses need to understand what kind of image they want to present, and whether the image created can be attached to their consumers. Combining all the above, we can conclude that a brand image influences purchase intention. The third hypothesis in this case is also accepted as brand image significantly influences consumers' purchase intention.

Lastly, emotional value direct influence to purchase intention is not high, but when it is mediated through brand image, the total effect is high. The mediation effect present in this study is complementary (partial mediation). By reviewing the explanation of the second hypothesis, which has the highest direct effects, we can see that emotional value has a great influence on the way consumers perceive a brand, the better emotional benefits and emotional relation consumers have on a brand, the more likely the image build will be a positive image. The same case can be seen from the explanation of the third hypothesis, which has the second highest direct effects, the better the brand image a brand has, the more likely consumers will purchase products from that brand. In this case, the influence of emotional value towards purchase intention when mediated through brand image is

higher than the direct influence. This shows that to increase purchase intention, businesses can try to create emotional value that can influence the brand image. Then the deeper and positive emotional value created will create a more positive brand image, which in turn will create a higher chance of consumers' purchase intention. Judging by the outer weight of the emotional value's indicator, the first indicator "I enjoy using the product" has the highest effect, followed by "I feel comfortable using the product", then "I feel proud using the local product". It can be validated that the enjoyable, happy, and comfortable feelings are the main factor influencing purchase intention mediated through brand image. The fourth hypothesis is also accepted.

## 6. Conclusions and Limitations

This study, which has a sample of mostly Indonesians aged 17 – 22, concludes that emotional value can directly influence purchase intention, and it has greater influence on purchase intention when mediated through brand image. The dimensions of emotional value brought up in this study are: social status, need for uniqueness, and symbolic meaning. Consumers want to express themselves to the public (self-expression) by leaving a positive impression – a positive personal image, an image which is usually shaped through their appearance. It can be argued that the appearance of a person and the choice of product they use will have an impact on their impression left to others. People tend to feel more respected when they are treated as someone in the higher social class, the feeling of respect is enjoyed and thus it becomes a pleasure and desire for consumers. Other than pleasure from social status, it can also be obtained by the unique feeling, stronger presence in their social circle, and as someone 'more valued'. This leads us to the need for uniqueness, need for uniqueness can also create pleasure for consumers. It makes them feel happy when they are different from the crowd, which is also a pleasure that drives consumers to buy luxury goods. They feel proud to stand out by displaying that they are different. They wanted to attract more attention, thus when they are admired by many, this creates a positive mental image as their self-image created is pleasurable to others and more importantly to themselves. A product may also have a symbolic meaning behind it. The symbolic meaning usually contains their own emotional benefit related to the users. Symbolic meaning may be perceived differently between individuals. Symbol towards a brand or a product is derived from the mental feeling related to previous experiences or certain encounters. The symbol a product has will trigger the emotional side of the product rather than the utilitarian side of it, thus it is associated with emotional value.

The emotional benefits coming from the pleasure, happiness, and enjoyment when a product is used creates emotional value,

- (i) Directly, emotional value influences the purchase intention towards a product of a certain brand.
- (ii) Indirectly, emotional value will influence brand image, which then brand image will influence purchase intention towards a product of a certain brand.

As the result presents, the direct path of emotional value influencing purchase intention is lesser than when it is mediated through brand image. Brand image itself already drives consumers' purchase intention. As brand image may be both the personal perception of someone towards a brand, it may also be a public perception towards a brand. A brand with a positive image is likely to have a higher tendency of being purchased. Added with the emotional value created towards a brand, this explains why brand image mediating emotional value and purchase intention has a (higher) positive significant influence.

For local businesses, we can see that they have to engage with consumers' emotional value in order to compete in this global era. They need to engage both directly and indirectly to consumers' emotional value. By directly they have to create and trigger the emotional benefits that can be felt by consumers when using their product to increase their purchase intention. By indirectly, they need to shape up a brand image, a positive one. Brand image is one important factor contributing to purchase intention. As mentioned in the discussion above, local businesses can also shape the brand image in consumers' thoughts by triggering their emotional value. Emotional value can create a brand image of a consumer towards a certain brand. Emotional value can both be positive and also negative. Positive feelings relate to pleasure, enjoyment, happiness, and other positive

emotions. Negative feelings relate to uncomfortable, awful, sadness, and other negative emotions. Local businesses should try to avoid those negative feelings when they are creating consumers' purchase intention (whether directly or indirectly). Only positive emotional values are associated with positive brand image and also purchase intention.

This study has some limitations which may be addressed by future researchers. The samples collected are mostly college students aged between 17 – 22 may limit the generalization of the study. Future research could find more sample to represents consumers from other groups (e.g. working group, millennials). This study solely uses emotional value as the independent variable. There are other factors influencing purchase intention. To provide better and broader understanding, future research could include other variables that influences purchase intention. Finally, this study is conducted to investigate purchase intention of local products as a whole. Thus, caution must be taken when applying the results to one specific brand.

Although local businesses are faced with such a challenging economic condition right now, the author expects these findings will encourage local businesses to create opportunities out of this crisis and reconstruct their products and even their brand. Furthermore, this study can be applied as a reference to help local businesses (especially in the line of sport products) to understand better the driver of consumers' purchase intention from the aspect of emotional value, so that they are able to better strategize their future path when competing with international brands and are able to prepare themselves for the markets after the pandemic.

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## **The Effect of COVID-19 on Stock Market: A Study at Indonesia Stock Exchange (IDX). An Abstract**

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The Corona Virus Disease (COVID-19) pandemic has raised costs for the health system, both public and private, medical care for the infected and pandemic control, loss of work productivity, social distancing disrupts economic activities, the impact of tourism, the impact on foreign direct investment. Furthermore, apart from these impacts, COVID-19 will also affect the global economy, including the financial system and capital markets. The purpose of this study was to analyze the impact of the Corona Virus Disease (COVID-19) pandemic, whether it was positively affected or died on the capital market on the Indonesia Stock Exchange (IDX). The sample of this research is all companies listed on the IDX for the period 2020 that trade shares on the IDX in the period from March 2, 2020 to April 22, 2020. This research data is secondary data in the form of: (1) The number of people who have been confirmed with COVID-19 and the number of people who died due to COVID-19, which were obtained through the website <http://sinta.ristekbrin.go.id/covid/datasets>, and (2) the Composite Stock Price Index (IHSG) obtained from the official IDX website, namely [www.idx.co.id](http://www.idx.co.id). Data analysis to test data normality used the Kolmogorov-Smirnov test. Hypothesis testing using simple regression analysis using SPSS. The result is the number of people who have been confirmed with COVID-19 and the number of people who have died due to COVID-19 have an effect on the Composite Stock Price Index (IHSG) at a significance level of 10%.

**Keywords:** Covid-19, Composite Stock Price Index (IHSG), Indonesia Stock Exchange (IDX)

## **Employee Performance: Organizational Culture, Compensation, And Organizational Commitment With Job Satisfaction As An Intervening Variable**

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### **Abstract**

This study is to determine the effect of organizational culture, compensation, and organizational commitment on employee performance, through job satisfaction as an intervening variable. This type of research is research. The study population was employees of PT. Austin Engineering Indonesia, with 154 employees. The number of samples in this study were 154 employees. The sampling technique used a census. Data collection was carried out by means of a questionnaire. The data analysis technique used multiple linear regression analysis. The results of this study are: organizational culture has a significant effect on employee performance, compensation has a significant effect on employee performance, organizational commitment has a significant effect on employee performance, job satisfaction has a significant effect on employee performance, organizational culture has a significant effect on employee performance through job satisfaction, compensation has a significant effect on employee performance through job satisfaction, and organizational commitment have a significant effect on employee performance through job satisfaction.

**Keywords:** Employee Performance, Organizational Culture, Compensation, Organizational Commitment, Job Satisfaction

### **1. Preliminary**

Organizations are faced with intense competition and changes that take place very quickly. This can be realized if employee performance is optimal, organizational culture is strong, the compensation provided by the organization to competing employees is better than that provided by similar organizations, and the participation of employees. Employee participation is reflected in the commitment given by employees to the organization. Another thing that is indicated to affect employee performance is job satisfaction. In the initial survey conducted, it was found that there had been a decline in employee performance during the last 3 years, which was indicated by the lack of a strong organizational culture, as evident from the lack of concern for company employees in the use of company facilities and infrastructure.

There are employee complaints related to compensation that are not in accordance with job risks. There are symptoms of decreased organizational commitment, this can be seen from the increased turnover rate over the last 3 years. Employee job satisfaction has not been optimal with the inclusion of several letters in the company suggestion box.

According to Kasmir (2018), employee performance is an act, achievement, and skill for a person to do his job. Organizational culture is a way of thinking, feeling and reacting based on certain patterns that exist in the organization, Romli (2017).

Compensation is remuneration provided by the company to employees in return for donating energy and thoughts for the progress of the company, Setiyoningsih (2011).

Organizational commitment is a sense of identification, involvement, and loyalty expressed by a member to his organization, Widiana (2015).

Job satisfaction according to Davis (2016) is a pleasant or unpleasant feeling that is felt by employees in seeing their work.

Employee performance is influenced by several variables, including organizational culture, compensation, organizational commitment, and job satisfaction. Based on real conditions and compared to theory, a study was conducted with the title Employee Performance: Organizational Culture, Compensation, and Organizational Commitment, with Job Satisfaction as an Intervening Variable.

## **2. Literature Review**

### **Employee performance**

According to Mangkunegara (2017), performance is the result of work in quality and quantity achieved by an employee in carrying out tasks in accordance with the responsibilities assigned to him. Performance measuring indicators are quality, quantity, time, cost reduction, supervision, and the relationship between employees.

### **Compensation**

According to Luthans (2018), it is the awarding of direct and indirect, financial and non-financial rewards that are fair and appropriate to employees for their contributions in achieving organizational goals.

### **Organizational Commitment**

Organizational commitment is a state of individual psychological linkage in an organization, where the individual takes sides, is loyal, is identified, and is involved in an organization, Robbins (2018).

### **Job satisfaction**

According to Robbins (2018) job satisfaction is the feeling of employees about their work results.

## **3. Research Methods**

This type of research is quantitative research using primary data sources. Data collection techniques using questionnaires, and data analysis techniques using multiple linear regression.

### **Research Population**

The population in this study were permanent employees of PT. Austin Engineering Indonesia, with 154 employees.

### **Research Samples**

The research sample was 154 people using saturated sampling technique.

### **Data analysis technique**

Analysis of research data in this study using multiple linear regression analysis.

### **Research Results and Analysis**

Before the questionnaire was distributed to the respondents, the validity and reliability of the instrument were tested with valid and reliable results. After the respondents' answers have been collected, data processing is carried out using multiple linear regression with the SPSS tool. Based on the results of multiple linear regression calculations, the following results were obtained:

### **The Influence of Organizational Culture on Job Satisfaction**

The results of hypothesis testing of organizational culture variables resulted in a value of  $t_{\text{count}}$  of 2,789

greater when compared to  $t_{(table)}$  of 0.677 and a significant value of 000  $< 0.05$ , then  $H_{01}$  was rejected and  $H_{\alpha 1}$  was accepted, thus the partial test of organizational culture variables had a significant effect on job satisfaction of employees of PT. Austin Engineering Indonesia. The results of this study are consistent with the results of research by Herawan, Gunawan, and Nurtjahjono (2015), Tumbelaka, Alhabsji, and Nimran (2016), and Primasheila, Hanafi, and Bakri (2017).

#### **The Effect of Compensation on Job Satisfaction**

Based on the results of hypothesis testing in this study, compensation has a significant effect on job satisfaction, the  $t_{(count)}$  value is 5,816, which is greater than the  $t_{(table)}$  of 0.677 and a significant value of 000  $< 0.05$ , then  $H_{02}$  is rejected and  $H_{\alpha 2}$  is accepted, thus partial test of compensation variable has a significant effect on job satisfaction of employees of PT. Austin Engineering Indonesia. The results of this study support the research results of Akmal and Tamini (2015), Retnoningsih, Sunuharjo, and Ruhana (2016), and Septerina and Irawati (2018).

#### **The Effect of Organizational Commitment on Job Satisfaction**

The results of testing the organizational commitment hypothesis resulted in a value of  $t_{(count)}$  of 3,581 greater when compared to  $t_{(table)}$  of 0.677 and a significant value of 000  $< 0.05$ , then  $H_{03}$  is rejected and  $H_{\alpha 3}$  is accepted, thus partially test, organizational commitment has a significant effect on satisfaction. work of employees of PT. Austin Engineering Indonesia. The results of this study support the research results of Parimita, Larasati, and Handaru (2014), Arifah and Romadhon (2015), Mus, Koesmono, and Wulani (2017).

#### **The Effect of Job Satisfaction on Employee Performance**

Based on the results of hypothesis testing in this study, Job Satisfaction has a significant effect on employee performance, the  $t_{(count)}$  value is 7,716, greater than the  $t_{(table)}$  of 0.677 and a significant value of 0.000  $< 0.05$ , then  $H_{04}$  is rejected and  $H_{\alpha 4}$  is accepted, thus in partial test Job Satisfaction has a significant effect on the performance of employees of PT. Austin Engineering Indonesia. The results of this study support the research results of Kristianto (2011), Indrawati (2013), Damayanti, Hanafi, & Cahyadi (2018).

#### **The Influence of Organizational Culture on Employee Performance Through Job Satisfaction**

Based on the results of testing with Path Analysis, it can be explained that Organizational Culture has a significant effect on the performance of PT. Austin Engineering Indonesia through Job Satisfaction. The results of this study support the research results of Baskoro, Hidayat, and Djoko (2013), Mustika and Utomo (2013), and Deccasari (2019).

#### **The Effect of Compensation on Employee Performance Through Job Satisfaction**

Based on the results of hypothesis testing in this study using Path Analysis it is stated that compensation has a significant effect on the performance of the employees of PT. Austin Engineering Indonesia through Job Satisfaction. The results of this study support the research results of Lusiana, Kirana, and Arina (2015), Hidayah and Aisyah (2016), Alwan and Djastuti (2018).

#### **The Effect of Organizational Commitment on Employee Performance through Job Satisfaction**

The results of hypothesis testing with Path Analysis state that organizational commitment has a significant effect on employee performance at PT. Austin Engineering Indonesia through Job Satisfaction. The research results support the research results of Ruswanto, Samsir, and Marzolina (2014), Dadie and Nugraheni (2016), and Pratama and Dihan (2017).

## **4. Conclusion**

Based on the results of research and discussion, it can be concluded as follows: Organizational culture has a significant effect on the performance of employees of PT. Austin Engineering Indonesia, compensation has a

significant effect on the performance of employees of PT. Austin Engineering Indonesia, Organizational Commitment has a significant effect on the employee performance of PT. Austin Engineering Indonesia, Employee Job Satisfaction has a significant effect on Employee Performance at PT. Austin Engineering Indonesia, Organizational Culture has a significant effect on Employee Performance of PT. Austin Engineering Indonesia through Job Satisfaction, Compensation has a significant effect on Employee Performance through Employee Job Satisfaction of PT. Austin Engineering Indonesia, Organizational Commitment has a significant effect on Employee Performance through Employee Job Satisfaction of PT. Austin Engineering Indonesia.

## 5. Suggestion

Based on the conclusions and research results, it provides the following: PT. Austin Engineering Indonesia is expected to strengthen the Organizational Culture in order to increase Employee Performance, PT. Austin Engineering Indonesia is expected to increase the compensation both financial and non-financial given to employees so that employee performance increases, PT. Austin Engineering Indonesia is expected to strengthen Organizational Commitment so that Employee Performance increases and loyalty increases, PT. Austin Engineering Indonesia is expected to pay attention to Job Satisfaction so that Employee Performance increases.

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## Creating Brand Love through Brand Trust, Brand Image and Other Customer Perception: a Case Study of Gojek in Jakarta, Indonesia

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### Abstract

This study attempts to define the impact of brand trust (BT), brand image (BI), other customer perception (OCP) on customer satisfaction (CS) on brand love (BL) for Gojek in Jakarta, Indonesia. Gojek is a Super App business startup that provides a variety of services from transportation, food and goods delivery, payments and logistics for users/commuters and providers. Purposive sampling served as the sampling method, and involved 405 participants who matched predetermined criteria. Smart PLS 3.0 software functioned as the tool to assess the Structural Equation Modeling (SEM) in this study. The outcome proves that brand trust, brand image, and other customer perception have a significant impact on brand love.

**Keywords:** brand trust, brand image, other customer perception, customer satisfaction, brand love

### 1. Introduction

The transportation sector continues to grow, accompanied by an abundance of public transport (cars, buses, trucks and motorbikes), the percentages of which are increasing every year. The table below shows data regarding the increase in vehicles in Jakarta in the three years from 2016 to 2018.

Table I. Number of Registered Motorized Vehicles

Types of Motorized Vehicle	2016	2017	2018
Passenger Cars	14,580,666	15,493,068	16,548,871
Buses	2,486,898	2,509,258	2,512,918
Trucks	7,063,433	7,523,550	7,808,030
Motorcycles	105,150,082	113,030,793	119,413,901

Source: *Indonesia State Police*

The emergence of cutting-edge technology is having a considerable impact on every aspect of life, especially transportation. The development of a technology-focused business model has resulted in many innovative companies (Munawar 2007 in Aziah et al. 2018). Moreover based on the Indonesian Internet Service Companies Association (APJII, 2019), Indonesia has more than 150 million internet users, with the majority they are in urban area (i.e. Jakarta) and majority they are in productive age (Briliana, 2019).

Gojek's services are not only limited to online transportation services in general, but various active efforts have been made, starting with a partnership of 20 motorcycle taxi drivers, to become a mega company (Super App) across Southeast Asia (Jakarta Post 2019).

The establishment of Gojek was based on a simple desire to increase the ease of interaction for ojek (motorcycle taxi) drivers and passengers, which led to Nadiem Makarim founding Gojek in 2010. The company then

launched its app in 2015 with additional services such as Go-Send (delivery service) and Go-Food (food delivery service), besides the Go-Ride service.

In 2017, Gojek had 900,000 driver-partners, 125,000 merchant-partners, and 15 million active users (Kompas.com 2017). Moreover, in 2019, the total number of downloaded Gojek apps was 142 million, coupled with an increased availability of service-partners, starting from 2 million drivers, 400,000 available merchants, and 60,000 service providers throughout Southeast Asia. Gojek's valuation exceeded USD 9 billion of the gross transaction value (GTV) and the volume of transactions reached USD 2 billion in 2018 (CNBC Indonesia, 2019).

According to Crunchbase, Gojek had 28 investors, including Visa and Mitsubishi Motors, in 2019. Twelve rounds of funding enabled Gojek to reach USD 3.1 billion and generate a brilliant market valuation of USD 9.5 billion in July 2019, which is projected to rise to USD 10 billion in the near future. The Gojek application has 22 types of services, including transport, food, lifestyle, entertainment, and digital payments. This demonstrates the prowess of Gojek's technology as an application-based company that integrates customers, partners and merchants all over Southeast Asia (Jakarta Post, 2019). Currently, Gojek is expanding across Vietnam, Thailand, and Singapore.

Gojek has been honoured with several awards, such as 'The World's Most Influential Person' in 2018, based on Bloomberg 50, and in Japan the 24th Nikkei Asia Prize in 2019 for Economy and Business Innovation was dedicated to Nadiem Makarim. According to Fortune, Gojek is also the only Southeast Asian company that is included in the top 50 companies that are changing the world. In 2017, Bank Indonesia declared Gojek a financial company that actively supports reducing the use of cash.

In 2019, Gojek held a Go-Food Festival and set a record with the Indonesian World Record Museum (MURI) for the number of participants or restaurant providers in various locations in Indonesia. Furthermore, according to BrandZ, the cash industry online publication [<https://industri.kontan.co.id>] Gojek is one of the business start-ups, online service provider companies, that are in high demand. It is included in the category of The Most Valuable Digital Brand and called a digital brand. This achievement is based on the assessment of the aspects of purpose, innovation, communications, experience and love, so as to create a brand that is meaningful, unique and memorable.

Nowadays, the use of online transportation services is increasingly integrated into the elements of life. Various reasons are also important influences in creating love for a particular brand, such as trust, image, OCP, and satisfaction. Before trying a service, customers tend to rely on the company's image and OCP, that drive the trial process and the utilization of the service.

When the service received accords with the expectations of the general public, satisfaction is created. Satisfied consumers tend to use one brand of service and develop emotional attachment and feelings of love for it, so they encourage other consumers to use the same service.

As reported in the Jakarta Post (2020), Health Ministry Regulation No. 9/2020 on PSBB (*Pembatasan sosial berskala besar* - large-scale social restrictions) guidelines and Gubernatorial Decree No. 33/2020 implemented a 14-day PSBB, which limited all kinds of online transportation services to only the delivery of food and goods. Muhammad Usman, a Gojek driver, stated that this limitation created problems for those who focus only on transporting passengers. Moreover, getting orders to deliver either food or goods is not easy, especially when roads are closed and drivers are required to find alternative routes, thereby increasing fuel consumption. The closure of several outlets also adds to the difficulty for drivers to fulfill food orders. The head of the *Presidium Nasional Gabungan Aksi Roda Dua* - Two-Wheel Transport Union (GARDA), Igun Wicaksono stated that this regulation needs to be re-evaluated, considering the frequent use of online transportation for daily needs.

Gojek, as an online transportation provider, still maintains its operations. Gojek's chief operations officer, Hans Patuwo, said that COVID-19 creates challenges, especially for all Gojek drivers, to carry out their activities. In order to deal with this problem, Gojek provides each driver with masks, hand sanitizer, vitamins and disinfectants, as well as devices to check body temperature for various Gojek merchant-partners. A contactless delivery system for Go-Food and Go-Send also plays an important role in convincing consumers to keep using these services. Gojek's latest campaign, known as '#KasihLebih' or '#GiveMore,' provides the freedom for each customer to tip drivers up to IDR100.000 in the Gojek application (PikiranRakyat.com, 2020).

The literature used does not discuss the transportation industry and its service providers in detail, especially the indirect effect of brand trust (BT) and brand image (BI) on brand love (BL) (Sreejesh et al., 2017; Hosseini, Sayed Hamid Khodadad & Leila Behboudi, 2017; Hsu et al., 2015). The available information does not cover these areas, so further research will be useful, especially in determining the gaps in previous research.

The current studies lack information about available variables for ride-hailing applications in Jakarta (and surrounding areas), Indonesia. Therefore, this research aims to identify the impact of BT, BI and OCP on customer satisfaction (CS) toward BL for Gojek in Jakarta, Indonesia.

## **2. Literature review**

### **Brand Trust**

Morgan and Hunt (1994) in Berry (2000) state that trust arises if one party deems the other as proportionate in terms of reliability and integrity. Schiffman and Kanuk (2010, 30) consider trust to be a core element or the main foundation in building and maintaining customer relationships and loyalty, whereas Lien et al. (2015) assert that trust is an essential ingredient concerning the relations between buyer and seller. Bauer and Leach (2002) state that satisfaction has a direct effect on trust in the context of customer relationships over the internet. A previous study by Briliana and Widayati (2018) discovered that BT has a strong relationship with brand love (BL). In their study they found that the passengers of online taxi and motorbike services were impressed with the services provided, if their travel needs and expectations were met. Furthermore, high BT means there is a positive response and strong relationship from customers to BL. In the context of this research, trust is the extent to which a party puts its belief in a specific viewpoint, which enhances the main foundation in establishing long-term relationships and builds loyalty amongst consumers.

### **Brand Image**

Schiffman and Wisenblit (2015, 133) define BI as a desirable image that is able to provoke a distinctive shape, so that it is embedded in the minds of consumers. Chih-Chung et al., (2012) reveal that a good BI can make consumers believe in product quality, which enables them to make choices and be confident about buying products. Lien et al. (2015) emphasize that BI is related to consumer thinking in that it affects subjective perceptions, behavior and the consequences. Furthermore, Keller (2013, 72) explains that BI is a view that comes from the thoughts of consumers, is associated with a person's long-term memory and tends to appear spontaneously when there are stimulants. Li et al., (2011) argue that BI includes knowledge about products or services that affect customer opinion, including the physical and psychological characteristics among products that create a BI. In addition, BI helps consumers to shape their perceptions of other brands and assists them in the purchase decision making process. The BI in this study is the consumer's view of a particular product/service that shapes people's thoughts and behavior in their long-term memory.

### **Other-customer Perception**

OCP is the customer response concerning other customers who are present in the service delivery processes (Anderson et al., 2008; Brocato et al., 2012). Some research declares that other patrons' demeanor tends to influence/attract attention in encouraging interaction (Wu, 2007). Breaking into queues, talking loudly, verbal abuse and smoking can cause frustration among customers (Harris and Reynolds, 2003). The perceptions of

these other customers, who are often strangers to each other, generally have the potential to increase or decrease the factors that are evaluated by individuals and indirectly influence purchasing decisions. Thus, OCP is a customer's response to other customers in the context of appearance, behavior and similarity, which affects the level of satisfaction in service acceptance.

### Customer Satisfaction

Satisfaction is a feeling when reacting to things based on past experiences, which are then compared to expectations, including the determination of decisions, needs and desires in shaping decisions (Armstrong and Kotler, 1996). According to Lovelock and Wirtz (2011: 74), CS is an attitude based on the previous encounter between consumers and certain products/services. Satisfaction is a positive relationship between emotions and determinations (Martin et al., 2008; Chitturi et al., 2008). Word-of-mouth significantly increases how good and bad are determined (Westbrook, 1987). Satisfaction also has a meaningful impact on passion and pleasure (Ladhari, 2007).

Briliana and Widayati (2018) state that online taxi passengers were very satisfied when they had experiences that exceeded their expectations. BL occurs when satisfaction and happiness result from their experience using the service. In this study, satisfaction refers to an emotion/feeling that positively or negatively affects the repurchase decisions. It is based on experience and influences the dissemination of information by word-of-mouth.

### Brand Love

Brand love refers to the attitudes (thoughts, feelings and emotions) of consumers toward a particular brand (Briliana & Widayati, 2018). Carroll and Ahuvia (2006) claim that satisfaction and BL are interrelated notions. However, satisfaction is the initial factor in the process of forming BL, and acts as an essential constituent in predicting the rise of loyalty that may stimulate benefits to marketers. Other opinions hold that BL depends on the particular context and tends to generate short-term rather than long-term romantic feelings (Sarkar et al., 2012). Following on from Heinrich et al., (2012), according to Fetcherin and Heinrich (2014), BL is an attractive relationship and surpasses the usual feelings between consumers and brands. In this study, BL is a feeling/attachment that involves one's emotions both for short- and long-term periods, and which exceeds the feeling of satisfaction.

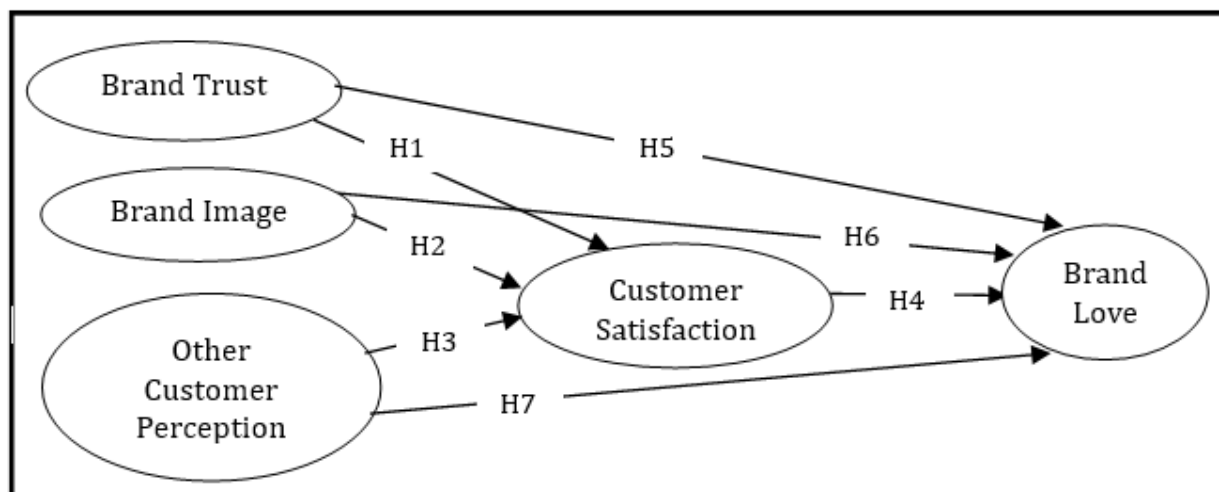


Figure 1. Conceptual Framework

The above literature led to the development of following hypotheses:

H1: Brand trust influences customer satisfaction.

H2: Brand image influences customer satisfaction.

H3: Other-customer perception influences customer satisfaction.

H4: Customer satisfaction influences brand love.

H5 : Brand trust influences brand love.

H6 : Brand image influences brand love.

H7 : Other customer perception influences brand love.

H8: Customer satisfaction mediates brand trust and brand love.

H9: Customer satisfaction mediates brand image and brand love.

H10: Customer satisfaction mediates other-customer perception and brand love.

#### 4. Sample and Data Collection

The process of data collection used Google Forms to conduct online surveys. From a total of 450 participants, only 405 were suitable. The predetermined criteria to decide whether individual participants fulfilled the requirements were: Their frequent use of Gojek apps; their utilization of both Go-Ride/Go-Car (at least once a week) during the breakout of COVID-19; and their use of Go-Pay as the payment method.

The study used Smart PLS 3.0 software as a tool for analyzing the data. PLS facilitated the researchers' ability to initiate the synchronous calculation of intricate interrelationships in associating multiple numbers of constructs and indicators that possess direct, indirect or mediating relationships. PLS measures correlations among latent variables by outlining the parameters for the equations in the path model and merging prime component analysis (Hair et al. 2018, 16, 32). The corresponding information below provides the outcomes of the outer model, convergent validity and composite reliability.

#### 5. Results

Table II. Presents the demographic profile of the respondents.

Characteristics	Descriptions	Frequency	Percent
Region	North Jakarta	48	11.9
	South Jakarta	49	12.1
	Central Jakarta	31	7.7
	West Jakarta	231	57
	East Jakarta	17	4.2
	Bogor	4	1
	Depok	2	0.5
	Tangerang	15	3.7
	Bekasi	8	2
Gender	Male	162	40
	Female	243	60

Age	14-16 years old	3	0.7
	17-19 years old	137	33.8
	20-23 years old	222	54.8
	24-27 years old	16	4
	28-31 years old	5	1.2
	32-35 years old	2	0.5
	More than 35 years old	20	4.9
Education	Elementary School	1	0.2
	Junior High School	2	0.5
	Senior High School	283	69.9
	Diploma	10	2.5
	Bachelor's degree	106	26.2
	Master's degree	3	0.7
Occupation	Student/College Student	286	68.4
	Studying and Working	40	9.6
	Employee	35	8.4
	Entrepreneur	21	5
	Housewife	8	1.9
	Others	15	3.6

Table III. Measurement model indicators

		Loading	CR	AVE	$\alpha$
Brand Trust – adapted from Hsu <i>et al.</i> (2015)					
BT1	Gojek's services are honest.	0.866	0.869	0.769	0.700
BT2	Gojek's services are trustworthy.	0.887			
Brand Image – adapted from Hsu <i>et al.</i> (2015)					
BI1	I like to proclaim the benefit of Gojek's services.	0.772	0.859	0.670	0.752
BI2	I am pleased to use Gojek's services	0.872			
BI3	I am glad to utilize Gojek's services.	0.809			
Other customer perception - adapted from Sreejesh <i>et al.</i> , ( 2017)					
OCP appearance					
OCP1.1	I like the appearances of other patrons in using Gojek's services.	0.806	0.932	0.513	0.920
OCP1.2	The other patrons are dressed appropriately.	0.847			



OCP1.3	The other patrons are looking nice.	0.873			
OCP1.4	The other patrons look like they are my type of people.	0.824			
OCP behavior					
OCP2.1	The behaviours of the other customers are appropriate for the setting	0.813			
OCP2.2	The other patrons seem to be friendly towards me.	0.836			
OCP2.3	The other patrons are behaving well.	0.893			
OCP2.4	The other patrons' behaviours are pleasant.	0.846			
OCP similarity					
OCP3.1	I can identify with the other patrons present in using Gojek's services.	0.774			
OCP3.2	I think that I am similar to the other patrons present in using Gojek's services.	0.857			
OCP3.3	The other patrons are like me.	0.803			
OCP3.4	The other patrons come from a similar background.	0.781			
OCP3.5	I fit right in with the other patrons.	0.838			
Satisfaction- adapted from Hsu <i>et al.</i> (2015)					
CS1	I am satisfied with the content of Gojek's services.	0.896	0.881	0.787	0.730
CS2	I am satisfied with the management of Gojek's services.	0.878			
Brand Love- adapted from Sreejesh <i>et al.</i> , (2017)					
BL1	These are fantastic services	0.759	0.921	0.594	0.902
BL2	Gojek's services make me feel good.	0.788			
BL3	Gojek's services are totally awesome.	0.829			
BL4	Gojek's services make me very happy.	0.755			
BL5	I love Gojek's services.	0.721			
BL6	Gojek's services are pure delight.	0.765			
BL7	I am passionate about Gojek's services.	0.744			
BL8	I am very attached to Gojek's services.	0.800			

Table III shows the loading factors, composite reliability (CR) and average variance extracted (AVE). In terms of loading factors, all results are higher than 0.7. The lowest value for brand trust (BT) is 0.866, while the

highest is 0.887. Brand image (BI) maintains the smallest amount of 0.772 and the highest of 0.872. As for other customer perception (OCP), the value ranges from 0.774 to 0.893. Similarly with BT, the lowest value for customer satisfaction (CS) is 0.878, and the highest is 0.896. The last variable, known as brand love (BL), has the lowest loading factor of 0.721 and 0.829 as the highest. Furthermore, AVE's values are higher than 0.5, which affirmed that both the loading factors and AVE fulfilled the convergent validity criteria. In terms of composite reliability, all values are higher than 0.7, varying from BT, which contains a value of 0.869 (CR) and 0.700 (Cronbach's Alpha). BI has a value of 0.859 and 0.752 for CR and Cronbach's Alpha, respectively. Meanwhile, the values of CR for OCP, CS and BL are 0.932, 0.881 and 0.921 respectively.

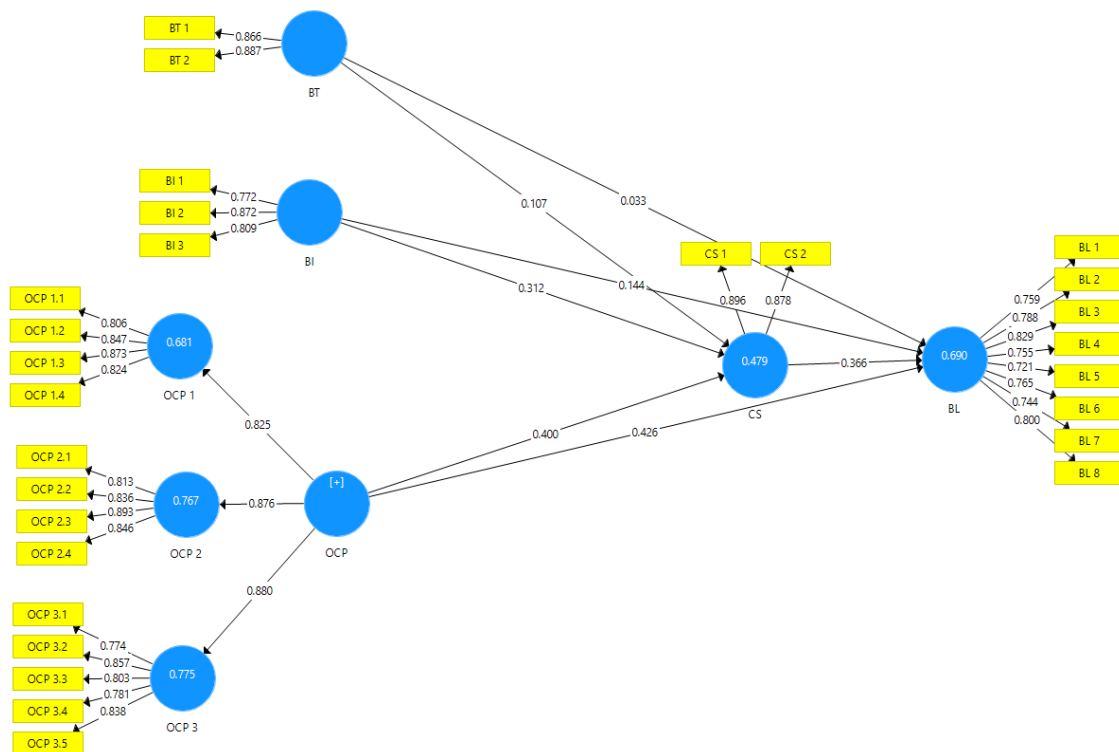


Figure 2. SmartPLS 3.0 results

Table IV. *Hypotheses result*

Brand Trust to Customer Satisfaction	2.082
Brand Image to Customer Satisfaction	5.151
Other-customer Perception to Customer Satisfaction	6.866
Brand Trust to Brand Love	0.941
Brand Image to Brand Love	3.126
Other-customer Perception to Brand Love	9.034
Customer Satisfaction to Brand Love	8.224
<b>Based on T-table 1.96</b>	
H1: Brand Trust influences customer satisfaction.	Accepted
H2: Brand Image influences customer satisfaction.	Accepted
H3: Other-customer perception influences customer satisfaction.	Accepted
H4: Customer satisfaction influences brand love.	Not Accepted
H5: Customer satisfaction mediates the relationship between brand trust and brand love.	Accepted
H6: Customer satisfaction mediates the relationship between brand image and brand love.	Accepted
H7: Customer satisfaction mediates the relationship between other-customer perception and brand love.	Accepted

Table IV shows the results of the hypotheses from H1 to H7. Hypothesis 1(H1) has a t-value of 2.082 (more than 1.96); hypothesis 2(H2) has a t-value of 5.151; hypothesis 3(H3) has a t-value of 6.866; hypothesis 4(H4) has a t-value of 8.224; hypothesis 5(H5) has a t-value of 0.941; hypothesis 6(H6) has a t-value of 3.126; and hypothesis 7(H7) has a t-value of 9.034. The findings on BT, BI, OCP show a significant effect ( $p < 0.05$  and t-value more than 1.96) on CS. Furthermore, this study found that CS, BI and OCP significantly influence BL. Surprisingly, the results for BT indicate that it does not significantly affect BL. Table 3 shows the hypotheses results from H1 to H7. Hypotheses 1(H1) has a t-value of 2.082 (more than 1.96), hypotheses 2(H2) has a t-value of 5.151, hypotheses 3(H3) has a t-value of 6.866, hypotheses 4(H4) has a t-value of 8.224, hypotheses 5(H5) has a t-value of 0.941, hypotheses 6(H6) has a t-value of 3.126, hypotheses 7(H7) has a t-value of 9.034. All hypotheses is accepted because possessing a higher t-value more than 1.96, except for the fifth hypotheses. The outcome reveals brand trust, brand image, other-customer perception influences customer satisfaction; customer satisfaction influences brand love; brand image and other-customer perception influence brand love through customer satisfaction, except for brand trust.

Table V *Mediation Analysis Results*

Mediation	Direct Effect	Indirect Effect	Total Effect	Significance of Mediation	T.Statistics of Mediation	Status
BT->CS->BL	0.033	0.039	0.072	0.038	2.082	Approved (Full)
BI->CS->BL	0.144	0.114	0.258	0.000	4.185	Approved (Partial)
OCP->CS->BL	0.426	0.146	0.573	0.000	5.576	Approved (Partial)

Table V displays the role of CS as the mediating variable between the independent variables (IV) (BT, BI and OCP) and the dependent variable (DV) (BL). All IVs are significant, occupying a sig value of 0.038 (BT->BL), 0.000 (BI->BL and OCP->BL) at a level of 5% with the entire t-statistic value above 1.96, which signifies adequacy. The mediating effect on CS of BT toward BL has the effect values of 0.033 (direct) and 0.039 (indirect), whilst indicating full mediation because the direct effect is insignificant. In terms of mediating BI and BL, a partial mediation comes into play with the effect values of 0.144 (direct) and 0.114 (indirect). Moreover, the mediating effect on CS of OCP toward BL has the effect values of 0.426 (direct) and 0.146 (indirect), whilst possessing a partial mediation because the direct effect is significant.

## 6. Discussion and Conclusion

This study takes a fresh look at examining the creation of brand love (BL) transportation apps in the context of an emerging country, Indonesia, and in the face of the COVID-19 pandemic. The main goal of this research was to determine the impact of brand trust (BT), brand image (BI) and other customer perception (OCP) on customer satisfaction (CS) towards brand love (BL). The outcomes reveal that all of the aspects, except BT, play a crucial role in BL, considering the insignificance of the direct effect on BL. The study found that although BT influences satisfaction, it does not guarantee BL. However, the result may vary from one study to another, especially if there is an increase in indicators or variables in the model.

Briliana and Widayati (2018) note that satisfaction and trust can influence consumers to develop an emotional attachment to particular brands, therefore experiencing BL. It was found that trust has a positive and significant relationship with CS (Ofori, 2018). This shows that with online transportation services, CS with online taxi services can be influenced by passenger trust. For example, online transportation service providers apply health and safety practices as top priorities. In line with the recommendations of the Ministry of Health, Gojek (including Go-Car and Go-Ride) has taken a number of initiatives to continue to provide maximum protection for all people in their environment. The company has implemented health protocols to stay healthy, hygienic and protected, in an effort to provide services to passengers so that they experience a mode of travel that is safe and convenient. The study also found that although BT influences satisfaction, it does not guarantee BL.

BI is a consumer's view of a brand, positive or negative. In the case of selecting ride-hailing apps, BI will be a determinant in decision making. Gojek possesses the appropriate image fundamentals among Indonesian customers, not only in establishing online transportation services but also when consolidating all the features in its wide range of a total of 22 services (transport, logistics, food and fast moving consumer goods (FMCG), payments, daily needs, news and entertainment, and business).

OCP scored the highest result from respondents who were concerned about the service procedures related to health and high contact with another person during the COVID-19 pandemic. Gojek has also established procedures that prioritize hygiene and health in Go-Ride and Go-Car services. The online transportation provider requires driver-partners to use masks, gloves and hand sanitizers as part of the trip preconditions, in compliance with government regulations. If either passengers or driver-partners are not wearing masks, the other party has the right to cancel the order and is welcome to report the incident through the Gojek app.

The findings also revealed that CS affects BL. These findings suggest that the satisfaction of passengers can encourage BL and this can increase loyalty with a strong quality service base.

## **7. Theoretical and managerial implications**

This study has important theoretical implications, integrating and examining the relationships between variables in a way that has never been done before. This broadens our understanding of the nature of influencing the relationships among the key factors in the transport service industry, namely brand trust (BT), brand image (BI), other customer perception (OCP), customer satisfaction (CS) and brand love (BL).

During the preparation for this research, the world fell victim to the COVID-19 pandemic. Throughout early to mid-2020, a dilemma occurred about whether Go-Ride should prioritize only food and goods delivery services, especially since the Government regulation in March to halt online transportation services for carrying passengers in Jakarta. However, this move could have serious financial consequences for the driver-partners and reduce long-term productivity. So, allowing Gojek to carry passengers is critical provided that appropriate health protocols are observed, such as wearing masks, using hand sanitizer, and checking body temperatures regularly.

## **8. Limitation and recommendation**

The research is not without its limitations, with the researcher encountering some obstacles and hindrances in the process. They included: [1] Only 405 people were involved in the survey. [2] The scope of the survey was limited to Jakarta and its surrounding. [3] The COVID-19 pandemic spread rapidly all around the world during 2020, which hindered the process of data collection.

This study is available for any parties wishing to engage in similar research. However, some research guidelines would be worth considering: [1] Any future research on a related topic would need to be based on distinct objects that reflect their country of origin, for example Gojek is an online transportation mode that operates solely in Southeast Asian countries. [2] If, or rather when COVID-19 no longer represents such a threat to the world, the collection of more comprehensive data is recommended so that more detailed results are obtained. [3] Additional variables outside the confines of the current study might reveal new opportunities, ideas and discoveries that would be appropriate for the community. [4] Further research might discard the role of customer satisfaction (CS) as the mediating variable considering the partial mediation of brand image (BI) and other customer perception (OCP) toward brand love (BL).

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## Employee Performance; Leadership, Organization Behavior, Compensation and Work Discipline

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### Abstract

*This research aims to get information about leadership, organization behavior, compensation, and work discipline also these four factors to employee performance. This research used a questionnaire for 94 respondents and used SPSS version 20. This research is categorized as quantitative research, statistics analysis use the Multiple Linear Regression method with quantitative analysis. Based on SPSS data analysis, the researcher got the measurement Multiple Linear Regression analysis to leadership variable (X1) is 2.071 with a significant number 0.041, organization behavior variable (X2) is 0.817 with a significant number 0.416, compensation variable (X3) is -0.726 with significant 0.470 and work discipline variable (X4) is 2.985 with significant number 0.004. The result of the simultaneous test (F test) researcher got value 8.083 with a trusted degree 95%. Conclusion for this research are first hypothesis leadership has the partial determination to employee performance, second hypothesis organization behavior has the partial determination to employee performance but not significant, third hypothesis compensation has the partial determination to employee performance but not significant, fourth hypothesis work discipline has the partial determination to employee performance and the last hypothesis received that these four variables (leadership, organization behavior, compensation, and work discipline) have the simultaneous determination to employee performance.*

**Keywords:** Employee Performance, Leadership, Organization Behavior, Compensation, Work Discipline

### 1. Introduction

Performance measurement in a company or organization is an act of measuring various activities that the company has carried out which can be used as feedback to provide information about the success of planning and to find out whether improvements are needed for the future. Performance measurement is carried out to achieve organizational goals, both for the short term and the long term. The goals and benefits of performance can be used as motivation for employees to achieve the vision, mission, and goals that the company has set in the predetermined standards of behavior to produce the desired results the company wants.

To achieve performance, the human resource factor is very dominant and influential. Quality human resources can be seen from the work. The framework of good performance professionalism is how individuals are able to show work behavior that leads to organizational strategic goals.

Performance is the work that can be achieved by a person or group of people in an organization, in accordance with their respective authorities and responsibilities, in the framework of achieving the goals of the organization concerned legally, does not violate the law and is in accordance with morals or ethics.

Leadership is the ability of a leader to influence his subordinates to cooperate to achieve the organizational goals that have been set.

Organizational culture is described as (1) symbols, language, ideology, and myths, (2) organizational records driven from personal records or dominating leaders, (3) a product, history, basic symbols, and abstraction of

behavior and product behavior. Organizational culture is what the employees perceive and how this perception creates a pattern of beliefs, values, and expectations.

Compensation has a broad definition that relates to financial and non-financial rewards that employees receive through their employment relationships in an organization.

Discipline is more appropriate if it is defined as an attitude, behavior, and actions in accordance with the rules of the organization, both written and unwritten.

This research will explain the influence of leadership, organization behavior, compensation, and work discipline on the employee performance.

## **2. Literature review**

### **2.1 Performance**

Performance is the quality and quantity of work achieved by an employee in carrying out his duties in accordance with the responsibilities assigned to him (Mangkunegara, 2013).

### **2.2 Leadership**

Leadership is a series of structuring activities in the form of the ability to influence the behavior of others in certain situations so that they are willing to work together to achieve predetermined goals (Sutarto, 2016).

### **2.3 Organization behavior**

The meaning of culture as a complex combination of assumptions, behaviors, stories, myths, metaphors, and various other ideas that come together to determine what it means to be a member of a particular society (Koentjaraningrat, 2015).

### **2.4 Compensation**

Compensation is any form of wages or rewards given to employees and arising from the employee's work (Dessler, 2015).

### **2.5 Work Discipline**

Discipline as the awareness and willingness of a person to comply with all company or organizational regulations and applicable social norms, where employees always come and go on time, and do all work well (Hasibuan, 2013).

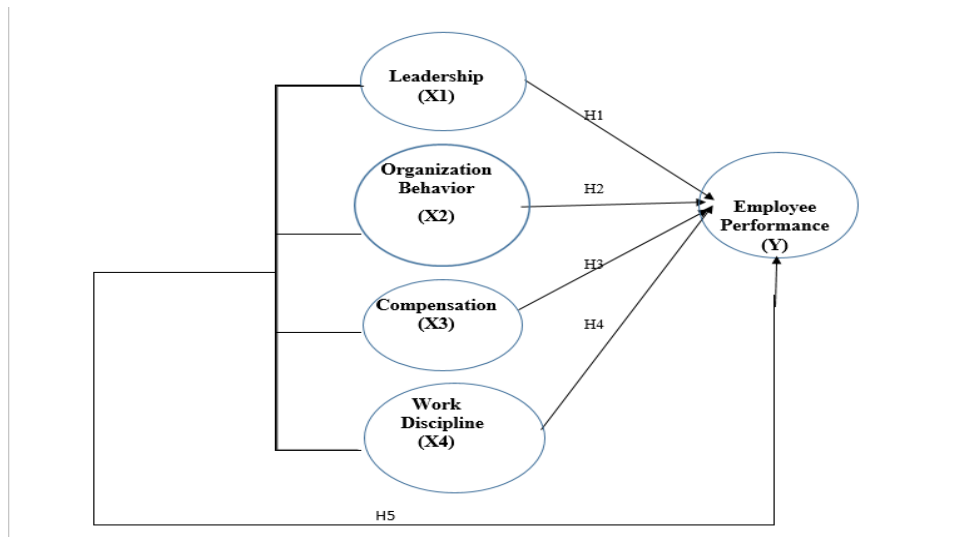


Figure 1 Conceptual Framework

## 2.6 Research Hypothesis

1. There is an influence of leadership on employee performance.
2. There is an influence of organizational behavior on employee performance.
3. There is an influence of compensation on employee performance.
4. There is an influence of work discipline on employee performance.
5. There are influences of leadership, organization behavior, compensation, and work discipline simultaneously on employee performance.

## 3. Methodology

This research is quantitative research, which is designed to find and explain causal relationships between variables through hypothesis testing (explanatory research).

This type of research used in this research is quantitative research with a descriptive approach. The quantitative research method is one type of research whose specifications are systematic, well-planned, and clearly structured from the start to the making of the research design (Sugiyono, 2013)

Hypothesis testing is research that aims to test hypotheses in general is a study that describes the phenomenon in the form of relationships between variables obtained based on data and facts that exist related to variables of Leadership, Organization Behavior, Compensation, Work Discipline also their effects on Employee Performance at PT. Team Metal Indonesia, with initial collection techniques namely initial observation, library research, and field research by distributing research instruments in the forms of questionnaires with Likert scale to a sample of 94 employees using SPSS Ver 20 software.

#### 4. Results

Table I: t-test results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
	(Constant)	14.849	7.907		1.878	.064		
	X1	.204	.098	.230	2.071	.041	.671	1.491
	X2	.150	.184	.090	.817	.416	.676	1.480
	X3	-.077	.105	-.076	-.726	.470	.758	1.320
	X4	.654	.219	.340	2.985	.004	.635	1.575

Table II: F-test results

##### ANOVA<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	756.254	4	189.063	8.083	.000 <sup>b</sup>
	Residual	2081.799	89	23.391		
	Total	2838.053	93			

Table III: R Square results

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. Change
1	.516 <sup>a</sup>	.266	.234	4.836	.266	8.083	4	89	.000

## 5. Discussion

Results of this research that all independent variables (leadership, organization behavior, compensation, and work discipline) had an influence on employee performance.

The following is a description of the analysis of research based on variables.

1. From the calculation, the significance value for the Leadership is 0.041 and the t value of 2.071 > t-table 1.99. Thus the conclusion of the Leadership variable has influential to Employee Performance variable.
2. From the calculation, the significance value for the variable Organization behavior is 0.416 and t-count 0.817 < t-table 1.99. Thus the conclusions of the Organization behavior variables are influential but not significant to the Employee Performance variable.
3. From the calculation, the significance value for the Compensation variable is 0.470 and t-count -0.726 < t-table 1.99 then  $H_0$  is accepted or  $H_a$  is rejected. Thus the conclusion of the Compensation variable is influential but not significant to the Employee Performance variable.
4. From the calculation, the significance value for the Work Discipline variable is 0.004 and t-count 2.985 > t-table 1.99 then  $H_0$  is rejected or  $H_a$  is accepted. Thus the conclusion of Work Discipline is influential on Employee Performance variables.
5. From the ANOVA test or F-test, the F count is 8.083 and with a probability of 0,000. Probability is much smaller (<) than 0.05, so regression models can be used to predict performance. The SPSS output also shows p-value 0,000 < 0,05 and F-count of 8083 > F-table 2.48, which means it is significant. Thus it concluded that the variables of Leadership, Organizational behavior, Compensation and Work Discipline simultaneous influence the Employee Performance.

## 6. Conclusion

1. Partially leadership influence on employee performance at PT. Team Metal Indonesia. This finding is in line with the findings of Huang et al (2011), Luthans(2016), Raf et al. (2014), Ratnasari, Sutjahjo, and Adam (2018).
2. Organization behavior has no effect on employee performance at PT. Team Metal Indonesia. This result is in line with Allard (2010) and Aripin et al. (2013).
3. Compensation has no effect on employee performance at PT. Team Metal Indonesia. This finding not in line with the findings Musriha (2009), Condlyat al (2008).
4. Partially work discipline has an influence on employee performance at PT. Team Metal Indonesia. This finding is in line with the finding of Dunggio (2013).
5. Simultaneously the influence is given by the four independent variables are positive. This finding is in line with the finding on Dunggio (2013), Aulia, R. (2014).

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## **Determination of Priorities Location for Affordable Housing Development With TOAHD Concept In Bregasmalang Agglomeration Area**

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### **Abstract**

The proportion of housing and transportation expenses is the highest expense in Central Java and the Bregasmalang Agglomeration Area, with a percentage of 70.73% and 67.63%. This situation can affect the level of welfare and purchasing power of low-income residents (MBR) because they only have a remaining income allocation of 29.27 to 32.37% to meet the other needs. In line with the establishment of Bregasmalang Agglomeration Area as one of the quick-win priority region through the Brebes Industrial Area, the provision of affordable housing with Transit-Oriented Affordable Housing Development (TOAHD) approach is deemed vital to support the development of Brebes Industrial Area by cutting housing and transportation costs, so that it can improve community welfare. Based on this, this study aims to determine priority locations for affordable housing using the TOAHD approach to accommodate community activities in Bregasmalang, especially Brebes Industrial Area and low-income workers. The method used is a quantitative approach with descriptive analysis, GIS-based spatial analysis, and AHP. The results told that the Bregasmalang Agglomeration Area has 22 priority locations for affordable housing emerging from the elimination process of 71 potential affordable housing locations. These priority locations spread across three Local Activity Centers (PKL) with details, namely 15 locations for Slawi - Adiwarna local activity centers, 4 locations for Ketanggungan - Kersana local activity centers, and 3 locations for East Tegal local activity centers. The priority locations in Bregasmalang Agglomeration Area tend to be centered on Slawi - Adiwarna local activity center, which is located in Dukusalam Village, Slawi District. The results of this study are expected to be adopted as a reference for the Government in determining priority locations for affordable housing in the Bregasmalang Agglomeration Area.

Keywords: affordable housing, transit-oriented development, priority locations

### **1. Introduction**

Indonesia's Presidential Regulation (Peraturan Presiden Republik Indonesia Nomor 79 Tahun 2019) views Bregasmalang Agglomeration Area (Brebes, Tegal, Slawi, Pemalang) as one of the quick-win priority region within the development of Brebes Industrial Area to increase regional economic growth in Central Java. To be able to accommodate this development, it is necessary to develop integrated infrastructure between regions to achieve optimal results, especially in terms of transportation and housing which has the largest proportion of public expense. The lack of integrated public transportation services will force residents to travel further distances so that the duration and cost of travel will be higher (Loo, Chen, & Chan, 2010). Residents also have the potential to exchange costs between transportation and housing and to get affordable housing, people will travel long distances which in fact will also burden transportation costs (Hamidi, Ewing, & Renne, 2016). This



condition is in line with the expense of Bregasmalang residents which is considered to have a very large proportion.

The expense of transportation and housing costs for Bregasmalang residents is considered to have a very large percentage with values reaching 25.32% and 41.31% each (BPS, 2018). Compared to the Housing and Transportation Affordability Index, these costs are considered to have passed the fair value, particularly 45% which includes 30% allocation of housing costs and 15% of the allocation of transportation costs (Center for Transit-Oriented Development & Center for Neighborhood Technology, 2006). This can affect the low welfare of the community due to limited fulfillment of other consumption that must be reached from 32.37% of the remaining income. Moreover, the imbalance in the proportion of expenses can indirectly have an impact on the poverty level of the district/city.

Therefore, the development of Brebes Industrial Area needs to pay attention to the provision of affordable housing which is integrated with movement nodes to improve community welfare, while at the same time supports Brebes Industrial Area in maximizing regional economic growth. Transit-Oriented Affordable Housing Development (TOAHD) approach as a transit-oriented housing area is expected to address these problems. The provision of road-based mass public transportation that is integrated through movement nodes close to affordable housing locations, is considered to be effective in reducing transportation and housing costs (Renne, Tolford, Hamidi, & Ewing, 2016). Thus, this study aims to determine priority locations for affordable housing with the TOAHD approach, which later can be used by the Government as a base consideration of providing grants to reduce housing and transportation costs for residents in Bregasmalang Agglomeration Area.

## **2. Research Limitations**

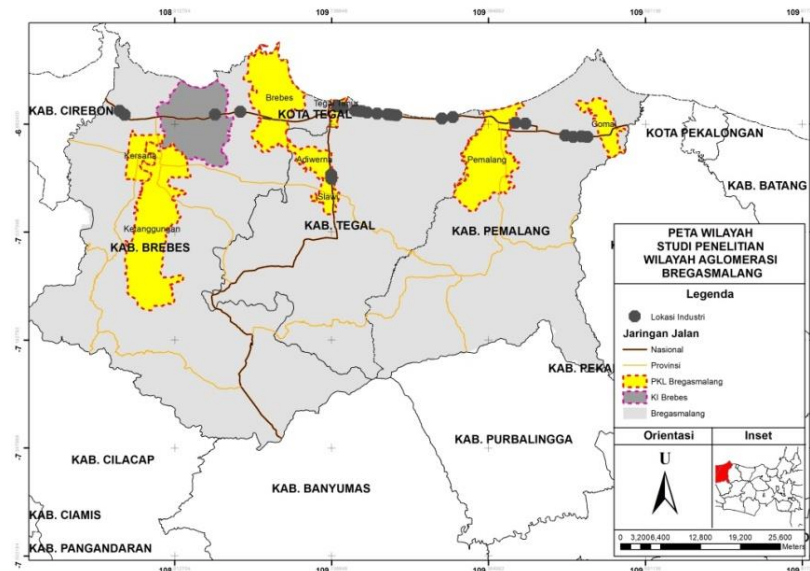
The research locations were conducted in the Bregasmalang Agglomeration Area which includes Brebes Regency, Tegal Regency, Pemalang Regency, and Tegal City with an area of 498,232 km<sup>2</sup>. Specifically, this study reviewed five Local Activity Centers (PKL) in Bregasmalang Agglomeration Area which considered to have accommodated the concentration of community activities based on the related Regency/Urban Land-use Plan. The five Local Activity Centers include Brebes, Ketanggungan - Kersana, East Tegal, Slawi - Adiwerna, Pemalang, and Comal with a total area of 526.97 km<sup>2</sup>.

Based on the limitations, this study uses five TOAHD variables (population density, accessibility, facilities, land prices, and floor area ratio) which are broken down into 12 sub-variables: population density, accessibility to transit nodes, accessibility to the main road, accessibility of crossroads, educational facilities (elementary, middle, and high school) markets and health centers, land prices, land price additions, and floor area ratio (FAR). This study has the following limitations:

Determination of potential locations for affordable housing does not consider property aspects such as land ownership and the property market, because the research relies on the TOAHD approach.

Research has focused on producing priority locations for affordable housing that have just been planned.

The study uses existing variables and ignores housing and economic financing factors due to limited data.



Source: Researcher's Interpretation, 2020

Figure 1. Bregasmalang Agglomeration Area Map

### 3. Literature

Renne et al., (2016) argued that the TOD approach followed by "AH" (Affordable Housing) can minimize transportation costs. Housing that is located close to transit points can improve transit quality and accessibility (Carlton, 2007). This condition will later encourage people to use public transportation, thereby reducing transportation costs. This is considered to be very beneficial for low-income residents, considering their income limitations. Furthermore, this allows them to optimize the allocation of income for other consumptions (Belzer & Autler, 2002).

The determination of potential locations in this study uses the TOAHD approach so that the variables are not much different from the criteria for transit-based area development (TOD). The Center for Transit-Oriented Development & Center for Neighborhood Technology (2006) and Litman (2017) explain that the requirement of affordable housing needs to consider location efficiencies such as density, pedestrian accessibility, availability and quality of transit, also accessibility to public services. Meanwhile, the efficiency of the location has a concept that is almost similar to the development of a transit-oriented area which is based on the range of transportation and services.

In line with this, Isalou, Litman, & Shahmoradi (2014), also stated that efforts to minimize housing and transportation costs require compact land-use factors, mixed land-use, and public transportation services, thus encouraging people to travel non-motorized and subdue motorized travel. ITDP (2017) also explains the criteria for determining the TOD area which is deemed quite in line with the TOAHD concept by examining several variables, such as density, walkable and cycling, connectivity, provision of public transportation (transit), mixing, compacting, and mode switching.

In order to minimize transportation and housing costs, affordable housing locations need to be nearby to the transit points on mixed land with high density. High-density cities will accommodate activities in urban areas in a limited area and encourage concentration of movement demand and rely on public transportation (ITDP, 2017). This needs to be accompanied by good accessibility and connectivity, so that it can support the high movement of the community. Reconsidering the accessibility of transit in the placement of affordable housing will open up opportunities for mode selection of public transport services and reduce the distance traveled by

private vehicles, especially if the meeting needs can be reached by walking (Hamidi et al., 2016 and Center for Transit Oriented Development & Center for Neighborhood Technology , 2006). On the other hand, the completeness of facilities and infrastructure at housing development locations also needs to be considered as an effort to realize efficient urban infrastructure and facilities services. The availability of facilities and infrastructure is one form of diversity that can have a positive impact on increasing walking and cycling distances in planning transit and housing areas (Howell, Currans, Norton, & Clifton, 2018). Thus, this is one of the keys to reduce transportation costs. Furthermore, to reduce housing costs in planning affordable housing locations, other considerations are needed which directly have implications for the cost of housing.

We can't deny that the implementation of TOAHD which provides a new lifestyle has increased the demand for residential developers. The application of TOAHD can trigger a rise in land prices which is influenced by the transit infrastructure provided (Higgins & Kanaroglou, 2016). Therefore, land prices also need to be considered in actualizing affordable housing development. Concerning affordability, Gao, Asami, & Katsumata, (2006) explain that floor area ratio (FAR) can also affect the affordability of housing through land prices and the potential for the provision of floors and housing. The higher the allowed floor area ratio, the more floors that can be built so that it can affect the rental price or the selling price of the dwelling.

Apart from considering spatial quality, land use factors also need to be considered in planning priority locations for affordable housing. Peraturan Menteri PUPR No. 05/PRT/M/ 2007 dan No. 01/PRT/M/2018 states there are several fundamental factors in residential development (flats), one of which is the suitability of land use that must be fulfilled. As for this, it regulates the requirements for the suitability of location, the suitability of existing conditions, land development area, and land rights. If it is related to the construction of affordable housing, it is important to pay attention to it because it has an impact on the development financing process and the alignment of development plans.

#### **4. Methods**

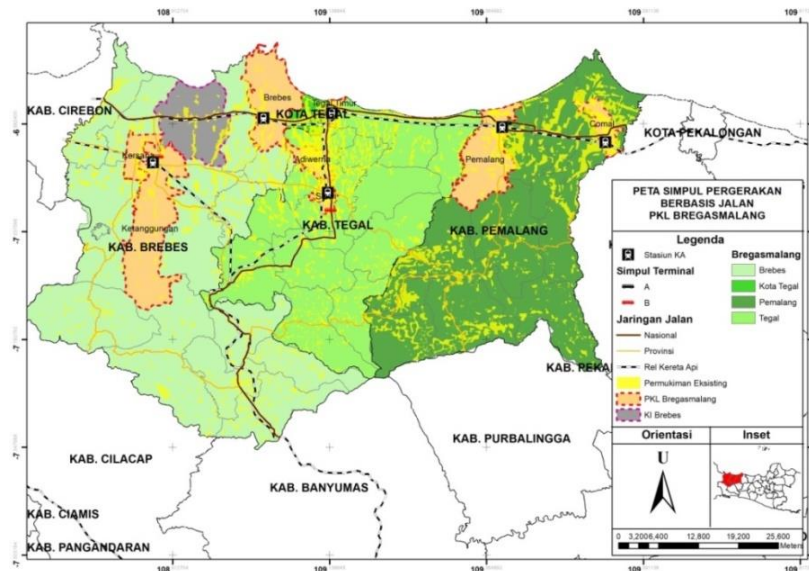
This study practices a quantitative approach that involves data collection techniques through primary data and secondary data. Primary data is obtained from collecting questionnaires to respondents via e-mail or other contacts, while secondary data is obtained from journals, mapping data, and BPS. Meanwhile, respondents who participated in collecting the AHP questionnaire were 10 experts in the field of transportation and residential housing from both government and private parties. The analysis technique used in this research includes descriptive analysis techniques, spatial analysis techniques in the form of scoring based on Geographical Information Systems (GIS), and AHP.

Specifically, the GIS scoring method will use a fishnet analysis tool that converts the analysis location into a cell that has its own spatial value to facilitate the scoring process and map overlay. Meanwhile, AHP is used to generate variable weights that will be used in the weighting process at the analysis stage of determining the potential locations for affordable housing. This research will produce priority locations for affordable housing through four sequential analysis stages, i.e the analysis of determining the potential location of the movement nodes, the analysis of determining the potential location of affordable housing, the analysis of land-use suitability, and the analysis of determining the priority locations for affordable housing.

#### **5. Results and Discussion**

##### **5.1. Determination Analysis of Potential Movement Nodes**

Potential movement nodes (passenger terminals) will support the determination of priority locations for affordable housing with the TOAHD approach as a transit location taking into account the accessibility and potential demand for movement. Potential movement nodes were analyzed based on two variables; transportation infrastructure (passenger terminals, passenger terminal types, road network), and land use.



Source: Researcher's Analysis, 2020

Figure 2. Movement Node Distribution Map in Bregasmalang

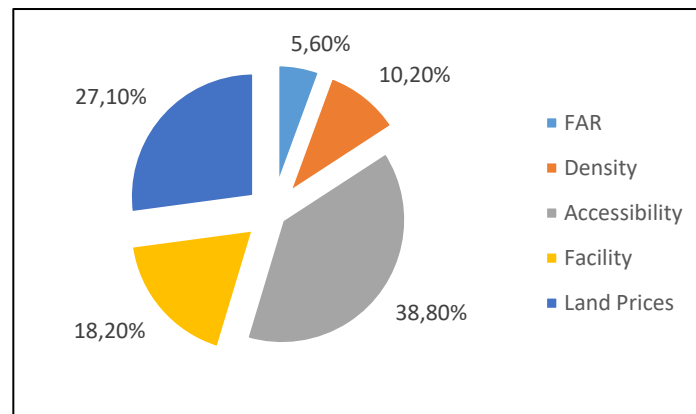
Results of the analysis in five potential movement nodes which were detailed into 1 type B terminal at Brebes Local Activity Centre, 1 type B terminal at Ketanggungan - Kersana Local Activity Centre, 2 type B terminals at Slawi - Adiwerna Local Activity Centre, and 1 type A terminal at Pemalang Local Activity Centre. All terminals are considered to have high accessibility because they have direct access to national and provincial roads. Meanwhile, based on land use, all passenger terminals are located in areas with fairly dense housing land use. This indicates a high potential for movement so that it can become a potential movement node to accommodate community movements in Bregasmalang.

## 5.2. Determination Analysis of Potential Affordable Housing Locations

Determination of potential locations for affordable housing was carried out using 5 variables and 12 sub-variables. All of these variables were then analyzed through a GIS-based spatial scoring analysis in the form of a fishnet which would produce an initial spatial score for each cell in the location. The resulting score will be multiplied by the AHP variable weight to get the final spatial score, which will be classified as potential affordable housing locations.

Based on Table I, it is known that the variables of accessibility and land price have the largest weight, 38.8% and 27.1% which indicate a significant role in determining the location of potential affordable housing. This is considered in line with Litman's (2017) statement, that accessibility plays a major role in providing the choice of alternative transportation modes through road network connectivity and affordability to the closest facility that allows direct travel and decreased use of private vehicles, thereby reducing transportation costs. Hamidi et al., (2016) also affirmed that placing housing close to transit accessibility will also reduce transportation costs through the availability of mode selection for cheaper transportation services. Furthermore, in terms of achieving the affordability of housing costs, it is found that there is a potential increase in land prices around transit locations due to the transportation services provided. Hence, land prices are also important to consider (Higgins & Kanaroglou, 2016). Judging from the probability analysis, the weight of this AHP analysis has a Consistency Ratio value of 0.05 ( $CR < 0.1$ ) which states that a consensus has reached the expert's judgment and

is available to use. Moreover, the weighting process is carried out between the initial spatial score and the AHP weight so that potential locations for affordable housing can be generated.



Source: Researcher's Analysis, 2020

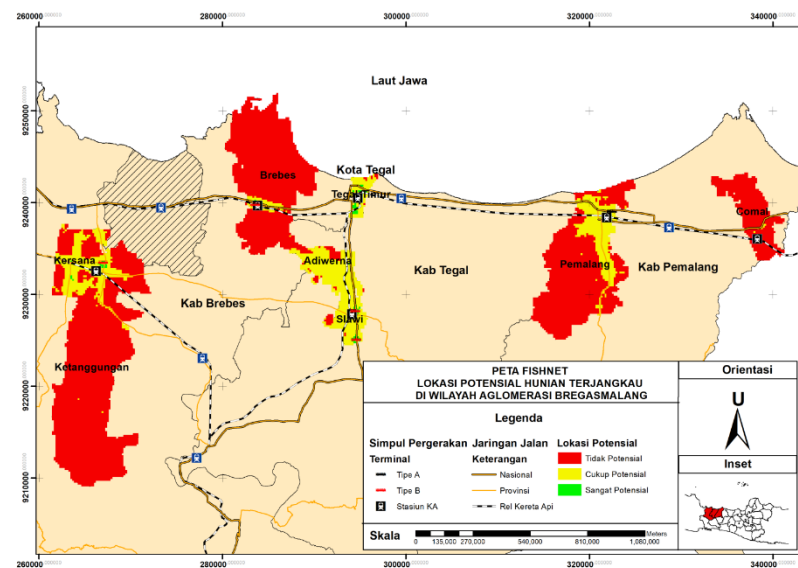
Figure 3. AHP Variable Weight Value and Consistency Ratio

The analysis resulted in 71 very potential locations spread across four street vendors. Based on the analysis, it was found that Slawi - Adiwerna Local Activity Centre had the highest number of potential locations, namely 29 grids, followed by East Tegal with 25 grids, Ketanggungan - Kersana 15 grids, and Brebes 2 grids. Meanwhile, Pemalang and Comal do not have very potential locations for affordable housing developments. This is speculated because Pemalang and Comal Local Activity Centre have low spatial values for the TOAHD variable such as low population density, unavailability of movement nodes (Comal), and low completeness of facilities and infrastructure around the movement nodes.

Table I. Grid of Potential Affordable Housing Areas in Bregasmalang

Regencies/Cities	Local Activity Centres	Number of AH Potential Location Grids			
		Very Potential	Quite Potential	Not Potential	Total Grid
Brebes	Brebes	2	108	2,472	2,582
	Ketanggungan Kersana	15	677	4,113	4,805
Kota Tegal	Tegal Timur	25	176	11	213
Tegal	Slawi	29	910	137	1,076
Pemalang	Pemalang	-	598	2,107	2,705
	Comal	-	6	795	801
Bregasmalang	Total	71	2,472	9,635	12,182

Source: Researcher's Analysis, 2020



Source: Researcher's Analysis, 2020

Figure 4. Distribution Map of Potential Affordable Housing Locations

### 5.3. Land Use Suitability Analysis

Land-use suitability analysis is a process of comparing existing conditions between potential affordable Housing locations with land-use suitability variables. This analysis serves to screen 71 potential locations which have been generated to produce verified potential locations and then ranked to produce affordable housing priority locations.

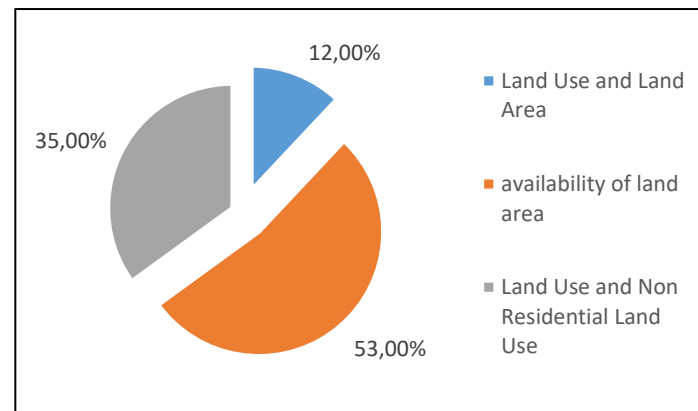
Land-use variable considers the spatial pattern plan in which housing areas are areas suitable for affordable housing development locations. On the other hand, non-residential areas were deemed inappropriate because they were not in line with the development objectives to be carried out. Land use variables are used to consider the potential land-use change that will be carried out. Potential locations that have open land or dry land have the best suitability compared to other land uses. The variable of land availability uses the parameter  $> 5,000 \text{ m}^2$  as a suitable location for affordable housing development, which is the minimum requirement for vertical housing development.

According to the analysis, there are four functions of the area in the variable of land use; housing and settlement areas, local protection areas (river boundaries and green open spaces), wetland agricultural areas, and trade and service areas. Meanwhile, in the existing land use variables, existing land uses have been identified which include housing and residential land uses, open or dry land, riverbanks, industry, green open space, and plantation agriculture. Furthermore, in the variable of land availability, it has been identified that a sufficiently variable value varies between  $950 \text{ m}^2$  -  $36.636 \text{ m}^2$ .

This analysis resulted in 22 verified potential locations spread across 3 Local Activity Centres; Slawi - Adiwarna with 15 verified potential locations, Ketanggungan - Kersana with 4 locations, also East Tegal with 4 and 3 locations. In the process of elimination, it is known that the variable land area availability is the main deciding variable that eliminates 26 out of 49 potential eliminated locations. The large number of locations eliminated in this analysis states that the aspect of land use is important to be considered under the criteria for the Permen PUPR No 01/PRT/M/2018, so that the selection of locations is more implementable. Based on the land use, it is also found that there is a potential for land use change in the eliminated location, especially in wetland agricultural areas to be converted into non-agricultural cultivation areas in the form of affordable housing for



low income residents with lease status. This can be done by taking into account the relevant laws and regulations, such as Ketentuan Umum Peraturan Zonasi (KUPZ) RTRW, ITBX Peraturan Zonasi, and Undang-Undang No. 2 Tahun 2012 tentang Tentang Pengadaan Tanah Bagi Pembangunan Untuk Kepentingan Umum.



Source: Researcher's Analysis, 2020

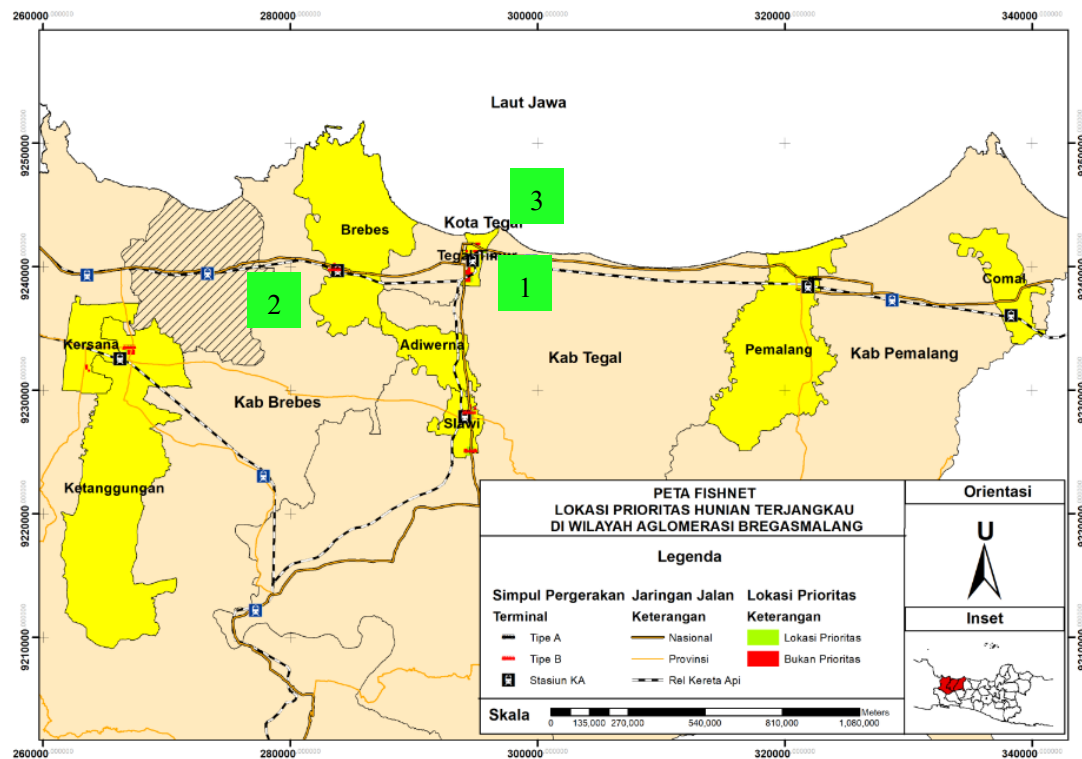
Figure 5. Elimination Factors for Potential Affordable Housing Locations

## 5.2 Determination Analysis of Affordable Housing Priority Locations

Determining priority locations for affordable occupancy is carried out after verified potential locations are generated and then ranked, resulting in affordable housing priority locations. The ranking process for priority locations for affordable housing is carried out in two stages, the first stage using the quantification score of land use suitability analysis and the second stage using the TOAHD spatial score. Quantification score of land use suitability analysis as the first factor is based on the importance of land use aspects in meeting the technical criteria for development. Furthermore, in realizing affordability of housing costs, land use needs to be considered to achieve low land prices through minimizing the potential for land consolidation and acquisition, to minimize development planning costs.

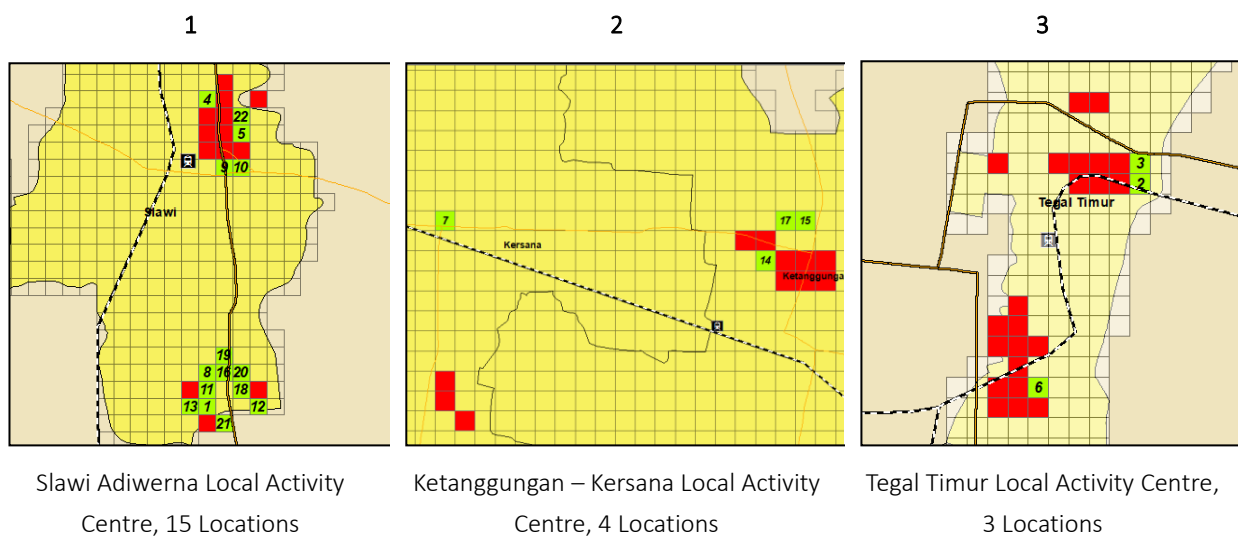
Based on the analysis, 22 priority locations for affordable housing development in Bregasmalang are spread across 3 Local Activity Centres; Slawi-Adiwerna, East Tegal, and Ketanggungan-Kersana . The analysis states that Slawi - Adiwerna Local Activity Centre has the highest number of priority locations, with 15 priority locations scattered in Dukuhsalam, Procot, Kagok, and Slawi Wetan villages, one of which is the priority location located in Dukuhsalam Village, Slawi. Furthermore, Ketanggungan - Kersana has 4 priority locations in the order of 7,14,15 and 17 which are located in Ketanggungan, Cigedog, and Kersana Kelurahan. Meanwhile, Tegal Timur only has 3 priority affordable housing locations with the 2nd, 3rd, and 6th priority, which are located in Panggang and Kejambon Villages.





Source: Researcher's Analysis, 2020

Figure 6. Distribution Map of Affordable Housing Priority Locations



Source: Researcher's Analysis, 2020

Figure 7. Details of the Distribution of Affordable Housing Priority Locations

## 6. Conclusion

Study on Priority Locations for Affordable Housing Development in Bregasmalang Agglomeration Area resulted in 22 priority locations spread over 3 Local Activity Centres, detailed into 15 locations in Slawi - Adiwerna, 4 locations in Ketangungan - Kersana, and 3 locations in East Tegal. Based on the number, it is known that there is a tendency to focus on priority locations for affordable housing in Slawi - Adiwerna, one of which is the priority location located in Dukusalam Village, Slawi District. East Tegal which is in Tegal Regional Activity Centre has the least number of priority locations due to limited land area, although functionally, it is predicted to have the more complete infrastructure than other Local Activity Centres.

According to the analysis, it is also concluded that the determination of priority locations for affordable housing is significantly influenced by the accessibility factor (38.8%) and land price (27.1%) with the magnitude of the influence reaching 65.9% in the stage of determining the potential location for affordable housing. This is considered relevant to the TOAHD approach which results in affordable housing through the development of high-quality transit locations and affordability of housing costs. Meanwhile, it can also be assumed that determining priority location for affordable housing is important to pay attention to land use factors in meeting the requirements for technical development criterias. This is indicated by the fact that 69% of the locations were eliminated in the land-use suitability analysis because they were deemed not under the spatial pattern plan or other land-use factors.

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## The Impact of Social Influence on Online Purchase Behavior of Organic Food

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### Abstract

Online shopping of organic food is something new and currently developing in Indonesia. So, many factors were considered by potential consumers before doing their purchase decision. Therefore, online marketers of organic food need to understand consumer purchase behavior to survive in this industry. Based on UTAUT theory, this study aims to examine the impact of social influence variable on online purchase behavior of organic food in Indonesia. The concept of social influence was broadened into reference group and e-WOM dimension. As many as 11 hypotheses were formulated. Then, online survey was conducted toward 200 respondent using purposive sampling technique. The collected data were analyzed with Structural Equation Modeling (SEM) using LISREL software. The results indicate that social influence has indirect positive impact on online purchase behavior through the mediation of perceived value, perceived trust, attitude, and online purchase intention. On the other hand, perceived risk has no significant effect on online purchase behavior. Several recommendations from social influence perspective are presented to help online marketers of organic food develop their business.

**Keywords:** Online Purchase, Organic Food, SEM, Social Influence, UTAUT

### 1. Introduction

The internet has growth rapidly in the last two decades in Indonesia. Asosiasi Penyelenggara Jasa Internet Indonesia (APJII) stated that 64,80% of Indonesian population has used internet in 2018. With the high level of internet penetration, online trading ecosystem began to develop through various online purchase and selling platform. That's reinforced by the results of a survey from Google and Temasek which states that Indonesia's e-commerce transaction is the highest in Southeast Asia. Currently, Indonesian consumers are very dependent on purchasing products online (Anandan *et al.*, 2018).

Organic food is one of the products that are starting to be traded online. Based on Regulation of the Ministry of Agriculture No. 64/Permentan/Ot.140/5/2013 article 1 paragraph 3 explains that organic food is food from an organic agricultural land which implements management practices aimed at maintaining the ecosystem in achieving sustainable productivity, controlling weeds, pests, and diseases, through several means such as recycling of crop and livestock waste, crop selection and rotation, water management, land management, and planting and use of biological materials. Mayrowani (2012) described that the advantages of organic food include three dimension, namely environmental, economic, and social. From the environmental dimension, organic food production is not limited to eliminating the use of synthetic inputs, but also utilizing natural resources in a sustainable manner, producing healthy food, and saving energy. Then, the economic dimension will be felt if organic food production is able to provide sufficient income for farmers. Meanwhile, the social dimension occurs when food safety awareness is created at both the consumer and producer levels.

For developing country, especially Indonesia, organic food is something new and becomes popular around 2007 (Mayrowani, 2012). The condition of Indonesia's organic food market is in line with the increasing trend of global organic food market, although the growth is slower, only 5% per year (Sari and Setiaboedhi, 2017). It is supported by the increase of organic agricultural land as well as organic producers, the expansion of product marketing (IFOAM, 2019), and the changes of society lifestyle which more concern about health quality (Chrysanthini *et al.*, 2017). However, there are challenges in developing organic food market such as the relatively high price of product and intangible benefit (Sari dan Setiaboedhi, 2017). Online trading is a strategy to overcome these challenges, where products can be reached by a wider market with a lower marketing cost, so the selling price will be more affordable (Sari dan Setiaboedhi, 2017). Then, it can also increase consumer trust when making online purchase decision with better information quality (Jung and Jaenam, 2015).

Organic Trade Association (2019) stated that online shopping system of organic food in Indonesia is still on primary stage because it is relatively new and still developing. It is restricted by multiple factors, such as lack of logistics and security issues, resulting to an uncertainty and wait-and-see attitude among many consumers. Many online marketers of organic food are still unable to fully grasp the factors that influence online purchase behavior (OPB) of organic food, leading to absence of appropriate and effective marketing tools and marketing method (Zhao *et al.*, 2017). Therefore, there is an urgent need to investigate OPB of organic food. One of many theories to analyze behavior is UTAUT (Unified Theory of Acceptance and Use of Technology). UTAUT is a combined model, from the previous eight theories, formulated by Venkatesh (2003) to explain user intention in using information systems which then it affects user behavior. UTAUT model consists of four main variables, namely 1) Performance Expectancy, 2) Effort Expectancy, 3) Social Influence, and 4) Facilitating Condition. This study aims to examine the impact of social influence (SI) on OPB of organic food in Indonesia. This is based on the fact that there are still few researches that focus on studying SI perspective towards OPB of organic food. Therefore, this study is expected to provide an overview about that matter, especially for online marketers of organic food in Indonesia.

## 2. Literature Review and Hypotheses Development

Venkatesh *et al.* (2003) defined SI as the degree to which an individual perceives that important others believe he or she should use the new system. So, the greater influence from people around individual whose opinion is considered important, namely reference group (RG), leading to the greater individual intention to use a similar system. Venkatesh and Davis (2000) stated that SI can affect individual behavior through three mechanisms i.e. compliance, internalization, and identification. First, compliance mechanism refers to individual behavior caused by the influence of social pressure to gain reward or avoid punishment. The influence of this mechanism is normative in a mandatory context, which means that individual behave because of the rules or orders from the authorities. Second, internalization mechanism refers to individual behavior due to recommendation from RG to perform the behavior, then the individual find the suitability of the behavior with the values he or she believes. Third, identification mechanism refers to individual behavior that is based on the desire to maintain or improve social status in the referred social system. The influence of the last two mechanisms can occur in mandatory or voluntary context.

If we focused in the context of consumer behavior, Argo (2019) divided SI into three influence types i.e. utilitarian, informational, and value-expressive. First, utilitarian influence occurs through compliance mechanism when consumers try to adjust against RG to gain reward and avoid punishment. A reward can satisfy feelings of being accepted by RG, due to a fundamental need to belong. Then, the punishment can be avoided with a willingness to comply with salient social norms. Second, informational influence occurs through internalization mechanism when consumers accept information from RGs to serve as evidence about reality. The information can enhance consumer knowledge and ability to understand a certain aspect. Third, value-expressive influence occurs through identification mechanism when consumers adopt behaviors or beliefs that

enhance or support their self-concept. Generally, consumers have a pervasive desire to hold a positive self-view. Thus, they seek to enhance, protect, and repair their self-concept as needed.

This study broadens the concept of SI, which was originally limited to RG, by adding a virtual dimension called electronic word of mouth (e-WOM) (Zhao *et al.*, 2017). This is based on the fact that information is easier to access today, so that consumers in making purchase decisions rarely only involve their personal judgment. Consumers decision usually very influenced by the behavior pattern of their RGs (family member, friends, colleagues, celebrities/influencers) and/or e-WOM (product review, online recommendation, etc.). Recommendations from these two play an important role in determining consumers purchase decisions, mainly when purchasing an expensive or newly marketed product or service (Hsu *et al.*, 2013), like organic food. The following will describe the two SI dimensions in this study.

First, RG is defined as a person or group who influences the decisions of others (Gupta and Ogden, 2009). The influence can be positive or negative. RG consist of two types i.e. direct RG and indirect RG. Direct RG is people around consumers who interact directly with consumers such as family, friend, and colleague. Meanwhile, indirect RG is people who do not interact directly with consumers such as celebrity or influencer (Schiffman and Kanuk, 2007). Second, e-WOM is defines as a positive or negative statement from potential consumers, actual consumers, or existing consumers about a product or company that is accessible to various society or institution through internet (Jalilvand *et al.*, 2011). The differences between RG and e-WOM lies in the information sources. RG's information comes from familiar people such as family members or friends, whereas e-WOM's information comes from unknown former purchaser (Ratchford *et al.*, 2001). This study is limited to explain positive influence of KR and e-WOM toward OPB of organic food. Zhao *et al.* (2017) stated that SI positive influence can build trust and change consumers attitude when purchasing online.

Besides broadening the SI concept, this study also broadened the main model of UTAUT where several variables were added to research model based on previous study, by paying attention to their suitability with the object under study i.e. OPB of organic food. The main variables of UTAUT model in this study are SI, online purchase intention (OPI), and OPB. UTAUT model proves that SI has a positive impact to OPI, then OPI has positive impact to OPB. The broadened model aims to obtain better analysis results as shown by William *et al.* (2015) and Dwivedi *et al.* (2019). The explanation of additional variables and its relationship to UTAUT variables will be discussed below.

### 1.1 The relationship between SI and PV, PR, PT

The first additional variable is perceived value (PV). PV is defined as a consumer's perception of the benefit that will be obtained for a given sacrifice. There are three dimensions of value i.e. emotional value, money value, and performance value (Fernandez and Bonillo, 2007). PV was added with consideration that before making a purchase decision, consumers will emphasize that the benefit received from the product are the most important component in determining the value of the product (Kusdyah, 2012). Moreover, Kim *et al.* (2007) initiated Value Adoption Model (VAM) theory that shows PV as important determinant of technology adoption where users (at once as consumers) of technology managing to maximize the value obtained. Thus, consumers will purchase organic food online if the value obtained is perceived as beneficial.

The influence of SI, especially informational and value-expressive influence, can impact consumers PV (Zhao *et al.*, 2017). Consumers usually receive information and recommendation from RG and e-WOM purchasing experience. It can determine consumer's evaluation of value. Research conducted by Zhao *et al.* (2017) pointed out that positive review from RG and e-WOM have positive impact on PV. That means, the more positive reviews from RG and e-WOM to purchase organic food online, the higher the PV consumer will be. Thus, the following hypotheses are proposed.

*H1a : RG's positive evaluation has a significant positive impact on consumer's PV of purchasing organic food online*

*H2a : e-WOM's positive evaluation has a significant positive impact on consumer's PV of purchasing organic food online*



Purchasing organic food online is associated with risk. Jing and Zhou (2005) pointed out that when purchasing online, consumers will assess not only PV but also perceived risk (PR) and losses. Although online purchase is much more convenient than the conventional purchase, but at the same time online purchase cannot immediately provide consumers relevant product or service experiences, which creates various risk that hinder consumer purchasing decisions. Besides that, organic food has characteristics such as perishable, short shelf life, bulky, and non-uniform, leading to the greater product risk (Zhao *et al.*, 2017). So, it is important to consider consumer's PR in determining OPB of organic food. Kim *et al.* (2008) defined PR as a consumer's belief about the potential uncertain negative outcomes from the online transaction. Three types of PR are said to be predominant on online purchase i.e. product risk, financial risk, information and security risk. Usually in overcoming risk, consumer will seek information from trusted source or product expert to reduce potential risk. Research conducted by Bearden *et al.* (1989) and Zhao *et al.* (2017) pointed out that positive influence from RG and e-WOM have negative impact on PR. That means, the more positive reviews from KR and e-WOM to purchase organic food online will reduce consumer's PR. Thus, the following hypotheses are proposed.

*H1b : RG's positive evaluation has a significant negative impact on consumer's PR of purchasing organic food online*

*H2b : e-WOM's positive evaluation has a significant negative impact on consumer's PR of purchasing organic food online*

Consumer's PR reduction generally in line with the increase of consumer's perceived trust (PT). Kim *et al.* (2008) defined PT as a consumer's subjective belief that the selling party or entity will fulfill its transactional obligations as the consumer understand them. Consumer's PT play an essential role in online purchase. This is because of some characteristics of online purchase such as they are blind, borderless, can occur at any time, and are non-instantaneous (payment may occur before the product is received), can cause consumer to be concerned that the seller won't adhere to its transactional obligations. PT can be divided into four dimensions i.e. trust of information, pledge and commitment, product, and delivery (Kim *et al.*, 2008; Sari dan Setiaboedhi, 2017). Research conducted by Pandey and Khare (2017) pointed out that positive influence from KR and e-WOM have positive impact to PT. Thus, the following hypotheses are proposed.

*H1c : RG's positive evaluation has a significant positive impact on consumer's PT of purchasing organic food online*

*H2c : e-WOM's positive evaluation has a significant positive impact on consumer's PT of purchasing organic food online*

## 1.2 The relationship between PV, PR, PT and ATT

This study also includes attitude (ATT) as additional variable. ATT is assumed to precede OPI and OPB as indicated by Theory of Research Action (TRA), Theory of Planned Behavior (TPB), and Technology Acceptance Model (TAM). Besides that, Dwivedi *et al.* (2019) conducted research about UTAUT model extension by adding ATT variable. The results show that there is positive impact between SI to ATT, ATT to OPI, and OPI to OPB. That means, ATT has a role to explain OPB of organic food. Ajzen (2005) defined ATT as an evaluative trait to respond pro or contrary against something. ATT responses can consist of three categories i.e. cognitive (belief), affective (emotion), and conative (tendency to behave). Kotler *et al.* (2013) stated that ATT usually develops for a long time so it is difficult to change (consistent). Therefore, the higher consumer's ATT towards organic food and online purchase, will lead to a higher potential of OPB.

The research conducted by Khoi *et al.* (2018) stated that PV has a positive impact on ATT. That means that the higher consumer's PV, the higher consumer's ATT is formed. Consumer evaluation that online purchase of organic food is fun, financially profitable, and improves performance in shopping will certainly lead to a positive ATT towards this behavior. Moreover, ATT is also influenced by PR. Rahmawati *et al.* (2018) stated that PR has a negative impact on consumer's ATT. Consumer evaluation that online purchase of organic food carries a high product risk, financial risk, and information and security risk will certainly reduce consumer's positive ATT. Consumer will dislike or avoid purchasing organic food online. Therefore, trust is needed to reduce consumer



hesitant toward this uncertainty (Kim *et al.*, 2008). Hsu *et al.* (2013) in their study pointed out that PT has a positive impact to ATT, which means the higher PT leads to the higher consumer's ATT. Consumer generally trust a seller with good reputation because they can provide valid and reliable information. Thus, the following hypotheses are proposed.

*H3 : PV has a significant positive impact on consumer's ATT of purchasing organic food online*

*H4 : PR has a significant negative impact on consumer's ATT of purchasing organic food online*

*H5 : PT has a significant positive impact on consumer's ATT of purchasing organic food online*

### 1.3 The relationship between ATT, OPI, and OPB

As previously discussed, ATT influences consumer behavior through its impact on OPI. OPI is defined as an evaluation of consumer's desire to perform behavior (Ajzen, 2005). Research by Hsu *et al.* (2013) pointed out that positive ATT is the most important variable to determine consumer's OPI. Moreover, Kim *et al.* (2008) stated that OPI is the strongest predictor related to a person's actual behavior. Thus, the higher ATT leads to the higher OPI. Then, the higher OPI can increase possibility of OPB will be performed. Based on this, the following hypotheses are proposed.

*H6 : ATT has a significant positive impact on consumer's OPI of organic food*

*H7 : OPI has a significant positive impact on consumer's OPB of organic food*

Based on hypotheses development above, Figure 1 illustrates the overall research model and the associated hypotheses.

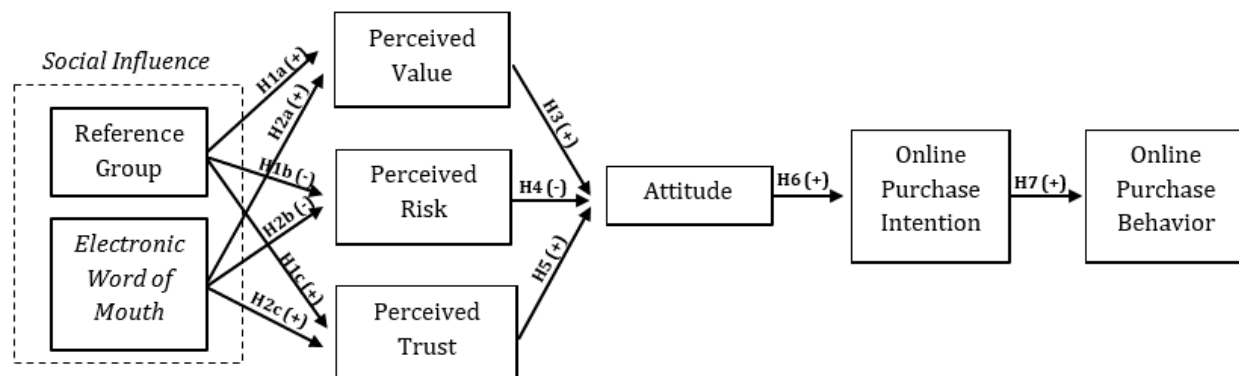


Figure 1. Research Model and Hypotheses

### 3. Methodology

The main methodology used in this study is descriptive with descriptive and analytical survey technique (Morissan, 2012). This study generated its data from online questionnaire survey, using google form, conducted in February – May 2020 in Indonesia. The location was chosen purposively with consideration about the needed of understanding online purchase behavior of organic food in Indonesia, particularly from social influence perspective. The online questionnaire distributed through social media (i.e. WhatsApp, Instagram, and Facebook) and marketplace Shopee.id using “chat” features. Respondent was chosen by purposive sampling, with the following criteria: a person >17 years old, residing in Indonesia, and has experience of purchasing organic food online in the last one month. Organic food purchased can be in the form of fresh ingredients (e.g. vegetables, fruits, meat), grains (e.g. rice, soybeans), processed ingredients and spices (e.g. tempeh, tofu, salt, oil, ketchup), and ready-to-consume food (e.g. salad, herbal medicines) with organic marketing label. The products can be purchased from e-commerce (e.g. clubsehat.com, purefoods.co.id), social media (e.g. WhatsApp, Instagram), marketplace (e.g. lemonilo.com, shopee.id, Tokopedia.com), and agricultural product

marketing application (e.g. TaniHub, Sayurbox, Kecipir). Respondent who meet the criteria should fill out the online questionnaire. The questionnaire mainly containing several open questions related to consumer profile and opinion about their purchase, and closed questions related to consumer response to several item statements about research latent variables (RG, e-WOM, PV, PR, PT, ATT, OPI, OPB). The closed questions are measured by 5 categories Likert Scale, which shows a very disagree to strongly agree responses.

After that, the data analysis was conducted by Structural Equation Modeling (SEM) with Maximum Likelihood (ML) estimation. The analysis, which was carried out with the help of LISREL 8.80 and SPSS 21 software. Hair *et al.* (2014) stated that the recommended sample size for SEM analysis with ML estimation between 100 – 400 samples. From this online survey, a total of 200 questionnaire were received. After performed data transformation and outlier test, it was known that 8 questionnaires were multivariate outlier, so they were excluded from analysis. Then, the remaining 192 questionnaires performed data normality test. Covariance-based SEM analysis with ML estimation requires data to be multivariate normally distributed, so the analysis results are not biased (Hair *et al.*, 2014). The data is said to be normally distributed if it has p-value of skewness and kurtosis >0,50 (Ghozali and Fuad, 2014). However, the result of normality test in this study showed that the data were not normally distributed as indicated by p-value of skewness and kurtosis <0,50. Ghozali and Fuad (2014) stated that non-normality data in SEM method are often found and there are several ways to overcome them. One of them is by including Asymptotic Covariance Matrix (ACM) estimation into analysis. ML estimation with ACM can correct biases arising from non-normality, especially in standard error and chi-square values. This estimation is called Robust Maximum Likelihood (RML). After that, the measurement model test was conducted. In this test, all items used in this study had to be valid and reliable. Subsequently, the structural model test was performed by comparing the goodness of fit index value of the research model with the reference value. After the model is considered as fit, the hypotheses can be tested.

#### 4. Results and Discussion

Responses of open questions from online questionnaire survey provide information about respondent's demographic characteristics. Based on data, it is known that majority of respondents are women (90,5%). Most respondents are in the age range between 26-35 years old (58,5%) then followed by 17-25 years old (25,5%), which indicates that the respondents are dominated by millennial generation. Moreover, the majority of respondents reside in Java island (85%) such as DKI Jakarta, West Java, East Java, Banten, Central Java, and Yogyakarta. While the rest (15%) reside outside Java island, with the most respondent coming from North Sumatra. The latest education level is dominated by undergraduates (64,5%). Then, the occupations that mostly done by respondents were housewives (34%) and private employees (27,5%). Most of respondent are married (69,5%) with family member as many as 3-5 people (64%). Then, related to family income it is known that most of respondents is in the middle to upper level economic condition, i.e. IDR2.000.000-IDR4.999.999 (40%), IDR5.000.000-IDR9.999.999 (30,5%), and above IDR10.000.000 (28%).

Besides that, we also collect information about respondent decision making process when purchase organic food online. The results show that the majority of respondents consume organic food because they have knowledge about the benefits of organic food, such us for health. Then, most of respondents chose to buy organic food online because it is easier and faster. The frequency of purchases is  $\leq 4$  times per month with spending around IDR100.000-IDR250.000 per purchase. Most of respondents have 1-2 years online purchasing experience of organic food. Moreover, the types of organic food that are often to purchased are grains, processed ingredients, and fresh ingredients, with marketplace as online marketing media that often used. Priorities that respondents consider when purchasing online are product quality, product price, seller location, and promotion, respectively. Moreover, consumer also consider about brand trust, testimonials, seller credibility, and so on. Subsequently, several tests were performed as follows.

#### 4.1 Measurement Model Test

Measurement model test was performed through validity and reliability test of all item in research model. First, validity test aims to determine the accuracy of items in measuring latent variables. Item validity can be determined through Confirmatory Factor Analysis (CFA). Item was considered as valid if the value of Standardized Loading Factor value (SLF) and Average Variance Extracted reached  $\geq 0,50$ . Meanwhile, reliability test aims to determine the consistency of items in measuring latent variables. Item reliability can be determined through Cronbach Alpha test. Item was considered as reliable if the value of CA reached  $\geq 0,70$  (Ghozali and Fuad, 2014). The value of SLF, AVE, and CA are presented in Table I.

Table I. Item Validity and Reliability Test

Variable	Indicator	Item	SLF	AVE	CA
Reference Group (RG)	Family	RG1	0,70	0,57	0,86
	Friend	RG3	0,87		
	Colleague	RG5	0,86		
	Celebrity/Influencer	RG7	0,53		
Electronic Word of Mouth (e-WOM)	Online Review	EWOM1	0,57	0,62	0,85
		EWOM2	0,87		
		EWOM3	0,84		
		EWOM4	0,83		
Perceived Value (PV)	Performance Value	PV4	0,54	0,51	0,78
		PV5	0,50		
	Emotional Value	PV8	0,88		
		PV9	0,86		
Perceived Risk (PR)	Product Risk	PR1	0,54	0,52	0,87
		PR2	0,56		
	Financial Risk	PR7	0,61		
	Information and Security Risk	PR8	0,91		
		PR9	0,89		
		PR10	0,72		
Perceived Trust (PT)	Information	PT1	0,63	0,52	0,88
		PT2	0,71		

	Pledge and Commitment	PT3	0,77	0,55	0,79
		PT5	0,79		
		PT7	0,81		
		PT8	0,70		
	Delivery	PT10	0,60		
Attitude (ATT)	Cognitive	ATT1	0,66	0,55	0,79
	Affective	ATT4	0,76		
		ATT5	0,80		
Online Purchase Intention (OPI)	Intention to behave	OPI1	0,83	0,50	0,75
		OPI2	0,50		
		OPI3	0,73		
Online Purchase Behavior (OPB)	Purchase Decision	OPB1	0,88	0,72	0,89
		OPB2	0,78		
		OPB3	0,89		

Validity test in this study was conducted through several iterations which invalid items were excluded from the analysis for each iteration. Iteration is terminated when all items are considered as valid, that is in third iteration. Based on Table 1, it is known that all items have met the standard values of SLF, AVE, and CA, therefore the items are declared as valid and reliable. SLF value ranged between 0,50 - 0,91; AVE ranged between 0,50 - 0,72; and CA ranged between 0,75 - 0,89.

#### 4.2. Structural Model Test

Structural model test aims to assess the feasibility of research model. This test was carried out by comparing the value of goodness of fit (GOFI) index of the specified model with standard value. There are three types of GOFI i.e. absolute fit indices, incremental fit indices, and parsimony fit indices. Each GOFI type has many indexes to measure model feasibility. However, Hair *et al.* (2014) suggest that the use of 4-5 GOFI indexes is sufficient, but the three GOFI types should be represented. This study will use GOFI index such as Satorra-Bentler (SB) Chi-Square, RMSEA, GFI, AGFI, NFI, CFI, IFI, RFI, AIC, CAIC, ECVI, and PGFI (Ghozali and Fuad, 2014). The values of GOFI indexes from specified model are presented in Table 2.

Table II. Goodness of Fit (GOFI) Test

Types	Index	Standard Value	Results	Evaluation
Absolute Fit	SB Chi-Square	Expected small	847,13 (df=513)	
	Probability	$\geq 0,05$	0,00	Poor fit
	RMSEA	$\leq 0,08$	0,058	Good fit
	P RMSEA	$\leq 0,05$	0,026	Good fit
	GFI	$\geq 0,90$	0,78	Marginal fit
Incremental Fit	AGFI	$\geq 0,90$	0,74	Marginal fit
	NFI		0,96	Good fit
	CFI		0,96	Good fit
	IFI		0,96	Good fit
	RFI		0,91	Good fit
Parsimony Fit	AIC	Model < Saturated < Independence	1011,13<1190,00<10098,78	Good fit
	CAIC		1360,24<3723,21<10243,53	Good fit
	ECVI		5,29<6,23<52,87	Good fit
	PGFI	$> 0,60$	0,67	Good fit

Based on Table II, it is known that only SB Chi-Square has poor fit criteria. This is because the probability of chi-square is not reached the standard. Ghazali and Fuad (2014) stated that getting chi-square and its probability value that meets the standard will be very difficult, especially if the assumption of normality is not met and the sample size is small. Therefore, it is suggested to use other GOFI indexes as a consideration of model feasibility. The value of RMSEA, p RMSEA, NFI, CFI, IFI, RFI, AIC, CAIC, ECVI, and PGFI is 0,058; 0,026; 0,96; 0,96; 0,96; 0,91; 1011,13; 1360,24; 5,29; and 0,67, respectively, which its value was reached its standard so categorized as good fit. Thus, this research model can be categorized as feasible (fit) because there are more than 5 indexes with good fit criteria and they represent the three types of GOFI. After that, the fit model can be performed hypotheses testing.

#### 4.3. Hypotheses Test

Ghozali and Fuad (2014) stated that there are three things that must be considered when testing the hypotheses: 1) the line of relationship and its regression coefficient value, 2) the significance of estimated parameters, and 3) the coefficient of determination value ( $R^2$ ). This study tested 11 hypotheses to show impact of the observed variables on OPB of organic food. Hypotheses is accepted if estimated parameter has t-values greater than t-table, which is t-table value is adjusted to satisfactory level of significance. The 1% significance level has a t-table of 2,576, while the 5% significance level has a t-table of 1,960. This research hypotheses test and its discussion is presented as follows.

Table III. Hypotheses Test

Hypotheses	Relationship	Coefficient Regression	t-Values	R <sup>2</sup>	Evaluation
H1a	PV ← RG	0,21	2,42*	0,24	Supported
H2a	PV ← e-WOM	0,42	3,71**		Supported
H1b	PR ← RG	0,08	0,80ns	0,0062	Not Supported
H2b	PR ← e-WOM	-0,03	-0,36ns		Not Supported
H1c	PT ← RG	0,07	0,73ns	0,16	Not Supported
H2c	PT ← e-WOM	0,39	4,00**		Supported
H3	ATT ← PV	0,55	5,57**	0,58	Supported
H4	ATT ← PR	-0,11	-1,61ns		Not Supported
H5	ATT ← PT	0,84	4,72**		Supported
H6	OPI ← ATT	0,88	8,03**	0,77	Supported
H7	OPB ← OPI	0,90	11,26**	0,80	Supported

Note:

\*\* : significant at the 1% level of significance      ns : not significant

\* : significant at the 5% level of significance

First, *RG and e-WOM significantly has a positive impact on PV*, thus, supported H1a and H2a. These results are in accordance with previous studies by Zhao *et al.* (2017) and Lim (2015) who show the positive impact of KR and e-WOM on PV. This means that the more positive reviews from KR and e-WOM in online purchase of organic food, the higher PV respondent will be. Compared to RG, e-WOM has a greater coefficient regression value, which indicates that e-WOM has a greater contribution on respondent's PV. Meanwhile, the R<sup>2</sup> value shows that RG and e-WOM influenced PV simultaneously by 24%, while the rest is influenced by other variables outside research model.

PV in this study includes the dimensions of performance values and emotional values. From performance value dimension, positive reviews of RG and e-WOM have positive impact on respondent's assessment about shopping productivity obtained when choosing to purchase organic food online. The convenient (e.g. ease, useful, saving time) can certainly increase consumer's shopping productivity, especially in today's digital era. Meanwhile, from emotional value dimension, it means that positive review of RG and e-WOM have a positive impact in respondent's assessment related to a pleasant shopping experience when purchase organic food online. Recommendations from KR and e-WOM become consumer's references and can gain respondent's confidence in purchasing organic food online.

Second, *RG and e-WOM have no impact on PR*, so H1b and H2b are not supported. This is indicated by not significant t-values at the 1% and 5% significance levels. The R<sup>2</sup> value of 0,0062% indicates that KR and e-WOM can explain PR only for 0,62%, while the rest is explained by other variables outside the research model. The results of H1b and H2b contradict previous studies by Bearden *et al.* (1989) which showed the negative impact of RG to PR, also studies by Zhao *et al.* (2017), Lin and Wang (2015), and Indiani *et al.* (2015) which showed the negative impact of e-WOM to PR. However, these results are consistent with study by Zhao *et al.* (2017) who showed that RG did not impact PR, and Hsu *et al.* (2018) who showed that e-WOM did not impact PR. This means, positive reviews from RG and e-WOM cannot reduce consumer PR. This can be due to characteristics of respondents in this study who experienced on online purchase of organic food, so recommendation or review from RG and e-WOM do not affect PR. This is consistent with study by Venkatesh and Davis (2000) where the

influence of SI, especially utilitarian and informational type, will decrease (until do not affect) with the increasing of experience. This is because respondent becomes familiar with the behavior being carried out.

PR in this study includes the dimensions of product risk, financial risk, and information and security risks. From product risk and financial risk dimensions, positive reviews from KR and e-WOM don't impact respondent's assessment toward product and financial risk they will experience when choosing to purchase organic food online. Based on the respondent answer on open survey question, it is known that respondents are aware that purchasing organic food online has greater product and financial risk than conventional ones. Yet, respondent decided to keep making purchases because they felt familiar and trust with product and financial guarantee provided by online marketers. Furthermore, from information and security dimension, it shows that positive review from RG and e-WOM do not impact respondent's assessment toward risk that information and security of personal data can be misused if they choose to purchase organic food online. This is also supported with low society awareness towards cyber threats and personal data security in Indonesia (Kominfo, 2017).

Third, *RG has no impact on PT*, so H1c is not supported. However, *e-WOM has a positive impact on PT*, so H2c is supported. Then, the  $R^2$  value of 0,16 indicated that RG and e-WOM simultaneously affect PT by 16%, while the rest is influenced by other variables outside the research model. The results of H1c contradict with previous study by Pandey and Khare (2017) where RG has a positive impact on PT. However, H1c is consistent with previous study by Chaouali *et al.* (2016) which showed that RG has no effect on PT. Then, H2c is consistent with previous studies by Lee *et al.* (2011) who stated that e-WOM has a positive impact on PT. This means that the greater positive review from e-WOM, the greater respondent's PT will be. The rejection of H1c can be caused by positive review from RG will lead to increase on respondent's PV, but not PR or PT. Respondent PT in this study was built based on the influence of e-WOM. Various product reviews and recommendations create consumer-created-information. Lee *et al.* (2011) explain that information from e-WOM through PT has a greater impact on consumer purchasing decision than information provided by seller in the form of advertisements. These results are also consistent with respondent's answer toward open survey question that information from internet is the most frequently encountered and most influences respondent's purchasing decisions.

PT in this study includes the dimensions of information, pledge and commitment, product, and delivery. From information and product dimensions, that means positive review from e-WOM can impact respondent's PT related to credibility of information provided by seller, especially information about product. The existence of product review and product rating features on several online marketing media of organic food can shape respondent's trust with the truth of product information provided by seller from former product purchaser. Then, from pledge and commitment dimension, the influence of e-WOM can assist potential consumer in building PT based on information related to implementation of various policies offered by online marketers. Such as policies regarding to discount, delivery time, product warranty, and so on. Then, from delivery dimension, positive review from e-WOM has an impact on increasing respondent's trust that the delivery of product is safe. This is because the condition of logistic (shipping) in Indonesia recently developed rapidly. Logistic options are more diverse with shipping insurance that ensures that the products shipped remain safe until they are received.

Fourth, *PV and PT have a positive impact on ATT*, thus supported H3 and H5. While, *PR has no impact on ATT*, so rejected H4. This means, the greater PV and PT will lead the greater respondent's ATT. Yet, PR has no influence in the formation of ATT. The  $R^2$  value of 0,58 indicates that PV, PR, and PT can explain ATT by 58%, while the rest is explained by other variables outside the research model. The result of H3 is consistent with previous studies by Chen *et al.* (2012) which stated that PV has a positive impact on ATT. Then, H5 is in accordance with previous studies by Hsu *et al.* (2013) which stated that PT has a positive impact on ATT. However, H4 is in contrast to previous study by Rahmawati *et al.* (2018), but consistent with previous study by Ventre and Kolbe (2020) which states that PR has no impact in ATT. The rejection of H4 is in accordance with previous explanation about respondent characteristic and the development of online shopping condition in Indonesia that more reliable in dealing various risk when purchasing online.



ATT in this study includes the dimensions of belief (cognitive) and emotion (affective). From cognitive dimension, that means respondent perceived that online buying of organic food can increase shopping productivity, fun, provide credible information, all pledges and commitments are well implemented, and safe delivery guarantee will certainly lead to positive attitude toward OPB of organic food. Meanwhile, from emotional dimension, that means PV and PT can influence respondent feelings of liking or positive emotion. This is indicated by the long experience and the frequent spending of organic food online, which indicates that respondents have a preference for doing the same thing for a long time.

Fifth, *ATT has a positive impact on OPI*, thus supported H6. This is in accordance with previous research by Hsu *et al.* (2013). Then, *OPI has a positive impact on OPB*, which supported H7. This is consistent with previous studies by Kim *et al.* (2008), Jung and Jaenam (2015), and Lim *et al.* (2016). The  $R^2$  values of OPI and OPB are 0,77 and 0,80, respectively. This indicates that ATT can explain OPI by 70% and OPI can explain OPB by 80%, while the rest is explained by other variables outside the model. A positive consciousness and emotional ATT towards purchasing organic food online can lead to intention to do the same. Based on respondent's answer towards open survey question, it is known that the majority of respondents have a positive ATT toward OPB of organic food. This is because there is a sense of interest when purchasing online such as practicality, convenience, ease of access information, various product choices, being able to compare various product attributes (e.g. quality, price, seller location, promotion, seller credibility, etc.), fast and safe delivery, and so on. This means, the higher positive ATT toward OPB of organic food formed, the higher respondent's OPI will be. People with the higher OPIs are more likely to make actual purchases than those with no intention.

#### 4.4. Implications and Limitations

Based on information from the fifth points discussed above, it can be seen that influence of SI, through KR or e-WOM, indirectly has an impact on the formation of OPB of organic food. The impact is mediated by the influence of PV, PR, PT, ATT, and OPI. The results of this study provide several contributions both from theoretical and practical perspective.

From theoretical perspective, this study provides more detailed explanation related to the impact of SI on OPB of organic food, where SI concept was broadened then several variables with consideration of their suitability with OPB were added to the research model. There are several interesting findings in this research. First, SI has no effect on PR and the ATT. Second, PT is not influenced by KR, but e-WOM. These two things are contrary with previous studies. Thus, we can show that differences in environmental and society conditions are important to understand when studying online consumer behavior (Zhao *et al.*, 2017).

Then, from practical perspective, this study can provide an overview for online marketers of organic food that SI is one of the important factors impact consumer's OPB. Based on research results, here are some recommendations that online marketers of organic food can consider when using SI to influence consumer online purchase decision.

First, online marketers should pay attention to the role of RG. Positive review from RG played an important role in the development of OPB of organic food, especially through increasing PV. Some of the ways that online marketers should do are: 1) retain existing consumers and encourage them to recommend organic food to people around them like family, friends, or colleagues. For example, online marketers providing a referral code that can be used to recommend products or seller. If other people use the referral code, consumers will get rewards from online marketers, 2) use the role of celebrity/influencer to spread information related to the benefits, convenience, or pleasure that will be obtained when purchasing organic food online.

Second, online marketers should pay attention to the role of e-WOM. Positive review from e-WOM are the most influential dimension in the development of OPB of organic food. This is in accordance with current condition of science and technology where consumers will evaluate e-WOM first before deciding to buy. Therefore, there are several ways that online marketers of organic food should do: 1) use various online news portal, websites, or

social media with high popularity and credibility to release information related to product or online marketing media, 2) use product review and rating features in online marketing media. Online marketers can encourage former consumer to give review and rating from their shopping experience. Positive reviews and high ratings can certainly attract potential consumer attention to make purchases.

Third, online marketers should increase consumer's PV and PT. The purchase decision-making process is basically a process for evaluating the value of products and online marketers. Therefore, it is important to understand the different meaning of "value" to each consumer. Consumer survey can be conducted to find out consumer opinions related to things that must be improved for better shopping performance. Moreover, online marketers can also increase interaction with existing and potential consumer through various platform. This can improve shopping experience where shopping can be interesting and enjoyable for consumer. Then, it is also important for online marketers to build and maintain consumer trust. This is because the characteristics of online purchasing that full of uncertainty. Online marketers need to ensure that all product-related information is true, as well as all pledge and commitment can be accountable. Make sure that consumers are not disappointed with the products or services provided.

Fourth, online marketers should pay attention to the role of ATT and OPI. ATT tends to be stable over a long time. Therefore, positive ATT for organic food should to be developed first. Online marketers can use the role of RG or e-WOM to campaign about the advantages of organic food compared to non-organic. Then, in the process of establishing ATT, online marketers can include promotional messages to direct consumers doing purchase behavior of organic food. If consumers already have a positive ATT, and intend to buy, then make sure that existing OPI is actualized by ensuring that the product information presented is completed, the products offered are available, providing various payment method, ensuring the given discount is appropriate, minimizing negative reviews, and so on.

Although this study can provide several contributions in understanding consumer OPB of organic food, there are still limitations that can be considered for further research. First, this study only examiner the impact of positive reviews of SI on OPB. Future studies may examine the impact of SI's negative reviews on OPB. Second, this study did not include moderator variables like in the main UTAUT model i.e. gender, age, experiences, and voluntariness. Future studies are expected to include these moderating variables to determine the differences impact of SI on OPB based on gender, age, experience, and voluntariness. Third, this study has not been able to identify the type of SI influence that has a significant impact on OPB. As previously stated, there are three types of SI influences i.e. utilitarian, informational, and value-expressive. Future research may consider to detailing these types effect. Finally, this study is a cross-sectional study so it is a little difficult to explain some of the result. Future research should apply longitudinal study to get better overview of the condition of online shopping of organic food in Indonesia.

## 5. Conclusion

Based on the results of the analysis and discussion section above, the conclusion of this study is that the positive influence of social influence (SI), both reference group (RG) and electronic word-of-mouth (e-WOM), indirectly impacts on online purchase behavior (OPB) of organic food in Indonesia. The impact is mediated by the influence of perceived value (PV), perceived trust (PT), attitude (ATT), and online purchase intention (OPI). Some contributions and recommendation are presented both from theoretical and practical perspective in explaining OPB of organic food in Indonesia.

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## The Effect of Corporate Governance Perception Index on Firm Performance in Indonesia

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### Abstract

In recent years, increasingly difficult for organizations to achieve, maintain, and improve business competitiveness. The implementation of corporate governance in company performance is the key to success for companies to gain long-term benefits. The application of the concept of corporate governance is an effort to restore the confidence of investors and institutions in the capital market. Corporate governance maybe isn't a one size fits all solution, but keep these best practices will make better equipped to execute the business plan. Variable corporate governance in this study is proxy with the *Corporate Governance Perception Index (CGPI)* issued by the Indonesian Institute for *Corporate Governance (IICG)*. The sample is a company registered in CGPI during the period 2013 to 2017. The results show that corporate governance variable has a negative and significant affect on firm performance.

**Keywords:** Corporate Governance, Firm Performance

### 1. Introduction

Increasingly tighter company competition causes company management to strive to increase the company's financial performance. Financial performance is an indicator of a company's financial condition that describes the company's achievements in a certain period (Fahmi, 2011). Therefore, it cannot be denied that the good and bad of the company's performance will have an impact on the interest of investors to invest or withdraw their investment from the company. Corporate governance is a supervisory system that influences the determination and achievement of company goals. Good corporate governance structures encourage companies to create value through operations, research and innovation development (Detthamrong et al., 2017).

In a company where an effective corporate governance system is practiced, so it could be expected that the interest between managers and shareholders are more aligned. The likelihood that managers will have the need to hide negative information from shareholders is low (Sihombing and Diyanti, 2019). Corporate governance is based on the structure and processes established by the entity that aims to minimize the level of agency problems as a result of the separation between ownership and control (Ofoeda, 2017). Corporate governance can help companies to set their objectives and provide means to achieve the objectives and monitoring function to ensure that managers are working towards achieving the objectives (OECD, 2015).

Corporate governance is based on the structure and processes established by the entity that aims to minimize the level of agency problems as a result of the separation between ownership and control (Ofoeda, 2017). The company's financial performance is influenced by several factors, one of which is corporate governance. Since the crisis that occurred in Indonesia in 1998, the issue of corporate governance has become one of the most interesting topics of interest (Anggitarani & Suhardjanto, 2010). The good corporate governance mechanism has several indicators in the form of an audit committee, the size of the board of commissioners, the proportion



of independent commissioners, and the educational background of the commissioners. Many studies have been conducted to examine the relationship between corporate governance mechanisms and corporate financial performance (Syafiqurrahman *et al*, 2014).

## **2. Literature Review and Hypothesis Development**

### **2.1 Agency Theory**

Agency theory is based on the fact that company managers are not the owners of the company, but rather as owner agents who are contracted to manage the company on behalf of the company owners (Ujunwa *et al*, 2012). Jensen and Meckling (1976) explain that agency theory is a collection of contracts between owners (principal) and managers (agents) that take care of the use and management of company resources. The owner expects that the manager can act in the interests of the owner of the company, but in fact each party will act according to their own interests. Therefore, it is necessary to have good corporate governance in the company to minimize the differences in interests.

Corporate governance is a basic concept of agency theory that gives investors confidence in the management of the company. Good corporate governance mechanisms can reduce agency conflicts and help align interests between managers and shareholders (Goranova *et al*, 2017). Effective implementation of corporate governance will reduce agency costs as an indicator of these problems. Minimizing agency problems in the company is necessary in order to achieve company goals by improving company performance.

### **2.2 Corporate Governance Perception Index**

The Corporate Governance Perception Index (CGPI) is a research and ranking program on the implementation of corporate governance in Indonesia carried out by an organization called The Indonesian Institute for Corporate Governance (IICG) and has been going on since 2001. In the CGPI ranking, at the end of each year it will be held The CGPI Award is a form of appreciation for the company's initiatives in realizing a business that is in accordance with corporate governance which will be published in the SWA magazine. As an independent and non-profit organization, IICG is committed to encouraging and assisting companies in implementing effective corporate governance in Indonesia (Wahyudin & Solikhah, 2017).

This study uses the Corporate Governance Perception Index (CGPI) as a proxy for corporate governance because in ranking CGPI, IICG considers various dimensions, including commitment, transparency, accountability, independence, responsibility, competence and ethics. IICG uses four phases which include company appraisal, document evaluation, review papers and company visits. The CGPI program consists of three scopes of assessment of the implementation of corporate governance including ([www.iicg.org](http://www.iicg.org)):

- a. The compliance aspect includes the fulfillment of various lawsuits and regulations that have been set by the regulator. This aspect aims to ensure that all business operations are in accordance with applicable regulations.
- b. The conformity aspect of implementation contains the appropriateness of the company's policies and operations based on the norms, ethics and values that are believed to be.
- c. The performance aspect of implementing corporate governance is the achievement of the company regarding the demands of ethical and dignified business operations.

### **2.3 Hypothesis Development**

Research shows that effective corporate governance practices are proven to be able to minimize capital, reduce risk, and positively affect the value of company performance. The implementation of corporate governance can create a system to direct, control and increase all resources efficiently and effectively. The implementation of corporate governance in company performance is the key to success for companies to gain profits in the long term so that they can compete well in global business (Sheikh *et al*, 2013).

The increasing need to establish good corporate governance is based on the many financial scandals that have



led to the collapse of the world's giant financial institutions. An efficient corporate governance system in the banking sector shows the integrity of bank management regarding the quality of banking service delivery and affects the overall performance of the sector (Okoye et al., 2016). The application of corporate governance is expected to prevent errors in decision making so that it will automatically improve company value that is reflected in profitability (Anjani and Yadnya, 2017). Based on the description above, the hypothesis development in research is as follows:

H1: Corporate governance has a positive and significant effect on firm performance

### 3. Research Method

#### 3.1 Sample and Data

Data collection was carried out by collecting data and literature related to the problems studied, which included annual reports obtained from the Indonesia Stock Exchange website, Bloomberg and CGPI reports for the period 2013-2017. The determination of the companies to be sampled in this study was carried out using a purposive sampling method using criteria for public companies participating in the CGPI program in 2013-2017.

#### 3.2 Research Model

To test the hypotheses of this research, the following regression model is used:

$$ROE = \alpha + \beta_1 \text{CGPI} + \beta_2 \text{DER} + \varepsilon$$

ROE = Return on Equity

$\alpha$  = Constanta

$\beta_1, \beta_2$  = Regression Coefficient

CGPI = Corporate Governance Perception Index

DER = Debt to Equity Ratio

$\varepsilon$  = Error

#### 3.3 Variable Operationalization

##### 3.3.1 Dependent Variable

The dependent variable in this study is firm's performance as a proxy for return on equity (ROE). The reason company performance is proxied by ROE because ROE is able to show management in utilizing equity in operational activities to generate profits (Brockman et al., 2013; Su & Fung, 2013; Ding et al., 2014)

$$\text{Return on equity} = \frac{\text{Net Income}}{\text{Equity}} \times 100 \%$$

##### 3.3.2 Independent Variable

Corporate governance in this study is proxied using the Corporate Governance Perception Index (CGPI) issued by The Indonesian Institute for Corporate Governance with the CGPI score scale used is 0-100 (Wahyudin & Solikhah, 2017). The use of the CGPI score as a proxy for corporate governance is because in ranking CGPI, IICG considers various dimensions including commitment, transparency, accountability, independence, responsibility, competence and ethics ([www.iicg.org](http://www.iicg.org)).

### 3.3.3 Control Variable

Leverage is a very important external financing mechanism for companies. Financial leverage indicates that a business incurs costs to purchase new assets or to increase its production or operations. In this study, leverage is used as a control variable which is proxied by using a debt to equity ratio to make it easier to identify the company's financial position.

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Equity}} \times 100 \%$$

## 4. Regression Result

The results of data processing using the SPSS 21 program are as follows:

**Table I**  
**Regression Analysis Results**

Variable	Coefficient	T	Sig.	Result
Constant	33,680	1,672	,099	
CGPI	-1,312	-3,831	,000	Significant
DER	-1,641	-3,672	,000	Significant

The hypothesis states that corporate governance has a positive and significant effect on profitability. Based on the test results, the value of  $t = -3,831$  and the coefficient of  $-1,312$  with a significance value of  $0,000$  is less than  $0.05$  and the direction of the coefficient is negative, it can be concluded that corporate governance has a negative and significant effect on profitability, so that  $H1$  is not accepted.

The effectiveness of corporate governance practices varies widely. However, the existence of corporate governance is an obstacle that must be obeyed. Corporate governance is not considered a maximum regulation for preventing risks and disasters, but only as a formality. This assumption arises because to implement good governance in a company requires a lot of money. The process is quite long and the implementation may not fit the company culture. In fact, corporate governance that is carried out according to procedures is a parameter for assessing organizational performance.

## 5. Conclusion

The objective of this research is to find out the effect of corporate governance on firm performance. Based on the analysis of the results of the tests and discussions that have been carried out, it can be concluded that the variable corporate governance perception index has a negative and significant effect on firm performance.

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## **Corporate Social Responsibility (CSR) of COVID-19 and Firm Value. An Abstract**

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### **Abstract**

The objectives of this study are: (1) to determine whether the company's CSR activities directed at dealing with Covid-19 have an effect on company value seen from the company's stock price, and (2) whether there is a difference in company value before and after the company carries out CSR Covid-19 activities. The population of this study is all companies listed on the Indonesia Stock Exchange (IDX) in 2020. The sample is companies that carry out CSR that are directed to handle CSR Covid-19 for period March until June 2020, namely a total of 124 companies. The research data is secondary data, namely the company's CSR activities from online media and the company's official website, and stock price data from the official IDX website. Data analysis to test data normality used the Kolmogorov-Smirnov test and the Shapiro-Wilk test. Hypothesis testing uses run test and the Wilcoxon test, because the data is not normal. The results of this study are: (1) the first hypothesis is accepted, CSR activities to handle covid-19 affect the company's stock price, and (2) the second hypothesis is accepted, that is, there are differences in stock prices before and after the company carries out CSR activities to handle covid-19.

Keywords: Corporate Social Responsibility (CSR), Covid-19, Firm Value

## **The Advantage of the Mobile App-based Waste Management: Towards A Zero Waste to Landfill**

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### **Abstract**

Household waste is the largest waste being produced by humankind. Approximately 60 tons of household waste per second is produced in the world. In 2019, Indonesia had 7,300 tons of or 175 thousand tons' household waste per day (Prayoga, 2019). It will increase as incomes rise and, in cities, the amount of garbage expands more than twice as the rate of population growth (Dethier, 2017). Most of the waste goes to the landfill or is burned. Burning garbage is the world's most significant dioxin source and one of the most toxic chemicals. Furthermore, waste burning contributes to the air pollution issue. So this will still become a serious problem, and if we do not change, waste generation will outpace population growth by more than double (theworldcounts.com). In 2015, an android mobile-app waste management called Smash.id was launched. This step then followed by some companies and even local governments to build the same mobile app-based waste management, and it is spread to other big cities in Indonesia. This study is intended to evaluate the mobile app-based waste management implementation using a questionnaire survey to six mobile app-based waste management developer to determine its advantages. They are Scavenger Indonesia, Rapel, Octopus, Smash.id, Dompot Sampah, angkuts, KOMPIS, Mountrash, and Juru Sampah. The Result shows that mobile app-based waste management provides many advantages and is a potential solution towards a zero waste to landfill.

**Keywords:** household waste, mobile app, sustainability, waste management

### **1. Introduction**

The Sustainable Development Goals (SDGs) cannot be met unless waste management is prioritized (Lenkiewicz, 2016). Waste from domestic sources is considered a significant obstacle to achieving environmental sustainability in the 21st century (Barr, Gilg, & Ford, 2001). Sound management of chemicals and waste underpins the effective implementation and achievement of every aspect of the SDGs at the country level (IOMC, 2018). SDGs are the foundation of all countries' governments in carrying out sustainable development,

including Indonesia (Ihsannudin & Ping, 2020). The Indonesian Ministry of National Development Planning or Bappenas has scheduled from Millennial Development Goals or MDGs (2000-2015) to SDGs (2016-2030), which have 17 goals to be reached and with holistic priority areas, namely economic, social and environmental. Seventeen goals are 5 goals on the social pillar, 5 goals on the economic pillar, 6 goals on the environmental pillar, one goal on the law, and governance pillar (Ministry of National Development Planning, Republic of Indonesia, 2020). Some of the agendas address the waste problems, such as the target number 11.6 and 12.5 (Ong, Fearnley, & Chia, 2019). As household waste is the most massive stream of municipal solid waste in Indonesia (Aye & Widjaya, 2006), the SDG waste target is a relevant basis for solving such a problem.

The general objective of minimizing environmental impacts associated with waste management systems is generally aligned with the waste sequence process: firstly, to reduce waste flows by reducing waste at source as well as reusing products; secondly, to increase recycling rates by avoiding landfill sites; (Elia, Gnoni, & Tornese, 2015). It is essential to use innovative technologies to direct the user's behavior towards the desired recycling behavior. In this context, recent advances in mobile technology and the introduction of smartphones and mobile apps tend to be one of the most promising methods or tools for providing behavioral change interventions amongst various socio-economic classes. (Mavropoulos, Tsakona, & Anthouli, 2015).

Everyone commonly does the utilization of mobile application technology. The development of mobile applications began with the Symbian OS operating system in 1998, Blackberry in 2004, IOS starting in 2007, Android since 2009, and Windows Phone in 2010 (online-pajak.com, 2020). At first, the web browser was the most commonly used mobile application on all mobile devices. Still, over time, mobile applications in the form of social media began to appear, such as Blackberry Messenger, Facebook mobile, Twitter Mobile, WhatsApp, etc. In subsequent developments, the mobile application business began to vary. It was measured through several application stores such as App World (Blackberry), App Store (Apple), Play Store (Android), and Windows Store (Windows). This development encourages mobile application developers to aggressively create mobile applications tailored to the needs of society, including games, social networks, video editing, video calls, digital marketing, and many more (tirto.id, 2020). This phenomenon was welcomed by the people who actively download and install applications that are already available. Each person installs 78 applications on their smartphone, and about 40 applications are used each month. The average application used every day is ten applications (appannie.com, 2020). Various mobile applications have unique characteristics that link spatial data to time and information about thoughts, moods, activities, and status. Mobile applications can act as devices that connect various stakeholders. Mobile applications provide opportunities to network, get information, provide low-cost infrastructure, organize jobs, attract customers by becoming a marketing tool, serve professional relationships, eliminate distance problems between partners, facilitate projects that require broader audience participation, save money, earn money, providing a shared and understandable platform for cooperation and sharing between various stakeholders that have varied communication codes (Mavropoulos et al., 2015)

Over time, mobile applications were also developed for waste management. This waste management mobile app has been developed by several mobile applications in various countries in Europe, including iScrap App, LanVol, MBT Mass Balone, and My Waste (Mavropoulos et al., 2015). The development of this technology has also been followed in Indonesia, enhancing the emergence of various waste management mobile apps including Scavenger Indonesia, Rapel, octopus, smash.id, dompet sampah, and angkuts. This shows that the role of technology through mobile applications for waste management is increasingly familiar with the Indonesian lifestyle.

Indonesia is an urbanized country with trash accumulation as one of the consequences causing significant environmental quality declined (Dethier, 2017). Moreover, municipal solid waste (MSW) disposal systems in Indonesia are not integrated. In big cities, such as Jakarta, even though sanitary landfills were built, in practice, open dumping is still the case because operational measures such as daily cover and capping full cells are not implemented, resulting in negative impacts on the environment and are also socially unacceptable (Aye &

Widjaya, 2006). Waste or garbage as an output of people's consumptive behavior that fails to be managed then goes to the ocean, making Indonesia the second contributor (After China) of waste entering the sea (Jambeck et al., 2015). Unfortunately, given Indonesia's geography, scale, and population, this country arguably faces all challenges (Mann, 2019).

Further, it will become a potential problem as an input source for the waste goes to the ocean. The rate of plastic recycled was identified as 24%, leaving 76% of plastic waste in landfills or the environment (Putri, Fujimori, & Takaoka, 2018). Dumps are central to Indonesia's waste management system because they end up storing most of its household waste (Kahfi, Putra, & Dipa, 2019). In Indonesia's case, given that base infrastructure is not keeping up with the rapid rate of urbanization, Indonesia could reach such a dubious milestone ahead of most countries (Mann, 2019). Some regulations have been issued by the Government of Indonesia and supported by all local Governments to manage waste. However, the waste problem still exists. In fact, people's awareness and behavior in disposing, sorting and managing waste is still low (Maulana, 2019). This requires synergy and concrete and sustainable efforts, both from the Government, business people and the community. On the other hand, the effort to manage waste by mobile application usage, especially household and municipal waste shows an increasing trend. Therefore, this study is intended to analyze whether the waste management through such application can bring effective solution for waste problem in Indonesia.

## 2. Waste Management

Nature can adapt, but only to the extent that an ecosystem's threshold, or carrying capacity, is not exceeded. Meanwhile, the transformation process (dilution, dispersion, synergy, and chain reaction) means that not every environmental intervention causes the same environmental impact. Every environmental intervention causes an environmental impact (Schaltegger and Burritt, 2000).

The problem of waste in Indonesia is caused by several factors: knowledge, access or facilities, and infrastructure. The knowledge factor, meaning that there is a lack of public knowledge regarding the impact of littered waste. This makes Indonesia the second largest contributor to plastic waste to the oceans in the world after China. The access factor or facilities and infrastructure, meaning the unavailability of waste disposal facilities and easy access, makes people throw their garbage carelessly (BPKP, 2019). That is why education and awareness of waste and waste management are increasingly important from a resource management global perspective (Demirbas, 2011).

Plastic waste in the Indonesia sea is number one compared to lower-middle-income countries with 187.2 million tons. The waste originates from the mainland as a result of the consumptive behavior of the people. Approximately 99.5 million MT of plastic waste was generated in coastal regions in 2010. Of this, 31.9 million MT were classified as mismanaged, and an estimated 4.8 to 12.7 million MT entered the ocean in 2010, equivalent to 1.7 to 4.6% of the total plastic waste generated in those 192 countries (Jambeck et al., 2015).

Increases in waste generation in the absence of adequate waste management systems can compromise the very quality of life and public health gains that economic growth and urbanization seek to achieve (Farrelly, Schneider, & Stupples, 2016). In Indonesia, the Government has shown efforts in dealing with waste management by issuing some regulations. *Peraturan Pemerintah* number 27 of 2020 concerning Specific Waste Management and Article 23 paragraph (2) of Law 18 of 2008 concerning Waste Management. Specific Waste Management is a systematic, comprehensive, and continuous activity that includes reduction and handling. In *Peraturan Pemerintah* number 27 of 2020 concerning Specific Waste Management mentions a Waste Processing Site with 3R Principles, which are Reduce, Reuse, Recycle, or 3R.

Specific waste is different from household waste and household-like waste. The management of such waste has been regulated in Government Regulation Number 81 of 2012 concerning Management of Household Waste and Household-like Waste, in PP 27 of 2020 concerning Specific Waste Management, Specific Waste Management much more complex diverse.



Waste management consists of six processes: prevention, sorting (separation of biodegradable, metal, plastic, and paper waste), disposal, recycling, reuse, and safe disposal of toxic and hazardous waste (Bigirimana, 2018). Waste management is intended to provide safe living conditions to minimize the amount of material entering or leaving society and promoting the reuse of materials in the community (Demirbas, 2011).

Six factors influence sustainable waste management: public health, environmental protection, resource value of waste, closing the loop, institutional and responsibility issues, and public awareness (Wilson, 2007). However, waste management policy focus only on source reduction in the production stage failed to consider household behavior such as waste reduction effort such as reuse and recycling, also household disposal decisions as well (Choe & Fraser, 1999). As recycling campaigns are inefficient, we need to implement or improve systems that can enhance behavioral change (Mavropoulos et al., 2015). Only if the recycling system can address users' attitudes, daily habits, routines, and lifestyles can provide more appropriate services to people (Salah, Lepri, Pianesi, & Pentland, 2011). In this sense, disruptive technologies offer proper changes in human behavior toward pro-environmental behavior (Esmaeiliana et al., 2018).

Numbers of previous researches had proposed such technology in doing waste management. Shyam et al. (2017) suggest the use of the Internet of Things (IoT) as smart waste management by obtaining the data through sensors and then transmitted over the Internet to a server for storage and processing mechanisms (Kirshna Shyam, Manvi, & Bharti, 2017). Saha et al. (2017) recommend using IoT in every step of waste management strategies such as recycling, composting, fermentation, landfills, burning, and land application. Additionally, the use of the Internet of Things (IoT) in waste management has three main reasons. First, all of the devices are connected, and data is collected every day. Second, computer systems can learn to perform specific tasks, such as classification, clustering, predictions, and pattern recognition. Lastly, the information obtained is then used to identify patterns or make decisions based on new data (Anh Khoa et al., 2020).

### 3. Mobile app-based Waste Management

Waste management using a mobile app is now emerging in Indonesia. There is a number of the mobile app offered in google play store. This app can be utilized by users to sell inorganic waste that still has a sale value or recyclable waste. The first step of selling the trash is the users have to sort the waste according to its type. Secondly, the users click the mobile app, and an agent of the app will pick the recyclable waste with the agreed price. There is a unique method of selling recyclable waste using a mobile app. The app developers cooperate with recyclable waste collector agents (they are *pemulung*<sup>5</sup>, *pengepul*<sup>6</sup>, or *Bank Sampah*<sup>7</sup>) as their agents. So, when users click the app to sell their recyclable waste, they call the agents to buy the waste. Then the agents sell the garbage to the app developers. The benefits gained by users is varied. They can get cash or points as their recorded accounts receivable that they can claim in the future, valuable things, etc.

### 4. Methods

This research uses a questionnaire sent to 16 mobile app-based waste management developers. We use several steps to do so. Firstly, we enter some keyword in the google search engine such as *aplikasi sampah*, *sampah dengan smartphone*, *aplikasi sampah dengan smartphone*, and *sampah mobile app*. We also go through google play store and type *sampah* in the search link. From that step, we can found the developer websites, email addresses, or phone numbers. We found 30 mobile application developers. Only 16 of them are active, while 14 mobile apps are no longer operate actively even they still available in the play store. Secondly, we develop a

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<sup>5</sup> *Pemulung* is a scavenger, a person whose main job is to collect recyclable waste. He or she works independently. Usually he or she works in a landfill by picking up valuable waste like paper, plastic bottle, etc., and sell it to *pengepul*. He or she might also operate around housing areas or estates.

<sup>6</sup> *Pengepul* or collector is a person who collect valuable waste from *pemulung*. She or he usually has several workers. She or he can have his own factory to recycle the waste or send it to the recycling factory.

<sup>7</sup> *Bank Sampah* is an organization which operate like a bank but rather than using money as a business base, it utilizes recyclable waste.

questionnaire that contains some questions, including the average amount of waste they collected periodically. Thirdly, we send the questionnaire to the 16 developers through email and WhatsApp. After one week, we only get five responses. Then we tried to give them a call and a private message. Although they showed good replies, they still do not answer the questionnaire, and there are only four additions. From the nine responses, we then make a qualitative descriptive analysis of the advantages of mobile app usage to manage household waste.

Image 1. Some of the waste management mobile app



## 5. Result and Discussion

Nine developers answered the questionnaire sent (table I). The first waste management mobile app is Smash.id, launched in 2015, followed by angkuts in 2016, dompet sampah in 2017, Scavenger and Octopus in 2018, and Rapel Indonesia in 2019. The coverage area for that mobile app is varying. Four of them serve in Kabupaten/Kota or regency/city. Four of them operate for all regions of Indonesia and one of them in a province area. Most of them collect waste or garbage daily, consisting of recyclable waste from households, restaurants, and small industries. While Kompis, which have users from an institution like hospitals and garbage bank, collects waste monthly.

Table I. Respondent list

Developer	Mobile app's name	Coverage Area
Octopus Waste Management PTE LTD	Octopus	Regency/city in Makassar
PT Wahana Anugerah Energi	Rapel Indonesia	Jogjakarta Province
PT Solusi Hijau Indonesia	Smash.id	All over Indonesia
PT Hijau Solusi Utama	Dompot Sampah	Depok Regency West Java
CV Dua Ikan Group	angkuts	South East Pontianak Regency
Yayasan Insan Hijau Berinovasi	Scavenger Indonesia	A district in Kebayoran Baru

	(scavenger.id)	Jakarta
Solusi Kreatif Kompis	KOMPIS	All over Indonesia
PT. Mountrash Avatar Indonesia	Mountrash	All over Indonesia
PT. Juru Supervisi Indonesia	Juru Sampah	All over Indonesia

The number of people using the mobile app to manage waste is increasing from time to time except for dompet sampah and angkuts (table II). We then trace the problem of those two apps through the play store and found that they seem to have trouble operating the app. In that regard, Dompet sampah replies in our questionnaire that it has a problem concerning difficulties in time management to picking up trash. Some of its users don't understand how to use the Internet. At the same time, angkuts is facing issues regarding human resources and funding. From table II, we can see that the number of people using the mobile app to manage their waste is enormous. It can be implied that this app is a promising tool to gain more people to change their behavior towards waste and be aware of waste management.

Table II. Number of Mobile App Users

App's name	2018	2019	2020
Octopus	1,189	8,322	16,559
Rapel Indonesia	Not yet operate	7,000	70,000
Smash.id	5,100	6,500	7,661
Dompet Sampah	400	661	142
angkuts	50	100	50
scavenger.id	500	>1,000	>1,000
KOMPIS	Not yet operate	Not yet operate	2 hospitals and 3 Garbage Bank
Mountrash	Not yet operate	300	13,000
Juru Sampah	Not yet operate	Not yet operate	200

These mobile apps are also beneficial in empowering scavenger. In replying our question about partners which they work with, most developer answer they cooperate with scavenger or pemulung/tukang rosok is amount 33,3% and several partners such as the waste bank, volunteers, the developer has employees to pick up collected trash and community representatives appointed to collect waste each by 11%. This shows that the role of mobile applications in waste management can help improve and drive the economy of the community, especially scavengers. So economically, if the management of mobile applications is increasingly being developed in many regions in Indonesia, it will be more useful to improve people's welfare and reduce waste.

Chart 3. Partner in waste collection



In 2017, based on the data from Kementerian Lingkungan Hidup dan Kehutanan ([industry.co.id](http://industry.co.id)), there are approximately 5 million scavengers in Indonesia. Even though this number is considered many, unfortunately, they have often been marginalized (Nuraedah, 2013). In this regard, as we give an open answer choice, the reply from Rapel is fascinating.

Rapel wrote:

“Cooperate with scavengers as our partners can make their work continues. Socially, they come from marginalized groups who, on average, live below the poverty line and do not have clear plans. Previously, they spend the money they got from collecting collected waste directly they spend on tertiary needs. This causes them to run out of the capital to buy the next trash. Finally, they borrow from collectors with a guarantee that the waste collected is paid to the collectors. This phenomenon causes collectors to buy material that is not sorted according to the application at a much lower price or even material (recyclable waste) that should be of high value is considered of no value, especially if the scavengers do not understand the type of the material. The collectors want to get as much as possible, but they are not honest in doing so. For Rapel, this is an obstacle because Rapel needs to educate the collectors and it requires long time and hard work intensively”.

Household waste is the largest waste being produce by humankind. Approximately 60 tons of household waste per second is produced in the world. In 2019, Indonesia had 7,300 tons of or 175 thousand tons' household waste per day (Prayoga, 2019). Based on the results of the questionnaire that we have collected, the existing data shows that the largest amount of waste comes from individual or household waste. The number of mobile app users are varying from individual user (44.4%), household, social organization, schools, and religious organization is amount (11,1%). This shows that waste management through mobile applications is very effective in collecting household waste which has been considered one-sided, even though it can have an extraordinary impact on the environment. Most of the waste goes to the landfill or is burned. Burning garbage is the world's most significant dioxin source and one of the most toxic chemicals. Furthermore, waste burning contributes to air pollution issue. So this will still become a serious problem, and if we do not change, waste generation will outpace population growth by more than double ([theworldcounts.com](http://theworldcounts.com)).

Chart 4 . The number of mobile app users



Chart 5. The most users of mobile app

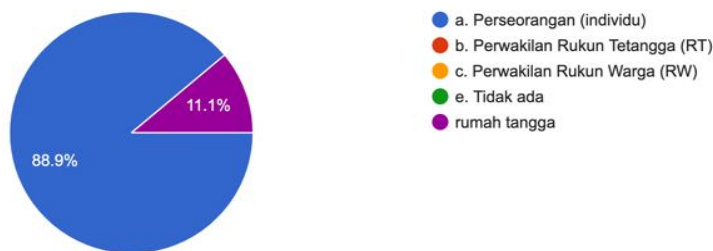


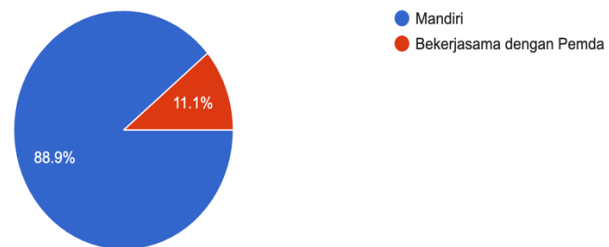
Table III. Type of Waste and Amount of waste collected

App	Type of waste	Amount of waste collected yearly (2018)	Amount of waste collected yearly (2019)	Amount of waste collected yearly (2020)
Octopus	Recyclables	24 tons	93 tons	166 tons
Rapel Indonesia	Recyclables and used oil	Not yet operate	70,000 kgs	30,000 kgs (Jan-Aug)
<a href="#">Smash.id</a>	Recyclables	280,000 kgs	380,000 kgs	431,076 kgs
Dompot Sampah	Recyclables	Not yet operate	4.3 tons (Dec 2019-Juli 2020)	
angkuts	Domestic waste from household, restaurant & school	180-270 tons	180-270 tons	180 tons (Jan-Aug)
Scavenger Indonesia	Recyclables	>150kgs	> 350kgs	-
KOMPIS	Recyclables and organic	Not yet operate	Not yet operate	Still in early stage of development
Mountrash	All type to sell	Not yet operate	50 tons	300 tons
Juru Sampah	Recyclables	Not yet operate	Not yet operate	-

Table IV. Cooperation with local government

App	Cooperation with local Government
Octopus	No
Rapel Indonesia	No
<a href="http://Smash.id">Smash.id</a>	No
Dompot Sampah	No
angkuts	Yes
Scavenger Indonesia	No
KOMPIS	No
Mountrash	No
Juru Sampah	No

Chart 6. Cooperation with local government



Amount of waste collected by the developer is depicted in table 3. We can see that from time to time the amount of waste they collected is increasing. For scavenger.id, in the year of 2020 it can provide amount of waste collected data because it is still counting. The same situation is experienced by Juru sampah. However, comparing the data from table 3 with the amount of trash entering landfill, it seems that the effort to develop the mobile app-based waste management still needs to be need a develop. In December 2019, approximately 18,851 tons of waste enter a landfill in Bantul district Jogjakarta province ([www.antaranews.com](http://www.antaranews.com)). While in the same year, Rapel which operate in Jogjakarta can collect 70,000 kgs of waste. Even for angkuts that work in regency or city area in South East Pontianak Kalimantan, which can collect 180-270 tons yearly, it seems disappointing when we compare the collected waste amount with the waste entering landfill in Pontianak. Pontianak produces 400 tons of waste daily ([www.antaranews.com](http://www.antaranews.com)). As Pontianak has 6 regencies, we divide 400 tons by 6 is equal to 66,7 tons. So, one regency produces approximately 66,7 tons waste a day. If we see the data in table 4, only angkuts work with the local Government. It can be implied that the local government support for the mobile app utilization to manage waste is insufficient. In this regards, Octopus, Juru sampah and Kompis stated that the insufficient support from the local Government is their obstacle.

## 6. Conclusion

The phenomenon of the waste management mobile app is emerging and we consider it as promising. This is still in the early stage of mobile app utilization to manage waste. The oldest data we found is Smash which launched in 2015. Others is also still very young. So, there is a hope as the data shows a rising trend. Both the number of people utilize the app and the amount of waste collected indicate an increasing direction, we can conclude that mobile app-based waste management is a potential solution to manage waste.



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## **The Effect of Location, Promotion, Product and Price to Customer Satisfaction CV. Silver Indonesia Batam**

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### **Abstract**

Quality of marketing is very influential from several things such as company location, company promotions, products that will be issued by a company and prices issued by the company. To test that customer satisfaction is really the result of the influence of location, the effect of promotion, the effect of the product and also the last is the effect of price on customer satisfaction. In this case, it is necessary to carry out accurate research where this research was conducted with 92 samples of respondents. This research uses the SPSS software application. The data was obtained by distributing questionnaire data and the results of the questionnaire were recapitulated and then tested into several tests. The results of this study indicate that location has a significant effect on customer satisfaction, promotion also has a significant effect on customer satisfaction, products also have a significant effect on customer satisfaction, and finally, price also has a significant effect on customer satisfaction.

**Keywords: Location , Promotion , Product, Price, Customer Satisfaction.**

### **1. Introduction**

#### **1.1 Preliminary**

Background, The current phenomenon experienced by consumers is how to analyze the location of the company, the company's promotional model, products that are a mainstay and price. This phenomenon is very frequent to consumers so it is necessary to study. Consumers are the life of every business that is built. Businesses will not be able to grow big without the support and encouragement from consumers who entrust their needs to the business. Consumers are part of the marketing cycle. All activities carried out by a company will ultimately boil down to the value that consumers will provide regarding perceived satisfaction. In this globalization era, companies will always be aware of the importance of the consumer factor. Therefore, measuring the level of satisfaction of consumers is very necessary. Every industrial company such as a retail business in marketing

products must have a goal, namely how consumers feel satisfied with the service received. But sometimes every consumer has a different feeling of satisfaction with each service that has been provided by the supplier. For example, consumers hope that the service will provide a good price, but this expectation is inversely proportional to the fact that consumers feel disappointed and feel dissatisfied. Lupiyoadi (2013) defines satisfaction as the level of feeling where a person states the results of the comparison of the performance of the service product received and the expected.

#### 1.1.1 Identification of problems

In identifying the problem of this study, the author only focuses research on consumers who use Silver Indonesia Batan services in the city of Batam and its surroundings, especially for products and services from Silver Indonesia Batam. While the supporting variables consist of Location, Promotion, Product Quality and Price as Independent Variables, and Customer Satisfaction as Dependent Variable.

#### 1.1.2 Restricting the problem

Limiting a problem is used to avoid deviations or widening of the subject matter so that the research is more focused and makes it easier to discuss so that the research objectives will be achieved. Some of the limitations of the problem in this study are as follows:

1. Broad scope only includes information on customer satisfaction.

2. The information presented is how consumers feel fulfilled in terms of satisfaction in terms of location, customer satisfaction in terms of promotion, customer satisfaction in terms of products and prices. Limiting this issue will focus location, promotion, product, and price on consumer satisfaction.

#### 1.1.3 Research Hypothesis

Based on the theoretical basis and framework as described above, the following hypotheses can be made:

H1. It is suspected that there is an influence between location (X1) and customer satisfaction (Y).

H2. It is suspected that there is an influence between promotion (X2) and customer satisfaction (Y).

H3. It is suspected that there is an influence between product (X3) and customer satisfaction (Y).

H4. It is suspected that there is an influence between price (X4) and customer satisfaction (Y).

H5. It is suspected that there is an influence between location (X1), promotion (X2), product (X3) and price (X4) together on customer satisfaction (Y).

X<sub>1</sub> = Variable of Location

X<sub>2</sub> = Variable of Promotion

X<sub>3</sub> = Variable of Product

X<sub>4</sub> = Variable of Price

Y = Variable of Customer Satisfaction

#### 1.1.3 Types and Research Design

In the Research Methodology section, the type and research design are research variables, namely something that is at the core of the research problem. While objects, things or people, places, data for the research variables attached and in question are objects. While the research location is Silver Indonesia, including customers, distributors, resellers and users of Silver Indonesia goods and services. This research uses quantitative research. According to Sugiono (2017) quantitative research, which is a research method of a human group, a system of thought or a class of events in the present that aims to form a systematic, factual, and accurate description,

description or painting of facts, characteristics , as well as the relationship between the phenomena under investigation. Whereas quantitative research can be defined as a research method based on the philosophy of positivism, used to examine populations or samples generally carried out randomly, data collection using research instruments, quantitative or statistical data analysis with the aim of testing predetermined hypotheses.

#### 1.1.4 Population and Research Sample

Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics that are determined by the researcher to be studied and then draw the conclusions. The population is CV Silver Indonesia Batam consumers. .

Table 1. Validity Test Results of Location Variables (X1)

No	Question	r <sub>Count</sub>	r <sub>Tabel</sub>	Remark
1	Q1	0.923	0.202	Valid
2	Q2	0.783	0.202	Valid
3	Q3	0.877	0.202	Valid
4	Q4	0.923	0.202	Valid
5	Q5	0.917	0.202	Valid
6	Q6	0.704	0.202	Valid
7	Q7	0.917	0.202	Valid
8	Q8	0.923	0.202	Valid
9	Q9	0.927	0.202	Valid
10	Q10	0.700	0.202	Valid

Table 2. Validity Test Results of Promotion Variables (X2)

No	Question	r <sub>Count</sub>	r <sub>Table</sub>	Remark
1	Q1	0.859	0.202	Valid
2	Q2	0.708	0.202	Valid
3	Q3	0.878	0.202	Valid
4	Q4	0.888	0.202	Valid
5	Q5	0.898	0.202	Valid

6	Q6	0.712	0.202	Valid
7	Q7	0.916	0.202	Valid
8	Q8	0.857	0.202	Valid
9	Q9	0.708	0.202	Valid
10	Q10	0.730	0.202	Valid

From the above test and the table (Variable X2), it is found that the value of R count is greater than R Table, then the data is declared valid, namely  $r \text{ count} > 0.202$ . Including with Variable X3, X4 and Y also namely  $r \text{ count} > 0.202$  and data is declared valid.

## References

According to Sugiyono (2012), descriptive statistics are statistics that are used to analyze data by describing or describing the collected data as is without the intention of making generalized conclusions or generalizations. Inferential statistics are statistics that are used to analyze sample data, the results will be generalized (referenced) for the population.

## Notes

### Note 1. Respondent Profile

Furthermore, to obtain data in this test, the questionnaire was distributed to 92 respondents of Silver Indonesia Batam. The number of sample questionnaires was generated from the calculation of the sample size and the questionnaire was distributed to Silver Indonesia Batam customers. The grouping of respondents was divided based on gender, age and position in a customer company from Silver Indonesia Batam.

Note 2. This is an example for note 2

Table 3. Distribution of Respondents by Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	68	74.0	74.0	74.0
	Female	24	26.0	26.0	25.0
	Total	92	100.0	100.0	

Based on the table above, the age between 21 years and 30 years has a total of 35 respondents. Then for the age 31 years to 40 years have 23 respondents and the last is the age from 41 years to 50 years has 34 respondents. It can be concluded that the most respondents are respondents aged from 21 years to 30 years as many as 35

respondents from Silver Indonesia Batam customers

### Note 3. Descriptive Analysis

Descriptive analysis is an analysis based on data obtained from respondents and expressed in tabulated data.

Tabel 4. Result of Description Analysis

		Location (X1)	Promotion (X2)	Product (X3)	Price (X4)	Customer Satisfaction (Y)
N	Valid	92	92	92	92	92
	Missing	0	0	0	0	0
Mean		41.5435	41.6304	41.3478	41.7826	41.5326
Std. Error of Mean		.48691	.47481	.49903	.50672	.51016
Median		40.0000	40.0000	40.0000	40.0000	40.0000
Std. Deviation		4.67025	4.55423	4.78651	4.86030	4.89326
Variance		21.811	20.741	22.911	23.623	23.944
Skewness		.796	.870	.777	.763	.614
Std. Error of Skewness		.251	.251	.251	.251	.251
Kurtosis		-.845	-.726	-.788	-.969	-1.001
Std. Error of Kurtosis		.498	.498	.498	.498	.498
Minimum		34.00	34.00	34.00	34.00	34.00
Maximum		50.00	50.00	50.00	50.00	50.00

Based on Table 4 that the results of descriptive statistical testing explain that the results of the Mean are higher than the minimum value, this illustrates that the four variables need to be evaluated more deeply, these variables are location variables, promotional variables, product variables and price variables. The mean value in the four variables is that the location variable has a value of 41.5435 with a Minimum value of 34. Then the Promotion variable has a Mean value of 41.6782 with a minimum value of 34. Furthermore, the product variable has a mean value of 41.3478 with a minimum value of 34 and the most recent is the price variable which has a Mean value of 41.7826 with a minimum value of 34. The four variables, namely the location variable, the

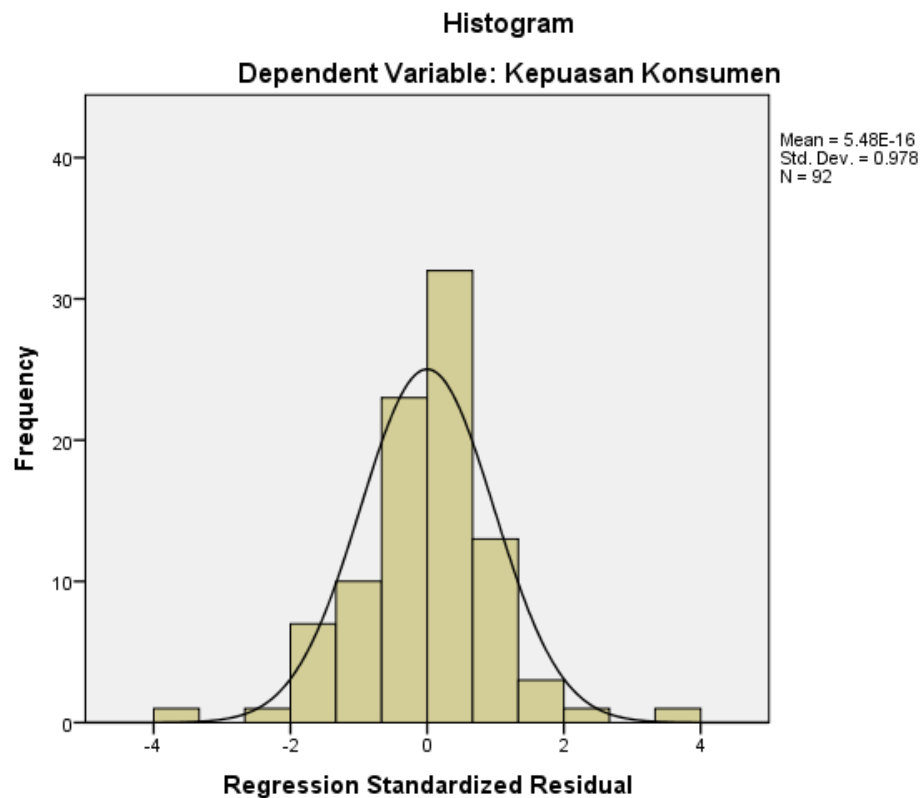


promotion variable, the product variable and finally the price variable need to be considered in terms of all indicators.

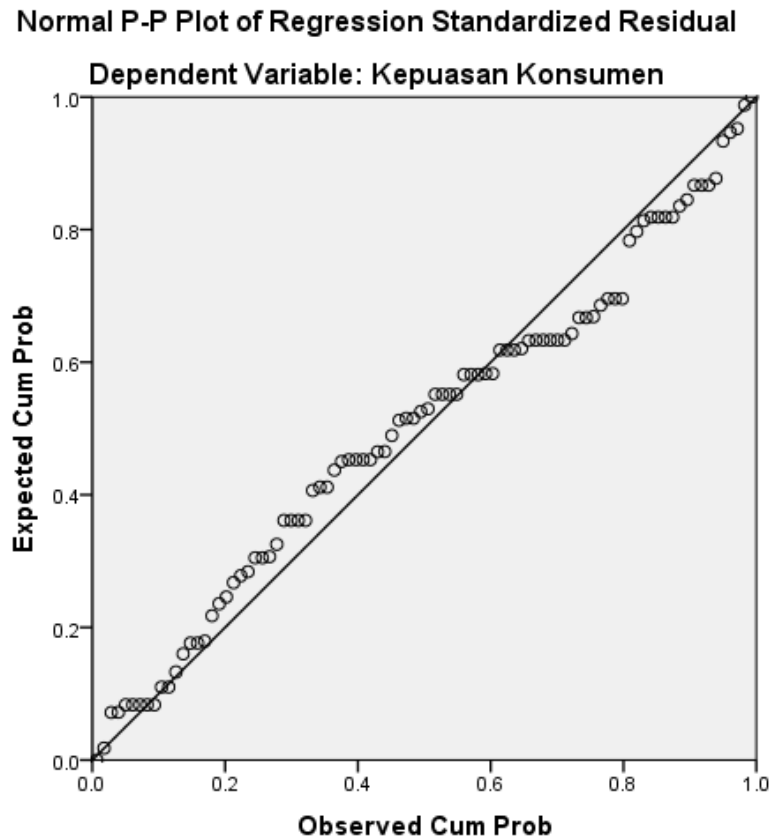
#### Note 4. Prerequisite Analysis

##### (1) Normality Test

For this study, a normality test was conducted to determine whether the data was normally distributed or not. This normality test was carried out with the statistical tool of the SPSS software application. The normality test can be displayed and can be displayed with a histogram graph as shown in the figure below. From the histogram, it can be seen that the data spreads data from left to right, so the data is declared to meet the normality assumption, here is the histogram graph in the normality test below:



Then in the image below, Figure 4 shows the P-P Plot normality graph, it appears that the dots spread out around the diagonal line and the distribution follows the direction of the diagonal line. The normality graph in Figure 4 can be concluded that the modal regression line fulfills the assumption of normality.



## (2) Multicollinearity Test

Multicollinearity testing is carried out to ensure that there is no correlation between the independent variables. Symptoms of multicollinearity can be known through a test that can detect whether the equation formed occurs multicollinearity. To detect the symptom of multicollinearity is the inflation factor (VIF) variable. The way is to look at the independent variable on the dependent variable, based on the VIF value. If the value is less than 10 then it shows that the model has no symptoms of multicollinearity. The explanation in table 5 shows that the VIF value for each independent variable is less than 10. That the VIF value of the VIF location variable is 1.688 and then the promotion variable for the VIF value is 1.181, and the VIF value on the product variable is 1.413, the price variable can also It can be concluded that the VIF value is 2.005. Meanwhile, the tolerance value for location has a value of 0.592 and for the Tolerance value for the promotional variable is 0.847. Furthermore, for the third variable, namely the product variable is 0.708 and the last is the price variable from the results of this test and the value of the tolerance result is 0.499. Therefore, it can be concluded that there is no multicollinearity between the independent variables.

Table 5. Result of Multikolinearitas Test

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Lokasi	.592	1.688
	Promosi	.847	1.181
	Produk	.708	1.413
	Harga	.499	2.005

## 1.1 Closing Chapter

### A. Conclusion

Based on the results and discussion above, it can be concluded as follows:

1. The influence of location has a positive and significant effect on customer satisfaction in CV Silver Indonesia Batam.
2. The effect of promotion has a positive but insignificant effect on customer satisfaction of CV Silver Indonesia Batam.
3. Product influence has a positive and significant effect on customer satisfaction CV Silver Indonesia Batam.

The effect of price has a positive and significant effect on customer satisfaction of CV Silver Indonesia Batam.

Simultaneously, location, promotion, product, and price have a positive and significant effect on customer satisfaction in CV. Silver Indonesia Batam.

### B. Suggestions

a. Based on this research, then submit the following suggestions:

The results of the research for the location variable are very significant because they affect the performance of the company. The location of the company has a huge influence on the progress of the company. Location greatly affects the development of the company. Where the location is very important for the company where in its current condition is CV Silver Indonesia. There are so many benefits of choosing a business place or a strategic location to provide support to CV consumers. Silver Indonesia Batam.

1. The results of research that have been done, that the variable price is the variable that most influences customer satisfaction. Price has always been important in the eyes of consumers, because consumers always prioritize price as a benchmark for budgets in every purchase plan for goods or services. The price variable is the most important thing because the price is the costing of the initial budget adjustment that the company will spend in this case the consumer from CV Silver Indonesia.

2. Provide advice to the management of CV Silver Indonesia Batam to pay more attention to price control to consumers, pay more attention to price in more detail before giving to consumers. So that consumers are happier to receive a good price, good in the sense that it is in accordance with the products and solutions provided by CV. Silver Indonesia to consumers from CV. Silver Indonesia.
3. Improve the location, because the current location is in the housing area. If there is a repair, you should look for an office area that is specifically for company business offices. If it is better the advice is to find a strategic area close to the consumer. To be more affordable in terms of after sale support from CV. Silver Indonesia Batam to customers of CV. Silver Indonesia Batam.
4. The parking location needs to be improved and regulated accordingly. The parking location will also affect the convenience of consumers if the consumer visits the CV Silver Indonesia office.
5. For the product it is good, but continues to be improvised to new products. The new products in question are products that can provide automation ideas and reduce costs to the company.
6. And lastly for promotion, the focus is more on CV. Silver Indonesia products, and always more improvisation regarding the promotional model.

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## The Welfare Loss Analysis of Regional Water Companies: Evidence from Unhealthy PDAM in Indonesia

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### Abstract

Regional Water Companies (Perusahaan Daerah Air Minum/ PDAM) in Indonesia still does not have satisfactory performance. Losses, cost inefficiency, and production inefficiency are several highlighted problems. This study aims to describe and estimate the economic welfare losses of PDAMs in Indonesia using a deadweight loss analysis. This study only selected the unhealthy performance of PDAM in 2018 with the following specific criteria: financial losses, non-revenue water above the standard, and non-full cost recovery. The data obtained from the Water Supply Improvement System Implementation Agency (Badan Peningkatan Penyelenggaraan Sistem Penyediaan Air Minum/BPPSPAM). The results show that from 112 PDAMs that meet the criteria, the estimated inefficiency value is IDR 87,770,955,471.42 at a price elasticity level of -0.2 or 25.28% of the total financial loss value of all companies. Meanwhile, the highest inefficiency value was IDR 351,083,821,885.69 at a price elasticity level of -0.8 or 101.11% of the total value of the company's financial losses. This study encourages company management to improve company performance continually, especially in production and service efficiency. PDAM management also needs to make tariff adjustments every two years after the mandate of the Minister of Home Affairs Regulation Number 71 of 2016 concerning Calculation and Determination of Drinking Water Rates.

**Keywords:** inefficiency, losses, water companies, performance.

### 1. Background

One of the development objectives following Todaro and Smith (2015) is to provide goods and or services needed by the community at large. The Regional Government forms a Local-Regional Owned Enterprises (LROE) as a development agent for one of them to provide goods and or services needed by these people. In addition to fulfilling many people's basic needs, LROE also aims to gain profits and increase regional revenue under Government Regulation Number 54 of 2017 concerning Regional Owned Enterprises. The Regional Drinking Water Company (Perusahaan Daerah Air Minum/PDAM) as an agent of the local government in providing public services in meeting drinking water needs and obtaining local revenue from a share of the generated profits and even taxes.

The performance results of PDAMs throughout Indonesia have not been satisfactory in the 2018 financial year. The health level of PDAMs is classified as low, and there has not been any improvement in recent years. The percentage of healthy PDAMs compared to unhealthy ones has not shown a significant increase. PDAMs that have performed well have not reached 60.00% of the total PDAMs evaluated in the last three years. Although there was an increase in the number of PDAMs assessed from 2017 to 2018, the health number of PDAM not much changing indicates that the efforts made to improve performance are not maximal in achieving the health

level of PDAMs.

Table 1. PDAM Health Performance in Last Three Year

PERFORMANCE CATEGORY		2016	%	2017	%	2018	%
HEALTH ( <i>SEHAT</i> )		209	55,29	223	59,63	224	58,95
UNHEALTHY ( <i>TIDAK SEHAT</i> ):	- NOT HEALTY ( <i>KURANG SEHAT</i> )	103	27,25	99	26,47	102	26,84
	- SICK ( <i>SAKIT</i> )	66	17,46	52	13,90	54	14,21
<b>TOTAL</b>		<b>378</b>		<b>374</b>		<b>380</b>	

Source: BPPSPAM, 2019.

From the results of this underperformance, we try to estimate the value of the loss of welfare of the PDAM that is not performing well by adding another proxy related to the problems faced by PDAM in achieving a healthy level of performance. The regional government, as the holder of the monopoly rights of PDAM and as the regulator in the drinking water sector, is expected to be able to collaborate with other stakeholders in minimizing the lost welfare as well as to improve the health performance of PDAMs in providing public service obligations in the drinking water supply.

## 2. Literature Review

### 2.1. PDAM: Performance and Challenges

The number of PDAMs throughout Indonesia evaluated in 2018 was 380 PDAMs spread across four regions: Regional I 105 PDAM, Regional II 108 PDAM, Regional III 115 PDAM, and Regional IV 52 PDAM. The evaluated performance results are still unsatisfactory, with only 224 PDAMs or 58.95% performing "HEALTHY" while the remaining 156 PDAMs are in the "LESS HEALTHY" and "SICK" categories. The most important thing in evaluating PDAM operations is how PDAM can meet aspects of quality, quantity, and continuity of water supply served to the community (BPPSPAM, 2019).

With the customer market segment among urban populations, PDAM is expected to be facing challenges in terms of service by predicting an increase in the number of water demand from customers. It is supported by projected urban population data from BPS - Statistics Indonesia (2020) that in 2020 the percentage of the urban population reaches 56.7%; this percentage will increase to 66.6% in 2035 and also increase occurs in the number populations in Indonesia. Therefore, a cost-efficiency strategy is needed to arrive at a sustainable business stage in responding to the increasing market segment of the urban population.

### 2.2. Efficiency and Rates

PDAM is classified as a monopoly business segment because not many private companies compete with PDAM in supplying clean water to the public through a piping system (Muftiadi, 2017). It requires a high average investment to enter the water market, considered to have a large service distribution level. The possibility of market failure is also relatively high (Sudarsono and Nurkholis, 2020). With the advantages and disadvantages in the monopoly market, PDAMs must serve customers well and profit to increase regional income. Although the average PDAM tariff has exceeded the national average production cost, 62.40% of PDAMs have not met the cost recovery. As indicated by the high percentage of non-revenue water, inefficiency in production costs and service operations dramatically affects this cost recovery's fulfillment. This efficiency is a goal that must be achieved by a company to achieve economic of scale. This efficiency leads to how the company can finance itself



from the revenue represented by full-cost recovery and the profit gained, but still carry out the Regional Government's public service obligation.

For this reason, service quality and seeking profit are two things that cannot be separated. They must be combined so that there is no interdependence between the two (Wibowo, 2015). The PDAM challenge is how synergy, support, and collaboration need to be strengthened and enhanced by stakeholders to improve and follow-up to increase performance indicators to achieve at least two company goals; services and profits (BPPSPAM, 2019).

The consequence of the PDAM monopoly is related to the Regional Government's tariff, whether it has met cost recovery and profits. PDAM is mandated by the Minister of Home Affairs to make adjustments every year to propose new tariffs, according to Minister of Home Affairs Regulation Number 71 of 2016. The proposed tariff adjustment accommodates five aspects; affordability and fairness, service quality, cost recovery, water use efficiency; raw water protection; and transparency, and accountability. By the Deadweight Loss calculation, it is essential to show how rates can reduce or even increase welfare loss, both for companies and communities as PDAM primary customers. Welfare loss is closely related to the level of PDAM efficiency so that it can be a starting point for initiating performance improvements by improving the efficiency of the PDAM.

### 3. Methodology

#### 3.1. Data Sources

The data is processed from the PDAM performance indicators in 2018 owned by the Agency for Improvement of the Implementation Drinking Water Supply System (Badan Peningkatan Penyelenggaraan Sistem Penyediaan Air Minum/BPPSPAM). Of the 380 PDAMs studied, 224 were categorized into Healthy and 156 PDAMs is Unhealthy. The data is then narrowed down to only unhealthy PDAMs that experience three conditions: financial loss, above standard NRW, and Not yet FCR. Data for tariff and cost of production of water average per m3 are available in the performance data resume for each PDAM; however, data for the volume of water sold and consumed by customers are not available. The water volume consumed by customers is estimated from the data on the total volume of water produced by PDAMs for a year minus the percentage of non-revenue water from each PDAM so that the real volume value of water sold is obtained.

#### 3.2. Estimation Formula

This study estimates the welfare loss value using dead-weight analysis, as was done by Porcher et al. (2017) on Water Companies in England and Wales, and Rosalina et al. (2018) for PDAMs in the Java region. The calculation of deadweight loss uses the following formula:

$$DWL = \frac{(\Delta Q \times [P - MC])}{2}$$

DWL calculates the Deadweight loss area triangle, calculated from the difference  $\Delta Q$ , and multiplied by P and MC's difference.  $\Delta Q$  is obtained from calculating the increase in demand due to price elasticity; the level of price elasticity on the market is between -0.2, -0.5, and -0.8, following the research of Arbués et al. (2004) and Porcher et al. (2017) because there are not many references related to the elasticity of drinking water service users. The calculation for  $\Delta Q$  follows the formula:

$$\Delta Q_{1,2,3} = \frac{[MC - P]}{P} \times \varepsilon_{1,2,3} \times Q_0$$

P is the price, given by the average drinking water tariff data per m3, and MC is the marginal cost of the average cost of production data per m3 per PDAM. From the MC minus the P value, a margin rate is obtained that will be used as a benchmark for whether the PDAM is included in the full-cost recovery category or not. The amount

of this margin rate will determine the amount of DWL and the volume sold, which is the multiplying element of this margin rate.

## 4. Findings and Results

### 4.1. Descriptive Statistics

From the analysis of performance data on 380 PDAMs, it is found that 112 PDAMs have these problems: unhealthy, loss, non-FCR, and NRW above the standard. The average performance score for unhealthy PDAMs is 2.23, with the lowest score of 1.28 in PDAM Bima Regency in West Nusa Tenggara. The highest score was PDAM Tanah Laut Regency in South Kalimantan and PDAM Dharma Tirta Sampit in Central Kalimantan, both of which had a performance score of 2.80. The 112 PDAMs have an average number of subscriber connections under 10,000 customers, below the average of all PDAMs in Indonesia is at the level of 31,446 customer. The PDAMs studied lost an average of 3.1 billion, with total losses in the 2018 financial statements for 112 PDAMs reaching 347 billion in financial reports.

Tabel 2. Summary of Performance Indicator Data from 112 Unhealthy PDAMs

Variables		Total	Mean	Std. Dev.	Min	Max
Performance Score – BPPSPAM			2.232857	0.3815484	1.28	2.80
Customer's Connection	units	1,106,580	9,880.179	7737.01	460	50,464
Service Coverages	%		0.267343	0.1612407	0.0299	0.7583
Losses (Financial Statements)	IDR 000.00	-347,236,831	-3,100,329	3,717,840	-24,166,190.00	-843.00
Non-Revenue Water/NRW	%		42.24893	16.23925	20.65	90.78
Average Rates	IDR/m <sup>3</sup>		4.320	1587.723	1,414.00	9,726.00
Average Cost of Water Production	IDR/m <sup>3</sup>		8,492.723	14,446.35	2,528.00	116,149.00
Margin (Rates – CoWP)	IDR/m <sup>3</sup>		-4,172.723	13,780.26	-106,423.00	-61.00
Water Sold Volume	m <sup>3</sup>	163,376,927.94	1,458,723	1,194,033	71,466.88	5,180,545.00

Source: Author's processed results

In terms of price, the average water tariff per m<sup>3</sup> at these 112 PDAMs is IDR 4,320.00. The lowest tariff is IDR 1,414.00 at PDAM Mual Nauli, Tapanuli Tengah Regency, in North Sumatra Province. The highest tariff is IDR 9,726.00 at PDAM Tirta Dumai Bersemai Dumai City in the Province Riau. The average production cost per m<sup>3</sup> at the 112 PDAMs studied was IDR 8,492.72, so the margin price minus by the average cost of production per m<sup>3</sup> was IDR -4,172.72. The highest margin is at PDAM Tirta Dumai Bersemai, Dumai City, in Riau Province, amounting to IDR 106,423.00, indicating the high tariffs in this group cannot cover the average cost of production yet. From these findings, it is concluded that the high tariffs set by the Regional Government are still unable to meet the recovery of PDAM production costs because the production costs vary depending on the level of complexity and difficulty in the distribution and production process.

### 4.2. Estimating Deadweight Loss

The DWL estimation results below divide 112 PDAMs into four regions with each PDAM meets the three criteria above. This regional division follows the division of the regional list issued by BPPSPAM. Detailed DWL estimation for all 112 PDAMs shows in the Appendix.

Tabel 3. Unhealthy PDAM's deadweight loss under three level of elasticity

Regional / PDAM		Margin IDR/m³	Water Sold (m³)	Predicted Water Sold (m³)			Deadweight Loss (IDR)		
				ε-0.2	ε-0.5	ε-0.8	ε-0.2	ε-0.5	ε-0.8
I	45	4,230	83,424,625	92,877,727	107,057,380	121,237,033	33,131,828,897	82,829,572,244	132,527,315,590
II	5	1,218	9,019,564	9,598,605	10,467,165	11,335,726	416,324,355	1,040,810,887	1,665,297,420
III	49	3,048	56,546,442	61,751,265	69,558,501	77,365,736	10,912,149,420	27,280,373,549	43,648,597,679
IV	13	9,351	14,386,297	16,472,733	19,602,386	22,732,039	43,310,652,799	108,276,631,998	173,242,611,198
Total	112	4,173	163,376,928	180,700,330	206,685,432	232,670,534	87,770,955,471	219,427,388,679	351,083,821,886

Source: Author's Processed Results

From the results of the DWL estimation it shows the distribution and severity of DWL in each region. The regional areas with the highest DWL value are Regional IV in the PDAMs of Eastern Indonesia: Bali, Nusa Tenggara, Maluku, and Papua. At the same time, the lowest is in Regional II or PDAM in Java Island. From the summary table above, the most efficient regional areas, according to the DWL results, apart from the small number of PDAMs, also have the lowest DWL values. Meanwhile, the number of PDAMs that have not achieved efficiency in performance, finance, FCR, and NRW is ranked from the largest in region III with 49 PDAMs and regional I with 45 PDAMs. The third place is Regional IV with 13 PDAMs, and the lowest rank is in Region II, with only 5 PDAMs. At the level of price elasticity of -0.2, the demand or volume prediction sold/consumed by customers reaches 180,700,330 m<sup>3</sup> or an increase of 17,323,402 m<sup>3</sup> or 10.60% of the initial volume. Meanwhile, at the elasticity level of -0.5, the predicted volume sold/consumed by customers is 43,308,504 m<sup>3</sup> or 26.51% of the initially sold volume. At the most significant elasticity level of -0.8, the volume sold/consumed by customers is 69,293,606 or 42.41% of the initial volume value.

The lesson that can be drawn from this research results is that the efficiency of PDAMs lies in two critical aspects: production costs and services. Production costs are related to the cost of goods per m<sup>3</sup>. Services are related to rates that must meet aspects of quality, quantity, and continuity. This service is closely related to how the PDAM can increase the tariff set but while maintaining and improving aspects of the service. The aspect of service to customers depends on efficiency. The relation number and characteristics of customers in previous studies show that the greater the number of water company customers, the higher the level of efficiency and economic achievement (Angeles-Castro et al, 2018).

## 5. Conclusion

The estimated value of inefficiency with the deadweight loss approach is closely related to the value of the PDAM's financial losses. With three levels of estimated elasticity of demand, we get the result at the elasticity level of -0.8; the inefficiency due to loss of welfare is equal to the value of loss in the financial statements. After estimating the DWL, we encourage PDAM management to improve company performance through production efficiency and excellent service. These two aspects are closely related to how the PDAM adjusts tariffs and cost recovery to achieve company efficiency. PDAM management also needs to propose tariff adjustments to the Regional Government every two years, taking into account company efficiency, affordability, and accountability, according to the Minister of Home Affairs Regulation Number 71 of 2016.

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**APPENDIX – RESULT OF DEADWEIGHT LOSS ESTIMATION UNDER THREE DIFFERENT ELASTICITY LEVEL**

No.	Regi- onal Area	Name of PDAM	Financial Losses	Price / Rates	Marginal Cost	Margin	Water Sold	Predicted Water Sold (m3)			Deadweight Loss (IDR)		
			(IDR 000.00)	(IDR/ m3)	(IDR/m3)	IDR/m3)	m3	-0.2	-0.5	-0.8	-0.2	-0.5	-0.8
1	I	PDAM Tirta Mon Krueng Baro	-a3.597.508	5.113	7.725	-2.612	835.906	921.311	1.049.419	1.177.527	111.539.298,02	278.848.245,05	446.157.192,08
2	I	PDAM Tirta Aneuk Laot	-240.213	3.226	3.797	-571	1.116.901	1.156.439	1.215.746	1.275.054	11.288.144,32	28.220.360,79	45.152.577,26
3	I	PDAM Tirta Keumueneng	-1.676.168	4.116	4.818	-702	2.807.309	2.903.069	3.046.708	3.190.348	33.611.597,34	84.028.993,35	134.446.389,36
4	I	PDAM Tirta Krueng Meureudu	-7.064.126	1.508	8.411	-6.903	1.167.116	2.235.630	3.838.402	5.441.174	3.687.978.347,47	9.219.945.868,67	14.751.913.389,87
5	I	PDAM Tirta Mon Pase	-3.466.929	4.988	6.375	-1.387	5.180.545	5.468.653	5.900.815	6.332.977	199.802.959,35	499.507.398,38	799.211.837,41
6	I	PDAM Tirta Peusada	-1.739.557	4.004	4.985	-981	977.550	1.025.451	1.097.302	1.169.153	23.495.399,06	58.738.497,65	93.981.596,25
7	I	PDAM Tirta Bengi	-939.903	2.720	4.077	-1.357	3.777.016	4.153.885	4.719.187	5.284.490	255.705.250,71	639.263.126,78	1.022.821.002,85
8	I	PDAM Tirta Agara	-5.005.629	1.822	4.388	-2.565	4.913.384	6.297.330	8.373.249	10.449.167	1.774.910.256,79	4.437.275.641,98	7.099.641.027,17
9	I	PDAM Tirta Singkil	-466.592	2.146	4.272	-2.126	610.852	731.884	913.432	1.094.980	128.656.884,47	321.642.211,17	514.627.537,88
10	I	PDAM Tirta Sejuk	-494.641	1.698	2.528	-830	3.127.561	3.433.318	3.891.953	4.350.588	126.889.080,29	317.222.700,72	507.556.321,16
11	I	PDAM Tirta Meulaboh	-859.829	5.226	5.417	-191	1.589.386	1.601.004	1.618.430	1.635.857	1.109.498,49	2.773.746,24	4.437.993,98
12	I	PDAM Tirta Fulawan	-1.031.733	3.472	6.345	-2.873	270.995	315.844	383.116	450.389	64.424.797,51	161.061.993,76	257.699.190,02
13	I	PDAM Tirta Bulian	-1.764.559	4.379	4.907	-529	1.054.889	1.080.327	1.118.486	1.156.644	6.728.546,74	16.821.366,84	26.914.186,95
14	I	PDAM Mual Natio	-1.723.256	3.084	4.178	-1.095	1.875.604	2.008.672	2.208.274	2.407.876	72.854.793,14	182.136.982,86	291.419.172,57
15	I	PERUMDAM Tirta Bina	-483.762	4.971	5.284	-313	764.338	773.963	788.401	802.839	1.506.365,57	3.765.913,93	6.025.462,29
16	I	PDAM Tirta Silaupiasa	-3.715.295	4.671	5.596	-926	2.477.449	2.575.571	2.722.754	2.869.937	45.430.510,49	113.576.276,23	181.722.041,97
17	I	PDAM Tirta Sari	-1.520.899	3.886	4.509	-624	1.269.223	1.309.919	1.370.963	1.432.008	12.697.195,39	31.742.988,46	50.788.781,54
18	I	PDAM Tirta Kualo	-11.084.787	3.155	4.927	-1.772	4.052.515	4.507.732	5.190.559	5.873.385	403.322.710,02	1.008.306.775,05	1.613.290.840,08
19	I	PDAM Mual Nauli	-514.328	1.414	2.593	-1.180	516.900	603.099	732.397	861.695	50.857.283,73	127.143.209,33	203.429.134,93

20	I	PDAM Tirta Malem	-3.580.498	2.569	3.992	-1.423	4.063.716	4.513.905	5.189.187	5.864.469	320.308.955,86	800.772.389,64	1.281.235.823,43
21	I	PDAM Kabupaten Pasaman Barat	-2.632.666	3.750	5.428	-1.678	655.665	714.343	802.359	890.376	49.230.543,53	123.076.358,82	196.922.174,11
22	I	PDAM Kota Sawahlunto	-587.016	3.912	4.217	-305	1.188.112	1.206.639	1.234.428	1.262.218	2.825.259,83	7.063.149,58	11.301.039,33
23	I	PDAM Tirta Langkisau	-2.083.650	2.878	3.307	-429	2.083.243	2.145.349	2.238.509	2.331.669	13.321.824,61	33.304.561,53	53.287.298,44
24	I	PDAM Kabupaten Solok Selatan	-4.412.849	2.391	4.375	-1.983	3.774.796	4.401.245	5.340.918	6.280.591	621.123.994,65	1.552.809.986,63	2.484.495.978,60
25	I	PDAM Kabupaten Solok	-263.056	2.576	2.869	-293	1.432.633	1.465.223	1.514.109	1.562.994	4.774.461,39	11.936.153,49	19.097.845,58
26	I	PDAM Tirta Indra	-6.601.342	4.046	5.956	-1.909	2.373.324	2.597.399	2.933.513	3.269.626	213.880.104,93	534.700.262,32	855.520.419,72
27	I	PDAM Tirta Indragiri	-7.621.490	4.785	10.036	-5.251	998.395	1.217.520	1.546.208	1.874.896	575.313.443,56	1.438.283.608,91	2.301.253.774,26
28	I	PDAM Tirta Siak	-4.025.354	7.637	8.940	-1.304	4.000.531	4.137.042	4.341.810	4.546.577	89.005.498,44	222.513.746,10	356.021.993,76
29	I	PDAM Tirta Dumai Bersemai	-5.124.812	9.726	116.149	-106.423	155.498	495.792	1.006.235	1.516.677	18.107.592.963,8 2	45.268.982.409,54	72.430.371.855,26
30	I	PDAM Tirta Nusa Kabupaten Natuna	-695.949	3.023	3.704	-681	1.425.159	1.489.369	1.585.684	1.681.999	21.863.487,59	54.658.718,97	87.453.950,35
31	I	PDAM Tirta Muaro Jambi	-553.329	6.675	7.388	-713	1.113.536	1.137.325	1.173.008	1.208.691	8.480.708,08	21.201.770,19	33.922.832,31
32	I	PDAM Tirta Pengabuan	-4.736.763	3.142	10.973	-7.831	532.410	797.801	1.195.888	1.593.976	1.039.140.340,73	2.597.850.851,82	4.156.561.362,91
33	I	PDAM Tirta Saka Selabung	-6.385.893	4.438	6.549	-2.110	1.408.398	1.542.383	1.743.360	1.944.338	141.354.199,79	353.385.499,47	565.416.799,15
34	I	PDAM Lematang Enim	-24.166.190	5.298	7.976	-2.679	3.735.455	4.113.090	4.679.542	5.245.995	505.841.943,66	1.264.604.859,15	2.023.367.774,64
35	I	PDAM Tirta Ogan	-5.272.186	3.326	7.933	-4.607	777.050	992.316	1.315.215	1.638.113	495.864.768,63	1.239.661.921,57	1.983.459.074,50
36	I	PDAM Tirta Raja	-1.403.635	4.983	5.534	-551	2.600.282	2.657.788	2.744.046	2.830.305	15.842.829,68	39.607.074,19	63.371.318,71
37	I	PDAM Tirta Betuah	-425.362	5.350	5.442	-92	3.622.187	3.634.645	3.653.331	3.672.018	573.050,31	1.432.625,78	2.292.201,25
38	I	PDAM Way Komering	-843	4.690	5.700	-1.009	310.223	323.584	343.626	363.668	6.740.830,25	16.852.075,62	26.963.320,99
39	I	PDAM Tirta Lematang Lahat	-2.939.275	4.497	7.837	-3.340	1.060.650	1.218.203	1.454.532	1.690.861	263.112.972,04	657.782.430,11	1.052.451.888,18

40	I	PDAM Kabupaten Belitung	-2.304.995	6.283	10.376	-4.092	422.245	477.258	559.779	642.299	112.557.590,94	281.393.977,35	450.230.363,75
41	I	PDAM Tirta Rafflesia	-1.924.311	2.563	4.795	-2.232	358.801	421.294	515.032	608.771	69.741.811,78	174.354.529,45	278.967.247,12
42	I	PDAM Tirta Tebo Emas	-1.100.081	2.326	3.262	-936	2.522.997	2.726.051	3.030.633	3.335.215	95.029.548,67	237.573.871,69	380.118.194,70
43	I	PDAM Tirta Alami Kabupaten	-4.676.949	6.318	13.701	-7.383	3.868.458	4.772.568	6.128.732	7.484.897	3.337.520.997,91	8.343.802.494,78	13.350.083.991,64
44	I	PDAM Way Guruh	-255.750	4.060	4.926	-866	158.147	164.893	175.013	185.133	2.921.258,40	7.303.146,01	11.685.033,61
45	I	PDAM Way Sekampung	-314.011	3.916	4.622	-706	397.275	411.599	433.086	454.573	5.056.589,44	12.641.473,59	20.226.357,74
46	II	PERUMDAM Tirta Intan	-12.409.451	3.648	5.139	-1.491	3.700.201	4.002.668	4.456.369	4.910.069	225.489.206,64	563.723.016,60	901.956.826,57
47	II	PDAM Tirta Anom Kota	-2.686.494	5.089	5.710	-621	2.044.290	2.094.182	2.169.020	2.243.858	15.491.489,69	38.728.724,22	61.965.958,76
48	II	PDAM Tirta Bara	-2.765.527	4.945	6.971	-2.026	765.918	828.678	922.819	1.016.959	63.576.242,13	158.940.605,33	254.304.968,53
49	II	PDAM Maja Tirta	-1.583.719	3.485	3.883	-398	1.186.763	1.213.869	1.254.529	1.295.189	5.394.202,78	13.485.506,96	21.576.811,13
50	II	PDAM Kota Blitar	-1.143.720	3.006	4.561	-1.555	1.322.393	1.459.207	1.664.429	1.869.650	106.373.213,70	265.933.034,25	425.492.854,80
51	III	PDAM Tirta Senentang	-2.984.677	7.988	9.224	-1.236	810.854	835.947	873.586	911.226	15.507.484,35	38.768.710,88	62.029.937,42
52	III	PDAM Kabupaten Kapuas Hulu	-4.496.696	3.580	4.575	-995	2.325.868	2.455.155	2.649.086	2.843.017	64.320.328,62	160.800.821,54	257.281.314,47
53	III	PDAM Tirta Pancur Aji	-4.390.068	3.805	5.402	-1.597	2.027.632	2.197.836	2.453.142	2.708.448	135.907.800,03	339.769.500,07	543.631.200,11
54	III	PDAM Kabupaten Landak	-649.468	1.899	2.957	-1.058	545.478	606.259	697.431	788.602	32.153.167,50	80.382.918,76	128.612.670,02
55	III	PDAM Tirta Galaهران	-399.967	4.136	4.695	-559	709.869	729.057	757.840	786.623	5.363.167,11	13.407.917,76	21.452.668,42
56	III	PDAM Dharma Tirta Sampit	-2.551.232	4.371	5.053	-682	2.937.206	3.028.864	3.166.350	3.303.836	31.255.207,77	78.138.019,42	125.020.831,07
57	III	PDAM Kabupaten Kapuas	-17.801.649	4.940	9.257	-4.317	1.126.608	1.323.513	1.618.872	1.914.230	425.020.535,80	1.062.551.339,49	1.700.082.143,19
58	III	PDAM Kabupaten Sukamara	-2.514.628	2.909	9.924	-7.015	141.685	210.019	312.520	415.021	239.681.946,23	599.204.865,58	958.727.784,93



59	III	PDAM Kota Palangka Raya	-5.371.099	7.359	9.060	-1.700	1.746.183	1.826.907	1.947.994	2.069.081	68.615.809,33	171.539.523,33	274.463.237,33
60	III	PDAM Kabupaten Gunung Mas	-5.500.811	6.614	12.731	-6.117	460.930	546.189	674.077	801.966	260.764.166,56	651.910.416,40	1.043.056.666,24
61	III	PDAM Kabupaten Pulang Pisau	-1.209.207	5.354	6.988	-1.633	544.589	577.830	627.691	677.552	27.141.174,47	67.852.936,17	108.564.697,86
62	III	PDAM Kabupaten Murung Raya	-47.490	3.770	5.531	-1.761	939.268	1.027.016	1.158.638	1.290.261	77.262.186,05	193.155.465,12	309.048.744,20
63	III	PDAM Kabupaten	-761.908	3.951	4.575	-623	427.379	440.879	461.128	481.377	4.205.124,04	10.512.810,11	16.820.496,17
64	III	PDAM Kabupaten Kotabaru	-7.296.781	3.822	5.425	-1.603	2.560.900	2.775.715	3.097.938	3.420.161	172.174.546,79	430.436.366,97	688.698.187,16
65	III	PDAM Tirta Sendawar	-19.768.535	7.612	13.341	-5.729	1.515.440	1.743.553	2.085.721	2.427.890	653.427.979,97	1.633.569.949,92	2.613.711.919,87
66	III	PDAM Kota Tomohon	-1.403.716	6.082	7.747	-1.665	962.643	1.015.349	1.094.409	1.173.468	43.878.036,48	109.695.091,21	175.512.145,94
67	III	PDAM Kabupaten Kepulauan Siau Tagulandang Biaro	-41.498	4.757	5.235	-478	142.896	145.768	150.075	154.383	686.345,01	1.715.862,52	2.745.380,04
68	III	PDAM Kabupaten Kepulauan Talaud	-101.009	2.713	2.920	-208	2.091.811	2.123.732	2.171.613	2.219.494	3.319.757,67	8.299.394,19	13.279.030,70
69	III	PDAM Kabupaten Minahasa	-2.224.920	5.658	6.715	-1.058	2.260.791	2.345.261	2.471.966	2.598.671	44.684.618,33	111.711.545,83	178.738.473,33
70	III	PDAM Kota Manado	-5.417.541	6.783	53.220	-46.437	71.467	169.321	316.101	462.882	2.272.015.736,14	5.680.039.340,36	9.088.062.944,57
71	III	PDAM Kabupaten Majene	-2.839.205	4.179	6.809	-2.630	952.151	1.071.995	1.251.763	1.431.530	157.595.861,17	393.989.652,94	630.383.444,70
72	III	PDAM Kabupaten Mamasa	-1.569.823	4.382	9.193	-4.811	680.648	830.105	1.054.290	1.278.475	359.518.118,83	898.795.297,07	1.438.072.475,30
73	III	PDAM Uwe Lino	-3.082.482	3.525	4.278	-753	3.546.564	3.698.085	3.925.367	4.152.649	57.047.761,34	142.619.403,36	228.191.045,37
74	III	PDAM Kota Palu	-2.286.154	4.279	8.614	-4.335	193.751	233.008	291.894	350.780	85.090.209,65	212.725.524,12	340.360.838,59
75	III	PDAM Kabupaten Poso	-885.806	3.410	3.626	-216	991.028	1.003.583	1.022.416	1.041.248	1.355.935,91	3.389.839,78	5.423.743,64
76	III	PDAM Kabupaten Banggai Kepulauan	-789.426	2.961	3.901	-940	307.791	327.334	356.647	385.961	9.184.885,03	22.962.212,57	36.739.540,11

77	III	PDAM Kabupaten Banggai Laut	-846.102	2.003	3.083	-1.080	356.603	395.058	452.741	510.424	20.765.925,29	51.914.813,22	83.063.701,15
78	III	PDAM Uemagali	-5.724.508	2.354	4.323	-1.969	2.254.726	2.631.919	3.197.708	3.763.496	371.346.036,19	928.365.090,48	1.485.384.144,77
79	III	PDAM Kabupaten Kolaka Utara	-6.719.089	4.054	7.606	-3.552	1.005.081	1.181.205	1.445.392	1.709.579	312.797.378,35	781.993.445,87	1.251.189.513,40
80	III	PDAM Kabupaten Wakatobi	-2.344.506	4.939	10.546	-5.607	218.406	267.995	342.378	416.762	139.022.821,22	347.557.053,04	556.091.284,86
81	III	PDAM Kabupaten Buton	-5.943.514	8.682	12.178	-3.496	2.275.039	2.458.258	2.733.086	3.007.914	320.266.734,35	800.666.835,88	1.281.066.937,41
82	III	PDAM Kabupaten Kolaka Timur	-642.090	4.560	6.569	-2.010	1.930.230	2.100.311	2.355.431	2.610.552	170.930.778,67	427.326.946,68	683.723.114,68
83	III	PDAM Kabupaten Bombana	-6.440.768	2.196	9.759	-7.563	924.787	1.561.778	2.517.265	3.472.752	2.408.782.186,38	6.021.955.465,95	9.635.128.745,51
84	III	PDAM Kabupaten Konawe	-882.323	2.758	5.841	-3.082	525.213	642.634	818.765	994.896	180.945.378,53	452.363.446,32	723.781.514,11
85	III	PDAM Kabupaten Kolaka	-306.095	6.617	7.118	-501	1.450.429	1.472.393	1.505.338	1.538.283	5.501.875,69	13.754.689,23	22.007.502,77
86	III	PDAM Kabupaten Takalar	-2.925.176	3.446	4.649	-1.203	1.291.774	1.381.966	1.517.254	1.652.542	54.250.367,12	135.625.917,81	217.001.468,50
87	III	PDAM Kabupaten Wajo	-2.416.700	3.697	4.690	-993	1.322.967	1.394.035	1.500.639	1.607.242	35.285.637,74	88.214.094,34	141.142.550,94
88	III	PDAM Kabupaten Sidenreng Rappang	-868.423	2.865	3.344	-479	698.377	721.730	756.758	791.787	5.592.893,33	13.982.233,33	22.371.573,33
89	III	PDAM Kabupaten Soppeng	-3.666.471	4.086	7.384	-3.298	833.560	968.120	1.169.962	1.371.803	221.890.941,49	554.727.353,73	887.563.765,97
90	III	PDAM Kabupaten Kepulauan Selayar	-208.601	4.795	5.170	-375	290.891	295.441	302.266	309.091	853.109,02	2.132.772,55	3.412.436,08
91	III	PDAM Kabupaten Barru	-1.913.463	5.073	6.902	-1.830	989.215	1.060.544	1.167.539	1.274.533	65.266.541,53	163.166.353,83	261.066.166,13
92	III	PDAM Kabupaten Toraja Utara	-56.595	6.376	6.437	-61	893.361	895.071	897.635	900.199	52.136,09	130.340,23	208.544,37
93	III	PDAM Kabupaten Luwu	-3.136.883	3.301	3.950	-649	1.497.985	1.556.888	1.645.242	1.733.597	19.113.992,01	47.784.980,03	76.455.968,05

94	III	PDAM Wae Manurung	-1.444.666	5.869	6.537	-669	1.115.192	1.140.578	1.178.656	1.216.735	8.491.570,86	21.228.927,15	33.966.283,45
95	III	PDAM Kabupaten Bulukumba	-1.586.170	5.161	5.233	-72	625.283	627.028	629.645	632.262	62.806,98	157.017,44	251.227,91
96	III	PDAM Kabupaten Gorontalo	-2.042.327	5.006	5.360	-354	1.660.011	1.683.488	1.718.705	1.753.921	4.155.531,85	10.388.829,64	16.622.127,42
97	III	PDAM Tirta Maleo	-4.582.715	4.127	7.034	-2.907	859.671	980.779	1.162.441	1.344.104	176.030.552,91	440.076.382,28	704.122.211,65
98	III	PDAM Tirta Boalemo	-4.290.599	3.411	5.643	-2.232	1.329.375	1.503.351	1.764.315	2.025.280	194.157.476,95	485.393.692,37	776.629.907,79
99	III	PUDAM Tirta Gerbang Emas	-3.542.573	3.344	8.538	-5.194	1.176.835	1.542.414	2.090.783	2.639.152	949.408.856,92	2.373.522.142,31	3.797.635.427,70
100	IV	PERUMDAM Bintang Bano	-2.431.680	3.143	4.538	-1.395	567.421	617.790	693.344	768.898	35.132.527,40	87.831.318,51	140.530.109,62
101	IV	PDAM Kabupaten Bima	-2.076.046	6.003	8.308	-2.305	2.951.375	3.178.026	3.518.002	3.857.978	261.214.913,95	653.037.284,88	1.044.859.655,81
102	IV	PDAM Tirta Kelimutu	-2.120.094	4.239	5.173	-933	1.347.152	1.406.517	1.495.564	1.584.611	27.693.739,65	69.234.349,13	110.774.958,61
103	IV	PDAM Wae Mbeliling	-2.899.563	3.468	6.572	-3.104	645.435	760.973	934.280	1.107.587	179.315.010,13	448.287.525,33	717.260.040,53
104	IV	PDAM Kabupaten Timor Tengah Selatan	-167.685	3.758	4.007	-248	623.580	631.844	644.239	656.634	1.024.676,09	2.561.690,23	4.098.704,37
105	IV	PDAM Rote Ndao	-656.087	4.465	5.475	-1.010	611.130	638.778	680.250	721.722	13.962.229,49	34.905.573,71	55.848.917,94
106	IV	PDAM Tirta Yapono	-2.597.804	7.001	8.955	-1.954	4.601.055	4.857.889	5.243.139	5.628.390	250.926.468,77	627.316.171,94	1.003.705.875,10
107	IV	PDAM Kabupaten Maluku Barat Daya	-2.789.662	6.624	100.019	-93.395	314.912	1.202.932	2.534.962	3.866.992	41.468.316.026,8 2	103.670.790.067,05	165.873.264.107,2 8
108	IV	PDAM Kabupaten Halmahera Utara	-2.916.641	4.222	5.950	-1.728	605.794	655.382	729.765	804.148	42.844.410,92	107.111.027,29	171.377.643,66
109	IV	PDAM Kabupaten Kepulauan Sula	-538.232	3.244	4.547	-1.302	498.291	538.320	598.364	658.408	26.058.984,57	65.147.461,43	104.235.938,29
110	IV	PDAM Kota Tidore Kepulauan	-3.201.393	5.804	10.606	-4.802	265.659	309.618	375.557	441.496	105.546.022,80	263.865.056,99	422.184.091,18
111	IV	PDAM Kabupaten Kepulauan Morotai	-2.142.965	4.285	10.092	-5.807	1.078.749	1.371.131	1.809.705	2.248.279	848.932.481,66	2.122.331.204,16	3.395.729.926,66

112	IV	PDAM Tirta Adrian	-1.715.946	7.095	10.670	-3.576	275.744	303.533	345.215	386.897	49.685.307,12	124.213.267,81	198.741.228,49
<b>GRAND TOTAL</b>			-				<b>163.376.</b>	<b>180.700.</b>	<b>206.685.4</b>	<b>232.670.53</b>	<b>87.770.955.471,</b>	<b>219.427.388.678,56</b>	<b>351.083.821.885,</b>
			<b>347.236.83</b>				<b>928</b>	<b>330</b>	<b>32</b>	<b>4</b>	<b>42</b>		<b>69</b>
			<b>1</b>										
<b>AVERAGE</b>			<b>-3.100.329</b>		<b>8.493</b>	<b>-4.173</b>	<b>1.458.72</b>	<b>1.613.39</b>	<b>1.845.406</b>	<b>2.077.415</b>	<b>783.669.245,28</b>	<b>1.959.173.113,20</b>	<b>3.134.676.981,12</b>
				<b>4.320</b>			<b>3</b>	<b>6</b>					

# Human Development Index (HDI): Comparative Study of Western Indonesia and Eastern Indonesia Region

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## Abstract

This research was conducted with the following objectives: (1) to determine whether there is a difference in the Human Development Index (HDI) as a measure of the level of prosperity of society / population between Western Indonesia and Eastern Indonesia, and (2) to determine whether there is a difference in the Human Development Index (HDI) before and after 2014 related to the issuance of government regulations regarding the acceleration of priority infrastructure provision, namely PP No. 75 of 2014 which took effect from 21 July 2014. The population of this study were all regencies / cities in the western and eastern Indonesia. Samples are districts / cities in several provinces in West Indonesia, namely Central Java (35 Regencies / Cities) and East Java (38 Regencies / Cities), and East Indonesia, namely East Nusa Tenggara (22 Regencies / Cities) and Papua (28 Regencies / Cities) and Papua (28 Regencies / Cities), with a total of 992 samples. This research data is secondary data in the form of Human Development Index (HDI) data taken from the Indonesian Central Bureau of Statistics (BPS) (<https://www.bps.go.id/>), and data on Regional Government Financial Reports taken from the Directorate General Fiscal Balance Ministry of Finance of the Republic of Indonesia for the period 2010 to 2018 (<http://www.djpk.kemenkeu.go.id/>). Data analysis to test data normality used the Kolmogorov-Smirnov test. Hypothesis testing uses a different test, namely the Mann-Whitney test, because the data are not normally distributed. The results showed that there were differences in HDI between West Indonesia and East Indonesia. On average, the HDI for Western Indonesia is greater than that of Eastern Indonesia. Another result is that there is a difference in HDI between the year before 2014 and the year after that year. On average, the HDI after 2014 (2015-2018) was greater than the year before 2014 (2010-2013).

Keywords: Human Development Index (HDI), Financial Statements of Regional Government, West Indonesia Region and Eastern Indonesia Region.

## 1. Introduction

### 1.1 Background

For some economists, the level of prosperity of a nation is usually measured by how much society's income / expenditure is. In this case, to get this figure, the easiest thing to see is how much the gross domestic product per capita of a country is (GDP per capita). When viewed from GDP per capita, based on data from the

International Monetary Fund (IMF) 2016, the income of the Indonesian people is estimated at USD 3,620. When compared with neighboring countries, this figure is still far below Malaysia (USD 12,127) and China (USD 8,239), but is above the Philippines (USD 3,073) and India (USD 1,820). Although this figure is often used as a reference, it does not represent real income.

Apart from being based on GDP per capita, the level of community prosperity is also measured by the Human Development Index (HDI). HDI is an indicator to see the extent to which the government has succeeded in building the quality of life of the community. In this case is the extent to which the results of development can be accessed by the community, so that they can get decent jobs, education and health. If the index in a country / region is close to number 1, then the people in that region can be categorized as prosperous. Based on data released by the United Nations Development Program (UNDP), in 2015 Indonesia's HDI was classified as medium, namely 0.684. This figure is still below Malaysia (0.779) and China (0.727), but above the Philippines (0.668) and India (0.609) (Adya, 2016).

Hill said that eastern Indonesia is still lagging behind compared to the western region because the eastern of Indonesia has always been poorer. Eastern Indonesia is still underdeveloped, although lagging behind other provinces, eastern Indonesia is also advanced in terms of growth rate. There is not much difference between western Indonesia and eastern Indonesia. Because the eastern of Indonesia has always been poorer, the growth rate is not as high as the western region, so the gap is getting bigger over time (Antara, 2007).

Rosmeli and Nurhayani (2014) also stated that economic growth, equitable distribution of development results and regional capabilities in eastern Indonesia are still lagging behind compared to western Indonesia in general. However, from the research results it is known that the western region of Indonesia has a higher level of inequality compared to the eastern region of Indonesia, with an average index of 0.83 for the western region of Indonesia and 0.45 for the eastern of Indonesia.

Based on the explanation above, the problems of this research are: (1) is there a difference in the level of prosperity as measured by the Human Development Index (HDI) between the districts / cities of Western Indonesia and Eastern Indonesia? (2) Are there differences in the Human Development Index before and after 2014 in the two regions? This second problem is tested related to government regulations regarding the acceleration of the provision of priority infrastructure, namely PP. 75 of 2014 which took effect from 21 July 2014.

This paper consists of an introduction, which contains research background, research objectives, and research benefits. The second part is a literature review and hypothesis development. The third part explains the research method consists of population and samples, types and sources of data, and data analysis. The fourth part is the result of analysis and discussion. The last part of this paper is the conclusions and limitations.

## 1.2 Research Objectives and Benefits

The purpose of this study was to determine: (1) whether there is a difference in prosperity as measured by the Human Development Index (HDI) between the regencies / cities in Western Indonesia (KBI) and Eastern Indonesia (KTI), and (2) whether there is a difference in HDI before and after 2014 in both regions. The benefits of this research are: (1) for academics, to increase the enrichment of knowledge in the public sector, especially local governments related to financial performance and the Human Development Index (HDI) in Indonesia, (2) For the Government, the results of this study are expected to provide input. to the government, especially the central government related to equitable development, including human development.

## 2. Literature Review and Hypothesis Development

### 2.1 Agency Theory

Agency theory describes the relationship between the agent and the principal. Agent is the party contracted by the principal to work for the interests of the principal. Because the agent is chosen, the agent must be accountable for all of its work to the principal. Agency problems can arise because each individual is assumed to have a preference for maximizing personal utility which is likely to conflict with the interests of other individuals. This problem has resulted in information asymmetry and conflict of interest (Jensen and Meckling, 1976).

Referring to Law Number 23 of 2014 concerning Regional Government, the parties involved in this case include the people as the principal and the government as the agent. The government consists of the central government, namely the President of the Republic of Indonesia who holds power in the government of the Republic of Indonesia who is assisted by the Vice President and ministers as referred to in the 1945 Constitution of the Republic of Indonesia, and the Regional People's Representative Council according to the principle of autonomy and co-administration (Law No. 23/2014, article 1 paragraph 1,2, and 3). The law states that regional governments use the principle of autonomy which is responsible for planning, implementing, and being accountable for the implementation of regional government autonomy programs. The government as an agent is also responsible for protecting, serving, empowering and welfare of the community according to the mandate of the law.

### 2.2 Human Development Index (HDI)

HDI explains how residents can access development outcomes in terms of income, health, education, and so on. HDI was introduced by UNDP in 1990 and published regularly in the annual Human Development Report (HDR). HDI is formed by 3 (three) basic dimensions, namely: (1) a long and healthy life, (2) knowledge, and (3) a decent standard of living. The benefits of HDI are as follows: (1) HDI is an important indicator to measure success in efforts to build the quality of human life (society / population), (2) HDI can determine the rank or level of development of a region / country, and (3) for Indonesia, HDI is strategic data because apart from being a measure of Government performance, IPM is also used as an allocator for determining the General Allocation Fund (DAU) (<https://ipm.bps.go.id/page/ipm>).

### 2.3 Economic Growth

Economic growth is the process of an increase in real gross national product or real national income. So the economy is said to grow or develop when real output growth occurs. Another definition of economic growth is that economic growth occurs when there is an increase in per capita output. Economic growth describes an increase in the standard of living measured by real output per person. Kuznets (1973) defines a country's economic growth as the country's ability to provide increasing economic goods for its population, where this capacity growth is based on technological and institutional advances and the ideological adjustments it requires.

### 2.4 Relationship between Economic Growth with Human Development

In the conventional literature on modern economic theory, democracy is considered a luxury. Demands will increase as per capita income increases. The hypothesis related to this is the cruel choice hypothesis between the two democracies and the discipline. Because democracy in the early stages of development is not very friendly to fast economic growth, what a country needs is discipline. Another conventional theory is the trickle down hypothesis put forward by Aghion and Patrick (1997), arguing that rapid economic growth will contribute to human development. If development increases, then society can spend more on human development. Based on these two hypotheses, the relationship between human development, democracy and economic growth is a linear, one-way line, in which economic growth is the driving force.

Research on the Human Development Index has been conducted by several previous researchers. Most of these studies link HDI with local government revenues and expenditures, including Regional Original Income, General



Allocation Funds, Special Allocation Funds, Profit Sharing Grants, health expenditures, education expenditures, and capital expenditures (Putra and Ulupi, 2015; Maulana, 2016; Harahap, 2017; Zahari and Sudirman, 2017; Ariyati et al., 2018; and Omodero, 2019). In addition, HDI is also linked to the financial performance of local governments, for example: the ratio of the degree of fiscal decentralization, regional financial dependence, regional independence, effectiveness of Regional Original Income, efficiency of Regional Original Income and compatibility of direct spending (Harliyani and Haryadi, 2016; Pradana and Sumarsono, 2018).

HDI studies that compare between provinces or between regions are still rare. This study refers to research conducted by Kpolovie, et al. (2017). They conducted an investigation to examine three HDI indicators (a long and healthy life, access to quality knowledge and education, and a decent standard of living) obtained from different countries of the world and compared HDI from seven continents around the world. A proportionally stratified sample of 182 was drawn from 253 countries on all continents of the world for the study. Analysis of Variance (ANOVA) and the Bonferroni Post Hoc Test were adopted to test the null hypothesis that there are no significant continental differences in the Human Development Index at alpha 0.05. The results showed that Africa has an average Human Development Index (HDI) of 0.536 which is significantly lower than other continents in the world (Asia 0.714, Europe 0.845, North America 0.733, South America 0.738, and Oceania 0.693). Another result is that Europe has the highest HDI which is significantly greater than the world average and greater than all other continents in the universe. Asia, North America, South America and Oceania do not differ significantly in their HDI.

Based on the description and research results above, the hypotheses proposed in this study are:

H1 There is a difference in the Human Development Index between regencies / cities in the western region of Indonesia and the eastern region of Indonesia.

H2 There are differences in the Human Development Index before and after 2014 in regencies / cities in the western region of Indonesia and in the eastern region of Indonesia.

## 2.5 Research Models

The research framework for the first year can be seen in the following figure.

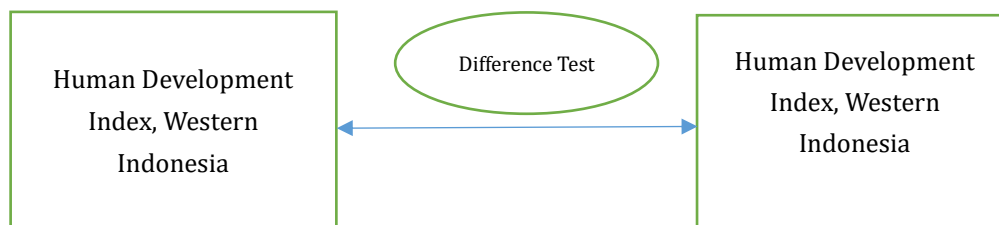


Figure 1. Research Model 1

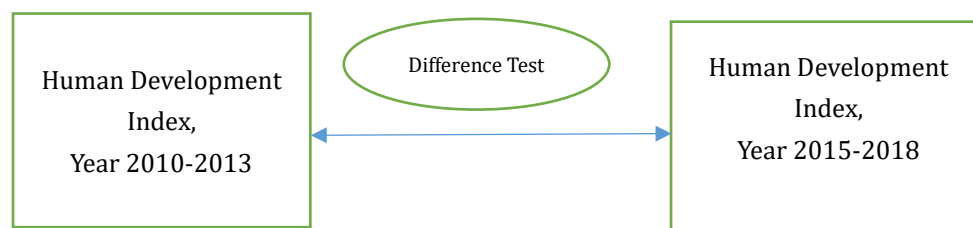


Figure 2. Research Model 2

### 3. Research Methods

#### 3.1 Population and Research Sample

The population of this research is the regencies / cities in the western region of Indonesia and the eastern region of Indonesia. The samples of this research are districts / cities of several provinces in the western region of Indonesia and eastern Indonesia by using a purposive sampling method of data collection, namely to obtain a sample that meets certain criteria, namely: (1) Districts / Cities publish Regional Government Financial Reports starting in 2010 up to 2018, and (2) Have complete Human Development Index (HDI) data from 2010 to 2018 which is published on the official website of BPS Indonesia, with a sample of 35 provinces in the West Indonesia region, namely Central Java and East Java with 38 districts / cities, and East Indonesia, namely East Nusa Tenggara with 22 regencies / cities and Papua with 28 regencies / cities.

#### 3.2 Research Variables

The variable used in this study is the Human Development Index as a proxy for the level of community prosperity, which is measured using three dimensions, namely: (1) long and healthy life, (2) knowledge, and (3) decent standard of living (BPS, 2015).

#### 3.3 Types and sources of data

This study uses secondary data. The data in this study is in the form of the Human Development Index (HDI) which is sourced from the official BPS website address, namely <http://ipm.bps.go.id>.

#### 3.4 Data Analysis and Hypothesis Testing

Before the statistical test of the hypothesis is carried out, the normality of the data will be tested first. To detect the normality of the data in this study, a nonparametric test, namely the Kolmogrov-Smirnov test, will be used. Some possible choices of statistical test tools for research hypotheses after the normality test are: (a) if the results of the data normality test produce normal data, then the hypothesis testing in this study will use the Independent Sample T Test or Anova Test, (b) but if the normality test results The data yields abnormal data, so the Mann-Whitney-U test is used.

### 4. Results and Discussion

#### 4.1 Research Sample

The population of this research is the districts and cities in West Indonesia and East Indonesia. The samples of the study were 2 provinces in West Indonesia and 2 provinces in East Indonesia. The research sample can be seen in the following table.

**Table 1**  
**Research Samples**

No.	Description	Amount
1.	Regencies/cities: 123 observations, 11 year	1.353
2.	Incompleted data	(361)
3.	<b>Research samples</b>	<b>992</b>

Source: Processed Data

## 4.2 Descriptive statistics

**Table 2**  
**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
HDI	992	19,62	82,72	63,8337	9,80210
Valid N (listwise)	992				

Sumber: Data diolah

Based on the table above, the minimum HDI value is 19.62 for the Eastern Indonesia region, namely Nduga Regency in 2010 and the maximum is 82.72 for the West Indonesia region in the city of Semarang in 2018. The average HDI score is 63.83.

## 4.3 Normality test

**Table 3**  
**Normality Test Results**

**One-Sample Kolmogorov-Smirnov Test**

		HDI
N		992
Normal Parameters <sup>a,b</sup>	Mean	63,8337
	Std. Deviation	9,80210
Most Extreme Differences	Absolute	,093
	Positive	,043
	Negative	-,093
Kolmogorov-Smirnov Z		2,936
Asymp. Sig. (2-tailed)		,000
a. Test distribution is Normal.		
b. Calculated from data.		

By using the Kolmogorov-Smirnov test, the data of this study are not normal because the significance value of the Kolmogorov-Smirnov test is 0.000, which is smaller than 0.05. Based on these results, testing the hypothesis in this study using the Mann-Whitney U test.

#### 4.4 Hypothesis Testing

**Table 4**  
**Nilai Ranks Value**

Wilayah/Tahun		N	Mean Rank	Sum of Ranks
HDI	Western	584	649,19	379124,50
	Estern	408	277,95	113403,50
	Total	992		
HDI	Before 2014	496	439,55	218017,00
	After 2014	496	553,45	274511,00
	Total	992		

Source: Processed data

**Table 5**  
**Results of Mann-Whitney U Test**

	HDI <sup>a</sup>	HDI <sup>b</sup>
Mann-Whitney U	29967,500	94761,000
Wilcoxon W	113403,50 0	218017,00 0
Z	-20,081	-6,260
Asymp. Sig. (2-tailed)	,000	,000
a. Grouping Variable: Region		
b. Grouping Variable: Year		

Based on table 4 and table 5, the significance value of the Mann-Whitney U test is 0.000 less than 0.05. This means that the HDI scores differ both between the regions of West Indonesia and the regions of East Indonesia as well as between the years before and after 2014. By region, the average score for the West Indonesia region is greater than that for the eastern part of Indonesia. Likewise by year, the average HDI value after 2014 was greater than the year before 2014.

#### 4.5 Discussion

Based on the results of data analysis and hypothesis testing, the findings of this study are that the first hypothesis proposed is not accepted, namely that there are differences in the HDI values of the West Indonesia region and the East Indonesia region. The average HDI value in West Indonesia is higher than that of Eastern Indonesia. This means that the level of prosperity of the people of western Indonesia is better than the level of prosperity in eastern Indonesia. This finding is supported by Hill that eastern Indonesia is still lagging behind compared to the western region because the eastern part of Indonesia has always been poorer. Because the eastern part of Indonesia has always been poorer, the growth rate is not as high as the western region, so the gap is getting bigger over time (Antara, 2007).

The second hypothesis in this study is accepted, namely there is a difference in the HDI value after 2014 with the year before 2014. The average HDI value after 2014 is greater than the HDI average value before 2014. This shows the success of government regulations regarding the acceleration of infrastructure provision. priorities, namely PP. 75 of 2014 which took effect from 21 July 2014.

## 5. Conclusion

Based on data analysis and discussion, this study can be concluded that: (1) there are differences in the HDI values for West Indonesia and East Indonesia, (2) there are differences in HDI values before 2014 with HDI values after 2014. The limitation of this study is that this study only analyzes differences in HDI by region and period (year). Further research can be developed by analyzing the relationship between HDI and other variables, for example local government performance.

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## A Study on Financial Well-Being of Indonesian Millennials

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### Abstract

The current study aims to identify key factors that influence financial well-being of millennials in Indonesia. This study focuses more on long-term behavior, such as retirement planning and investment behavior. The analytical results revealed that financial education was positively related to the millennial's financial well-being. However, the mediation result demonstrated that long-term behavior strengthens the relationship between financial education and financial well-being and enhanced the positive effects of being financially literate. This study suggests to increase millennials' knowledge and awareness about long-term behavior and financial well-being. They are recommended to obtain financial education programs.

**Keywords:** Millennials, Financial Education, Long-Term Behaviors, Financial Well-Being

### 1. Introduction

The millennial generation has become an interesting subject that often discussed in Indonesia in relation to their population, characters, and future prediction. According to Tanuwidjaja (2019), this generation holds a large portion of the population, including one-third of the total population and 44% of the productive age in Indonesia. Millennials have different characteristics from the other generation since they can express their opinions well, think out of the box, and socialize with others (Ali, Purwandi, Nugroho, Ekoputri, & Halim, 2017). These characters become millennials' strengths to have good academic and job performance. Nowadays, millennials are in the stage of life where they eager to start or continue their life independently. Within this state, millennials have the large opportunity to become the majority generation that will lead the Indonesian workforce in the years to come (Tanuwidjaja, 2019). In leading the workforce, millennials get a large portion of income as a return for their job performance. As their financial resource, millennials carefully manage their income to have the level of stability that makes them feel secure about their financial situation. It can be implied; millennials will face lots of financial activities where they need a better stage of financial well-being.

Concerning this situation, it is important to manage the factor that can improve the millennial's financial well-being, e.g. financial behavior (Kumar, Watung, Eunike, & Luinata, 2017). Millennials have different financial behaviors since they might face different financial activities and challenges between one and another. The more often millennials facing financial challenges, the more often they learn about financial behavior. Financial behavior can be categorized into short-term behavior if it relates to emergency saving and spending behavior while it described as long-term if it relates to investment and retirement saving behavior (Henager & Cude, 2016). These financial behaviors can affect either negatively or positively to millennials' financial well-being. In relation to financial well-being, there is a study that explained the relationship between financial behavior and financial well-being.

Financial well-being is the condition of how people are doing well and feel secure in their financial health (Michael Collins & Urban, 2020). Many factors make individuals feel secure about their financial condition; one of the factors is to repay the debt. According to the previous study, people are unable to pay the bills or debt because they failed to manage their financial behavior (Topa, Hernández-Solís, & Zappalà, 2018). The inability to pay the bill and chronic debts are the sign of the decreasing of financial well-being. From this relationship,



there is a direct relationship between financial behaviors to financial well-being. When people well-manage their financial behavior, people can increase the level of their financial well-being. Therefore, it is important to have better financial behaviors that can increase individuals' financial well-being.

Millennial generation should get proper financial education programs to improve financial behaviors. However, Andarsari and Ningtyas (2019) study found the lack of financial education programs in Indonesia that contribute to the poor financial behavior of millennials. This statement can be supported by *Otoritas Jasa Keuangan* (OJK; Indonesian Financial Services Authority, 2016) that reported savings to GDP ratio Indonesia is 31%; it is lower than Singapore with 49%, Philippines 46%, and China 49% (Ningtyas, 2019). This indicates that many people that age above 15 years old are not aware of the importance of saving money accounts in the financial services institution. Furthermore, financial education can also directly influence financial well-being. Some researchers analyze the direct relationship of financial education to financial well-being in the United States. Lusardi (2019) found that financial education is closely related to financial well-being. The researchers suggested millennials that complete the financial education program are more likely to have higher financial well-being than others that did not get the financial education program.

The current study examines the role of long-term behavior as the mediator in the relationship between financial education and financial well-being. This study will give several implications for the financial education institution and financial service institution that reveal the factors that affect millennials' financial decision of millennials. Moreover, this study contributes to the understanding that explains the relationship between financial education and financial well-being.

## 2. Literature Review

### 2.1 Financial Education and Financial Well-Being

Limited studies are interested in further examining financial education on the millennial's financial well-being. Fabris and Luburic (2016) found a prior study that defined financial education as the process to embed the proper financial behavior that makes individuals feel secure with their financial situation (Fabris & Luburic, 2016). According to this research, the existence of financial education can make individuals feel more secure with their current and future financial situation. The secure feeling indicates that the person has a high-level of financial well-being. This statement is in accordance with CFPB; Consumer Financial Protection Bureau (2015), which defines financial well-being as a state where people feel secure with their financial future and can feel the enjoyment of their life with their current financial situation. It means people can enjoy purchasing any product or services that they need but did not worried about their financial situation in the future. Focus on millennials; it is important to examine the financial education programs in the college and workplace that can increase their level of financial well-being.

In college, financial education usually provided in the form of courses with the traditional lecturer method, where the lecturer teaches the students directly in a classroom. According to Wagner (2019), college personal finance classes can increase students' knowledge, which will be useful for improving their financial well-being. Besides the traditional lecturer method, there is a new method of financial education that develop by Weng (2018). In the study, the researcher team develops the animation application methods to improve the effectiveness of financial education for college students. The lecturers can combine the traditional lecturer method with the animation application for college students. On the other hand, millennials at the workplace usually get financial education from the employers. In prior study, the researchers found evidence about employee financial wellness programs (EFWP) that can increase the workers' financial well-being. EFWP has become one of the strategies to improve the financial well-being of employees. Usually, the employers delivered EFWP through insurance and retirement plan from vendors, Employee Assistance Programs (EAPs), and other financial institutions (Frank-Miller, Despard, Grinstein-Weiss, & Covington, 2019). Besides EFWP, the employee also gets financial education through another program, such as workshops and seminars programs (Wagner, 2019). Employers can choose EFWP, workshops, or seminars as effective financial education programs for the employees.

It can be implied, millennials at the college and workplace will be offered several financial education programs. The lecturers might conduct traditional lecturer methods or combine it with the animation application method for college students. Meanwhile, for millennials that enter the workforce, the employers might provide the EFWP, workshop, or seminars to increase the information about financial management behavior. These kinds of financial education programs offered in the college and workplace to help millennials increase their financial well-being. Therefore, this study hypothesizes that:

*Hypothesis 1: Financial education will be positively related to financial well-being*

## 2.2 The Mediating Role of Long-Term Behavior

Financial behavior characterized as long-term behavior when it involves the activities of future planning. Wagner and Walstad (2019) examine the effect of financial education on long-term behavior. According to this study, long-term behavior is related to the ability to accumulate wealth and prepare the money needed for retirement (Wagner & Walstad, 2019). From this explanation, the meaning of accumulate wealth is related to investment behavior. Relates to long-term behaviors, several prior researchers' interest in examining the factors that can influence the behaviors. Annamalah et al. (2019) found the effect of risk-taking attitude, financial status, and financial education programs to long-term behaviors (e.g., Investment decision). As one of the factors that influence long-term behaviors, the other prior researchers focus on the influence of financial education toward long-term behaviors. Bernheim and Garret examine the efficiency of financial education and found the result that it can increase the rate of participants in the retirement plans and retirement savings (Wagner & Walstad, 2019). These findings indicate financial education programs can influence millennials' employees to have retirement plan behaviors.

Other than retirement plans and saving, some studies examine the effect of financial programs on investment behaviors. According to Wagner (2019), the college's finance courses can increase millennials' investment knowledge and make them involved in investment programs. Those theories indicate that financial education programs will have a positive effect on millennials' retirement and investment behaviors. The prior study also found a positive relationship between long-term behaviors and financial well-being (Brüggen et al., 2017). When people have future-oriented planning, they will feel secure about their financial situation in the future. For example, people will not concern about their financial situation for their retirement life since they already spare their money in the retirement account and other investments. In sum, those theories explain the relationship between financial education, long-term behavior, and financial well-being. It can be supported by Azmi and Ramakrishnan (2018) that stated financial education contributes to the individual's investment behaviors that make them able to increase their financial well-being. That theory indicates, there is a mediating role of long-term behaviors in the relationship between financial education and financial well-being. Therefore, this study hypothesizes that:

*Hypothesis 2: Long-term behavior will mediate the relationship between financial education and financial decisions.*

## 3. Methods

### 3.1 Sample and Procedures

The sample in the current study was collected from the millennial's in Indonesia, which was born between 1980 – 2000 within the age between 20 and 40 years old (Moreno et al., 2017). The reason millennials are chosen as the sample is because of its large population in Indonesia. As recorded by *Badan Pusat Statistik* (BPS; 2020), the total population of millennials in Indonesia is 83,993,600. This large number makes it easier to search the target respondents in a shorter period. For the survey, the researchers distributed an online questionnaire to collect the data from the respondents.

As a result, 241 respondents participated in the online questionnaire. The majority of respondents are female (67.2%), within the age of 20-23 years old (54.4%), unmarried (85.1%), have no child (90%), and had Bachelor degrees (59.8%) as their last education. Related to the job description, most of the respondents are employed

(56.4%) as a private employee (44.4%) with job duration 1 – 5 years (31.5%).

### 3.2 Measures

#### 3.2.1 Financial Education

The respondents rated their financial education by using the five-question items adapted from Kaiser and Menkhoff (2017); and Kim, Anderson, and Seay (2019). At first, the previous researcher measured financial education by using multiple-choice questions. Then, this study changes the type of questions into a seven-point Likert Scale format, ranging between 1 (strongly disagree) and 7 (strongly agree). Statements included: (1) "I ever attended the financial education programs"; (2) "I felt the financial education program that I received at school and college was more than enough"; (3) "I spend more than 8 hours per week for the financial education programs"; (4) "I have participated in the financial education program through face to face or online"; (5) "My motivation to participated in the financial education program is because it is important for my future". It is important to ask the question about the setting, intensity, channel, and motivation on participated in the financial education programs to measure the individual's financial education (Kaiser & Menkhoff, 2017). For Financial education, the reliability was  $\alpha = 0.80$  in the present study.

#### 3.2.2 Long-Term Behavior.

The respondent's long-term behavior was measured with four question items adapted from Kim, Anderson, and Seay (2019). The previous study measured long-term behavior by using dichotomous responses. Then, this study changes the type of questions into a seven-point Likert Scale format, which ranges between 1 (strongly disagree) and 7 (strongly agree). Item questions included: (1) "I often think about the estimation of money that needed for life after retirement"; (2) "I intend to apply for long-term financial programs (e.g., retirement plan and investment)"; (3) "I am interested to make a plan on long-term financial programs"; (4) "I am determining my long-term financial plan that I would like to achieve". Those question items will measure the respondents' retirement and investment behaviors. For long-term behavior, the reliability was  $\alpha = 0.81$  in the present study.

#### 3.2.3 Financial Well-Being.

The respondent's financial well-being was measured with four items adapted from Collins and Urban's (2020) study. The previous study measured financial well-being using a five-point Likert Scale. The original a five-point Likert Scale adapted to a seven-point Likert Scale format that ranges between 1 (strongly disagree) and 7 (strongly agree). The difference occurs since this study adds the intermediate of neutral (neither disagree nor agree) as one of the respondent choices. The items are: (1) "I feel able to handle the large unexpected expenses" (2) "I always try to maintain or secure my financial situation in the future" (3) "I feel that I can enjoy my life because of my financial management" (4) "I always try to set aside my money at the end of the month". For financial well-being, the reliability was  $\alpha = 0.72$  in the present study.

### 3.3 Control Variables

This study chooses gender, age, and level of education as the control variables. In the analysis, they were coded gender (1 = female, 2 = male), age (ranging from 1 = 17-23 to 4 = >37), and education level (ranging from 1 = High School to 4 = Master's degree).

### 3.4 Method of Analysis

The purpose of this study was to investigate the mediating role of long-term behaviors in the relationship between financial education and financial well-being. Therefore, this study will perform the mediation analysis by using PROCESS macros that operate under SPSS 21. PROCESS macros were developed by Hayes (2013) to

become the tools to test the mediation and moderation framework models. In this study, it will conduct the mediation analysis to test both hypothesis 1 and 2.

In the PROCESS, model 1 should be chosen to run the mediation analysis. In this model, the researchers also utilize bootstrap procedures by choosing 5,000 samples at a 95% confidence level. Based on Efron and Tibshirani (1993), bootstrapping is a statistical procedure that changes the data by resampling it into obtaining new simulation data (Borau et al., 2015). By employing this procedure, the indirect effect estimation will be more accurate. Moreover, bootstrapping will also show the confidence interval that determines the significance of the indirect effect. The indirect effect will be considered as significant if the confidence intervals have the value that does not include 0 in its range.

#### 4. Results

Before testing the hypothesis, it is essential to do the correlation analysis. For this study, the correlation analysis shows that financial education and long-term behavior were highly correlated. It indicates, those variables have the probability of having multicollinearity. This study conducted the test of tolerance and Variance Inflation Factor (VIF) tests to prove the multicollinearity. Senaviratna and Cooray (2019) stated multicollinearity did not exist when the score of tolerance is close to 1 and a score of VIF under 10. Therefore, no multicollinearity occurs since the tolerance and VIF scores are 0.992 and 1.084, respectively.

Table 1 provides the information of variables means, standard deviation, correlation, and reliabilities. From that table, the correlation matrix has the result that can support the proposed hypothesis. It can be seen; financial education was positively related to the financial well-being ( $r = 0.27$ ,  $p < 0.01$ ) and long-term behavior ( $r = 0.28$ ,  $p < 0.01$ ). Furthermore, long-term behavior also positively related to financial well-being ( $r = 0.551$ ,  $p < 0.01$ ).

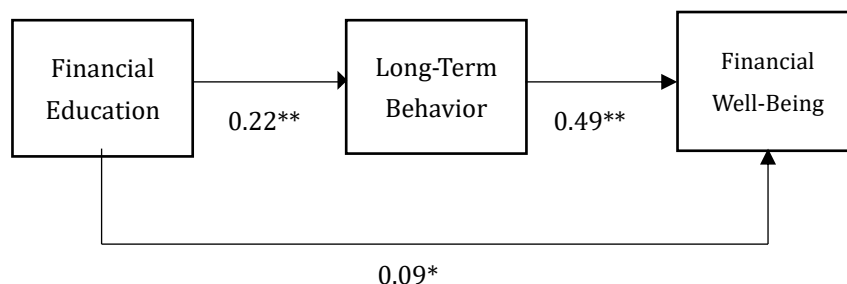


Figure 1. Conceptual Framework

Table 1. Descriptive Statistic and Correlation Matrix

	Mean	SD	1	2	3	4	5	6
1. Gender	1.33	0.47	-					
2. Age	1.57	0.72	0.20*	-				
3. Education	2.35	0.95	0.08	0.39**	-			
4. Financial Education	4.07	1.32	0.04	0.04	-0.00	(0.81)		
5. Financial Well-Being	5.01	0.99	0.17**	0.11	0.01	0.27**	(0.72)	
6. Long-Term Behavior	5.54	1.03	0.06	0.02	-0.03	0.28**	0.55**	(0.81)

Gender coded: 1 = Female; 2 = Male. Age coded: 1 = 17-23; 2 = 24-30; 3 = 31-37; 4 = >37. Education coded: 1 = High School; 2 = Diploma; 3 = Bachelor degree; 4 = Master degree.

\* $p < 0.05$ , \*\* $p < 0.01$

#### 4.1 Hypothesis Tests

All hypotheses were run concurrently using the PROCESS macros of mediation analysis. The result shows in Table 2 that it will be interpreted using the standardized beta. The hypothesis tests include the variables of gender, age, and education that chosen as the control variables. Hypothesis 1 predicts that financial education is positively related to financial well-being. As predicted, the result shows the direct relationship between financial education and financial well-being was significant ( $b = 0.09, p < 0.05$ ). This result indicates that Hypothesis 1 was supported.

Table 2. Regression Results for Testing Mediation Analysis

Variable	Coefficient	SE	T	<i>p</i>	LLCI	ULCI
<i>Outcome: Long-Term Behavior</i>						
Constant	4.58	0.31	14.63	0.00	3.96	5.19
Financial Education	0.22	0.05	4.42	0.00	0.12	0.31
<i>Outcome: Financial Well-Being</i>						
Constant	1.50	0.35	4.29	0.00	0.81	2.19
Financial Education	0.09	0.04	2.15	0.03	0.01	0.17
Long-term behavior	0.49	0.05	9.21	0.00	0.38	0.59

Table 3. Indirect Effect(s) of Financial Education on Financial Well-Being through Long-Term Behavior

<i>Indirect effect (s) of X on Y</i>				
	Effect	Boot SE	Boot LLCI	Boot ULCI
Long-term behavior	0.11	0.03	0.06	0.16
<i>Partially Standardized indirect effect (s) of X on Y</i>				
Long-term behavior	0.11	0.03	0.06	0.16
<i>Completely standardized indirect effect (s) of X on Y</i>				
Long-term behavior	0.14	0.03	0.08	0.21

## 4.2 Discussion

The purpose of this study was to examine the relationships among financial education, long-term behavior, and financial well-being of Indonesian millennials. This study responds to a call for research to investigate the mechanism through which financial education affects Indonesian millennials' financial well-being (Brüggen et al., 2017). As a result, this study found evidence that can support financial education has a direct effect on financial well-being. Then, this study also demonstrated the impact of millennials' financial education on financial well-being by testing a new mediating pathway that has not been explored in prior studies, namely long-term behavior. Long-term behavior was part of financial behavior that divided by Henager and Cude (2016). In the prior study, the researchers divided financial behavior into short-term and long-term behavior. This study focuses on long-term behaviors that are more future-oriented, such as investment and retirement plan behaviors (Henager & Cude, 2016). While having only a single mediator, the findings confirm the critical linkages among millennials' financial education, long-term behavior, and financial well-being. These results are in accordance with the prior research that found positive effects on the financial education and long-term behaviors relationship (Wagner & Walstad, 2019); and the relationship between long-term behavior and financial well-being (Brüggen et al., 2017). In other words, this study found that long-term behavior is having a strong mediating role in the relationship between financial education and financial well-being. Rather than a direct relationship, it will better to include the mediation effect of long-term behavior in the financial education and financial well-being relationship.

## 5. Conclusion

This study has developed theories about financial education, long-term behavior, and financial well-being. In response to support the prior research, this study extends the significant influence of millennials' long-term behavior on financial education and financial well-being relationship. The study reveals the importance of financial education to support the millennials' financial well-being. Then, this study also highlighting the relationship between financial education and financial well-being will be maximized if it is going through the improvement of millennials' long-term behaviors.

### 5.1 Theoretical Contribution

This study contributes to the financial education theory by examining its relationship with financial well-being. This study found a significant result in the direct relationship between financial education and financial well-being. It indicates that the financial education programs in the college and workplace can provide information



that millennials can implement to increase their financial well-being. This finding was consistent with Lusardi (2019) studies that also found a significant link between millennials' financial education and their financial well-being.

Furthermore, this study also contributes to providing evidence that can support the mediating role of long-term behavior in the relationship between financial education and financial well-being. The result shows financial education has a strong relationship with long-term behaviors. Then, long-term behaviors and financial well-being also show a significant result. These findings were in line with the theory from Brügggen et al., (2017) that stated, financial education makes people have more understanding about the importance of the long-term financial plan that will improve their financial well-being.

## 5.2 Managerial Implication

This study offers several important implications for practice. First, the financial education institution should consider developing a new method that can attract millennials to participate in financial education programs. From this study, the animation application can be implemented as a method to attract millennials. Within the development of information media technology, millennials will be more attracted to learn from animations, videos, movies, and games (Weng, 2018). By implementing this new method, the financial institution will successfully improve their management and also contributes to increasing the rate of millennials generation that participate in financial education programs.

Second, this study also relevant to banks and other investment companies. In those companies, usually, there would be investment bankers and wealth managers position that have a job desk related to the financial services and financial planning. To improve their performance, the bank or investment companies can send investment bankers and wealth managers for getting the financial education programs to certify their advanced level that can provide wealth management services to their clients.

Third, those financial services institutions also can create competition that leads millennials to improve their long-term behaviors such as stock market competitions. Fourth, the financial services institution can collaborate with financial education institutions to have CSR programs for the employees and other Indonesia millennials generation. The CSR programs should focus on giving financial education programs that teach about investment and retirement plans to the millennial generation. These CSR programs will improve the millennials' long-term behavior and makes the institution have a more positive image or brand in society.

## 5.3 Strength, Limitation, Future Research

Similar to other studies, this study would have some strengths and limitations. This study has strengths since it examines the mediating role of long-term behaviors in the relationship between financial education and financial well-being. This study reveals the role of long-term behavior as the mediation will maximize the relationship between financial education and long-term behaviors. Then, the Indonesian millennials generation's sample also becomes the strength since it is important to examine millennials that will lead the Indonesian industry in the future. This study expects other researchers to examine Indonesia's financial education and long-term behaviors related to millennials' financial well-being.

On the other hand, this study also has limitations that can be improved in future research. First, other factors can impact long-term behaviors besides financial education, such as financial literacy, financial status, and risk-taking attitude. Those variables are recommended to be added in future research since it predicted can affect the millennial's long-term behavior and financial well-being. Second, this study only focuses on examining the millennials generation. Future researchers are advised to compare millennials generation with the older generations, for example, Gen X. Third, this study did not examine the millennials' major of study and their financial support. Future research is recommended considering those two factors since the result will have more comparisons. From the major of study, the researchers can examine why millennials outside business majors can have an interest in the retirement plan and investment. Meanwhile, financial support will be used to determine whether they have someone that they can rely on to support their long-term behaviors. Therefore, asking about the major of study and financial support is recommended in future research.



Fourth, this study uses an online questionnaire method that makes the researcher unable to verify respondents' honesty. There are probabilities the respondents did not answer the questions based on their reality. Fifth, this study uses a small sample from 241 millennials generation in Indonesia. There might be millennials that have different perspectives and situations with this study respondent. From these issues, future research recommended adding another method like field research with bigger sample size. Therefore, future researches can support this study since it has more detail and accurate data.

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## **The Influence Of Organizational Culture, Leadership, Motivation, And Work Discipline On Employee Performance? An Extended Abstract**

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### **Abstract**

Organizational goals are to achieve maximum success with high employee performance to contribute to the agency and in line with the organization's vision and mission. This study aims to analyze the influence of organizational culture, leadership, motivation, and work discipline on employee performance in the Bulang District, Batam City Government. Partially and simultaneously this study uses quantitative research, and a population of 69 respondents consisting of all employees, and at the same time as a sample in this study, using the census sampling technique. Data collection was obtained using a questionnaire that has been conducted and tested the validity and reliability of the data. The data analysis technique uses multiple linear regression, and hypothesis testing is done by partial and simultaneous testing. Based on the results of data testing using the SPSS program, it shows that organizational culture has a positive and significant effect on employee performance, leadership has no positive and significant effect on employee performance, motivation has a positive and significant effect on employee performance, and work discipline has a positive and significant effect on employee performance. . Simultaneous hypothesis testing shows that the independent variables consisting of organizational culture, leadership, motivation, and work discipline have a positive and significant effect on employee performance.

**Keywords:** Employee Performance Organizational Culture, Leadership, Motivation, Work Discipline

### **1. Introduction**

Performance measurement in an organization is an act of measuring the various activities that the organization has carried out which can be used as feedback to provide information about the success of planning and to find out whether improvements are needed for the future. Where this is done to achieve organizational goals for both the short and long term. The goals and benefits of performance can be used as motivation for employees to achieve the vision, mission, and goals that the organization has set in adhering to predetermined standards of behavior in order to produce the results the organization wants. In the scope of work, organizational culture is often associated with the achievement of goals and organizational performance. According to Subagiyono (2015), defining organizational culture is a pattern of basic assumptions - created, discovered or developed by certain groups when they adjust to external problems and internal integration that have worked quite well and are considered valuable, and are therefore taught to new employees. as the correct way to realize, think, and feel a connection with the problem.

According to Isyandi (2017), it is stated that organizational culture is a belief, habit, value, norm and way of doing work for each organization that regulates organizational activity patterns and actions, and describes implicit patterns, behaviors, and emotions that appear to be characteristics in the organization. Organizational culture shows a unique configuration of norms, values, beliefs, and ways of behaving that characterize the way groups and individuals work together to get things done.

Leadership in an organization is very important to mobilize all employees to achieve the expected

organizational goals. Good leadership will be used as a guide for each employee in making decisions on their respective assignments and responsibilities. According to Isyandi (2017), stating leadership is an ability that is possessed by everyone who knows and wants to learn and practice. Leadership is the process of influencing or giving examples from leaders to followers in an effort to achieve organizational goals. Leadership plays an important role because it is the leader who will move and direct the organization in achieving its goals and at the same time is a difficult task. It's not easy, because you have to understand every different behavior of your subordinates.

According to Sutrisno (2019), leadership is the ability to influence other parties, through direct or indirect communication with the intention of moving people to be understanding, aware, and happy to follow the will of the leadership.

According to Sutrisno (2019), motivation is a factor that encourages a person to carry out a certain activity, therefore motivation is often interpreted as a factor driving one's behavior. According to Hasibuan Supriyanto (2018), work motivation is the provision of a driving force that creates a person's work enthusiasm so that they are willing to work together, work effectively and are integrated with all their efforts to achieve satisfaction. An important driving factor that causes humans to work is a need that must be met.

The success of an organization in achieving a goal is determined by the quality of professionalism determined by the discipline of its employees, for government officials this discipline is an element of obedience, loyalty, sincerity in carrying out duties and the ability to sacrifice in the sense of sacrificing personal and group interests for the benefit of society and the State.

#### Identification of problems

Based on the explanation described on the background of the problem, it appears that there are employee performance problems in the Bulang District environment including:

1. There are still unfavorable assumptions about other employees.
2. Lack of leadership attention to employees to motivate employees.
3. Employee motivation to work is still low
4. Lack of timeliness in completing work.
5. Employee performance is not optimal.

#### Formulation of the problem

Based on the background of the problems above, the problem formulation in this study is as follows:

1. Does Organizational Culture affect Employee Performance in Bulang District, Batam City Government?
2. Does Leadership Affect Employee Performance in Bulang District, Batam City Government?
3. Does Motivation affect Employee Performance in Bulang District, Batam City Government?
4. Does Work Discipline affect Employee Performance in Bulang District, Batam City Government?
5. Does Organizational Culture, Leadership, Motivation and Work Discipline affect Employee Performance in Bulang District, Batam City Government?

## 2. Literature Review

Organization is defined as a social unit of a group of individuals (people), who interact with each other according to a structured pattern in a certain way, so that each member of the organization has their respective duties and functions, and as a unit has certain goals, and also has boundaries. clear boundaries, so that the organization can be clearly separated from its environment.

Sutrisno (2019) defines organizational culture as a set of systems of values, beliefs, assumptions, or norms that

have long been valid, agreed upon and followed by members of an organization as code of conduct and solving organizational problems. Organizational culture is also called corporate culture, which is a set of values or norms that have been in effect for a long time, shared by members of the organization (employees) as a norm of behavior in solving organizational problems.

Sofyan et al., (2018) stated that leadership is a process where a person can become a leader through continuous activities so that they can influence those they lead (followers) in order to achieve organizational goals. The relationship between a leader and being led is a leadership process because the leader needs followers and followers need the leader. Even though leaders and followers are related to each other, leaders should often take the initiative to establish relationships, communicate and maintain relationships so that organizational goals as formulated in the organization's vision, mission, plans and strategies can be achieved.

Sutrisno (2019) states that motivation is a factor that encourages a person to do a certain activity, motivation is often interpreted as a factor driving one's behavior. Every activity carried out by someone must have a factor that drives these activities. Therefore, the driving factor of a person to do a certain activity is generally the person's needs and wants.

Disciplined work shows a condition or attitude of respect that exists in employees towards company rules and regulations. Thus, if the rules or regulations that exist in the company are ignored, or are often violated, then employees will have poor discipline. Conversely, if employees are subject to company regulations, it illustrates a condition of good discipline. Sutrisno (2016), states that Discipline is the attitude of a person's willingness and willingness to obey and obey the regulatory norms that apply around them.

Sidianti (2015) states that employee performance is often interpreted as the achievement of tasks, where employees at work must be in accordance with the organization's work program to show the level of organizational performance in achieving the vision, mission and goals of the organization. Sutrisno (2019), states that work performance or performance is the result of work that has been achieved by someone from their work behavior in carrying out work activities.

### 3. Research Methods

In this study using quantitative research methods is one type of research whose specifications are systematic, well-planned and clearly structured from the start to the making of the research design. The type of data in this study uses primary data types. According to Sugiyono (2015), defining primary data is a data source that directly provides data to data collectors. Sugiyono (2015), states that data collection techniques can be done by interview (interview), questionnaire (questionnaire), and a combination of the two. Interview (Interview), is used as a data collection technique, if the researcher wants to conduct a preliminary study to find problems that must be researched, and also if the researcher wants to find out more in-depth things from the respondents and the number of respondents is small or small. Questionnaire (Questionnaire), a questionnaire is a data collection technique which is done by giving a set of questions or written statements to respondents to answer.

According to Sugiyono (2016), states that the population is a generalization area consisting of objects or subjects that have certain qualities and characteristics set by the researcher and then draw conclusions. The population used in this study were all employees in the Bulang District, Batam City Government as many as people.

According to Sugiyono (2016), states that the sample is part of the number owned by the population. Sample measurement is a step to determine the size of the sample taken in carrying out research on an object. To determine the size of the sample can be done statistically or based on research estimates. This sampling must be carried out in such a way that a sample is obtained that can actually function or can describe the actual situation of the population, in other terms it must be representative (representing).

This research variable is used to measure each of the independent and dependent variables. Sugiyono (2017), states that the research variables are basically anything that is determined by the researcher to study so that information is obtained about it, then conclusions are drawn. The variables of this study are divided into two,

the independent variable and the dependent variable.

The instrument used in this study was a questionnaire (questionnaire). The questionnaire used is in the form of a closed questionnaire, which aims to obtain a general description of the independent variables of leadership, motivation, work discipline and work environment and the dependent variable on employee performance. Sugiyono (2015) explains that the research instrument is a measuring tool such as tests, questionnaires, interview guidelines and observation guidelines that researchers use to collect data in a study. Measurement in this research instrument using a measuring instrument, namely the Likert scale and elaborated questions based on the indicators in this research variable.

The research instrument analysis technique was used to test the extent to which the research variable indicators could be tested for their validity and reliability quantitatively. The data analysis technique in this quantitative research uses statistical methods. This study uses inferential statistical data analysis. According to Sugiyono (2015), inferential statistics are often called inductive statistics or probability statistics, which are statistical techniques used to analyze sample data and the results are applied to the population. These statistics are called probability statistics, because the conclusions that are applied to the population based on the sample data are probability. Inferential statistics uses a type of parametric statistics which is to test population parameters through statistics, or to test population size through sample data, meaning that these statistics are data obtained from the sample.

Multiple regression analysis is used to predict how the state (ups and downs) of the dependent variable, if two or more independent variables act as predictor factors or fluctuate in value. This analysis is used to see the extent to which each independent variable affects the dependent variable.

Coefficient of determination ( $R^2$ ) is a tool to measure how far the model's ability to explain the variation in the dependent variable. The coefficient of determination is between zero or one. Score ( $R^2$ ) Small means that the ability of the independent variables to explain the variation in the dependent variable is very limited. Conversely, if the value is close to one, it means that the variables provide almost all the information needed to predict the dependent variables.

#### 4. Results and Discussion

Based on the normality test and free of these classical assumptions, it can be said to be linear or normal, so that multiple linear regression data analysis can be used in this study. The results of the calculation of the multiple linear regression statistical test can be seen in Table 1 below.

Table. 1 Multiple Linear Regression Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.241	7.506		-.831	.409
	Organizational Culture	.465	.057	.647	8.104	.000
	Leadership	-.270	.058	-.400	-4.689	.000
	Motivation	.445	.085	.417	5.208	.000
	Work Diciplene	.429	.093	.381	4.609	.000

a. Dependent Variable: Employee Performance

Based on the Coefficientsa output shows that the multiple linear regression equation model to estimate the results of each variable influence organizational culture, leadership, motivation, and work discipline are:  $Y = -6.241 + 0.465X_1 + -.270X_2 + 0.445X_3 + 0.429$ .

The X1 regression coefficient of 0.465 states that each increase of one score for the organizational culture variable will increase employee performance by 0.465, conversely, if the organizational culture score decreases by one score, the employee performance results are also predicted to decrease by 0.465 assuming other variables remain.

The regression coefficient X2, if the leadership score is -.270 states that each value decreases by -.270, then the assumption that employee performance will decrease by -.270, assuming other variables remain.

The X3 regression coefficient of 0.445 states that each increase of one Motivation score will increase employee performance by 0.445. Conversely, if the Motivation score decreases by one score, the employee performance results are also predicted to decrease by 0.445 on the assumption that other variables are constant.

The X4 regression coefficient of 0.429 states that every one increase in work discipline score will increase employee performance by 0.429. conversely, if the score of work discipline drops by one score, then the employee performance results are also predicted to decrease by 0.429 on the assumption that other variables are constant. This regression model is tested for correctness using partial test (t test) and simultaneous test (F test).

Based on the research that has been done, the data obtained from the research results. After all the data has been collected, the next step that will be taken is to analyze the data. The data analysis required in this study is the t test analysis and the F test.

The t test is used to determine the effect of each independent variable consisting of organizational culture, leadership, motivation, and work discipline on the dependent variable, namely employee performance.

Table. 2 T test results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.241	7.506		-.831	.409
	Organizational Culture	.465	.057	.647	8.104	.000
	Leadership	-.270	.058	-.400	-4.689	.000
	Motivation	.445	.085	.417	5.208	.000
	Work Diciplene	.429	.093	.381	4.609	.000

a. Dependent Variable: Employee Performance

Partial testing is done using SPSS 20.0 for windows. The test results using the SPSS program show that the significance value is  $0.000 < 0.05$ , which means the hypothesis ( $H_0$ ) rejected, and ( $H_a$ ) received, and value  $t_{count} = 8.104 > t_{table} = 0,678$  then it is concluded that  $H_a$  received, and  $H_0$  rejected thus organizational



culture has a positive and significant effect on Employee Performance in the Bulang District, Batam City Government.

Partial testing is done using SPSS 20.0 for windows. The test results using the SPSS program show that the significance value is  $0.000 < 0.05$ , which means the hypothesis ( $H_{02}$ ) rejected, and ( $H_{\alpha 2}$ ) received, and value  $t_{\text{count}} = -4.689 > t_{\text{table}} = 0,678$  then it is concluded that  $H_{\alpha 2}$  received, and  $H_{02}$  rejected, thus the leadership variable has a negative and significant effect on Employee Performance in the Bulang District, Batam City Government. Partial testing is done using SPSS 20.0 for windows. The test results using the SPSS program show that the significance value is  $0.000 < 0.05$ , which means the hypothesis ( $H_{03}$ ) ditolak, dan ( $H_{\alpha 3}$ ) received, and value  $t_{\text{count}} = 5.208 > t_{\text{table}} = 0,678$  then it is concluded that  $H_{\alpha 3}$  received, and  $H_{03}$  rejected, thus motivation has a positive and significant effect on Employee Performance in the Bulang District, Batam City Government.

Partial testing is done using SPSS 20.0 for windows. The test results using the SPSS program show that the significance value is  $0.000 < 0.05$ , which means the hypothesis ( $H_{04}$ ) rejected, and ( $H_{\alpha 4}$ ) received, and value  $t_{\text{count}} = 4.609 > t_{\text{table}} = 0,678$  then it is concluded that  $H_{\alpha 4}$  received, and  $H_{04}$  Thus work discipline has a positive and significant effect on Employee Performance in the Bulang District, Batam City Government.

The F test or simultaneous test is used to find out whether all independent variables have an influence simultaneously on the dependent variable. In this case, simultaneous testing is intended to test the influence of the independent variables of organizational culture, leadership, motivation, and work discipline on the dependent variable employee performance.

Table. 3 Hasil Uji F

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1029.796	4	257.449	26.356	.000 <sup>b</sup>
	Residual	625.161	64	9.768		
	Total	1654.957	68			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Work Discipline, Motivation, Organizational Culture, Leadership

Simultaneous testing was carried out using SPSS 20.0 for windows. The test results using the SPSS program show that the significance value is  $0.000 < 0.05$ , which means that the hypothesis ( $H_{05}$ ) is rejected, and ( $H_{\alpha 5}$ ) accepted, and the value of  $t_{\text{count}} = 26,356 > t_{\text{table}} = 2.50$ , it can be concluded that  $H_{\alpha 5}$  is accepted, and  $H_{05}$  is rejected, thus there is a significant influence between organizational culture, leadership, motivation, and work discipline on employee performance in the sub-district environment, Batam City Government Headquarters.

The coefficient of determination is used to see the closeness of the relationship between the dependent variable and the independent variable. In other words, the coefficient of determination test is used to show how much the independent variable can explain the dependent variable. In this case the coefficient of determination is indicated by the value Adjusted R square. The higher the value Adjusted R square means the better the regression model used. Score R square ranges between 0 up to one (1). For multiple linear regression we recommend using R square which has been adjusted or written Adjusted R square, because it is adjusted to the number of independent variables used.

Table. 4 Determination Coefficient Test Results

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.789 <sup>a</sup>	.622	.599	3.12540

a. Predictors: (Constant), Work Discipline, Motivation, Organizational Culture, Leadership

b. Dependent Variable: Employee Performance

On *output Model Summary* above it can be explained that the correlation results ( $R^2$ ) which simultan (jointly) between organizational culture, leadership, motivation, and work discipline obtained a value of 0.789. The contribution given by these four variables to the employee performance variable in the Bulang District, Batam City Government. Written determination coefficient value *Adjusted R square* amounting to 0,599 It can be explained that the dependent variable is income 59,9% influenced by all independent variables consisting of organizational culture, leadership, motivation, and work discipline, the rest are influenced by other factors outside the variables used in this study.

## 5. Results and Discussion

### Organizational culture

The influence of organizational culture on employee performance, partial hypothesis testing results (t test). This is indicated by a significance value of 0.000 smaller than  $\alpha = 0,05$ , and nilai  $t_{count} = 8.104 > t_{table} = 0,678$ , then  $H_{\alpha 1}$  accepted, and  $H_0 1$  rejected thus that organizational culture has a positive and significant effect on Employee Performance in the Bulang District, Batam City Government.

### Leadership

The influence of leadership on employee performance, the results of partial hypothesis testing (t test). This is indicated by a significance value of 0.000 smaller than  $\alpha = 0,05$ , and value  $t_{count} = -4.689 > t_{table} = 0,678$ , then  $H_{\alpha 2}$  accepted, and  $H_0 2$  rejected, thus that Leadership has a negative and significant effect on Employee Performance in the Bulang District, Batam City Government.

### Motivation

Effect of Motivation on Employee Performance, partial hypothesis testing results (t test). This is indicated by a significance value of 0.000 smaller than  $\alpha = 0,05$ , and value  $t_{count} = -5.208 > t_{table} = 0,678$ , then  $H_{\alpha 3}$  accepted, and  $H_0 3$  rejected, thus that motivation has a positive and significant effect on Employee Performance in the Bulang District, Batam City Government.

### Work Discipline

Effect of work discipline on employee performance, partial hypothesis testing results (t test). This is indicated by a significance value of 0.000 smaller than  $\alpha = 0,05$ , and value  $t_{count} = 4.609 > t_{table} = 0,678$ , then  $H_{\alpha 4}$  accepted, and  $H_0 4$  rejected, thus that work discipline has a positive and significant effect on Employee Performance in the Bulang District, Batam City Government.

### Organizational culture, leadership, motivation, and work discipline on employee performance

Testing is simultaneously carried out using SPSS 20.0 for windows. The test results using the SPSS program show a significance value of  $0.000 < 0,05$  which means hypothesis ( $H_0 5$ ) rejected, and ( $H_{\alpha 5}$ ) accepted, adn value  $F_{count} = 26.356 > t_{table} = 2.50$ , then it is concluded that  $H_{\alpha 5}$  accepted, and  $H_0 5$  rejected, thus

simultaneously has a positive and significant effect on Employee Performance in the Bulang District, Batam City Government.

#### Conclusion

Based on the results of research and discussion, several conclusions can be drawn as follows:

Organizational culture has a positive and significant effect on employee performance in the Bulang District, Batam City Government.

Leadership has no positive and significant effect on employee performance in the Bulang District, Batam City Government.

Motivation has a positive and significant influence on employee performance in the Bulang District, Batam City Government.

Work discipline has a positive and significant effect on employee performance in the Bulang District, Batam City Government.

Organizational culture, leadership, motivation, and work discipline have a positive and significant effect on employee performance in the Bulang district environment of the Batam City Government.

#### Suggestion

Based on the description of the discussion and conclusions, some suggestions can be made, including the following:

The need to cultivate a good organization and cooperation between all employees in the Bulang District environment in achieving the goal of effective service for all communities, especially for the District.

The need to increase the role of a leader in improving employee performance. Good leadership will encourage government organizations to do better and employees can maximize their existing abilities and expertise.

To improve employee performance, it can be done by providing motivation for employees so that they are motivated to work and have creative work. Sensitivity is also needed to help colleagues' work as soon as possible after their own work is completed, so that in addition to doing office work, employees also interact with other employees.

Work discipline needs to be applied as early as possible for all employees so that any work carried out can be completed quickly and accurately, without having to wait several days to complete work that should have been completed in less time.

Employee performance needs to improve performance, especially in terms of achieving work targets and the ability to complete work and the attitude of employee cooperation in completing work.

It should be given an award in accordance with the achievements given to the organization. The forms of reward do not have to be in the form of money, but also in the form of praise that is proportional to achievement so that employees can continue to be motivated at work. Another form of reward can be given in the form of providing opportunities for self-development through formal and informal education so that employees continue to develop which in turn is expected to improve employee performance and will be an added value for the employee concerned and for the institution to advance a more effective and creative organization.

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# **The Influence Of Leadership, Motivation, Work Discipline, And The Working Environment On Employee Performance? An Extended Abstract**

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## **Abstract**

Factors that encourage employee performance to achieve organizational success are leadership, motivation, work discipline, and employee work environment. The important thing in this study aims to determine the effect of leadership, motivation, work discipline, and work environment on employee performance in the Department of Food and Agriculture of Batam City Government. This study involved a population of 63 respondents and was also used as a sample in gathering data for this study. The variables studied in this study consisted of leadership, motivation, work discipline, work environment, and employee performance. Statistical data of this study were tested and analyzed using validity, reliability, partial testing, simultaneous testing, and multiple linear regression testing. Based on the results of testing the data shows that partial testing that leadership, work discipline, work environment has a positive and significant effect, and motivation variables have a negative and significant effect on the performance of the Employees of the Department of Food and Agriculture, Batam City Government. This study also carried out the F test or simultaneous test, where the four independent variables including leadership, motivation, work discipline, and work environment showed positive and significant results on the performance of the Department of Food and Agriculture Employees of Batam City Government. The coefficient of determination shows the value of R 0.762 and the adjusted value of 0.551 means that it is able to contribute research to improve employee performance.

**Keywords:** Employee Performance, Leadership, Motivation, Work Discipline, Work Environment

## **1. Introduction**

Human resource management is a science or a method of how to manage the relationships and roles of resources (labor) owned by individuals in an efficient and effective manner and can be used optimally so that the common goals of the organization, employees and society are maximized. Performance management is very important for an agency to be able to carry out its talent management strategy, namely to identify the strengths and weaknesses of its employees, link employees with appropriate training and development activities, and reward good performance with salaries and other incentives.

Employee performance greatly affects the success of an organization's goals, seeing the importance of employees in an organization. Good performance can be seen from the results obtained, in accordance with organizational standards. One of the efforts to improve employee performance can be done by applying policies and directives from a reliable and highly motivated and focused leader. The policies of each organization or agency in providing rules to achieve different goals.

According to Sasono (2018), defines leadership as an overall activity in order to influence people to be willing to work together to achieve a common goal. The ability of a leader has a role in influencing other people to carry out work, meaning that how is the ability of a leader in motivating his staff to be disciplined in carrying out their duties and duties as an employee in the Batam City Government Food and Agriculture Service.

According to Sutrisno (2019), motivation is a factor that encourages a person to carry out a certain activity,



therefore motivation is often interpreted as a factor driving one's behavior. According to Supriyanto (2018), stating that work motivation is the provision of a driving force that creates someone's work enthusiasm so that they are willing to work together, work effectively and are integrated with all their efforts to achieve satisfaction. An important driving factor that causes humans to work is a need that must be met.

In order to achieve organizational goals, employees need motivation to work more diligently. Seeing the importance of employees in the organization, employees need more serious attention to the tasks they are doing so that organizational goals are achieved. With high work motivation, employees will work harder in carrying out their jobs. Conversely, with low work motivation, employees do not have work enthusiasm, give up easily, and have difficulty completing their work. In addition to work motivation factors, the work environment in which the employee works is equally important in improving employee performance.

Employee work discipline is the ability of employees to comply with obligations and avoid prohibitions that have been stipulated in statutory regulations or official regulations which if not obeyed or violated are subject to disciplinary action, while disciplinary violations are words, writings or actions of employees who do not comply with obligations and or violate prohibition of disciplinary provisions that are carried out within or outside working hours.

With these data, the level of employee discipline is still not optimal every month. Lack of work discipline factors will decrease the desire of employees to achieve work performance, lack of timeliness in completing work, and lack of obeying organizational regulations, these things that lack of discipline levels for employees will have an impact on the overall organizational performance results.

According to Riskawati et al., (2018), stated that work discipline is an act of motivating groups of employees to meet the demands of various regulatory provisions. Employee discipline in the form of an effort justifies training knowledge, consciously shaping employee attitudes with the ability to cooperate with other employees and increasing work performance in organizations that have different backgrounds from one another.

The work environment is the whole or every aspect of the symptoms and socio-culture that surrounds or affects individuals. The work environment is everything that is around the workers that can affect themselves in carrying out their assigned tasks, for example lighting, air temperature, space for movement, security, cleanliness, employee social interactions and others. A comfortable working environment will affect employees to work harder and concentrate on completing their tasks according to schedule. The success of improving performance requires the Regional Apparatus Organizations to know the performance targets. If the performance target is grown from within the employee, it will form a self-strength and if the work environment also supports it, the achievement of performance will be easier.

#### Identification of Problems

Based on the explanation that has been described on the background of the problem, it can be seen that there are several problems in the performance of the Batam City Government Food and Agriculture Service Employee, including:

1. Supervision of leadership on each employee performance is still not optimal.
2. Employee motivation has not been optimal in achieving organizational goals.
3. Lack of employee accuracy in completing work.
4. The work environment is less conducive.
5. The achievement of organizational goals is still not optimal.

#### Formulation of the problem

Based on the background of the problems above, the problem formulation in this study is as follows:

1. Does Leadership affect Employee Performance at the Batam City Government Food and Agriculture Security Service?



2. Does Motivation affect Employee Performance at the Batam City Government Food and Agriculture Security Service?
3. Does Work Discipline affect Employee Performance at the Food Security and Agriculture Office of Batam City Government?
4. Does the Work Environment affect Employee Performance at the Batam City Government Food and Agriculture Security Service?
5. Do Leadership, Motivation, Work Discipline, and Work Environment affect Employee Performance at the Batam City Government Food Security and Agriculture Service?

## 2. Literature Review

There are several kinds of definitions regarding leadership, including according to Wukir (2013), providing an understanding of leadership which is the art of motivating and influencing a group of people to act to achieve common goals. According to Samsudin (2014), stating leadership can be interpreted as the ability to convince and move others to want to work together under his leadership as a team to achieve certain goals. Then according to Rachmawati (2014), leadership can be defined as the ability to influence groups towards achieving goals or an effort to use influencing styles and not forcing to motivate individuals to achieve goals.

Sulistiyani (2018), states that motivation is a process of giving encouragement to subordinates so that subordinates can work in line with the limits given to achieve organizational goals optimally. The process of giving encouragement is a series of activities that must be passed or carried out to foster employee motivation to work in line with organizational goals. Disiplin Kerja

Sutrisno (2016) states that discipline is the behavior of a person that is in accordance with the rules, existing work procedures or discipline is the attitude, behavior and actions that are in accordance with the rules of the organization, both written and unwritten. From some of the opinions above, it can be understood that discipline is the attitude or willingness of a person to obey and obey the rules that apply in an organization.

According to Sedarmayanti (2015), states that all tools and materials faced, the surrounding environment where a person works, their work methods, and work arrangements both as individuals and as a group. The work environment is everything that is around the worker and which can affect him in carrying out assigned tasks.

Sutrisno (2019), states that work performance or performance is the result of work that has been achieved by someone from their work behavior in carrying out work activities. Sutrisno (2019), revealed that job performance or performance appraisal is a formal process to periodically review and evaluate one's work performance.

## 3. Research Methods

The quantitative research method is one type of research whose specifications are systematic, well-planned and clearly structured from the start to the making of the research design. The type of data in this study uses primary data types. According to Sugiyono (2015), defining primary data is a data source that directly provides data to data collectors. According to Sugiyono (2015), states that data collection techniques can be done by interview (interview), questionnaire (questionnaire), and a combination of the two.

Interview is used as a data collection technique, if the researcher wants to conduct a preliminary study to find the problems that must be researched, and also if the researcher wants to know the things of the respondents that are more in-depth and the number of respondents is small or small.

Questionnaire a questionnaire is a data collection technique which is done by giving a set of questions or written statements to respondents to answer.

According to Sugiyono (2016), states that population is a generalization area consisting of objects or subjects that have certain qualities and characteristics set by the researcher and then draw conclusions. The population used in this study were all employees at the Batam City Government's Food and Agriculture Security Service.

According to Sugiyono (2016), states that the sample is part of the number owned by the population. Sample measurement is a step to determine the size of the sample taken in carrying out research on an object. To determine the size of the sample can be done statistically or based on research estimates. This sampling must be carried out in such a way that a sample is obtained that can actually function or can describe the actual situation of the population, in other terms it must be representative (representing).

This research variable is used to measure each of the independent and dependent variables. Sugiyono (2017), states that the research variables are basically anything that is determined by the researcher to study so that information is obtained about it, then conclusions are drawn. The variables of this study are divided into two, the independent variable and the dependent variable.

The instrument used in this study was a questionnaire (questionnaire). The questionnaire used is in the form of a closed questionnaire, which aims to obtain a general description of the independent variables of leadership, motivation, work discipline and work environment and the dependent variable of employee performance.

According to Sugiyono (2015), explaining that research instruments are measuring tools such as tests, questionnaires, interview guides and observation guidelines that researchers use to collect data in a study. Measurement in this research instrument using a measuring instrument, namely the Likert scale and elaborated questions based on the indicators in this research variable.

This research instrument analysis technique is used to test the extent to which the research variable indicators can be tested for their validity and reliability quantitatively. The data analysis technique in this quantitative research uses statistical methods. This study uses inferential statistical data analysis. According to Sugiyono (2015), inferential statistics are often called inductive statistics or probability statistics, which are statistical techniques used to analyze sample data and the results are applied to the population. Multiple regression analysis is used to predict how the state (ups and downs) of the dependent variable, if two or more independent variables are predictive factors or their value fluctuates. This analysis is used to see the extent to which each independent variable affects the dependent variable.

Coefficient of Determination ( $R^2$ ) is a tool to measure how far the model's ability to explain the variation in the dependent variable. The coefficient of determination is between zero or one. If the coefficient of determination is small, it means that the ability of the independent variables to explain the variation in the dependent variable is very limited. Conversely, if the value is close to one, it means that the variables provide almost all the information needed to predict the dependent variables.

The results of this study can be tested for multiple linear regression equations, to find out it can be explained and analyzed in Table 1 below.

#### 4. Results and Discussion

Table. 1 Multiple Linear Regression Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-9,016	8,064		-1,118	,268
	X1	,625	,092	,613	6,768	,000
	X2	-,387	,097	-,386	-3,999	,000
	X3	,476	,094	,452	5,072	,000
	X4	,444	,106	,399	4,200	,000

a. Dependent Variable: Y

The results of data processing in Table 1 indicate that the acquisition of multiple linear regression equations.

$$Y = -9,016 + 0,625 X1 + - 0,387 X2 + 0,476 X3 + 0,444 X4 + e$$

Meaning:

1. The constant value has a value of -9.016, this result shows that the variable leadership, motivation, work discipline, work environment has a zero value and the employee performance value is -9.016.
2. The value of the leadership variable has a regression coefficient of 0.625, this result shows that if the other independent variables do not change, a 1% increase in the leadership variable can increase employee performance by 0.625.
3. The value of the motivation variable has a regression coefficient of -0.387, this result shows that if the other independent variables do not change, a 1% increase in the motivation variable cannot increase because the leadership value is - 0.387.
4. The value of the work discipline variable has a regression coefficient of 0.476, this result shows that if the other independent variables do not change, a 1% increase in the work discipline variable can increase employee performance by 0.476.
5. The value of the work environment variable has a regression coefficient of 0.444, this result shows that if the other independent variables do not change, a 1% increase in the work environment variable can increase employee performance by 0.444.

### Result of t Test (Partial Test)

Statistical testing with the t test is used to determine the effect of each independent variable on the dependent variable. By comparing the calculated t value with the t table value. If  $t_{\text{count}} > t_{\text{table}}$ , then there is a significant effect, and vice versa if  $t_{\text{count}} < t_{\text{table}}$  then there is no significant effect. The results of partial test data processing can be explained in Table 2.

Table. 2 T Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-9,016	8,064		-1,118	,268
	X1	,625	,092	,613	6,768	,000
	X2	-,387	,097	-,386	-3,999	,000
	X3	,476	,094	,452	5,072	,000
	X4	,444	,106	,399	4,200	,000

a. Dependent Variable: Y

Based on the output results in Table 2 it can be explained:

1. The leadership variable has a t value of 6.768 > 0.778 t table and a significance value of 0.000 < 0.05, it can be concluded that H01 is rejected and H $\alpha$ 1 is accepted, partially the leadership variable has a positive and significant effect on employee performance.
2. The motivation variable has a t value of -3,999 < 0.678 t table and a significance value of 0.000 < 0.05, it can be concluded that H02 is rejected and H $\alpha$ 2 is accepted, partially the motivation variable has no positive and significant effect on employee performance.
3. The work discipline variable has a t value of 5.072 > 0.678 t table and a significance value of 0.000 < 0.05, it can be concluded that H0 3 is rejected and H $\alpha$ 3 is accepted, partially the work discipline variable has a positive and significant effect on employee performance.
4. The work environment variable has a t value of 4.200 > 0.678 t table and a significance value of 0.000 < 0.05, it can be concluded that H0 4 is rejected and H $\alpha$ 4 is accepted, partially environmental variables have a positive and significant effect on employee performance.

### F Test Results (Simultan Test)

The simultaneous test is used to determine the significance level of the independent variables on the influence of the dependent variable. The results of data processing obtained are as follows:

Table. 3 F Test Results (Simultan Test)

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	856,096	4	214,024	20,033	,000 <sup>b</sup>
	Residual	619,650	58	10,684		
	Total	1475,746	62			

a. Dependent Variable: Y

b. Predictors: (Constant), X4, X3, X1, X2

### Determination Coefficient Test Results ( $R^2$ )

Testing the coefficient of determination ( $R^2$ ) is used to measure the proportion or percentage of the model's ability to explain the dependent variable. The coefficient of determination ranges from zero to one ( $0 \leq R^2 \leq 1$ ). If the value of  $R^2$  is greater (close to one), it can be said that the influence of the independent variable (X) is large on the dependent variable (Y). This means that the model used is stronger to explain the effect of the independent variable on the dependent variable and vice versa.

Table. 4 Determination Coefficient Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,762 <sup>a</sup>	,580	,551	3,26858

a. Predictors: (Constant), X4, X3, X1, X2

Based on the results of primary data processing using SPSS 20.00, the R coefficient is 0.762. The results of the coefficient indicate that the variable leadership, motivation, work discipline, and work environment on employee performance variables has a value of 76.2%. Adjusted Value ( $R^2$ ) = 0,551. This means that the performance of the Batam City Food and Agriculture Security Service staff can be explained by leadership, motivation, work discipline, and work environment is 55.1%, while the remaining 44.9% is explained by other variables not included in this study. This shows that the independent variable is able to provide a large contribution and information on the performance of the Batam City Food and Agriculture Service Staff.

### Leadership

The first hypothesis testing is whether leadership has an effect on employee performance. Based on hypothesis testing on the leadership variable on employee performance and the results of partial hypothesis testing (t test) it proves that, a significance value of 0.000 less than  $\alpha = 0,05$ , and value  $t_{\text{count}} = 6,768 > t_{\text{table}} = 0,678$ , then  $H_{\alpha 1}$  received, and  $H_{01}$  rejected, thus it can be concluded that leadership has a positive and significant effect on the performance in the Food and Agriculture Service of Batam City Government.

### Motivation

The second hypothesis testing is whether motivation affects employee performance. Based on hypothesis testing on the motivation variable on employee performance and the results of partial hypothesis testing (t test) prove that, the significance value of 0.000 is smaller than  $\alpha = 0,05$ , and score  $t_{\text{count}} = -3,999 > t_{\text{table}} = 0,678$ , then  $H_{\alpha 2}$  received, and  $H_{02}$  rejected, thus it can be concluded that motivation does not have a positive and significant effect on the performance in the Food and Agriculture Service of Batam City Government.

### Work Discipline

Testing the third hypothesis whether work discipline affects employee performance. Based on hypothesis testing on work discipline variables on employee performance and partial hypothesis testing results (t test) prove that, the significance value 0.000 greater than  $\alpha = 0,05$ , and value  $t_{\text{count}} = 5,072 > t_{\text{table}} = 0,678$ , then  $H_{\alpha 3}$  received, and  $H_{03}$  rejected, thus it can be concluded that work discipline has a positive and significant effect on Employee Performance in the Food and Agriculture Security Service of Batam City Government.

### Work environment

Testing the fourth hypothesis whether the environment affects employee performance. Based on hypothesis testing on work environment variables on employee performance and the results of partial hypothesis testing (t test) prove that, the significance value of 0.000 is greater than  $\alpha = 0,05$ , and value  $t_{\text{count}} = 4,200 > t_{\text{table}} = 0,678$ , then  $H_{\alpha 4}$  accepted, and  $H_{04}$  rejected, thus it can be concluded that the work environment has a positive and significant effect on Employee Performance in the Food and Agriculture Service Office of the Batam City Government.

### Leadership, Motivation, Work Discipline, and Work Environment on Employee Performance

Simultaneous hypothesis testing whether leadership, motivation, work discipline, and work environment affect employee performance. Based on hypothesis testing on the variables of Leadership, Motivation, Work Discipline, and Work Environment on Employee Performance and the results of simultaneous hypothesis testing prove that, the significance value of 0.000 is smaller than  $\alpha = 0,05$ , and value  $F_{\text{count}} = 20,033 > t_{\text{table}} = 2.53$ , then  $H_{\alpha 5}$  accepted, and  $H_{05}$  rejected, thus it can be concluded that all independent variables simultaneously have a positive and significant effect on Employee Performance in the Food Security and Agriculture Office of Batam City Government.

### Conclusion

The research results obtained from testing and data analysis, it can be obtained and drawn some conclusions in this study including the following:

1. Leadership has a positive and significant effect on Employee Performance in the Department of Food Security and Agriculture of Batam City Government.
2. Motivation does not have a positive and significant effect on Employee Performance in the Food and Agriculture Service Office of Batam City Government.
3. Work discipline has a positive and significant effect on Employee Performance in the Food and Agriculture Service Office of the Batam City Government.
4. The work environment has a positive and significant effect on Employee Performance in the Food and Agriculture Service of Batam City Government.
5. Leadership, motivation, work discipline, and work environment have a positive and significant effect on

Employee Performance in the Food Security and Agriculture Office of Batam City Government.

#### Suggestion

Based on the description of the discussion and conclusions above, it can reveal several suggestions, including the following:

1. Leadership who always plays an active role in providing motivation to the internal organization will provide employee performance results. It is hoped that good cooperation will be built for all employees so that work achievement can increase organizational values to continue to develop. Sangat penting untuk provide motivation to employees who continue to work optimally in producing effective organizational performance.
2. The importance of firmness on employees to always obey the rules and procedures in work so that they are not equipped with every activity carried out by the organization.
3. It is always important to maintain the cleanliness of the employee's work environment, so that every work done is not hampered and remains focused on completing the work.
4. To produce a more satisfying internal performance, it is hoped that the cooperation of the entire internal organization can provide high scores to produce maximum performance, of course.
5. Limitations with the research results achieved in this study are expected to continue to be developed and tracked every employee's motivation to work on further research.

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# **The Influence of Organizational Culture, Work Environment, Knowledge Transfer, The Application Of Information Technology Towards Managerial Performance**

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## **Abstract**

This research aims to analyze the influence of the organization culture, work environment, transfer of knowledge, and information technology application simultaneously on managerial performance. This research uses quantitative methods, using a questionnaire with a Likert scale. The population of this research is 60 employees from Supervisor to Manager. The research sample was 60 respondents—this research sampling technique using census technique. The data analysis technique used Multiple Linear Regression with SPSS. The results showed: organizational culture has a positive and significant effect on managerial performance. This means that an influential corporate culture is directly related to the optimal managerial performance by prioritizing quality and quantity. The work environment has a positive but not significant effect on managerial performance. This means that the work environment is no more extended performance support but has become a general guideline for all activities to maintain workplace safety and maintain the natural environment. The work environment has become a standard covering occupational health and aspects and environmental governance. Knowledge transfer has a positive but not significant effect on managerial performance. means that with a sound recruitment system, a proper training system supported by adequate information technology accompanied by work experience, and a sufficient level of education for the managerial level, the transfer of knowledge does not significantly affect organizational performance. The application of information technology has a positive but not insignificant effect on managerial performance. This means that the availability of superior information technology facilities has made information technology an everyday thing. There is no interest in employees at the managerial level to improvise to use information technology to improve quality and performance.

**Keywords:** Organizational Culture, Work Environment, Knowledge Transfer, Application of Information Technology, Managerial Performance

## **1. Introduction**

Batam City is one of the cities in the Riau Islands Province, Indonesia. Batam City is a very strategic island, located in international trade routes and has high economic power with a short distance from Singapore and Malaysia. Batam is an industrial city with various industrial fields, the Manufacture Industry, the Shipyard Industry, and the supporting industry for Oil and Gas (Oil and Gas Industry).

The company leader appoints a manager, supervisor, or superintendent with specific criteria following his enormous responsibility as a controller of his department. Still, whether good or not managerial performance determined by relationships and cooperation with other departments, support and feedback from subordinates in continuous improvement of the system and procedures are created and implemented to be more effective and efficient, good communication with internal and external parties with the application of the latest technology, in achieving company goals.

There has been no significant growth in the number of local employees filling managerial positions for five years. There are several phenomena of the lack of significance of local managerial performance capabilities,

including gaps or differences in local and foreign managerial abilities in terms of planning, organizing, directing, monitoring, problem-solving, evaluation, investigation, staffing, negotiation, and being a company representative to other parties, and There are still many experts for expertise specifications imported from outside Indonesia as temporary and rotational experts for a certain period.

## 2. Review of Literature

Fahmi (2010), managerial performance results from the maximum achievement of people or individuals in organizations or companies by developing and promoting effective communication between various parties both within the company and outside the company and applying management concepts that have a representative and aspirational level of flexibility-realizing the company's vision and mission.

The definition of performance management according to Kreitner, Kinici (2014) performance management is a company system where managers integrate the activities of goal setting, monitoring and evaluation, providing feedback and training, and continuous employee rewards.

To measure managerial performance, perform management functions, according to Hidayat (2015) as follows: 1) Planning, 2) Investigation, 3) Coordination, 4) Evaluation, 5) Supervision, 6) Staffing (Staffing), 7) Negotiation, 8) Representation.

Mangkunegara (2017), organizational culture is a set of assumptions or belief systems, values , and norms developed in organizations that serve as guidelines for behavior for its members to overcome problems of external adaptation and internal integration. According to Robbins (2015), organizational culture refers to a system of sharing meaning by members that differentiate the organization from other organizations.

According to Laksono (2014), the formation of organizational culture takes a long time for the construction of organizational culture. Once formed, the culture tends to take root, making it difficult for managers to change it.

Romli (2014) suggests organizational culture indicators, as follows: 1) implementation of norms, 2) implementation of values, 3) belief and philosophy, 4) implementation of a code of ethics, 5) implementation of ceremonies, 6) organizational history.

Ajala (2012) states that the work environment has a significant effect on performance. A comfortable and conducive work environment will increase employee productivity. In terms of doing their job, humans cannot separate from the various circumstances around their work, namely the work environment. During labor, each employee will interact with multiple conditions in the work environment

According to Sedarmayanti (2014), the work environment is the entire tooling tool and material faced by the surrounding environment where a person works, their work methods, and their work arrangements both as individuals and as groups.

According to Sedarmayanti (2014), factors that affect the work environment include: 1) Lighting or Light, 2) Air Temperature, 3) Noise, 4) Decoration or Spatial, 5) Employee Relations.

Nguyen and Burgess (2014) revealed that knowledge transfer is considered an increasingly important knowledge management process because of its ability to help organizational management benefit from personal knowledge.

Parent et al (2014) says that knowledge can understand as experience, contextual understanding, value-added information, or insight based on an understanding framework that exists in individuals or groups' minds and must be managed independently by being present in the form of tacit or explicit knowledge. Integration activities, including knowledge creation, application of knowledge transfer tools, identification, and acquisition, are seen as more useful than any activities carried out separately.

The indicators of knowledge transfer are as follows, namely: 1) Gera (2012) Social and Cultural Values, 2) Martinkenaite (2012) Technology, 3) Nguyen, Burgess, (2014) Language, 4) Martinkenaite, (2012) Trust and Relationships.

Muslim (2017). Information technology in everyday life is significant because technology development is increasing rapidly so that human needs for technology are also growing.

Information technology uses a group of hardware and devices that can process data into useful information quickly and accurately, with indicators, according to Sutarman (2012), as follows.

Muslim (2017) The role of information technology in everyday life is essential because technology development has proliferated so that human needs for technology are also increasing.

Information technology uses a group of hardware and devices that can process data into useful information quickly and accurately, with indicators, according to Sutarman (2012), as follows, namely: 1) Capturing information, 2) Delivering information, 3) Creating information, 4) Storing information, 5) Communicating information.

### 3. Research Design and Methodology

Objectives:

1. To analyze the influence of organizational culture on managerial performance.
2. To examine the impact of the work environment on managerial performance
3. To investigate the effect of knowledge transfer on managerial performance
4. To analyze the impact of information technology on managerial performance.
5. To analyze the influence of the organization, work environment, transfer of knowledge, and the application of information technology simultaneously affect managerial performance.

Hypothesis:

Based on the theoretical review and empirical findings above, the hypotheses proposed in this study are:

1. *There is an influence of organizational culture on managerial performance*
2. *There is an influence of the work environment on managerial performance*
3. *There is an effect of Knowledge Transfer on managerial performance*
4. *There is an influence of the application of information technology on managerial performance*
5. *There is a significant influence of Organizational Culture, Work Environment, Knowledge Transfer, and the application of information technology on managerial performance*

### 4. The Data Environment and Methodology

Object of research

The research object is a scientific objective to obtain data with specific purposes and uses about something objective, valid, and reliable about something (certain variables), Sugiyono (2017). The population in this study were employees at the managerial level, from Supervisor to Manager levels.

Population and Sample

Population in this study were employees at the managerial level, from the group of Supervisor to Manager with a population of 60 people This research's sampling technique is the saturated sample or census sample because the population is not more than 100 respondents.

The criteria for sampling this research are: Supervisors, Senior Supervisors, Engineering, Coordinators, Superintendents, and Managers. The department that led is a department related to the research carried out, namely the Procurement Department. QA / QC department, Engineering department, IT / HRD department, fabrication department, safety department, finances department, Logistics, and warehouse department. The number of samples examined in this study was sixty (60).

Data analysis technique

Validity test

Analyze each item's validity, and it is done by correlating each item's score with the total score, each item score. The resulting correlation coefficient compares with the applicable validity standards. According to Sugiyono (2017), the requirements must meet in this test must-have criteria:

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- 1) If  $r \geq 0.30$ , then the questions from the questionnaire are valid
- 2) If  $r \leq 0.30$ , then the item from the questionnaire is valid

#### Reliability Test

Externally, testing with test-retest (stability), equivalent, and both. Internally, the reliability of the instrument can experiment with specific techniques. Reliability testing can refer to the value of Cronbach Alpha ( $\alpha$ ), where a constructor variable is declared reliable if it has Cronbach Alpha ( $\alpha$ ) > 0.7 (Sugiyono, 2017).

#### Classic Assumptions Test

The classical assumption test aims to see whether the regression model is feasible or not used to predict the dependent variable based on the independent variable's input, so the regression model must be free from several assumptions, including:

##### Normality test

The normality test is carried to ensure that the data to be analyzed is usually distributed or not.

##### Multicollinearity Test.

The multicollinearity test aims to test whether the regression model found a correlation between the independent variables.

If the independent variables are correlated, these variables are not orthogonal. What is meant by orthogonal variables are independent variables in which the correlation value between independent variables is equal to zero, Ghazali (2015).

A good regression model should not correlate with the independent variables. If the tolerance value is <0.10, or equal to nil; ai VIF > 10, it can be said that the regression model has multicollinearity symptoms and vice versa.

##### Heteroscedasticity Test

Gozali (2015), the heteroscedasticity test to test in the regression, has inequality of variance from the residuals of one observation to another. A good regression model is a homoscedasticity, or heteroscedasticity does not occur. If the p value > 0.05 is not significant, it means there is no heteroscedasticity, and it means that the regression model passes the heteroscedasticity test.

#### Hypothesis test

##### Multiple Linear Regression Analysis

Multiple linear regression analysis is used to measure the presence or absence of influence between the independent variable (free) and the dependent variable (bound).

##### T-Test (Partial)

This test is used to determine whether each independent variable individually has a significant effect on the dependent variable. With the provision that  $t_{count} > t_{table}$  or the probability of error is less than 5%, it proves that the independent variable partially has a significant effect on the dependent variable,  $H_a$  is accepted, and  $H_0$  rejects.

##### F Test (Simultaneous)

This test is used to determine the effect together (simultaneously) of the independent variable on the dependent variable, where  $F_{count} > F_{table}$ , then  $H_a$  is accepted, or together the independent variable can explain the dependent variable simultaneously.

##### R2 test

The R2 test intended to measure how much the percentage of variation in the independent variable (independent) in the multiple linear regression model explains the variation in the dependent variable (dependent). In other words, testing the model using R2, the value of the coefficient of determination is between 0 (zero) and 1 (one), which means that the ability of the independent variables (competence, communication, organizational culture, training) to explain the variation of the dependent variable (performance) is minimal.

## 5. Discussion and Result

Figure 1 shows the output of SPSS version 25, showing the P-P plot points spreading around the diagonal line. Following the diagonal line, it can conclude that this regression meets the assumption of normality.

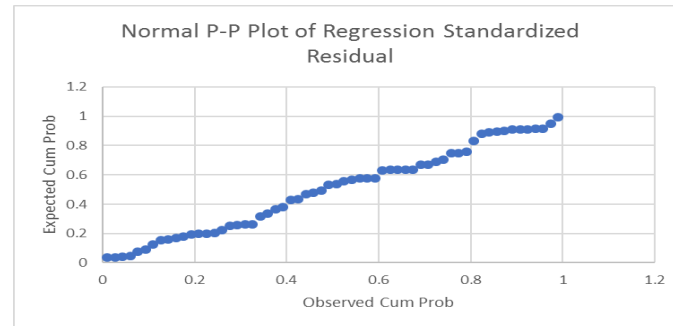


Figure 1. Figure 1. Normality Test Results (P-P Plot)

### Multicollinearity Test Results

Table 1 shows that no data has a VIF value greater than ten, and there is no tolerance value less than 0.1, which means that the research data does not have multicollinearity symptoms.

Table 1. Results of the Multicollinearity Test Value

Variabel	Collinearity Statistics	
	Tolerance	VIF
Organizational Culture	0,601	1,664
Work Environment	0,665	1,503
Knowledge Transfer	0,378	2,642
Application of Information Technology	0,478	2,091

### Heteroscedasticity Test

Figure 2 looks to be spread randomly and does not form a specific pattern and spread above and below the 0 axes on the Y-axis. So, it can be concluded that there is no heteroscedasticity symptom in the regression model.

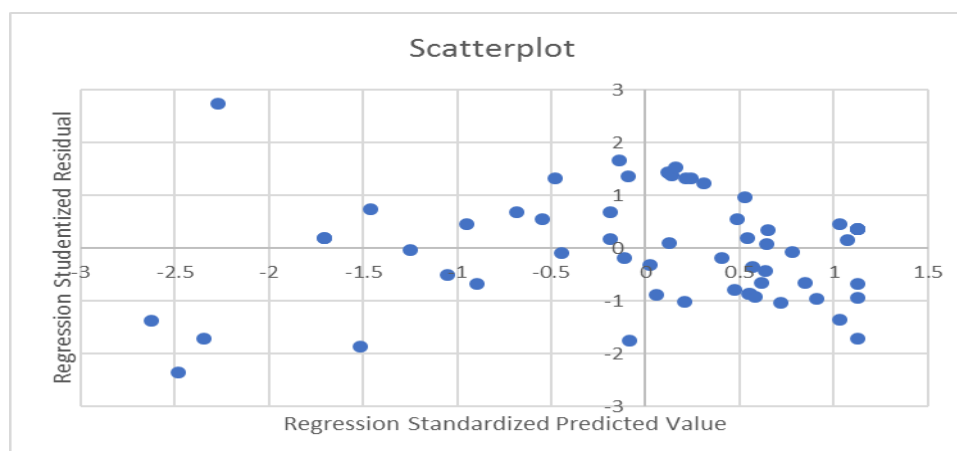


Figure 2. Histogram Scatterplot

## Multiple Linear Regression Test Results

Table 2. Results of Multiple Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.907	7.472		3.066	0.003
	Organizational Culture	0.405	0.113	0.430	3.589	0.001
	Work Environment	0.030	0.116	0.030	0.259	0.797
	Knowledge Transfer	0.369	0.213	0.262	1.733	0.089
	Application of Information Technology	0.140	0.139	0.136	1.010	0.317

a. Dependent Variable: managerial performance

This analysis also predicts the value of the dependent variable if the independent variable's value has increased or decreased and to determine the direction of the relationship between the independent variable and the dependent variable whether each independent variable is related passively or negatively.

Based on the results of the output of SPSS version 25, shown in table 6 above, the following equation obtained:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

$$Y = 22,907 + 0.405X_1 + 0.030X_2 + 0.369X_3 + 0.140X_4 + e$$

From the above equation, a reference to the explanation of the equation obtained as follows:

1. A constant with a value of 22.907 means that if the variables of organizational culture, work environment, knowledge transfer, and application of information technology are zero, then the managerial performance is 22.907.
2. The regression coefficient for the organizational culture variable is 0.405, which means that if other independent variables are considered zero and the value of organizational culture has increased by 1%, then managerial performance will increase by 0.405.
3. The regression coefficient for the work environment variable is 0.030, which means that if other independent variables are considered zero and the value of organizational culture has increased by 1%, then managerial performance will increase by 0.030.
4. The knowledge transfer variable's regression coefficient is 0.369, meaning that if other independent variables are considered zero and the value of organizational culture has increased by 1%, then managerial performance will increase by 0.369.
5. The regression coefficient for the variable application of information technology is 0.140, meaning that if other independent variables are considered zero and the value of organizational culture has increased by 1%, then managerial performance will increase by 0.140.



## Hypothesis Test Results

### The T-test (partial)

The t-test results show in table 3

Table 3. Products of the t-test value

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	22.907	7.472		3.066	0.003
Organizational Culture	0.405	0.113	0.430	3.589	0.001
Work Environment	0.030	0.116	0.030	0.259	0.797
Knowledge Transfer	0.369	0.213	0.262	1.733	0.089
Application of Information Technology	0.140	0.139	0.136	1.010	0.317

#### a. Dependent Variable: managerial performance

1. The organizational culture variable (X1) has t count of 3.589 > 2.004 t table with a significance value of 0.001 < 0.05, then H<sub>0</sub> is rejected, H<sub>a</sub> is accepted, it can conclude that Organizational Culture has a positive and significant effect on managerial performance.
2. Work Environment Variable (X2) has t-count value of 0.259 < 2.004 t table with a significance value of 0.797 > 0.05, then H<sub>0</sub> is accepted, H<sub>a</sub> rejected, it can conclude that the Work Environment has a positive but not insignificant effect on managerial performance.
3. The knowledge transfer variable (X3) has t count of 1.733 < 2.004 t table with a significance value of 0.089 > 0.05. H<sub>0</sub> is accepted, H<sub>a</sub> rejected, and it can conclude that Knowledge Transfer has a positive but not significant effect on managerial performance.
4. The variable application of information technology (X4) has t count of 1.010 < 2.004 t table with a significance value of 0.317 > 0.05, so H<sub>0</sub> is accepted, H<sub>a</sub> rejected, and the application of information technology has a positive but not insignificant effect on managerial performance.

### F Test (Simultaneous)

Simultaneous significance test to determine whether together (simultaneously) the study's independent variables affect the dependent variable. The results of the F test can be seen in Table 4 as follows:

Table 4. Results of the F test

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	948.605	4	237.151	15.153	.000 <sup>b</sup>
	Residual	860.795	55	15.651		
	Total	1809.400	59			

a. Dependent Variable: managerial performance

b. Predictors: (Constant), application of information technology, work environment organizational culture, Knowledge Transfer

Obtained Fcount value of 15.153 > F F table 2.371 with a significance value of 0.000 < 0.05, then Ho is rejected, H<sub>a</sub> accepted. It can conclude that Organizational Culture (X1), Work Environment (X2), Knowledge Transfer (X3), Application of Information Technology (X4) simultaneously have a positive and significant effect on the managerial performance.

R2 test (Determination)

Table 5. Multiple Linear Regression Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.724 <sup>a</sup>	0.524	0.490	3.956

a. Predictors: (Constant), application of information technology, work environment organizational culture, Knowledge Transfer

Table 5 shows an R-value of 0.724, which indicates the independent variable, namely organizational culture, work environment, transfer of knowledge, and the application of information technology together, giving an effect of 72.4% on the dependent variable, namely managerial performance. There is a stable relationship in this regression model, while 27.6% of the factors and other variables not included in this research model.

## 6. Conclusion

Based on the research results, the following conclusions can be drawn: 1. Organizational culture has a positive and significant effect on managerial performance. This means that a healthy organizational culture is directly related to the optimal managerial performance by prioritizing quality and quantity. 2. The work environment has a positive but not insignificant effect on managerial performance. This means that the work environment is no more extended performance support but has become a general guideline for all activities to maintain workplace safety and also maintain the natural environment. The work environment has become a standard covering occupational health and aspects as well as environmental governance. 3. Knowledge transfer has a positive but not significant effect on managerial performance. This means that with a sound recruitment system, a good training system supported by adequate information technology accompanied by work experience, and the right level of education for the managerial level, the transfer of knowledge does not significantly affect managerial performance. 4. The application of information technology has a positive but insignificant effect on managerial performance. This means that the availability of useful information technology facilities makes information technology an everyday thing. There is no employee interest at the managerial level to improvise to use information technology to improve quality and performance. 5. Information technology has become an

ordinary thing which only serves as a work support tool. 6. Organizational culture, work environment, knowledge transfer, and application of information technology simultaneously have a positive and significant effect. The effect is 72.4% simultaneously, and this means a stable relationship in this regression model and the remaining 27.6% influenced by other factors and variables that cannot include in this study.

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# **The Effect of New Normal Policies on Financial Markets during The Covid-19 Pandemic : Evidence from China, USA, and Indonesian Financial Markets**

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## **Abstract**

This study aims to determine whether there is an effect between the number of contaminated COVID-19 and financial markets in China, USA, and Indonesia after implementing the New Normal Policy. The COVID 19 outbreak that WHO has announced in March 2020 as a Pandemic has triggered a fall in share prices. In June 2020, the Indonesian government issued a new normal policy to save the economy sector. Will the financial markets return to normal after the implementation of the new normal policy? this study is the latest research on the effect of the number of contaminated COVID-19 with the financial market after enacting the new normal. This study uses secondary data, which is processed by linear regression using SPSS software. The samples in this study were the Shanghai Composite Index / SSEC (China), the Dow Jones industrial average index / DJIA (United States), and the Jakarta Composite Index / JCI (Indonesia). The daily index data is taken for one month after the new normal implemented, namely June 2020. The results of this study indicate that the amount contaminated with COVID 19 does not affect. Financial market index of China, USA, and Indonesia after the issuance of the New Normal policy. This research provides international evidence that the amount contaminated with COVID 19 has no effect on the stock index in the financial markets of China, USA, and Indonesia after the implementation of the new normal policy. For further research, it can include other variables such as macroeconomics and use a more comprehensive research sample.

**Keywords:** New Normal, COVID 19, Shanghai Composite Index, Dow Jones Industrial Average Index, Jakarta Composite Index

## **1. Introduction**

This study aims to find international evidence of the influence of the number of contaminated COVID-19 with financial markets in China, the USA, and Indonesia after the new normal policy. In mid-December 2019, an outbreak of COVID 19 discovered in the city of Wuhan, China, which became the Chinese government's attention at that time due to the rapid spread of the virus. January 2020, the Chinese government locked down Wuhan's city because the spread of the virus was getting bigger and faster. In March 2020, the World Health Organization (WHO) announced the COVID 19 Outbreak as a Pandemic because the COVID 19 outbreak was spreading rapidly in various countries. The COVID 19 outbreak triggered a fall in stock prices in almost all parts of the world. March 2020 data from IDX shows that the index in China has decreased by -10.74% YTD, USA -34.85% YTD, and Indonesia -37.49% YTD.

COVID 19 has impacted humans as reflected in the number of people infected and the number of deaths due to COVID 19, which continues to increase. Many countries are locking down economic activities and people's movement, imposing travel bans and implementing stimulus packages to protect the economic sector (Hoang et al., 2020). Baker et al., (2020) stated that no outbreak could affect financial markets as severely as the COVID 19 outbreak. Zhang et al., (2020) also stated that the COVID 19 outbreak caused financial markets to fall in a

short time so that losses and risks in the market finances get high.

Data from Worldometer states that the number of COVID 19 cases on August 21, 2020, was 22,900,468 cases. Albuquerque et al., (2020) stated that the first quarter of 2020 was a storm for the USA financial market, where prices decreased in a short time. Not only in the USA financial market but also in the global financial market, including Indonesia. Fernandes, (2020) states that a country whose majority of income comes from tourism will significantly impact the country's income due to the COVID 19 outbreak. Indonesia, one of the countries whose income comes from tourism. Since the implementation of restrictions on community activities, it has an impact on state income. Therefore, in June 2020, the Indonesian government implemented a new normal policy in which there was no prohibition for people to do activities but had to comply with the required protocol. It hoped that the new normal policy could reduce the economic impact caused by the COVID 19 outbreak.

## 2. Literature Review

The first quarter of 2020 for the USA is a formidable challenge. Data from Worldometer shows the number of COVID 19 cases ranked first in the world, with 5,747,544 cases in August 2020. This number far exceeds China, which is the origin of the COVID 19 outbreak. In addition to the COVID 19 outbreak, the USA is also facing a decline in oil prices in the first quarter; the combination of falling oil prices and the COVID 19 outbreak causes a long-term economic downturn and a recession (Sharif et al., 2020). Sansa, (2020) conducted a study on the effect of the amount of COVID 19 contamination on financial markets in the USA and China; the result was that there was a significant influence between the number of COVID 19 cases and financial markets in the USA and China for the period March 2020.

Yan, (2020) found that the COVID 19 outbreak has caused a decline in share prices in China's financial markets. Share prices fell along with the lockdown in Wuhan City, China. It happened due to an excessive reaction from investors. Besides, this study also found that when the 2002-2003 SARS outbreak occurred, there was no significant decline in stock prices, such as the COVID 19 outbreak. Fongang & Ahmadi, (2020) also found affect the decline in share prices because of COVID 19.

Data from IDX shows that the Jakarta Composite Index has decreased by more than 30% due to the COVID 19 outbreak. It is a result of an overreaction from investors—besides, restrictions on community activities and policies issued by the government. Indonesia's second-quarter 2020 GDP contracted by more than 5% due to the COVID 19 outbreak. In June 2020, the Indonesian government issued a New Normal policy where people can return to activities while still implementing the Health protocol. The hope is that this can increase economic growth and reduce the COVID 19 outbreak's negative impact. The hypothesis in this study is:

*H1: Number of Confirmed COVID cases in China has a positive and significant effect on China's Financial Market*

*H2: The number of confirmed cases of COVID 19 in the USA has a positive and significant effect on the USA Financial Market*

*H3: Number of Confirmed COVID 19 cases in Indonesia has a positive and significant impact on the Indonesian Financial Market*

## 3. Method, Data, And Analysis

This research method is quantitative research. The data used in this research is secondary data. The samples of this research are the Shanghai Composite Index / SSEC (China), the Dow Jones industrial average index / DJIA (United States), and the Jakarta Composite Index / JCI (Indonesia). The research period is 1 June 2020 to 30 June 2020 or one month after the new normal policy. The data were processed by linear regression using SPSS software.

#### 4. Result and Discussion

The results of this study indicate that the number of COVID 19 cases does not have a significant effect on stock indexes in China, the USA, and Indonesia. It can see from Table 1, the significance value for China is  $0.68 > 0.05$ , so the hypothesis one rejected. It means that there is no influence on the number of COVID 19 cases in China's financial markets. For the USA's financial market, the results of this study show the same results as the financial market in China, where there is no influence between the number of COVID 19 cases and the financial market in the USA, as seen from the significance value of  $0.157 > 0.05$ . so the second hypothesis is rejected. The third study results also show that there is no influence between the number of COVID 19 cases and the financial market in Indonesia. It can be seen from the significance value of  $0.246 > 0.05$  so that the third hypothesis two and three rejected.

Table 1. Summary Regression Test

Country	Adjusted R Square	Sig
China	0,134	0,68
USA	0,062	0,157
Indonesia	0,024	0,246

The adjusted R square value for the Chinese financial market shows that 13.4% is influenced by the variable number of COVID 19 cases, while other variables influence the rest. For the USA, only 6.2% and Indonesia 2.4% are influenced by the variable number of COVID 19 cases, while other variables outside the one understudy influence the rest

#### 5. Conclusions, Implication/limitation, and suggestions

The results of this study indicate that the number of COVID 19 cases has no significant effect on the stock index in China, USA, and Indonesia after the new normal policy. This study proves that the new normal policy has not had a significant impact on the growth of financial markets in China, USA, and Indonesia. This study only uses one variable, namely the number of COVID 19 cases. For further research can use other variables, such as macroeconomic variables. This research period is only one month after the new normal policy. For further research, use a more extended research period to see the new normal policy results in the medium term.

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# The Influence Of Individual Characteristics, Work Environment, Organizational Climate, Motivation, and Compensation On Employee Performance?

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## Abstract

Employee performance is a very important factor in the organization, because employee performance determines organizational performance. The purpose of this study was to determine the effect of individual characteristics, work environment, organizational climate, motivation, compensation on employee performance at PT. Matahari Department Store Nagoya Hill Batam. This type of research is quantitative research. The population of this study were all employees of PT. Matahari Department Store Nagoya Hill Batam 198 people. The sampling technique used the Slovin formula totaling 132 respondents. Data obtained using a questionnaire instrument that has been tested for validity and reliability. This data test was analyzed using multiple linear regression, and hypothesis testing using the t test and F test. The results based on partial testing showed that individual characteristics had a positive and significant effect on employee performance, the work environment had a positive and significant effect on employee performance, organizational climate. positive and significant effect on employee performance, motivation has a positive and significant effect on employee performance, and compensation has a positive and insignificant effect on employee performance at PT. Matahari Department Store Nagoya Hill Batam. Simultaneously it shows that individual characteristics, work environment, organizational climate, motivation and compensation have a positive and significant effect on employee performance at PT. Matahari Department Store Nagoya Hill Batam.

**Keywords:** Employee Performance, Individual Characteristics, Work Environment, Organizational Climate, Motivation, Compensation

## 1. Introduction

A person's individual character habits can encourage him to work more responsively in completing the work for which he is responsible. Individual someone reflects behavior in acting in the company environment. Employees who have individual characters have character abilities and a high level of personal confidence in their work. A person's individual relationship with the company encourages good character in fostering company synergy to achieve organizational goals. Individual employees can explain the causes of different employee performance from one another. Individuals have individual employee characteristics depending on how they apply them, Husein (2018).

According to Budianto et al, (2015), a comfortable work environment can encourage individuals to use forces that can directly or indirectly affect the organization. Surrounding employees who are doing work can affect work including the place of work, facilities, cleanliness, lighting, tranquility, including work relations between people who are in the workplace.

Wahyuni et al., (2017) suggest that organizational climate is a configuration of attitudes and perceptions, a person and emotions, and behavior of organizational employees that reveal important norms, values, and attitudes. This organization is expected to at least a little help someone in solving the problem, because the organization is expected to be able to unite both economically, socially, intellectually, spiritually, and emotionally.

This shows that the importance of an organization as a forum for mutual interaction and cooperation for its members in order to achieve common goals.

Quote Hasibuan (2018), compensation for a remuneration received or often called income received from the results of work that has been done for contributions that have been made to the company based on a person's individual performance.

Budianto, (2015) defines employee performance as a result of work achieved by individuals and is adjusted to the role or task of the individual in the company for a certain period of time, which can be linked to a measure of value or to certain standards of the company where employees do work. to produce competitive performance. Theoretically, as described, employee performance can be influenced by several variables including individual characteristics, work environment, organizational climate, motivation, and compensation for employee performance at PT. Matahari Department Store Nagoya Hill Batam.

Research must be based on the problems that exist in the object of research, which are in accordance with the research background and focus on carrying out research in a systematic and measured manner as follows:

To find out whether individual characteristics affect the performance of employees of PT. Matahari Department Store Nagoya Hill Batam?

- 1) Does the work environment affect the performance of the employees of PT. Matahari Department Store Nagoya Hill Batam?
- 2) Does the organizational climate affect the performance of the employees of PT. Matahari Department Store Nagoya Hill Batam?
- 3) Does motivation affect the performance of employees of PT. Matahari Department Store Nagoya Hill Batam?
- 4) Does compensation affect the performance of the employees of PT. Matahari Department Store Nagoya Hill Batam?
- 5) Do individual characteristics, work environment, organizational climate, motivation and compensation affect the performance of the employees of PT. Matahari Department Store Nagoya Hill Batam?

## 2. Literature Review

Employee performance is a work achievement or actual achievement achieved by someone in developing their abilities. Employees who carry out the burden given, usually try to achieve maximum results for the achievement of organizational profit goals.

Individual characteristics have individual characteristics that are inherent in employees and differ from one another. Characteristics that can foster a person's traits, traits that have the ability to improve the quality of one's life in achieving a higher career, while the individual is an individual without anyone else. Agustya (2018), individual characteristics are characters that are owned by each person who is different from one person to another.

The company is always surrounded by various situations of different work environments, of course it can encourage employee activeness in mastering the situation around them, where the work environment of employees is able to carry out their work every day with all the work facilities and infrastructure needed to carry out these tasks and responsibilities. (Widodo 2015).

Steers (2015) states that an organizational climate is a model that shows the content and strength of the influence of the content and the strength of the influence between the values, norms, behavior and feelings of members of a social system that can be measured through objective measurement tools.

According to the quotes of experts in Tegar (2019), it is stated that motivation is a process of encouragement, which explains the intensity, direction and goals, of individual employees' persistence in contributing to the company.

According to Kasmir (2015), in explaining the definition of compensation for a remuneration received by

employees for work results and contributions to the company, every company gift is not always financial in nature, it can also be other things and involves providing compensation to employees.

### 3. Research Methods

Research based on valid method steps in order to produce measurable values. In this research method, to design the type of research needed to obtain data which will be processed based on data collection sourced from primary data so as to produce quantitative data from research objek. The quantitative data that has been collected is the result of a questionnaire that has been distributed to selected respondents and the data is analyzed to test the validity of the data. This research method can measure the extent to which data can be analyzed using a descriptive design that aims to describe the variables studied and the dependent variable, thereby producing comprehensive information about the variables studied (Umar, 2019).

According to Sugiyono (2017), argues that this study has a number of research populations to obtain the necessary data in the research process, the research population or generalization area consisting of an object or subject that has the quality to obtain accurate data, and each specific characteristic can be determined. the number needed and conclusions drawn in drawing a sample that can truly represent the original population. The population in this study can be represented by the results based on the appropriate sampling and can be verified. This population consists of 198 respondents and this number is very large, and samples will be drawn based on the Slovin formula.

A quality sample can represent the results of the population so that this sample is 132 respondents and has a 95% confidence level.

According to Sugiyono (2017), a Likert scale is used to measure every existing situation, a person's attitude, quality ideas or ideas, and someone's perception that influences patterns of thinking or a group of people who think about social phenomena or situations.

When analyzing the data in the research used, quantitative data analysis is based on data acquisition. A data analysis is an activity carried out to test the data that has been collected from the respondents' results.

The research can be analyzed quantitative data by using inferential statistics. Inferential statistical research, or called inductive statistics or probability statistics, is an analysis of data used to analyze the results applied to a population. Inferential statistics include parametric and non-parametric statistics.

Testing data with multiple linear regression with this study using multiple linear regression to obtain testing simultaneously on the test results. The selection process in this type of multiple linear regression analysis because it consists of five variables that affect the dependent variable including Individual Characteristics (X1), Work Environment (X2), Organizational Climate (X3), Motivation (X4), Compensation (X5) and the dependent variable: Employee Performance (Y).

### 4. Results and Discussion

The tool used in testing the hypothesis is multiple regression analysis. This analysis is used to measure the strength of the relationship between the independent variables and the dependent variable, and to show the direction of the relationship between these variables. This analysis will form an equation which can be explained the results in Table 1.

Table. 1 Results of Multiple Linear Regression Analysis

Model	Coefficients <sup>a</sup>			T	Sig.
	Unstandardized		Standardized		
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	-12.285	3.400		-3.613	.000
Individual Characteristics	.231	3.400	.220	4.805	.000
Work environment	.150	.048	.123	2.912	.004
Organizational Climate	.338	.052	.320	6.723	.000
Motivation	.548	.050	.542	10.431	.000
Compensation	.029	.041	.028	.702	.484

Based on the results of data processing, it is obtained the following multiple linear regression equation.

$$Y = -12.285 + 0.231X_1 + 0.232X_2 + 0.150X_3 + 0.338X_4 + 0.548X_5 + e$$

From the above equation, it can be used as a reference to interpret as follows:

The constant coefficient is -12,285, meaning that when the company runs a business it does not consider Individual Characteristics, Work Environment, Organizational Climate, Motivation and Compensation, which means that if there is no influence of the independent variables, the value of the employee performance results is -12,285.

Individual Characteristics Variable has a value of 0.231 which means that every time there is an increase in X1 of 1%, then the Employee Performance will increase by 0.231.

The Work Environment variable has a value of 0.232, meaning that every time there is an increase in X2 of 1%, the Employee Performance will increase by 0.231.

The organizational climate variable has a value of 0.150, meaning that every 1% increase in X3, the employee performance will increase by 0.150.

The motivation variable has a value of 0.338, meaning that every time there is an increase in X4 by 1%, then the employee performance will increase by 0.338.

The compensation variable has a value of 0.548, meaning that every time there is an increase in X5 of 1%, then the employee performance will increase by 0.548.

The Influence of Individual Characteristics on Employee Performance

Based on a hypothesis test results, individual characteristics have a positive and significant effect on employee performance by obtaining a value of  $t_{\text{count}}$  of 4.805 or greater when compared to the value of  $t_{\text{table}}$  of 0.676 and has a significant value of  $0.000 < 0.05$ , with the decision that taken  $H_{01}$  is rejected and  $H_{\alpha 1}$  is accepted, thus the t test on individual characteristics has a positive and significant effect on employee performance at PT. Matahari Department Store Nagoya Hill Batam. This is driven by the seriousness caused by the good individual character that encourages the creation of high and maximum performance results. Therefore it can be concluded that the characteristics of good individual employees will affect to improve the goals achieved by the company. Individuals who have self-integrity enable themselves to work well in order to be able to improve company performance. Good situations and conditions develop individual skills in continuing to work actively so as to enable them to achieve progress and developing company goals.

The Effect of Work Environment on Employee Performance

A result obtained from testing the hypothesis, in a work environment with positive and significant results on employee performance with a value of  $t_{\text{count}}$  of 2,912 is greater when compared to  $t_{\text{table}}$  of 0.676 and a significant value of  $0.004 < 0.05$ , then  $H_{02}$  is rejected and  $H_{\alpha 2}$  is accepted, thus the work environment t test positively and significantly affects the performance of employees of PT. Matahari Department Store Nagoya Hill

Batam. Comfort in each employee's work place, makes employees have a higher sense of security to focus more on work, or in other words, good environmental conditions will have a more impact on company employees.

#### The Effect of Organizational Climate on Employee Performance

A result that shows hypothesis testing, the organizational climate has a positive and significant value on employee performance by obtaining a value of  $t_{\text{count}}$  of 6,723 greater than  $t_{\text{table}}$  of 0.676 and a significant value of  $0.000 < 0.05$ , then  $H_{03}$  is rejected and  $H_{a3}$  is accepted, thus the motivation  $t$  test positively and significantly affects the performance of employees of PT. Matahari Department Store Nagoya Hill Batam. Of course this is due to the organizational climate that employees feel is well structured so that it will encourage the creation of maximum performance results. Therefore it can be concluded that a good employee organizational climate will affect the standard and value of employee performance. When the work environment has a good structure, it can provide and or create its own comfort for company employees, so as to provide results that have a better impact on the company organization.

#### The Influence of Motivation on Employee Performance

A result that shows hypothesis testing with the  $t$  test that motivation positively and significantly affects employee performance by obtaining the  $t_{\text{value}}$  (count) of 10,431 is greater when compared to the provisions of the  $t_{\text{value}}$  (table) of 0.676 and a significant value of  $0.004 < 0.05$ , then  $H_{04}$  rejected and  $H_{a4}$  accepted, thus by partial test the motivation variable has a positive and significant effect on employee performance at PT. Matahari Department Store Nagoya Hill Batam. Of course this is because superiors are able to provide motivation or encouragement to employees so that organizational success can be realized by good cooperation so as to create maximum performance results. Therefore it can be concluded that good employee motivation will affect to increase one's performance achievement in the company.

#### The Effect of Compensation on Employee Performance

A result that shows hypothesis testing with the compensation  $t$  test is positive and insignificant or is said to have no effect on employee performance by obtaining a  $t_{\text{value}}$  (count) of 0.702 greater than the  $t_{\text{value}}$  (table) of 0.676 and a significant value of  $0.483 > 0.05$ , then  $H_{05}$  is rejected and  $H_{a5}$  is accepted, thus by partial test the compensation variable has a positive and insignificant effect on employee performance at PT. Matahari Department Store Nagoya Hill Batam. Of course this is because the compensation provided by the company is able to meet the needs of employees and the remuneration provided with the results of work performance achieved. Therefore, it can be concluded that the compensation given by the company will affect employee performance in achieving maximum results.

#### The Influence of Individual Characteristics, Work Environment, Organizational Climate, Motivation and Compensation on Employee Performance

Based on the results of hypothesis testing in this study, the variables of individual characteristics, work environment, organizational climate, motivation and compensation simultaneously have a positive and significant effect on employee performance, the  $F_{\text{count}}$  value of 100,208 is greater when compared to the  $F_{\text{table}}$  value of 2.29. and a significance value of  $0.000 < 0.05$ , meaning that  $H_{(0)6}$  is rejected and  $H_{(\alpha)6}$  is accepted, thus the  $F$  test simultaneously has an influence on employee performance at PT. Matahari Department Store Nagoya Hill Batam. This is because individual characteristics both among employees and with superiors understand each other so that good performance will be created, a comfortable work environment will encourage employee activities to continue to work well, an organizational climate that is neatly structured so that it will produce better performance, motivation given by superiors is able to influence employees to work optimally and the compensation given by the organization is in accordance with the employee's work performance so that these things will result in good performance. Therefore it can be concluded that the independent variables in this study are able to contribute to improving employee performance.

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## Comparison of People Welfare and Financial Performance Between City Governments and Districts in Java

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### Abstract

In 2019, Indonesia succeeded in making history in national development because the human development index was in the high category. This certainly shows the success of the government which is supported by all Indonesian people in building a country with the fourth largest population in the world. However, that does not mean that there are no more problems in human development in Indonesia. One of the problems that is still faced is the gap in the level of health between urban areas and rural areas. This gap is evidenced by the fact that districts or cities with a human development index fall into the very high category in Java, with 13 regions consisting of 11 cities and only 2 regencies. This is certainly evidence that illustrates how there has been a gap between urban and rural communities considering that in Java there are 113 regions consisting of 84 districts and 29 cities. Several previous studies have found that the human development index is influenced by the level of financial independence. This study aims to test whether there is a significant difference in people's welfare as measured by the human development index and regional financial performance using three parameters, namely the amount of local revenue, the contribution of local revenue to regional income and the contribution of local revenue to indirect spending. The sample in this study is all regencies and cities in Java, except for districts and cities in the Special Capital Region of Jakarta whose autonomy is only in the provincial government. This study uses secondary data obtained from the Central Statistics Agency in the form of published reports. This study finds that the people's welfare and regional financial performance between caputaen and city are statistically different.

**Keywords :** District Government, City Government, People's Welfare, Financial Performance.

### 1. Introduction

In 2019, for the first time, Indonesia was included in the ranks of countries with a high human development index (HDI) category and was ranked 111th out of 189 countries. Indonesia's position among ASEAN member countries is below Singapore, Brunei Darussalam, Malaysia, Thailand and the Philippines. There are three factors that drive the increase in the human development index in Indonesia, namely health, education and the economy. For these three factors, Indonesia continues to progress from year to year. Human development in Indonesia continues to progress. In 2019, Indonesia's Human Development Index (HDI) will reach 71.92. This figure increased 0.53 points or grew 0.74 percent compared to 2018. Babies born in 2019 have a hope of being able to live up to 71.34 years, 0.14 years longer than those born the previous year. It is hoped that 7 years old children in 2019 will be able to enjoy 12.95 years of education (almost equivalent to the education period for completing the Diploma I level), 0.04 years longer than the same age in 2018. Age Population 25 years and over an average of 8.34 years of education (almost equivalent to completing grade IX), 0.17 years longer than the previous year. In 2019, the Indonesian people meet their daily needs with an average per capita expenditure (PPP) of 11.30 million rupiah per year, an increase of 240 thousand rupiah compared to the previous year's expenditure.

The problems faced by the Indonesian people have not been resolved with these achievements. This fact should create a pumping spirit to move forward and work hard and work smartly so that the welfare of society in the future will increase. One of the problems facing Indonesia today is the gap where there is still a gap between

the central government, provincial governments and district / city governments. In addition, there is also a gap between regions such as the western part of Indonesia which is more prosperous than the eastern part of Indonesia or the gap between urban communities who are more prosperous than rural communities.

The policy currently being pursued by the government which prioritizes the 3 T areas, namely the Underdeveloped, Outermost and Frontier, has shown results where the gap between regions has decreased. The one-price BBM program has an impact on increasing people's purchasing power due to lower fuel prices and other commodity prices due to lower transportation costs. The Sea Toll Program also has a significant impact on isolated communities so that open routes can be opened or entered into other areas so that traffic of goods needs to be smoother and more secure. Finally, the social safety net program that has been running so far has been continued and improved so that the economically weak or low-income people can enjoy various programs provided by the government. These programs include: Direct Cash Assistance, Smart Indonesia Card Program, Healthy Indonesia Card, Family Hope Program, village fund program which is continuously improved every year. This is of course expected to improve the welfare of society at large so that the aspirations of building a just and prosperous society can be realized.

## 2. Research Methods

The population in this study is the regional governments of regencies and cities in Java, except for districts and cities in the Special Capital Region of Jakarta because autonomy rests with the provincial government. The number of caputaen and cities in this study were 113 consisting of 89 districts and 29 cities from the provinces of Banten, West Java, Central Java, East Java and Yogyakarta Special Region. The human development index uses 2016 to 2019, while the regional financial performance uses 2016 to 2018 data. The data used is in the form of secondary data obtained from the publication of the Central Statistics Agency. The data analysis method in this research is descriptive.

## 3. Results and Discussion

### 3.1. Comparison of Human Development Index

The human development index in regencies in Java in the last four years from 2016 to 2019 has increased on average from year to year. In 2016 to 2018, on average, it is still classified as medium because the total value of the human development index is 68.36 in 2016, 68.86 in 2017 and 69.50 in 2018. In 2019 the average index human development in all districts in Java increased in the high classification with the human development index figure of 70.18. However, during that period, namely the Sampang district in East Java in 2016 and 2017 the human development index was still classified as low at 59.09 and 59.90. In another district, namely Sleman district in the Special Region of Yogyakarta province from 2016 to 2019, the human development index is always in the very high category because the value is always above 80. In 2019 there are 2 districts that have increased in class from high to very high, namely Bantul district. in the province of the Yogyakarta Special Region and Sidoarjo district in the province of East Java. So in 2019 there are 3 districts out of 84 districts in Java whose human development index is in the very high category with a number above 80. (Table 3a)

Achievement of development programs with a higher human development index benchmark can be achieved in urban areas in Java. Of the 29 cities in Java in the four years from 2016 to 2019, the average human development index has increased from year to year. The human development index in urban areas in Java from 2016 to 2019 is in the high and very high category with an average value of 76.53 in 2016, 76.98 in 2017, 77.50 in 2018 and 78.87 in 2019. Of the 29 cities in Java in 2016, there were 9 cities whose human development index reached the very high category with a value above 80. The nine cities are spread across all provinces in Java, consisting of the city of Yogyakarta in the province of Yogyakarta Special Region, Surataba city, city Malang and Madiun city in East Java, Bandung city in West Java, Semarang city, Surakarta city and Salatiga city in Central Java, and South Tangerang city in Banten. In 2017 there was an increase in cities that increased their human development index, namely the city of Bekasi in West Java so that in 2017 there were 10 cities with a very high

human development index. In 2018 and 2019 the number of cities with the human development index in the very high category became 11 cities with the addition of the city of Depok from West Java. (Table 3b)

From the data on the attainment of the human development index in districts and cities in Java, it can be seen that there is a difference where in urban areas the human development index is higher than in rural areas. This difference can be explained by using three components in measuring the human development index, namely education, health, and per capita income. Health and education facilities available in urban areas and rural areas are certainly better in urban areas. The ratio of the number of schools compared to the total population of the school force in urban areas is better when compared to the ratio of the number of schools to the total population of school forces in rural areas. Likewise, health facilities in urban areas are better than those in rural areas. In addition to the availability of more comprehensive and closer education and health facilities, in general the per capita income of urban residents is also higher than the average population living in rural areas.

This comparison of the level of community welfare between urban communities and rural communities does not only occur in Indonesia but in almost all countries, so that as a solution to improve the welfare of many people living in rural areas move to urban areas (urbanization). In the long run, the development of countries around the world will bring about changes where the area of rural areas is decreasing over time, on the other hand, urban areas will always develop. In the end, successful development will be able to provide facilities and infrastructure for education and health as well as job opportunities that are capable of making the whole population prosperous.

**Table 3a. Index of Human Development in District Areas in Java 2016 - 2019**

NO	PROVINCE	DISTRICT	2016	2017	2018	2019
1	Banten	Kabupaten Pandeglang	63,40	63,82	64,34	64,91
2	Banten	Kabupaten Lebak	62,78	62,95	63,37	63,88
3	Banten	Kabupaten Tangerang	70,44	70,97	71,59	71,93
4	Banten	Kabupaten Serang	65,12	65,60	65,93	66,38
5	Jawa Tengah	Kabupaten Cilacap	68,60	68,90	69,56	69,98
6	Jawa Tengah	Kabupaten Banyumas	70,49	70,75	71,30	71,96
7	Jawa Tengah	Kabupaten Purbalingga	67,48	67,72	68,41	68,99
8	Jawa Tengah	Kabupaten Banjarnegara	65,52	65,86	66,54	67,34
9	Jawa Tengah	Kabupaten Kebumen	67,41	68,29	68,80	69,60
10	Jawa Tengah	Kabupaten Purworejo	70,66	71,31	71,87	72,50
11	Jawa Tengah	Kabupaten Wonosobo	66,19	66,89	67,81	68,27
12	Jawa Tengah	Kabupaten Magelang	67,85	68,39	69,11	69,87
13	Jawa Tengah	Kabupaten Boyolali	72,18	72,64	73,22	73,80
14	Jawa Tengah	Kabupaten Klaten	73,97	74,25	74,79	75,29
15	Jawa Tengah	Kabupaten Sukoharjo	75,06	75,56	76,07	76,84
16	Jawa Tengah	Kabupaten Wonogiri	68,23	68,66	69,37	69,98
17	Jawa Tengah	Kabupaten Karanganyar	74,90	75,22	75,54	75,89
18	Jawa Tengah	Kabupaten Sragen	71,43	72,40	72,96	73,43

19	Jawa Tengah	Kabupaten Grobogan	68,52	68,87	69,32	69,86
20	Jawa Tengah	Kabupaten Blora	66,61	67,52	67,95	68,65
21	Jawa Tengah	Kabupaten Rembang	68,60	68,95	69,46	70,15
22	Jawa Tengah	Kabupaten Pati	69,03	70,12	70,71	71,35
23	Jawa Tengah	Kabupaten Kudus	72,94	73,84	74,58	74,94
24	Jawa Tengah	Kabupaten Jepara	70,25	70,79	71,38	71,88
25	Jawa Tengah	Kabupaten Demak	70,10	70,41	71,26	71,87
26	Jawa Tengah	Kabupaten Semarang	72,40	73,20	73,61	74,14
27	Jawa Tengah	Kabupaten Temanggung	67,60	68,34	68,83	69,56
28	Jawa Tengah	Kabupaten Kendal	70,11	70,62	71,28	71,97
29	Jawa Tengah	Kabupaten Batang	66,38	67,35	67,86	68,42
30	Jawa Tengah	Kabupaten Pekalongan	67,71	68,40	68,97	69,71
31	Jawa Tengah	Kabupaten Pemalang	64,17	65,04	65,67	66,32
32	Jawa Tengah	Kabupaten Tegal	65,84	66,44	67,33	68,24
33	Jawa Tengah	Kabupaten Brebes	63,98	64,86	65,68	66,12
34	Jawa Barat	Kabupaten Bogor	68,32	69,13	69,69	70,65
35	Jawa Barat	Kabupaten Sukabumi	65,13	65,49	66,05	66,87
36	Jawa Barat	Kabupaten Cianjur	62,92	63,70	64,62	65,38
37	Jawa Barat	Kabupaten Bandung	70,69	71,02	71,75	72,41
38	Jawa Barat	Kabupaten Garut	63,64	64,52	65,42	66,22
39	Jawa Barat	Kabupaten Tasikmalaya	63,57	64,14	65,00	65,64
40	Jawa Barat	Kabupaten Ciamis	68,45	68,87	69,63	70,39
41	Jawa Barat	Kabupaten Kuningan	67,51	67,78	68,55	69,12
42	Jawa Barat	Kabupaten Cirebon	66,70	67,39	68,05	68,69
43	Jawa Barat	Kabupaten Majalengka	65,25	65,92	66,72	67,52
44	Jawa Barat	Kabupaten Sumedang	69,45	70,07	70,99	71,46
45	Jawa Barat	Kabupaten Indramayu	64,78	65,58	66,36	66,97
46	Jawa Barat	Kabupaten Subang	67,14	67,73	68,31	68,69
47	Jawa Barat	Kabupaten Purwakarta	68,56	69,28	69,98	70,67
48	Jawa Barat	Kabupaten Karawang	68,19	69,17	69,89	70,86
49	Jawa Barat	Kabupaten Bekasi	71,83	72,63	73,49	73,99

50	Jawa Barat	Kabupaten Bandung Barat	65,81	66,63	67,46	68,27
51	Jawa Barat	Kabupaten Pangandaran	65,79	66,60	67,44	68,21
52	Jawa Timur	Kabupaten Pacitan	65,74	66,51	67,33	68,16
53	Jawa Timur	Kabupaten Ponorogo	68,93	69,26	69,91	70,56
54	Jawa Timur	Kabupaten Trenggalek	67,78	68,10	68,71	69,46
55	Jawa Timur	Kabupaten Tulungagung	70,82	71,24	71,99	72,62
56	Jawa Timur	Kabupaten Blitar	68,88	69,33	69,93	70,57
57	Jawa Timur	Kabupaten Kediri	69,87	70,47	71,07	71,85
58	Jawa Timur	Kabupaten Malang	67,51	68,47	69,40	70,35
59	Jawa Timur	Kabupaten Lumajang	63,74	64,23	64,83	65,33
60	Jawa Timur	Kabupaten Jember	64,01	64,96	65,96	66,69
61	Jawa Timur	Kabupaten Banyuwangi	69,00	69,64	70,06	70,60
62	Jawa Timur	Kabupaten Bondowoso	64,52	64,75	65,27	66,09
63	Jawa Timur	Kabupaten Situbondo	65,08	65,68	66,42	67,09
64	Jawa Timur	Kabupaten Probolinggo	64,12	64,28	64,85	65,60
65	Jawa Timur	Kabupaten Pasuruan	65,71	66,69	67,41	68,29
66	Jawa Timur	Kabupaten Sidoarjo	78,17	78,70	79,50	80,05
67	Jawa Timur	Kabupaten Mojokerto	71,38	72,36	72,64	73,53
68	Jawa Timur	Kabupaten Jombang	70,03	70,88	71,86	72,85
69	Jawa Timur	Kabupaten Nganjuk	70,50	70,69	71,23	71,71
70	Jawa Timur	Kabupaten Madiun	69,67	70,27	71,01	71,69
71	Jawa Timur	Kabupaten Magetan	71,94	72,60	72,91	73,49
72	Jawa Timur	Kabupaten Ngawi	68,96	69,27	69,91	70,41
73	Jawa Timur	Kabupaten Bojonegoro	66,73	67,28	67,85	68,75
74	Jawa Timur	Kabupaten Tuban	66,19	66,77	67,43	68,37
75	Jawa Timur	Kabupaten Lamongan	70,34	71,11	71,97	72,57
76	Jawa Timur	Kabupaten Gresik	74,46	74,84	75,28	76,10
77	Jawa Timur	Kabupaten Bangkalan	62,06	62,30	62,87	63,79
78	Jawa Timur	Kabupaten Sampang	59,09	59,90	61,00	61,94
79	Jawa Timur	Kabupaten Pamekasan	63,98	64,93	65,41	65,94
80	Jawa Timur	Kabupaten Sumenep	63,42	64,28	65,25	66,22

81	D I Y	Kulon Progo	72,38	73,23	73,76	74,44
82	D I Y	Bantul	78,42	78,67	79,45	80,01
83	D I Y	Gunung Kidul	67,82	68,73	69,24	69,96
84	D I Y	Sleman	82,15	82,85	83,42	83,85
		Maximum	82,15	82,85	83,42	83,85
		Minimun	59,09	59,90	61,00	61,94
		Average	68,36	68,86	69,51	70,18

Source: Central Bureau of Statistics

**Table 3b. Human Development Index in Cities in Java 2016 - 2019**

NO	CITY	PROVINCE	2016	2017	2018	2019
1	Banten	Kota Tangerang	76,81	77,01	77,92	78,43
2	Banten	Kota Cilegon	72,04	72,29	72,65	73,01
3	Banten	Kota Serang	71,09	71,31	71,68	72,10
4	Banten	Kota Tangerang Selatan	80,11	80,84	81,17	81,48
5	Jawa Tengah	Kota Magelang	77,16	77,84	78,31	78,80
6	Jawa Tengah	Kota Surakarta	80,76	80,85	81,46	81,86
7	Jawa Tengah	Kota Salatiga	81,14	81,68	82,41	83,12
8	Jawa Tengah	Kota Semarang	81,19	82,01	82,72	83,19
9	Jawa Tengah	Kota Pekalongan	73,32	73,77	74,24	74,77
10	Jawa Tengah	Kota Tegal	73,55	73,95	74,44	74,93
11	Jawa Timur	Kota Kediri	76,33	77,13	77,58	78,08
12	Jawa Timur	Kota Blitar	76,71	77,10	77,58	78,56
13	Jawa Timur	Kota Malang	80,46	80,65	80,89	81,32
14	Jawa Timur	Kota Probolinggo	71,50	72,09	72,53	73,27
15	Jawa Timur	Kota Pasuruan	74,11	74,39	74,78	75,25
16	Jawa Timur	Kota Mojokerto	76,38	76,77	77,14	77,96
17	Jawa Timur	Kota Madiun	80,01	80,13	80,33	80,88
18	Jawa Timur	Kota Surabaya	80,38	81,07	81,74	82,22
19	Jawa Timur	Kota Batu	73,57	74,26	75,04	75,88
20	D I Y	Kota Yogyakarta	85,32	85,49	86,11	86,65
21	Jawa Barat	Kota Bogor	74,50	75,16	75,66	76,23
22	Jawa Barat	Kota Sukabumi	72,33	73,03	73,55	74,31



23	Jawa Barat	Kota Bandung	80,13	80,31	81,06	81,62
24	Jawa Barat	Kota Cirebon	73,70	74,00	74,35	74,92
25	Jawa Barat	Kota Bekasi	79,95	80,30	81,04	81,59
26	Jawa Barat	Kota Depok	79,60	79,83	80,29	80,82
27	Jawa Barat	Kota Cimahi	76,69	76,95	77,56	78,11
28	Jawa Barat	Kota Tasikmalaya	70,58	71,51	72,03	72,84
29	Jawa Barat	Kota Banjar	70,09	70,79	71,25	71,75
	Maximum		85,32	85,49	86,11	86,65
	Minimun		70,09	70,79	71,25	71,75
	Average		76,53	76,98	77,50	78,07

Source: Central Bureau of Statistics

### 3.2. Comparasion of Financial Performance

The following is a comparison of the financial performance of local governments between district governments and municipalities in Java using data on the realization of the 2016 to 2018 regional revenue and expenditure budgets. The performance measures in this study consist of two measures: first is to measure the level of regional fiscal independence using the ratio of original income area divided by total regional revenue. The larger the portion of the region's own revenue in forming regional income means that the region is more independent, but if the proportion of regional income to total regional income is small it means that the level of regional independence is low. There are four categories of the level of regional fiscal independence, namely: 1. Very Low, if the contribution of regional revenue to total regional revenue is less than 25%; 2. Low, if the contribution of local revenue to total regional revenue is 25% to less than 50%; 3. Medium, if the contribution of local revenue to total regional revenue reaches 50% to less than 75%; 4. High, if the contribution of local revenue to total regional revenue is 75% or more.

The second is the financial performance of regional governments in financing routine expenditures which are in the realization of the regional income and expenditure budgets listed in indirect expenditure. Indirect expenditure consists of personnel expenditure which is the largest component in indirect expenditure. Apart from personnel expenditures, indirect expenditure can also be budgeted for interest spending, subsidy spending, grant spending, production sharing spending, social assistance spending, and unexpected spending. The ratio used to measure the financial capacity of the district or city government is the ratio of local revenue to indirect expenditure. The greater the ratio of own-source revenue to indirect expenditure, it indicates that these districts and cities have the greater the ability to finance routine expenditures, which means that they are more independent and less dependent on funding assistance from the central government or from the provincial government. On the other hand, a region with a small ratio of local revenue to indirect expenditure means a low level of independence and is highly dependent on funding from transfers from both the central and provincial governments.

The financial performance of district governments in Java from 2016 to 2018 shows that the level of regional fiscal independence is very low on average, with the ratio of local revenue to total regional revenue on average less than 25%, which is only 15.26% in 2016, 18, 78% in 2017 and 16.15% in 2018. Of all the 84 districts Tangerang district is the region that has the highest fiscal independence, which in 2017 and 2018 contributed more than 50% to total regional revenue. . In addition to Tangerang district, there are 6 regencies whose contribution to local revenue is more than 25% so that they fall into the category of low fiscal independence, namely Kerawang Regency, Bekasi Regency and Bogor Regency from West Java Province, Gresik Regency and

Sidoarjo Regency from East Java Province and Sleman Regency from the Province Yogyakarta Special Region.

The financial capacity of districts in Java in meeting their routine expenditure needs, namely indirect expenditure, is also classified as low because the average is less than 50%. On average, the ratio of local district revenue in Java to indirect expenditure in 2016 was 24.88%, in 2017 it was 32.98% and in 2018 it was 28.24%. The regency has returned to being the district with the strongest ability to finance indirect expenditure among other districts in Java with the ratio of original regional income to indirect expenditure in 2016 of 121.98%, 2017 of 156.15% and in 2018 of 130.65%. Several districts have a ratio of local revenue to indirect expenditure of more than 50% including Bogor district, Kerawang district, Bekasi district in West Java, Gresik district and Sidoarjo district in East Java and Selam district in the Yogyakarta Special Region. (Table 3c)

In contrast to the financial performance of the district government which still heavily relies on transfer funds from the central and provincial governments, the level of fiscal independence of the city governments in Java is more independent. On average, in the three years from 2016 to 2018, the contribution of local revenue to total regional revenue was at the level of 27.98% for 2016, 31.58% for 2017 and 29.36% for 2018. Although on average -The average fiscal independence of the city government is still in the low category, but the level of independence is still higher when compared to the level of fiscal independence of the district government. There are two cities in Java that have a moderate level of fiscal independence, namely the city of Surabaya from East Java and the city of South Tangerang from Banten. Both cities have a contribution of local revenue to total regional revenue of more than 50%.

Similar to the financial performance which measures the level of fiscal independence, city governments in Java have a higher level of independence in financing indirect expenditures. On average, in the three years from 2016 to 2018, the ratio of own-source revenue to indirect expenditure was above 50%. Consecutively from 2016 to 2018, the contribution of original regional income to indirect expenditure was 59.08%, 77.94% and 70.45%. The city of Surabaya is the city with the highest level of independence in financing indirect expenditure with a ratio of 147.36% in 2016, 205.72% in 2017 and 254.18%. Second is the city of South Tangerang with a ratio of 129.70% in 2016, 164.32% in 2017 and 125.76% in 2018. The third place in the ability to finance indirect expenditure is the city of Semarang, which has a ratio of local revenue to indirect expenditure of 85.64% in 2016, 116.62% in 2017 and 111.73% in 2019. (Table 3d)

The higher financial performance of city governments than district governments can be explained from the source of district and city revenue which consists of local taxes, local user fees, profits from local companies and other local revenue. Maryono et. Al (2016) found that the largest contribution to district and municipal revenue in 2010 to 2013 came from local taxes. Local taxes in accordance with Law number 28 of 2009 concerning regional taxes and local levies state that local taxes for districts and cities include: land and building tax, land and building rights fees, street lighting tax, hotel tax, restaurant tax, entertainment tax, groundwater tax and swallow's nest tax. Of all the types of taxes that are received by regency and municipal governments the most are those originating from land and building taxes, land and building rights fees, street lighting taxes, tourism taxes which include hotel taxes, restaurant taxes and entertainment taxes.

From these types of local taxes, it is assumed that the city government has a higher potential income from local taxes than the district government. This is because the large amount of land and building tax, the amount of which is based on the sale value of the tax object, will result in a higher potential for land and building tax in urban areas because the selling value of land and buildings is also higher than land and buildings in rural areas. The potential for receiving duties on land and building rights in the city government is also higher than that of the district government because the mobilization of urban residents is higher than that of rural residents so that the sale and purchase of land and buildings in urban areas is higher so that the city government revenue will also be high. The potential for street lighting tax revenue from city governments is also higher than district governments because the level of electricity use for both households and offices and the business sector in urban areas is more. Finally, the tourism sector regional tax which consists of hotel tax, restaurant tax and entertainment tax will certainly also benefit the city government because the existence of hotels, restaurants and entertainment places that are taxed is more in cities, especially big cities than in regency cities.

**Tabel 3c. District Government Financial Performance in Java 2016 - 2018**

NO	PROVINCE	DISTRICT	PAD TO TOTAL REVENUE			PAD TO INDIRECT EXPENSE		
			2016	2017	2018	2016	2017	2018
1	Banten	Kabupaten Pandeglang	8,99%	15,70%	8,34%	13,66%	26,99%	11,81%
2	Banten	Kabupaten Lebak	12,20%	19,31%	13,95%	21,55%	32,10%	23,86%
3	Banten	Kabupaten Tangerang	42,81%	52,45%	52,39%	121,98%	156,15%	130,65%
4	Banten	Kabupaten Serang	23,94%	29,01%	23,88%	39,94%	56,49%	46,69%
5	Jawa Tengah	Kabupaten Cilacap	15,33%	21,13%	17,17%	24,26%	38,72%	31,63%
6	Jawa Tengah	Kabupaten Banyumas	18,98%	19,24%	19,85%	28,52%	32,44%	33,25%
7	Jawa Tengah	Kabupaten Purbalingga	14,42%	18,17%	14,51%	21,08%	28,77%	22,57%
8	Jawa Tengah	Kabupaten Banjarnegara	12,04%	13,72%	11,38%	18,46%	23,46%	19,34%
9	Jawa Tengah	Kabupaten Kebumen	11,17%	16,35%	13,34%	16,99%	25,44%	19,88%
10	Jawa Tengah	Kabupaten Purworejo	12,35%	14,12%	14,00%	18,46%	20,65%	20,31%
11	Jawa Tengah	Kabupaten Wonosobo	12,69%	12,46%	12,25%	18,22%	21,30%	20,81%
12	Jawa Tengah	Kabupaten Magelang	14,17%	17,77%	14,12%	20,90%	27,33%	21,83%
13	Jawa Tengah	Kabupaten Boyolali	14,66%	17,83%	15,39%	20,66%	28,42%	27,00%
14	Jawa Tengah	Kabupaten Klaten	9,93%	14,40%	15,36%	12,41%	21,27%	21,63%
15	Jawa Tengah	Kabupaten Sukoharjo	18,80%	22,60%	21,09%	30,68%	40,40%	35,27%
16	Jawa Tengah	Kabupaten Wonogiri	10,74%	14,40%	11,95%	14,44%	22,37%	17,93%
17	Jawa Tengah	Kabupaten Karanganyar	14,97%	20,32%	16,23%	22,30%	30,94%	25,92%
18	Jawa Tengah	Kabupaten Sragen	14,20%	18,50%	15,38%	19,85%	27,10%	23,63%
19	Jawa Tengah	Kabupaten Grobogan	13,58%	18,15%	12,94%	21,39%	31,92%	23,68%
20	Jawa Tengah	Kabupaten Blora	9,22%	13,91%	9,58%	13,14%	21,93%	15,50%
21	Jawa Tengah	Kabupaten Rembang	14,96%	17,44%	16,61%	20,00%	24,52%	23,90%
22	Jawa Tengah	Kabupaten Pati	12,88%	16,24%	16,13%	18,07%	26,74%	21,73%
23	Jawa Tengah	Kabupaten Kudus	14,85%	18,46%	16,90%	24,93%	32,87%	29,95%
24	Jawa Tengah	Kabupaten Jepara	15,31%	15,04%	16,37%	26,14%	26,28%	29,07%
25	Jawa Tengah	Kabupaten Demak	14,72%	15,02%	15,97%	24,74%	25,99%	27,67%
26	Jawa Tengah	Kabupaten Semarang	16,10%	19,55%	18,11%	25,95%	33,38%	29,32%
27	Jawa Tengah	Kabupaten Temanggung	16,76%	17,33%	14,56%	26,51%	29,44%	21,63%
28	Jawa Tengah	Kabupaten Kendal	14,03%	19,78%	15,71%	21,53%	32,40%	25,69%
29	Jawa Tengah	Kabupaten Batang	14,01%	14,03%	13,96%	18,90%	19,82%	20,91%
30	Jawa Tengah	Kabupaten Pekalongan	17,38%	14,77%	14,81%	23,69%	22,54%	22,73%
31	Jawa Tengah	Kabupaten Pemalang	13,04%	18,10%	12,37%	23,13%	29,08%	19,60%
32	Jawa Tengah	Kabupaten Tegal	14,62%	15,32%	14,75%	20,59%	24,42%	22,25%
33	Jawa Tengah	Kabupaten Brebes	13,18%	18,33%	12,15%	20,17%	32,57%	21,39%
34	Jawa Barat	Kabupaten Bogor	38,37%	43,61%	38,28%	64,23%	82,82%	76,09%

35	Jawa Barat	Kabupaten Sukabumi	16,12%	21,32%	15,03%	29,26%	42,53%	28,28%
36	Jawa Barat	Kabupaten Cianjur	14,04%	14,22%	14,18%	22,57%	25,71%	26,85%
37	Jawa Barat	Kabupaten Bandung	18,59%	18,44%	18,55%	31,49%	35,58%	32,54%
38	Jawa Barat	Kabupaten Garut	10,28%	15,65%	9,79%	16,95%	26,95%	16,55%
39	Jawa Barat	Kabupaten Tasikmalaya	6,73%	12,10%	6,98%	9,96%	18,01%	11,43%
40	Jawa Barat	Kabupaten Ciamis	8,63%	8,64%	9,12%	13,24%	13,82%	13,90%
41	Jawa Barat	Kabupaten Kuningan	10,43%	14,69%	12,28%	14,93%	22,69%	17,86%
42	Jawa Barat	Kabupaten Cirebon	15,73%	21,70%	15,88%	24,41%	35,12%	26,60%
43	Jawa Barat	Kabupaten Majalengka	12,87%	19,13%	15,97%	19,60%	30,47%	25,87%
44	Jawa Barat	Kabupaten Sumedang	14,45%	20,81%	15,72%	21,65%	36,44%	26,81%
45	Jawa Barat	Kabupaten Indramayu	11,22%	17,61%	12,58%	20,11%	32,03%	23,64%
46	Jawa Barat	Kabupaten Subang	14,03%	20,30%	15,72%	20,88%	30,61%	26,81%
47	Jawa Barat	Kabupaten Purwakarta	18,11%	21,96%	17,90%	31,46%	38,14%	28,22%
48	Jawa Barat	Kabupaten Karawang	28,09%	33,74%	27,92%	47,36%	65,24%	53,29%
49	Jawa Barat	Kabupaten Bekasi	41,92%	46,31%	40,32%	79,00%	99,13%	82,08%
50	Jawa Barat	Kabupaten Bandung Barat	16,78%	22,40%	16,23%	27,09%	38,69%	23,63%
51	Jawa Barat	Kabupaten Pangandaran	7,15%	6,61%	9,78%	11,33%	12,91%	17,26%
52	Jawa Timur	Kabupaten Pacitan	9,85%	14,02%	10,35%	14,98%	20,73%	19,02%
53	Jawa Timur	Kabupaten Ponorogo	11,85%	13,91%	12,56%	17,25%	21,97%	21,59%
54	Jawa Timur	Kabupaten Trenggalek	11,16%	14,13%	12,82%	21,09%	24,89%	20,79%
55	Jawa Timur	Kabupaten Tulungagung	13,33%	19,36%	16,77%	22,32%	34,37%	30,62%
56	Jawa Timur	Kabupaten Blitar	10,00%	13,99%	10,73%	16,87%	24,27%	19,37%
57	Jawa Timur	Kabupaten Kediri	14,15%	19,64%	16,63%	20,77%	33,62%	29,75%
58	Jawa Timur	Kabupaten Malang	14,62%	19,87%	15,30%	22,87%	34,29%	26,65%
59	Jawa Timur	Kabupaten Lumajang	13,14%	16,58%	13,01%	19,14%	24,59%	19,95%
60	Jawa Timur	Kabupaten Jember	16,42%	20,67%	16,65%	26,12%	34,46%	31,25%
61	Jawa Timur	Kabupaten Banyuwangi	13,11%	14,24%	15,01%	22,68%	25,46%	28,19%
62	Jawa Timur	Kabupaten Bondowoso	9,10%	11,90%	9,70%	16,38%	20,59%	17,74%
63	Jawa Timur	Kabupaten Situbondo	11,00%	14,10%	10,67%	18,19%	24,18%	18,79%
64	Jawa Timur	Kabupaten Probolinggo	11,24%	14,32%	10,72%	18,57%	23,12%	17,27%
65	Jawa Timur	Kabupaten Pasuruan	17,04%	24,80%	19,27%	29,24%	39,81%	32,21%
66	Jawa Timur	Kabupaten Sidoarjo	36,40%	41,32%	38,90%	66,09%	82,08%	77,39%
67	Jawa Timur	Kabupaten Mojokerto	20,62%	21,43%	22,44%	31,36%	37,01%	42,74%
68	Jawa Timur	Kabupaten Jombang	16,58%	20,71%	17,44%	25,46%	34,43%	28,31%
69	Jawa Timur	Kabupaten Nganjuk	15,40%	14,46%	15,26%	23,74%	24,55%	26,48%
70	Jawa Timur	Kabupaten Madiun	9,47%	13,76%	11,97%	14,55%	22,75%	20,01%

71	Jawa Timur	Kabupaten Magetan	9,92%	12,11%	10,76%	13,68%	19,24%	17,41%
72	Jawa Timur	Kabupaten Ngawi	9,89%	13,81%	11,83%	14,49%	28,29%	17,30%
73	Jawa Timur	Kabupaten Bojonegoro	11,33%	14,82%	8,81%	20,62%	24,96%	22,04%
74	Jawa Timur	Kabupaten Tuban	16,68%	20,92%	18,02%	25,33%	35,96%	31,89%
75	Jawa Timur	Kabupaten Lamongan	14,84%	15,80%	15,53%	23,09%	24,95%	25,42%
76	Jawa Timur	Kabupaten Gresik	28,37%	31,78%	33,28%	48,80%	58,15%	59,98%
77	Jawa Timur	Kabupaten Bangkalan	10,92%	14,88%	9,80%	17,16%	22,50%	13,56%
78	Jawa Timur	Kabupaten Sampang	7,91%	13,05%	7,97%	13,84%	21,45%	13,11%
79	Jawa Timur	Kabupaten Pamekasan	9,76%	12,76%	12,08%	16,72%	23,34%	21,32%
80	Jawa Timur	Kabupaten Sumenep	10,15%	8,83%	8,28%	15,53%	13,77%	13,29%
81	D I Y	Kulon Progo	13,27%	17,52%	14,23%	19,67%	29,55%	25,50%
82	D I Y	Bantul	20,22%	23,68%	20,77%	30,86%	41,09%	37,21%
83	D I Y	Gunung Kidul	12,47%	14,69%	12,26%	17,70%	24,31%	21,06%
84	D I Y	Sleman	30,79%	31,57%	32,97%	45,74%	54,38%	58,19%
		Maximum	42,81%	52,45%	52,39%	121,98%	156,15%	130,65%
		Minimum	6,73%	6,61%	6,98%	9,96%	12,91%	11,43%
		Average	15,26%	18,78%	16,15%	24,88%	32,98%	28,24%

Tabel 3d. City Government Financial Performance in Java 2016 - 2018

NO	CITY	PROVINCE	PAD TO TOTAL REVENUE			PAD TO INDIRECT EXPENSE		
			2016	2017	2018	2016	2017	2018
1	Banten	Kota Tangerang	46,93%	50,68%	46,94%	109,79%	144,74%	124,50%
2	Banten	Kota Cilegon	35,07%	38,16%	35,48%	91,02%	103,70%	89,35%
3	Banten	Kota Serang	11,21%	18,88%	13,22%	22,74%	43,16%	29,72%
4	Banten	Kota Tangerang Selatan	50,53%	54,06%	50,50%	129,70%	164,32%	125,76%
5	Jawa Tengah	Kota Magelang	26,23%	25,68%	27,52%	56,35%	69,58%	74,44%
6	Jawa Tengah	Kota Surakarta	24,99%	29,24%	28,09%	44,77%	69,63%	68,53%
7	Jawa Tengah	Kota Salatiga	23,16%	24,95%	23,48%	45,20%	55,77%	48,67%
8	Jawa Tengah	Kota Semarang	36,35%	45,20%	43,01%	85,64%	116,62%	111,73%
9	Jawa Tengah	Kota Pekalongan	20,83%	20,96%	19,80%	44,30%	51,07%	42,70%
10	Jawa Tengah	Kota Tegal	27,34%	29,94%	27,86%	67,48%	77,12%	70,19%
11	Jawa Timur	Kota Kediri	20,20%	23,65%	19,48%	31,47%	43,53%	34,10%
12	Jawa Timur	Kota Blitar	15,57%	22,89%	18,23%	35,18%	64,05%	50,67%
13	Jawa Timur	Kota Malang	27,42%	29,83%	27,30%	51,11%	74,32%	66,71%
14	Jawa Timur	Kota Probolinggo	19,33%	22,39%	17,80%	37,71%	51,86%	41,08%
15	Jawa Timur	Kota Pasuruan	18,73%	17,56%	16,94%	34,25%	43,56%	40,58%
16	Jawa Timur	Kota Mojokerto	18,90%	22,79%	20,56%	44,28%	66,51%	48,49%
17	Jawa Timur	Kota Madiun	17,35%	24,08%	22,91%	37,04%	65,65%	48,90%
18	Jawa Timur	Kota Surabaya	59,92%	64,25%	60,83%	147,36%	205,72%	254,18%
19	Jawa Timur	Kota Batu	13,63%	17,59%	16,51%	24,53%	34,77%	31,25%
20	D I Y	Kota Yogyakarta	34,26%	39,60%	38,43%	57,01%	86,61%	80,30%
21	Jawa Barat	Kota Bogor	36,42%	42,73%	39,17%	72,60%	85,38%	71,36%
22	Jawa Barat	Kota Sukabumi	25,39%	29,52%	29,61%	51,73%	69,22%	66,72%
23	Jawa Barat	Kota Bandung	37,87%	44,96%	43,29%	76,31%	95,88%	84,26%
24	Jawa Barat	Kota Cirebon	26,44%	31,93%	31,34%	58,09%	63,82%	65,34%
25	Jawa Barat	Kota Bekasi	38,04%	41,80%	41,38%	76,80%	79,67%	83,27%
26	Jawa Barat	Kota Depok	37,09%	42,52%	36,56%	78,80%	98,56%	79,89%
27	Jawa Barat	Kota Cimahi	32,05%	25,05%	25,45%	47,08%	62,45%	49,16%
28	Jawa Barat	Kota Tasikmalaya	15,84%	19,46%	15,24%	28,52%	39,74%	31,56%
29	Jawa Barat	Kota Banjar	14,27%	15,45%	14,52%	26,38%	33,29%	29,78%
	Maximum	Maximum	59,92%	64,25%	60,83%	147,36%	205,72%	254,18%
	Minimum	Minimum	11,21%	15,45%	13,22%	22,74%	33,29%	29,72%
	Average	Average	27,98%	31,58%	29,36%	59,08%	77,94%	70,45%

Source: Central Bureau of Statistics



#### 4. Conclusion

Dari paparan di atas dapat ditarik suatu kesimpulan sebagai berikut :

1. Terdapat perbedaan indeks pembangunan manusia pada pemerintah kabupaten dengan pemerintah kota di Jawa yang menempatkan pemerintah kota memiliki indeks pembangunan manusia lebih tinggi daripada pemerintah kabupaten. .
2. Terdapat perbedaan kinerja keuangan antara pemerintah kabupaten dengan pemerintah kota yang diukur dengan rasio pendapatan asli daerah terhadap total pendapatan daerah dan menempatkan pemerintah kota secara rata-rata memiliki tingkat kemandirian fiskal yang lebih tinggi daripada pemerintah kabupaten,
3. Kemampuan pemerintah kota lebih tinggi dibandingkan dengan pemerintah kabupaten dalam memenuhi belanja tidak langsung dengan rasio pendapatan asli daerah terhadap belanja tidak langsung.

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# The Influence of Leadership Style, Communication, Training, Work Ethic and Individual Characteristics on Employee Performance

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## Abstract

This research aims to examine and analyze the effect of leadership style, communication, employee training, work ethic and individual characteristics on employee performance and to examine and analyze the influence of leadership style, communication, training, work ethic, and individual characteristics simultaneously on employee performance. The applied research type is a correlation study with quantitative methods. The population of this research was 52 employees of the Al Muhajirin Dotamana Indah Foundation. The research sample consisted of 52 people, taken with a saturated sampling technique. Data obtained by distributing questionnaires then analyzed using multiple linear regression and hypothesis testing using SPSS version 25. The results of this research are: leadership style partially has significant effect on employee performance, communication partially has significant effect on employee performance, training partially has insignificant effect on employee performance, work ethic partially has insignificant effect on employee performance, individual characteristics partially has significant effect on employee performance, and leadership style, communication, training, work ethic, and individual characteristics simultaneously have significant effect on employee performance.

**Keywords:** Employee Performance, Leadership Style, Communication, Training, Work Ethic, Individual Characteristics

## 1. Introduction

One of the roles of a social foundation is to provide services to the community where the foundation is located. The dynamics of the community which continues to grow requires the foundation to continually strengthen its resources to be able to provide services that are the reason for its establishment.

The Al Muhajirin Dotamana Indah Foundation is now managing 3 activity units, namely RA (kindergarten), SDIT (elementary school) and Masjid. RA unit, established since 2002, is now considered as one of the best in its surrounding areas. Performing well, RA has relatively not experienced significant employee turnover. In 2015, the Foundation established an elementary school to meet the formal education needs of RA graduates. Except for the principal who is promoted from RA teacher, all SDIT employees are new recruits who are dominated by young employees. SDIT is growing very rapidly both in terms of facilities, students and number of employees, mostly teachers. The majority of the teachers and staff recruited are young employees.

With the establishment of SDIT, the Foundation's challenges are related to managing two organizations with distinctive character difference, such as age, marital status, years of service. RA's employees are small in number with a relatively older in age and higher of years of service. This is in contrast to SDIT which has a much larger number of employees with younger of age.

Recently as the complexity of organizations grows, the Foundation began to experience challenges related to HR management. For this reason, the Foundation has taken serious action to start mapping the factors that affect the overall performance of the organization.

### Problem Description

Based on the problem described above, the problem formulations in this study are as follows: Is there an influence of leadership style on employee performance? Is there an influence of communication on employee performance? Is there an influence of training on employee performance? Is there an influence of work ethic on employee performance? Is there an influence of individual characteristics on employee performance? Is there a simultaneous influence of leadership style, communication, training, work ethic and individual characteristics on employee performance?

### Research Objectives

Based on the background of the problem and the formulation of the research problem above, the objectives of this study are as follows: To determine and analyze the influence of leadership style on Al Muhajirin Dotamana Indah Foundation employees performance. To determine and analyze the influence of communication on Al Muhajirin Dotamana Indah Foundation employees performance. To determine and analyze the effect of training on Al Muhajirin Dotamana Indah Foundation employees performance. To determine and analyze the influence of Work Ethics on Al Muhajirin Dotamana Indah Foundation employees performance. To determine and analyze the effect of individual characteristics on Al Muhajirin Dotamana Indah Foundation employees performance. To identify and analyze the effect of Leadership Style, Communication, Training, Work Ethic and Individual Characteristics simultaneously on Al Muhajirin Dotamana Indah Foundation employees performance.

## 2. Literature Review

### Definition of Employee Performance

According to Lubis et al. (2019) performance is the result of a process that is referenced and measured over a certain period of time based on predetermined provisions, standards or agreements. According to Wibowo (2016), the criteria used to assess employee performance are as follows: Quantity of Work, Quality of Work, Job Knowledge, Creativeness, Cooperation, Dependability, Initiative, Personal qualities.

### Definition of Leadership Style

According to Susanto (2016) leadership style is a method or technique being applied by a person in carrying out leadership. Leadership style is interpreted as a norm of behavior a person uses to influence the behavior of others.

Khan (2016) explains that the concept of leadership style according to Bass and Avolio reveals at least 3 types of leadership styles, namely: transformational leadership styles, transactional leadership styles and passive-avoidant leadership styles. Hasibuan (2014) argues that leadership styles are divided into: Authoritarian Leadership, Participatory Leadership and Delegate Leadership.

### Definition of Communication

Anjaswarni (2016) states that communication can be interpreted as a process of exchanging, delivering, and receiving news, ideas, or information from one person to another. According to Hardjana (2018) communication at the level of organizational management is a prerequisite that allows an organization to carry out its four basic functions, namely: planning, organizing, leadership and controlling. Without communication, these basic management functions will not produce output required by organizational goals. Hardjana (2018) also explains that there are four basic types of communication style, namely: passive, aggressive, passive-aggressive and assertive communication styles.

### Definition of Training

According to Hamalik (2010), training is a series of processes that include actions (efforts) that are carried out deliberately in the form of providing assistance to the workforce, carried out by training professionals which aims is to improve the work ability of participants in certain fields of work. This is to improve effectiveness and productivity in an organization. According to Santoso (2010) in terms of training material, it can be classified into 2 (two) types, namely: knowledge-based training and skill-based training.

### Definition of Work Ethic

According to Darodjat (2015) work ethic is a set of positive behaviors and a foundation that includes the motivation that drives them, main characteristics, basic spirit, basic thoughts, code of ethics, moral code, code of behavior, attitudes, aspirations, beliefs, principles and standards. Ginting (2016) explains that work ethic indicators are: loyalty & obedience, responsibility, enthusiasm, cooperation, honesty and thoroughness.

### Definition of Individual Characteristic

According to Robbins (2012), individual characteristics are the overall behavior and abilities that exist in individuals as a result of their natural environment. Yang (2011) states that individual characteristics include: gender, age, education, experience and marriage.

### Hypotheses

Based on the theoretical review and empirical findings above, the hypotheses proposed in this study are as follow:

*H1: Leadership style affects the employee performance of the Al Muhajirin Dotamana Indah Foundation.*

*H2: Communication affects the employee performance of the Al Muhajirin Dotamana Indah Foundation*

*H3: Training affects the employee performance of the Al Muhajirin Dotamana Indah Foundation*

*H4: Work ethic affects the employee performance of Al Muhajirin Dotamana Indah Foundation*

*H5: Individual characteristics affect the employee performance of the Al Muhajirin Dotamana Indah Foundation*

*H6: Leadership Style, Communication, Training, Work Ethic and Individual Characteristics*

*simultaneously affect the employee performance of Al Muhajirin Dotamana Indah Foundation*

## 3. Methodology

### 3.1 Research Object

The object of research is a scientific goal to obtain data with specific purposes and uses about something objective, valid, and reliable about something (certain variables), Sugiyono (2017). The object of this research is employees of the Al Muhajirin Dotamana Indah Foundation.

### Population and Sample

The population in this research was employees of the Al Muhajirin Dotamana Indah Foundation. As the population is less than 100 people, a saturated sample technique will be applied for all teachers.

### 3.2 Source of Data

The data used in this study is primary data obtained directly from all employees. Secondary data is data that refers to information collected from pre-existing sources.

### Data Collection Technique

According to Sugiyono (2017) based on the sources of data collection, data collection can be done by means of a questionnaire.

### 3.3 Operational Definition

#### 3.3.1 Independent Variables

The independent variables in this research are:

X1 = Leadership Style

X2 = Communication

X3 = Training

X4 = Work Ethic

X5 = Individual Characteristics

### 3.3.2 Dependent Variable

The dependent variable is a variable that is explained or influenced by the independent variable. In this study, the dependent variable is: Y = Employee performance

### Data Analysis Technique

#### 3.4 Validity Test

Sugiyono (2017) states that validity is the degree of accuracy between data that occurs on the object of research and data that can be reported by researchers. Criteria for validity testing is done by comparing r count and r table. If r count > r table, the statement item can be said as valid. The r count value is taken in the correlated item-total correlation column, while the r table is determined using the formula  $df = n - 2$ .

#### 3.5 Reliability Test

Sugiyono (2014) explains reliability as trustworthy or reliable. Based on this opinion, it can be concluded that it is said to be reliable if it provides constant results. Reliability measurement was carried out using the SPSS statistical test tool Cronbach Alpha ( $\alpha$ ). A variable is said to be reliable if it provides a Cronbach Alpha value  $\geq 0.6$  or r count > r table (Sugiyono, 2014).

#### 3.6 Classical Assumption Test

The classical assumption test aims to see whether or not the regression model is valid to predict the dependent variable based on the input of the independent variable. This means the regression model must be free from several assumptions.

#### 3.7 Normality Test

The normality test is carried out to check whether the data to be analyzed is normally distributed.

#### 3.8 Multicollinearity Test

The multicollinearity test aims to test whether the regression model finds a correlation between independent variables. If the independent variables are correlated, these variables are not orthogonal. The meaning of orthogonal variables is an independent variable whose correlation value between independent variables is equal to zero, Ghozali (2015).

A good regression model should not have a correlation between the independent variables. If the tolerance value is <0.10, or equal to the VIF value > 10, it can be said that the regression model has multicollinearity symptoms and vice versa.

#### 3.9 Heteroscedasticity Test.

According to Gozali (2015) the heteroscedasticity test is to test whether in the regression there is an inequality of variance from the residuals of one observation to another. A good regression model is a homoscedasticity or heteroscedasticity does not occur. If the p value > 0.05, is not significant and no heteroscedasticity is occurred. This concludes that the regression model passes the heteroscedasticity test.

#### 3.10 Hypotheses Test

##### 3.10.1 Multiple Linear Regression Analysis

Multiple linear regression analysis is used to measure the presence or absence of influence between the independent variable and the dependent variable.

##### 3.10.2 T-Test

This test is used to determine whether each independent variable individually has a significant effect on the dependent variable. With the provisions of  $t_{count} > t_{table}$  or the probability of error is less than 5%, it proves that the independent variables partially have a significant effect on dependent variables, then  $H_a$  is accepted, and  $H_0$  is rejected.

### 3.10.3 F-Test

This test is used to determine the simultaneous effect of the independent variables on the dependent variable, where  $F_{count} > F_{table}$ , then  $H_a$  is accepted, or simultaneously the independent variables are able explain the dependent variable.

### 3.10.4 R-Squared Test

The R-Squared test is intended to measure the ability of how much the percentage of variation in the independent variables in the multiple linear regression models in explaining the variation in the dependent variable. In other words, testing the model using R-Squared, the value of the coefficient of determination is between 0 (zero) and 1 (one) which means the ability of the independent variables to explain the variation of the dependent variable.

## 4. Analysis

### Characteristics of Respondents by Gender

The results of this study seen from the characteristics of respondents based on gender can be seen in Table 1.

Table 1. Characteristics of Respondents by gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pria	10	19.2	19.2	19.2
	Wanita	42	80.8	80.8	100.0
	Total	52	100.0	100.0	

Source: Processed primary data, 2020.

As presented on Table 1, the Foundation employees are dominated by women at 80.8%.

### Characteristics of Respondents by Education Degree

The results of this study seen from the characteristics of respondents based on education degree is presented on Table 2.

Table 2. Characteristics of Respondents by Education Degree

Education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SMU	7	13.5	13.5	13.5
	S1	45	86.5	86.5	100.0
	Total	52	100.0	100.0	

Source: Processed primary data, 2020.

As presented on Table 2, the Foundation employees are dominated by Bachelor Degree

Characteristics of Respondents by Years of Service

The results of this study seen from the characteristics of respondents based on years of service is presented on Table 3.

Table 3. Characteristics of Respondents by years of service

<b>Lama Kerja</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	41	78.8	78.8	78.8
	6-10	5	9.6	9.6	88.5
	10-15	1	1.9	1.9	90.4
	>15	5	9.6	9.6	100.0
	Total	52	100.0	100.0	

Source: Processed primary data, 2020.

As presented on Table 3, 78.8% Foundation employees are with the years of service of 1-5 years.

Validity & Reliability Test Result

Table 4. Validity & Reliability Test Result

<b>Item-Total Statistics</b>				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Connected Item - Total Correlation	Cronbach's Alpha if Item Deleted
Gaya Kepemimpinan	117.50	89.902	.486	.723
Komunikasi	115.77	77.161	.557	.692
Pelatihan	113.15	67.270	.460	.761
Etos Kerja	111.25	75.525	.702	.646
Karakteristik Individu	109.87	86.236	.496	.717

Source: Processed primary data, 2020

Based on the data presented in Table 4 above, it is found that  $r$  count > 0.30 and Cronbach Alpha is > 0.6. All variables are declared valid and reliable

### Normality Test Result

As shown in Figure 1, the Scatterplot shows the points spreading around the diagonal line

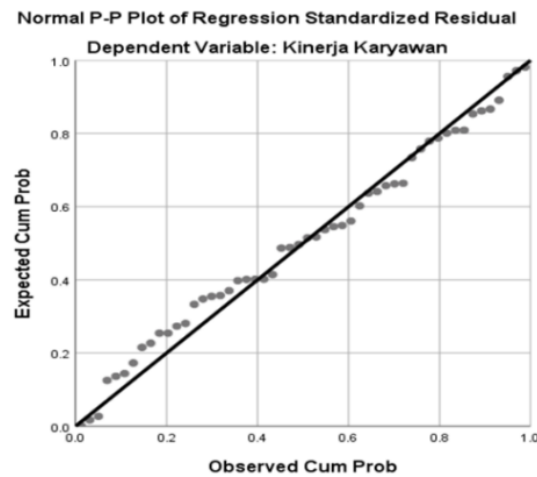


Figure 1. Normality Test Results (P-P Plot)

Source: Processed primary data, 2020

### Multicollinearity Test Result

Based on data processed using SPSS program version 25.0, VIF value for all independent variables are < 10. There is no symptoms of multicollinearity observed in this regression model.

Table 5. Multicollinearity Test Results

Coefficients <sup>a</sup>								
Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Tolerance	Statistics VIF
1	(Constant)	1.471	4.105		.358	.722		
	Gaya Kepemimpinan	.648	.137	.330	4.713	.000	.737	1.357
	Komunikasi	.799	.138	.540	5.789	.000	.415	2.410
	Pelatihan	-.097	.065	-.100	-1.492	.143	.801	1.249
	Etos Kerja	.135	.156	.082	.864	.392	.404	2.473
	Karakteristik Individu	.489	.125	.277	3.924	.000	.725	1.379

Dependent Variable Kinerja Karyawan

Source: Processed primary data, 2020



## Heteroscedasticity Test Result

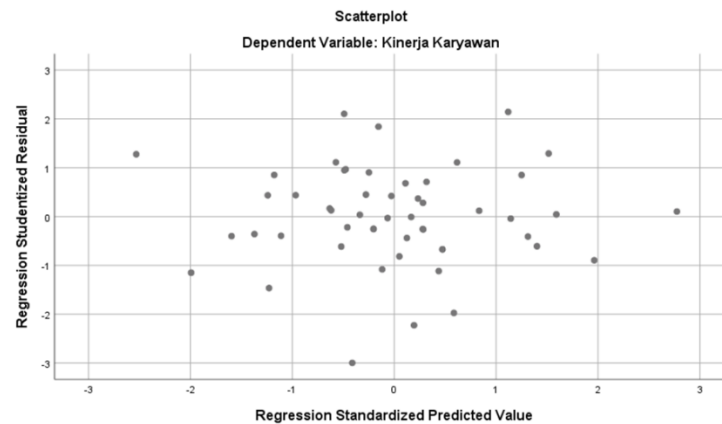


Figure 2: Scatterplot

Source: Processed primary data, 2020.

Figure 2 shows that the data is spread above and below the zero line and does not form a pattern. Heteroscedasticity symptoms were not observed in the regression model

## Multiple Linear Regression Test Result

Table 6. Multiple Linear Regression Test Result

Coefficients <sup>a</sup>						
Model		Unstanda r-dized B	Coefficient s Std.Error	Standardize d Coefficients Beta	t	Sig.
1	(Constant)	1.471	4.105		.358	.722
	Gaya Kepemimpinan	.648	.137	.330	4.713	.000
	Komunikasi	.799	.138	.540	5.789	.000
	Pelatihan	-.097	.065	-.100	-1.492	.143
	Etos Kerja	.135	.156	.082	.864	.392
	Karakteristik Individu	.489	.125	.277	3.924	.000

a. Dependent Variable Kinerja Karyawan

Source: Processed primary data, 2020

Based table 6 above, the following regression equation can be obtained.

$$Y = 1.471 + 0.648X_1 + 0.799X_2 - 0.097X_3 + 0.135X_4 + 0.489X_5 + e$$

It means:

1. The constanta has a value of 1.471. This shows that if the value of Leadership style, Communication, Training, Work Ethic and Individual Characteristic is zero, then Employee Performance has a value of 1.471.
2. The Leadership style variable has a regression coefficient value of 0.648, this means that if the other independent variables are fixed or unchanged, then every 1 point or 1% increase in the Leadership style variable will increase Employee performance by 0.648. There is a relationship between Leadership style and Employee Performance
3. The Communication Variable has a regression coefficient value of 0.779, this means that if other independent variables are fixed or unchanged, then every 1 point or 1% increase in the Communication variable will increase Employee Performance by 0.779. There is a relationship between Communication and Employee Performance
4. The Training variable has a regression coefficient value of -0.097. This means that if other independent variables are fixed or unchanged, then every 1 point or 1% increase in the Training variable will decrease Employee Performance by 0.138.
5. The Work Ethic has a regression coefficient value of 0.135, this means that if other independent variables are fixed or unchanged, then every 1 point or 1% increase in the Work Ethic variable will increase Employee Performance by 0.135. There is a relationship between Work Ethic and Employee Performance
6. The Individual Characteristic variable has a regression coefficient value of 0.489, this means that if other independent variables are fixed or unchanged, then every 1 point or 1% increase in the Individual Characteristics variable will increase employee performance by 0.489. There is a relationship between Individual Characteristic and employee performance.

#### Hypotheses Test Result

##### T-Test

T-Test result shows the following:

- a. The t count for the Organizational Commitment variable is  $4.713 > 2.012$  t table and the sig value is  $0,000 < 0.05$ . Based on the results obtained, H0 is rejected and H1 is accepted for the Leadership Style variable. Thus, partially the Leadership Style variable affects employee performance.
- b. The t count for the Communication variable is  $5.789 > 2.012$  t table and the sig value is  $0,000 < 0.05$ . Based on the results obtained, H0 is rejected and H2 is accepted for the Communication variable. Thus, partially the Communication variable affects employee performance.
- c. The t count for the Training variable is  $-1.492 < t$  table of 2.012 and the sig value is  $0.143 > 0.05$ . Based on the results obtained, H0 is accepted and H3 is rejected for the Principal Leadership variable. Thus, partially the Training variable has no effect on employee performance.
- d. The t count for the Work Ethic variable is  $0.864 < t$  table of 2,012 and the sig value is  $0.392 > 0.05$ . Based on the results obtained, H0 is accepted and H4 is rejected for the Work Ethic variable. Partially the Work Ethic variable has no effect on employee performance.
- e. The t count for the Individual Characteristics variable is  $3.924 > t$  table of 2.012 and the sig value is  $0.00 < 0.05$ . Based on the results obtained, H0 is rejected and H5 is accepted for the Individual Characteristics variable. Partially the Individual Characteristics variable has an effect on teacher performance.

##### F-Test

The test results show that the independent variables simultaneously obtained the value of F count =  $46.181 >$

F table of 2.52 with a probability value of F (Sig) is 0.00 (Sig. 0.00 < 0.05). It can be concluded that Leadership style (X1), Communication (X2), Training (X3), Work Ethic (X4) and Individual Characteristics (X5) simultaneously have an influence on employee Performance (Y) of Yayasan Al Muhajirin Dotamana Indah

Table 7. F-Test result

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	875.106	5	175.021	46.181	.000 <sup>b</sup>
	Residual	174.336	46	3.790		
	Total	1049.442	51			

a. Dependent Variable Kinerja Karyawan

b. Predictors : (Constant), Karakteristik, Pelatihan, Komunikasi, Gaya Kepemimpinan, Etos Kerja

Source: Processed primary data, 2020

R-Squared Test

Table 8. R-Squared Result

Model Summary				
Model	R	R Square	Adjusted R Square	Std.Error of the Estimate
1	.913 <sup>a</sup>	.834	.816	1.947

Predictors : (Constant), Karakteristik, Pelatihan, Komunikasi, Gaya Kepemimpinan, Etos Kerja

Source: Processed primary data, 2020

R-Squared test result shows that the R Adjusted number is 0.816, which means that the correlation between the variables of Leadership style, Communication, Training, Work Ethic and Individual Characteristics is 81.6.1%. This means that the percentage of the contribution of the variable Leadership style, Communication, Training, Work Ethic and Individual Characteristics in the regression model is 81.6%, while the remaining 18.4% is explained by other variables that are not researched or not included in this study.

Based on the results of the analysis above, it can be concluded that Leadership style, Communication, Training, Work Ethic and Individual Characteristics simultaneously are contributed to Yayasan Al Muhajirin Dotamana Indah employee performance.

This result is in line with research conducted by Firdaus and Zaitul from the Bung Hatta University Postgraduate Program in 2015 which found a significant influence between Leadership and Work Ethics on Employee Performance. Meanwhile, Dewi in 2019 found in her research "The Influence of Communication, Training and Motivation on Employee Performance of BNNP Bengkulu According to Islamic Perspective" a significant relationship between Communication and Employee Performance.

However, the results of this study are not in line with the theses research entitled "The Effect of Training and Work Motivation on Employee Performance at PT. Perkebunan Nusantara IV (Persero) Medan" conducted by Lubis from 2018. In his research, Lubis found a significant influence between Employee Training and Employee Performance.

The results are also not in line with the results of research conducted by Firdaus and Zaitul in 2015. Both examined the effect of leadership style and work ethic on performance with Locus of Control as an intervening variable for hospital staff and found that work ethic had a significant effect on employee performance.

## 5. Conclusion

Based on the results and discussion above, it can be concluded as follows: (1) Leadership Style affects the performance of the employees of the Al Muhajirin Dotamana Indah Foundation. (2) Communication affects the performance of the employees of the Al Muhajirin Dotamana Indah Foundation. (3) Training has no effect on the performance of the employees of Yayasan Al Muhajirin Dotamana Indah. (4) Work Ethic affects the performance of the employees of the Al Muhajirin Dotamana Indah Foundation. (5) Individual characteristics affect the performance of the employees of the Al Muhajirin Dotamana Indah Foundation. (6) Leadership Style, Communication, Training, Work Ethic and Individual Characteristics simultaneously affect the performance of the employees of the Al Muhajirin Dotamana Indah Foundation.

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## Flypaper Effect on Regional Expenditure in 32 Cities of Indonesia

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### Abstract

The main objective of this study is to analyze the flypaper effect, namely the effect of local revenue, unconditional grants, and residents, on regional expenditure in Indonesia, namely the western region of Indonesia and the eastern region of Indonesia which is moderated by the institution. The population in this study were all cities in Indonesia, namely 32 capitals. This study was conducted with secondary data in the form of a cross section during 2016, because institutional data proxied as an index of regional economic governance was only available in that year.

The data used is secondary data in the form of quantitative data which includes regional expenditures, local revenue, unconditional grants, residents and institutions. This data comes from the central statistical agency and the committee to monitor the implementation of regional autonomy.

The results showed that the flypaper effect had an impact on increasing regional expenditure in western Indonesia and eastern Indonesia with an increase that was higher than the increase in regional original income in response to transfers. It can be understood that local governments are more responsive to transfer funds in increasing regional spending. However, on the other hand, institutions have a negative and significant effect on the relationship between unconditional transfers and regional expenditures. This suggests that institutions with good governance lead to less and less unconditional transfers used for regional expenditure. This means that the role of institutions causes the flypaper effect to be reduced. This indicates that institutions that have good governance are able to increase local revenue.

**Keywords:** flypaper effect, local revenue, unconditional grants, residents, institutions, regional expenditure

### 1. Introduction

Intergovernmental transfers are still a common phenomenon in all countries regardless of the government system. Oates (1999) argues that the implementation of transfers is to overcome the problem of externalities, correct vertical imbalances, distribute fiscal between regions and achieve certain development goals.

Before fiscal decentralization was rolled out in 2001, each level I and level II region had two types of revenue to finance their expenditures, namely local revenue and funds transferred by the central government (Alfirman, 2003). But because of the political and economic crisis that occurred, it triggered local governments to take bigger initiatives in regulating their respective regional affairs (Wibowo, 2008). This is due to the pressure to reform any policies with nuances of corruption, collusion and nepotism (Fitriani et al, 2005). One of them is that regions that have abundant natural resources receive unfair revenue sharing from the central government (Tadjoeddin et al, 2001).

The Habibie government began to launch two legal products, namely Law no. 22 of 1999 concerning Regional Government and Law no. 25 of 1999 concerning Financial Balance between Central and Regional Government. These two legislative products are designed to create interregional autonomy and promote a more democratic



system of government, so that with the new fiscal decentralization, provinces and districts / cities take over all roles of the central government except for five things, namely defense and security, foreign policy, justice, policy, macroeconomics and national planning (Fane, 2003).

Since the 2001 fiscal year, the government has implemented Law no. 25 of 1999 concerning Financial Balance between Central and Regional Government. The enactment of this law caused Indonesia to enter a new era of decentralization in the field of fiscal and structural changes. In the implementation of fiscal decentralization, there are two factors that need to be considered, namely local revenue and balancing funds. The original regional income is, in principle, a description of the ability of an autonomous region in the fiscal aspect, therefore it is hoped that regional government expenditure can be fulfilled by using its own regional income, so that the region becomes truly independent.

The sources of funding for the implementation of regional government consist of local revenue, balance funds, and other legal revenues. Original regional income consists of components of regional taxes, regional levies, the results of processing separated regional assets, and other legitimate regional original revenues. Balancing funds are regional funding originating from the State Budget consisting of profit sharing funds, general allocation funds, and special allocation funds. In general, profit-sharing funds and general allocation funds are classified into the form of unconditional transfers / unconditional grants or so-called unconditional transfers. Meanwhile, the special allocation funds are classified into the form of conditional transfers / conditional grants or commonly referred to as conditional transfers (Brojonegoro and Vazquez, 2002).

According to the law, regional financing arrangements are carried out based on the principles of decentralization, deconcentration and co-administration. The financing of governance based on the principle of decentralization is carried out at the expense of the APBD. Therefore, regional heads are given the authority to collect taxes / levies and provide revenue sharing as well as financial assistance (grants), otherwise known as balancing funds. The financing of government administration based on the principle of deconcentration is carried out at the expense of the State Budget and the financing of the administration of government in the context of the assistance task is financed at the expense of the budget at the assigned government level.

In the implementation of fiscal decentralization, there are two factors that need to be considered, namely local revenue and balancing funds. The original regional income is, in principle, a description of the ability of an autonomous region in the fiscal aspect, therefore it is hoped that regional government expenditure can be fulfilled by using its own regional income, so that the region becomes truly independent. The value of the original regional income of all autonomous regions in Aceh Province, the original regional income continues to increase every year, but has not been able to finance more than half of its own expenses as the goal of decentralization. The proportion of original regional revenue to APBD is still relatively small compared to transfers from the center. Mahi (2005) shows that during 2001-2003 the role of local revenue in routine expenditure and total APBD expenditure decreased. The decreasing role of local revenue in routine expenditure and total expenditure in APBD indicates that there is an increasing role for transfer mechanisms from the central government through balancing funds. The proportion of transfers from the center to regional revenues is still the largest compared to local revenue. This shows that regional dependence on the center is still high, so that the objectives of implementing decentralization are still far from being expected.

Usman et al (2008) also stated that most of the regions reflected in the original regional income (PAD) were only able to collect no more than 15% of the APBD value. Therefore, the central government must assist the deficiency through a balance fund mechanism consisting of DBH, DAU and DAK, which fill and complement each other. Adi's study (2005) strengthens the argument that regional independence is not getting better, but on the contrary, namely, regional dependence on transfers from the center is getting higher.

Therefore, fiscal capacity is an important and strategic issue, because in the future local governments are expected to reduce and even release their financial dependence on the central government. However, Wibowo (2008) argues that the reform order version of fiscal decentralization gave rise to many regions that have big responsibilities but are not accompanied by adequate fiscal capacity. In line with this, Brodjonegoro (2001) states that although the regions receive more equal funds, this has been accompanied by a decline in the amount

of local revenue and the ability to collect local taxes. As a result, from year to year, local governments always demand even bigger transfers from the center, instead of exploring the local tax base optimally (Kuncoro, 2004).

Turning to the state of Aceh, based on district / city government financial statistics (2017) it is explained that the capital's revenue in Indonesia from unconditional transfers has increased compared to original regional income in 2016. It means that between the contribution of original regional income and the contribution of unconditional transfers to Regional expenditures tend to be more predominantly influenced by unconditional transfer contributions. The small amount of local revenue indicates that local tax and user fees are still low to finance regional expenditure needs. Thus, to increase the ability of regions to finance their expenditure needs, it is necessary to strengthen regional taxing power, such as broadening the regional tax base.

The dominance of the role of transfers relative to own-source revenue in financing regional government spending does not actually provide good guidance for the government on the transfer flows themselves. Empirical evidence internationally shows that high dependence on transfers is negatively related to governance outcomes (Mello and Barenstrein, 2001). This means that local governments will be more careful in using funds raised from the community themselves rather than transfer funds received from the center.

This phenomenon is known in literature as the flypaper effect, to show that "money sticks where it hits". In summary, this literature finds that unconditional grants (UG) in a community have a much greater stimulating effect on sub-national spending than equivalent increases in community income.

Based on some of the descriptions above, this study aims to analyze whether intergovernmental transfers support the flypaper effect at the capital level in Indonesia. The reason for examining the validity of the flypaper effect is to try to gain understanding to develop better theories about local public spending.

This paper begins by discussing section 2, which describes the flypaper effect literature and several previous studies. The methodology and data will be presented in section 3. We analyzed all capitals in Indonesia during 2016 using cross section data because previously with panels and time series. Section 4 covers the empirical results and then conclusions will be made in Section 5.

## 2. Literature review

In theory, a \$ 1 increase in local people's income should have the same impact on public spending as receiving \$ 1 as a form of general-purpose transfer: they change the outgoing budget line identically. In fact, all empirical studies show that the \$ 1 received by communities in the form of general-purpose transfers tends to be used to increase local spending by increasing local people's income by more than \$ 1. Budget money tends to stick to the place where it was first issued, causing less portion of tax breaks than expected, a phenomenon known as the "flypaper effect" (Asatryan, Feld, and Geys, 2015; Vegh and Vuletin, 2015. ; Boadway and Shah, 2009). This statement is supported by Hines and Thaler (1995) who found that much of the literature pays attention to the interaction between income and grants at the regional level. Empirical evidence suggests that spending is stimulated more than theory predicts. For an unlimited grant, the estimated effects are often closer to 100%. This result is called the flypaper effect. The implication is that local governments tend to lead to regional expenditures greater than regional revenues (McMillan et. Al, 1980).

The Flypaper effect relies on public choice reasoning, namely bureaucratic models and fiscal illusions. The bureaucratic model examines the flypaper effect from the point of view of the bureaucrat. This model states that the flypaper effect comes from the budget maximization behavior of local politicians (bureaucrats). The flypaper effect occurs because bureaucrats have more information about intergovernmental grants and regional budgets. Local bureaucrats tend to spend readily on an intergovernmental grant, rather than asking for increases in local taxes. On the other hand, the fiscal illusion model bases its study from the perspective of people who experience limited information on their local government budgets. The bureaucratic school of thought was initiated by Niskanen. In his view, the position of bureaucrats is stronger in public decision making (Niskanen, 1968). Then, Niskanen (1971) developed a model known as the (bilateral) monopoly theory of bureaucracy model. This model views bilateral bargaining between bureaucrats who tend to maximize the

budget and the elected government that devotes itself to the interests of the average voter. Three important assumptions underlie Niskanen's theory, namely: a). the bureaucracy tends to take action to maximize the budget; b). the bureaucracy holds a monopoly on most public service supplies; and c). bureaucracy has the advantage of mastery of information.

Oates (1979) also states about the phenomenon of fiscal illusions. For Oates, the transfer will lower the average cost of providing public goods (not their marginal cost). However, people do not understand that the reduction in costs that occurs is at the average cost or marginal cost. People only believe that the price of public goods will decline. If the demand for public goods is inelastic, the transfer will have an impact on increasing taxes for the community. This shows that the flypaper effect is the result of people's ignorance of local government budgets. Public choice theory, describes that "typically political economists see politics in the form of democracy, which provides space for mutual exchange between communities, political parties, government and bureaucrats. In this context, voters are positioned as buyers of collective (public) goods, while the government and political parties are considered as alternative providers of public policy (goods and services) so that in the long run they can gain support from the general election (Rachbini, 2002). In short, in such a process, any policy formulation and support is considered a process of distributing the economic ratio through the political market.

The public choice approach is divided into two parts: supply and demand. On the supply side, there are two subjects that play a role in policy formulation, namely the center of power that is elected and the center of power that is not chosen. On the demand side, actors can also be divided into two categories, namely voters and pressure groups. Finally, as stated by Niskanen (1973), the greatest contribution of public choice is its ability to show that politicians in their actions are always motivated by personal interests. Public choice sees politicians as actors who tend to maximize personal satisfaction motivated by many factors, such as salary, public reputation, power and space to control the bureaucracy (Yustika, 2010). Public choice theory can also further transform the basic concepts of classical economics into politics. In this case the concept of rent-seeking is known. This concept is very important for political economy science to explain the behavior of entrepreneurs, politicians, and interest groups (Rachbini, 2002). Bates and Olson (in Kherallah and Kirsten, 2002) analyze rent seeking behavior and the dynamics of group interests in explaining economic outcomes that are less economically efficient. Empirical evidence shows that rent seeking is a serious problem in developing countries (Svensson, 2000). Because of the existence of rent seeking, it creates competition between groups for the interests of groups over the country as a whole and this has a negative impact on growth (Szeftel 2000).

Rent seeking itself is defined comprehensively as an investment in real resources carried out by individuals or groups (coalitions) in the hope of obtaining an increase (avoiding a decrease) in their income wealth as a result of securing (blocking) changes in legal rights (Hartle, 1983). In this sense, rent-seeking behavior is seen as spending resources to change economic policies, or tweaking these policies so that they can benefit rent-seekers.

Theoretically, rent-seeking activities should be interpreted neutrally, because individuals (groups) can benefit from legal (legal) economic activities, such as renting out land, capital (machines). In this category, the income that a person gets through renting is equivalent to the income that an individual earns for investing his capital (profit) and selling his labor and services (wages). Therefore, the concept of rent seeking in classical economic theory is not interpreted negatively as economic activity that causes losses, it can even mean positive because it can simultaneously spur economic activity, such as someone who wants to earn profits and wages. However, in the political economy literature, the concept of rent seeking is not interpreted in a neutral way. The trend is that the political economy approach sees rent-seeking behavior from a negative perspective. The assumption that is built from political economy theory is that each interest group strives to get the maximum economic benefit with the least amount of effort.

It is at this point that all existing political economy resources, such as lobbying, will be pursued in order to achieve this goal. The problem that often occurs is, if the product of the lobby is a policy, the implications that arise can be enormous. As stated by Olson, the lobbying process can have a big impact because it results in the decision-making process running very slowly and ultimately unable to respond quickly to changes and new technology (Yustika 2010).

Several empirical studies on the flypaper effect have been researched in Indonesia such as Ardanareswari et.al (2019) in Java, Ansharullah (2018) in Indonesia, Kurniana et. al (2017) in Yogyakarta, Nugroho (2017) in Yogyakarta, Pangabea and Dalimunthe (2017) in North Sumatra, Siregar and Rudy (2017) in Indonesia, Sumarsono and Farida (2017) in East Java, Abdillah and Djoko (2016) in East Java, and Purbarini and Madjojo (2015) in Indonesia. Likewise, with empirical studies in European and American countries such as Acar (2019) in Turkey, Kopanska (2018) in Poland, Langer and Artem (2018) in Germany, Yaş and Umut (2015) in Turkey, Leduc and Daniel (2017) in America, Ryu (2017) in Ohio, Vegh and Guellermo (2015) in Argentina, Bracco et. al (2015) in Italy, Kjaergaard (2015) in Denmark.

Brooks and Justin (2008) suggest that cities that face constraining fiscal institutions are more likely to spend federal grants than cities that are not constrained. This means that the grant program can control the receiving mechanism, so this test shows a flypaper effect, one that produces strong evidence that federal grants complement local expenditures. All this, suggests that there are more powerful factors such as politics for empiricism alongside other economic reasons (Courant et al., 1979). Political factors that will later be analyzed are proxies as an institution. This approach is different from previous research.

### 3. Method

The method used in this research is development research, which is research aimed at developing previous research findings or theories, both for the purposes of pure science and applied science and so on. However, in supporting the research method, research can also be carried out in the library. Research conducted in this library takes a library setting as a place of research with the object of research being library materials. Thus, this research only takes the library as its research arena. Research is dealing with various kinds of literature according to the objectives and problems to be and is being researched. If this research is carried out properly, it will be able to produce a research result on changes in a theoretical research object from some time ago to the present.

The data used is secondary data in the form of quantitative data which includes APBD financial data such as regional expenditures, local revenue, general allocation funds, revenue-sharing funds, and Regional Economic Governance Index (ITKED). This data is sourced from the Central Bureau of Statistics and the Regional Autonomy Monitoring Committee (KPPOD). The population in this study were all cities in Indonesia, namely 32 capitals. This research was conducted with secondary data in the form of a cross section during 2016. Because institutional data that is proxied as an index of regional economic governance is only obtained in that year.

The equation model used in this study is to analyze the effect of transfers on the regional spending approach. This flypaper effect study has been conducted with panels such as Acar (2019), Inayati and Dobby (2017), Kjaergaard (2015), and Vegh and Guellermo (2015). Likewise the time series by Tabar and Majid (2016), Yaş and Umut (2015). This study seeks to look at the cross section approach. The regional expenditure function used in this equation:

$$Exp_i = f(Rr_i, Ug_i, Pop, Inst_i, UgInst) \dots\dots\dots (1)$$

To facilitate the calculation of the equation (1) model, the equation is converted into multiple linear using the double log method or natural logarithm (Ln) as follows:

$$Ln Exp_i = \alpha_0 + \alpha_1 \ln Rr_i + \alpha_2 \ln Ug_i + \alpha_3 \ln Pop_i + \alpha_4 \ln Inst_i + \alpha_5 \{(\ln Ug_i) \times (\ln Inst_i)\} + e_i \dots\dots\dots (2)$$

where:

*Ln Exp* = Regional expenditure; *ln Rr* = Locally-generated revenue; *ln Ug* = Unconditional grants; *ln Pop* = Population; *ln Inst* = The institution is proxied as ITKED; *ln UgInst* = Interaction *Ln Ug* and *ln Inst*; *i* = Cross section; *e* = Error term;  $\alpha_0$  = Intercept;  $\alpha_1$ ,  $\alpha_2$ ,  $\alpha_3$ ,  $\alpha_4$  dan  $\alpha_5$  = Regression coefficient.

The flypaper effect can be obtained through the unconditional transfer coefficient value greater than the income coefficient value. But if, the unconditional transfer coefficient value is smaller than the income coefficient value, then the flypaper effect will not occur (Widarjono, 2006; Sagbas and Saruc, 2004; Lalvani, 2002).

In addition, the above equation can be described that the multiplication variable between LnUg and Ins is a moderating variable which illustrates the moderating effect of the Ins variable on the relationship between LnUg and LnExp. The criterion for determining the institutional variable as a moderating variable in the relationship between unconditional transfers and regional expenditure is if the coefficient  $\alpha_4$  is significant.

#### 4. Results and discussion

Approximate models estimated are local revenue (Ln Rr), unconditional grant (Ln Ug), resident (Ln Pop), institutional (Inst), institutional influence on the relationship between unconditional grant and regional expenditure (Ln UgInst). The results of the estimation of regional expenditure parameters can be seen in Table 1.

Table 1. Estimation Results of Regional Expenditure in Indonesia

Regional Expenditure: Ln EXP			
Variable	The capital city in Indonesia	Western Indonesia Region	Eastern Indonesia
C	-41.516	2.3836	92.1167
Ln (Rr)	0.1046	0.1920	0.0443
	1.7341*	1.5722*	1.1435*
Ln (Ug)	3.7472	0.4581	6.2566
	1.6003**	0.1127*	0.7404*
Ln (Pop)	0.2968	0.2129	0.4474
	3.4327**	1.8452***	3.2368**
Inst	0.2968	0.2822	1.1861
	1.2600***	0.3007*	1.0921*
Ln (UgInst)	- 0.0417	- 0.0217	- 0.0881
	-1.2552*	- 0.3131*	-1.0899*
R-squared	0.8291	0.8913	0.8098

Source: Processed data, through Eviews 11



Information: (\*, \*\*, \*\*\*) significant at critical value of 1%, 5%, and 10% respectively

The estimation results show that local revenue (LnRr), unconditional grant (LnUg), population (Ln Pop), institution (Inst), institutional influence on the relationship between unconditional grant and regional expenditure (LnUgInst) have a significant effect on regional expenditure.

Table 1, shows that First; The condition of the capital city of Indonesia has local revenue which has a significant influence on regional expenditure, showing a regression coefficient of 0.1046, this means that any increase in the value of local revenue by 1% will increase regional expenditure by 0.1046%. Original regional income has a very dominant influence in increasing regional expenditure. According to Wagner's law, that in an economy if per capita income increases, relative government spending will also increase. Furthermore, empirically, the effect of own-source income on regional expenditure has been widely used (Tasri, 2018; Salawali, 2016; Purbarini and Masdjojo, 2015; Von Furstenberg et al, 1986, Blackley, 1986). The hypothesis which states that income (especially taxes) will affect local government spending is known as the tax spend hypothesis (Ho and Chiung, 2009; Von Furstenberg et. Al, 1998). In this case, local government spending will be adjusted according to changes in local government revenues or changes in income occur before changes in spending.

The unconditional grant factor has a significant effect on regional expenditure, showing a regression coefficient of 3.7472, this means that every 1% increase in the value of the unconditional grant will increase regional expenditure by 3.7472%. Holtz-Eakin et al (1985) stated that there is a very close relationship between transfers from the central government and local government spending. Likewise, Gamkhar and Oates (1996) stated that a reduction in the number of transfers (cut in the federal grants) led to a decrease in regional spending. This is also not different from the research results of Pangabea and Dalimunthe (2017); and Purbarini and Madjojo (2015). As a source of regional revenue, unconditional transfers are funds allocated by the central government as a consequence of the delegation of authority and responsibility to local governments. This means that unconditional transfers are intended to finance the implementation of government tasks, public services and regional development. Thus, the size of the unconditional transfers will have a significant direct effect on regional spending.

The population factor has a significant influence on regional expenditure, showing a regression coefficient of 0.2968, this means that any increase in population value of 1% will increase regional expenditure by 0.2968%. Institutional factors have a significant influence on regional expenditure, showing a regression coefficient of 0.5648, this means that any increase in institutional value by 1% will increase regional expenditure by 0.5648%. Devita, Arman and Junaidi (2014), found that the population can reduce the increase in direct spending. However, it is different from indirect expenditure which has a positive effect because population growth in districts / cities can increase the allocation of personnel expenditure, while direct expenditure, especially for capital expenditure, has no effect, which in essence the population size variable with regional spending has a significant positive correlation. Furthermore, research conducted by Irdha, Vecky and Daisy (2010) also found that the total population and regional expenditure has a positive significant correlation, which means that the total population and regional spending have a correlation.

In line with the above research, Sasana (2011) states that population size has a significant positive correlation with regional spending. This is because the population can affect regional spending in relation to improving public service support facilities organized by local governments.

Likewise, the moderating variable shows significant results, such as institutional factors that have a significant effect on the relationship between unconditional grants and regional expenditures, showing a regression coefficient of -0.0417. This means that every 1% increase in institutional value will reduce the relationship between unconditional grants and regional expenditures by - 0.0417%. Meanwhile, good institutions will encourage increased regional spending. However, when moderated, the increase in the role of institutions actually causes the relationship between unconditional transfers and regional spending to become negative. This suggests that institutions with good governance lead to less and less unconditional transfers used for regional expenditure. This means that the role of institutions causes the flypaper effect to be reduced. This indicates that institutions that have good governance are able to increase local revenue.

Second, the estimation results of the table above show that local revenue (LnRr), unconditional grant (LnUg), population (LnPop), institution (Inst), institutional influence on the relationship between unconditional grant and regional expenditure (LnUgInst) have a significant effect on regional expenditure.

The condition of the western region of Indonesia has local revenue which has a significant influence on regional expenditure, showing a regression coefficient of 0.1920, this means that any increase in the value of regional original income by 1% will increase regional expenditure by 0.1920%. Original regional income has a very dominant influence in increasing regional expenditure. According to Wagner's law, that in an economy if per capita income increases, relative government spending will also increase. Furthermore, empirically, the effect of own-source income on regional expenditure has been widely used (Tasri, 2018; Salawali, 2016; Purbarini and Masdjojo, 2015; Von Furstenberg et al, 1986, Blackley, 1986). The hypothesis which states that income (especially taxes) will affect local government spending is known as the tax spend hypothesis (Ho and Chiung, 2009; Von Furstenberg et. Al, 1998). In this case, local government spending will be adjusted according to changes in local government revenues or changes in income occur before changes in spending.

The unconditional grant factor has a significant effect on regional expenditure, showing a regression coefficient of 0.4581, this means that every 1% increase in the value of the unconditional grant will increase regional expenditure by 0.4581%. Holtz-Eakin et al (1985) stated that there is a very close relationship between transfers from the central government and local government spending. Likewise, Gamkhar and Oates (1996) stated that a reduction in the number of transfers (cut in the federal grants) led to a decrease in regional spending. This is also not different from the research results of Pangabea and Dalimunthe (2017); and Purbarini and Madjojo (2015). As a source of regional revenue, unconditional transfers are funds allocated by the central government as a consequence of the delegation of authority and responsibility to local governments. This means that unconditional transfers are intended to finance the implementation of government tasks, public services and regional development. Thus, the size of the unconditional transfers will have a significant direct effect on regional spending.

The population factor has a significant influence on regional expenditure, showing a regression coefficient of 0.2129, this means that any increase in population value of 1% will increase regional expenditure by 0.2129%. Institutional factors have a significant influence on regional expenditure, showing a regression coefficient of 0.2822, this means that every 1% increase in institutional value will increase regional expenditure by 0.2822%. Devita, Arman and Junaidi (2014), found that the population can reduce the increase in direct spending. However, it is different from indirect expenditure which has a positive effect because population growth in districts / cities can increase the allocation of personnel expenditure, while direct expenditure, especially for capital expenditure, has no effect, which in essence the population size variable with regional spending has a significant positive correlation. Furthermore, research conducted by Irdha, Vecky and Daisy (2010) also found that the total population and regional expenditure has a positive significant correlation, which means that the total population and regional spending have a correlation.

In line with the above research, Sasana (2011) states that population size has a significant positive correlation with regional spending. This is because the population can affect regional spending in relation to improving public service support facilities organized by local governments.

Likewise, the moderating variable shows significant results, such as institutional factors that have a significant effect on the relationship between unconditional grants and regional expenditures, showing a regression coefficient of -0.0217. This means that every 1% increase in the value of the institution will reduce the relationship between unconditional grants and regional expenditures by - 0.0217%. Meanwhile, good institutions will encourage increased regional spending. However, when moderated, the increase in the role of institutions actually causes the relationship between unconditional transfers and regional spending to become negative. This suggests that institutions with good governance lead to less and less unconditional transfers used for regional expenditure. This means that the role of institutions causes the flypaper effect to be reduced. This indicates that institutions that have good governance are able to increase local revenue.

Third, the estimation results of the table above show that local revenue (LnRr), unconditional grants (LnUg),



residents (LnPop), institutions (Inst), the influence of institutions on the relationship between unconditional grants and regional expenditures (LnUgInst) have a significant effect on regional expenditure.

The condition of eastern Indonesia has local revenue which has a significant influence on regional expenditure, showing a regression coefficient of 0.0443, this means that any increase in the value of regional original income by 1% will increase regional spending by 0.0443%. Original regional income has a very dominant influence in increasing regional expenditure. According to Wagner's law, that in an economy if per capita income increases, relative government spending will also increase. Furthermore, empirically, the effect of own-source income on regional expenditure has been widely used (Tasri, 2018; Salawali, 2016; Purbarini and Masdjojo, 2015; Von Furstenberg et al, 1986, Blackley, 1986). The hypothesis which states that income (especially taxes) will affect local government spending is known as the tax spend hypothesis (Ho and Chiung, 2009; Von Furstenberg et. Al, 1998). In this case, local government spending will be adjusted according to changes in local government revenues or changes in income occur before changes in spending.

The unconditional grant factor has a significant effect on regional expenditure, showing a regression coefficient of 6.2566, this means that every 1% increase in the value of the unconditional grant will increase regional expenditure by 6.2566%. Holtz-Eakin et al (1985) stated that there is a very close relationship between transfers from the central government and local government spending. Likewise, Gamkhar and Oates (1996) stated that a reduction in the number of transfers (cut in the federal grants) led to a decrease in regional spending. This is also not different from the research results of Pangabea and Dalimunthe (2017); and Purbarini and Madjojo (2015). As a source of regional revenue, unconditional transfers are funds allocated by the central government as a consequence of the delegation of authority and responsibility to local governments. This means that unconditional transfers are intended to finance the implementation of government tasks, public services and regional development. Thus, the size of the unconditional transfers will have a significant direct effect on regional spending.

The population factor has a significant influence on regional expenditure, showing a regression coefficient of 0.4474, this means that any increase in population value of 1% will increase regional expenditure by 0.474%. Institutional factors have a significant influence on regional expenditure, showing a regression coefficient of 1.1861, this means that any increase in institutional value by 1% will increase regional expenditure by 1.1861%. Devita, Arman and Junaidi (2014), found that the population can reduce the increase in direct spending. However, it is different from indirect expenditure which has a positive effect because population growth in districts / cities can increase the allocation of personnel expenditure, while direct expenditure, especially for capital expenditure, has no effect, which in essence the population size variable with regional spending has a significant positive correlation. Furthermore, research conducted by Irdha, Vecky and Daisy (2010) also found that the total population and regional expenditure has a positive significant correlation, which means that the total population and regional spending have a correlation.

In line with the above research, Sasana (2011) states that population size has a significant positive correlation with regional spending. This is because the population can affect regional spending in relation to improving public service support facilities organized by local governments.

Likewise, the moderating variable shows significant results, such as institutional factors that have a significant effect on the relationship between unconditional grants and regional expenditures, showing a regression coefficient of -0.0881. This means that every 1% increase in institutional value will reduce the relationship between unconditional grants and regional expenditures by -0.0881%. Meanwhile, good institutions will encourage increased regional spending. However, when moderated, the increase in the role of institutions actually causes the relationship between unconditional transfers and regional spending to become negative. This suggests that institutions with good governance lead to less and less unconditional transfers used for regional expenditure. This means that the role of institutions causes the flypaper effect to be reduced. This indicates that institutions that have good governance are able to increase local revenue.

Based on the description of the condition of the capital city in Indonesia, both western Indonesia and eastern Indonesia found a flypaper effect. The flypaper effect is strong in the eastern region, not in the western region.

This is indicated by a larger difference between the transfer elasticity and the income elasticity. These findings indicate explicitly that the flypaper effect occurs mostly in poor areas than in rich areas. Poor local governments depend on intergovernmental transfers for the provision of public goods and services. This is in line with research conducted by Widarjono (2006).

Interestingly, from this study, this equation includes institutions to determine the ability of institutions to reduce transfers in order to increase local revenue as a regional development goal. This can be seen from the equation above, where institutions can reduce the flypaper effect in eastern Indonesia (-0.0881) more than the western region of Indonesia (-0.0217), Indonesia. This indicates that eastern Indonesian institutions have good governance in order to increase local revenue.

Other findings that can be raised are the implications of the flypaper effect on the expenditure side of the capital city in Indonesia, such as, First; regional dependence on the central government still exists, so that the policy taken is to increase the potential of the region which will have an impact on increasing PAD, such as encouraging agricultural and industrial sectors, services and other potential economic sectors to be developed; Second; the high increase in expenditure is due to inefficiency of regional expenditure, especially indirect (routine) expenditure, so that the policy taken is to increase direct (public) expenditure so that the growth of public sectors, especially such as infrastructure, can improve the business climate.

## 5. Conclusion

Based on the results of the analysis and discussion of the flypaper effect on regional expenditure in Indonesia, both in western Indonesia and eastern Indonesia, it can be concluded that the flypaper effect has an impact on increasing regional expenditure in western Indonesia and eastern Indonesia with a higher increase than increase in own-source revenue in response to transfers. It can be understood that local governments are more responsive to transfer funds in increasing regional spending. However, on the other hand, institutions have a negative and significant effect on the relationship between unconditional transfers and regional expenditures. This suggests that institutions with good governance lead to less and less unconditional transfers used for regional expenditure. This means that the role of institutions causes the flypaper effect to be reduced. This indicates that institutions that have good governance are able to increase local revenue.

With regard to recommendations, several suggestions can be put forward, as follows, such as budget allocation as efficiently as possible, especially in programs and activities with sectors that focus more on the public interest; applying the concept of good governance in order to achieve strengthening of the regional economy; and applying the flypaper effect model in order to measure the ability of institutions to reduce transfers to increase local revenue in regional development through regional spending.

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# The Influence of Organizational Commitment, Principal Leadership, Organizational Culture and Compensation on Teacher Performance

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This study aims to examine and analyze the effect of organizational commitment, principal leadership, organizational culture and compensation on teacher performance and to examined and analyzed the effect of organizational commitment, principal leadership, organizational culture and compensation simultaneously on teacher performance. This type of research is a correlation study with quantitative methods. The population of this study were 65 teachers of the Insan Harapan Batam Integrated Islamic School. The research sample was 65 people, taken with a saturated sampling technique. The data were obtained by distributing questionnaires and then analyzed using multiple linear regression tests and hypothesis testing using SPSS version 25. The results of this study are: organizational commitment has a positive and significant effect on teacher performance, the principal leadership has a positive effect. and not significant to teacher performance, organizational culture has a negative and significant effect on teacher performance, compensation has a positive and significant effect on teacher performance, and organizational commitment, principal leadership, organizational culture and compensation simultaneously positive and significant effect on teacher performance

**Keywords:** Teacher Performance, Organizational Commitment, Principal Leadership, Organizational Culture, Compensation

## 1. Introduction

Batam, which was prepared as an industrial city in the 1980s and the development of industrial estates starting in the 1990s, attracted young workers. The young workers then started a family and became a young family, which today has children of primary to secondary education. The increasing population of learning age children is the focus of the Batam City Government.

Yayasan Harapan Ibu Kepri was founded in 2011 in Batam. The Foundation is engaged in the social and education sector with a current focus on building and managing schools and orphanages as well as minimarkets and convection as operational support. Currently the Foundation managing 4 schools namely RA Insan Harapan, SDIT Insan Harapan, SMPIT / SA and SMK Insan Harapan and 2 orphanages, namely the Permate Putra and Permate Putri orphanages, all of which are located in Sagulung District, Batam City

As a manifestation of the Foundation's seriousness in supporting performance of teachers, the Foundation has provided awards for the working time of teachers in schools managed by the Foundation. The award is in the form of an Umrah trip to Mecca for teachers who have been working for more than 10 years and a gold pin for teachers who have been working for more than 5 years.

Currently the Foundation is focusing on improving the performance of the Foundation's teachers. The Foundation notes the stagnation in its teacher performance. The Foundation has yet to find a link between the efforts the Foundation has made towards developing teachers' skills and insights and the results of these efforts. The indicator most often used by the Foundation is the teacher attendance, both for attendance based on working hours and teacher absence permits on specified work days. The foundation also pays attention to the turnover rate that has not yet decreased, especially for elementary school units.



Teachers must be continuously encouraged, motivated and admonished to at least meet the set disciplinary standards. The Foundation has also not succeeded in encouraging teachers to go beyond their current boundaries and are willing to 'walk another mile' in the process of developing their capacity and competence, with the support of the Foundation.

In this regard, apart from continuing to strive to improve teacher performance through policies that support teacher capacity building, the Foundation also tries to map the factors that affect the performance of teachers within the scope of the Foundation.

#### Problem Description

Based on the problem described above, the problem formulations in this study are as follows: Is there any influence of Organizational Commitment on Teacher Performance? Is there any influence of the Leadership of the Principal on Teacher Performance? Is there any influence of Organizational Culture on Teacher Performance? Is there any influence of Compensation on Teacher Performance? Is there any influence of organizational commitment, principal leadership, organizational culture, and compensation simultaneously on teacher performance?

#### Research Objectives

Based on the background of the problem and the formulation of the research problems above, the objectives of this study are as follows: To determine and analyze the influence of Organizational Commitment on the Performance of Insan Harapan Integrated Islamic School Teachers. To determine and analyze the influence of the Principal's Leadership on the Performance of Insan Harapan Integrated Islamic School Teachers. To determine and analyze the influence of Organizational Culture on the Performance of Insan Harapan Integrated Islamic School Teachers. To determine and analyze the influence of compensation on the performance of the Insan Harapan Integrated Islamic School Teacher. To determine and analyze the influence of Organizational Commitment, Principal Leadership, Organizational Culture, and Compensation simultaneously to the Performance of Insan Harapan Integrated Islamic School Teachers.

## 2. Literature Review

### Definition of Teacher Performance

The criteria used as a benchmark for a teacher's performance are competency standards described in Government Regulation or PP No. 19 of 2005 concerning National Education Standards. According to the PP, teacher performance, in this case, teacher competence includes four standard competencies. The four competencies are: pedagogic competence, personality competence, professional competence, and social competence

### Definition of Organizational Commitment

Ghazzawi (2019) found that organizational commitment is a process that takes place spontaneously and naturally, that grows through the association of individuals to their organization. According to Busro (2018), there are three approaches to organizational commitment. These three approaches are similar to those described by Widiana (2015) namely: Affective commitment, Continual commitment, Normative commitment

### Definition of Principal Leadership

Khan (2016), explaining the concept of leadership style according to Bass and Avolio, reveals at least 3 types of leadership styles, namely: transformational leadership styles, transactional leadership styles, and passive-avoidant leadership styles. According to Susanto (2016), the role of the principal as a leader is the key to improving or developing the school and the principal's ability to influence the environment dynamically.

### Definition of Organizational Culture

Busro (2018) states that organizational culture is ways of thinking, feeling, and reacting based on certain patterns that exist in the organization or that exist in parts of the organization. Busro (2018) defines



organizational culture as a shared perception shared by members of the organization to form a system that is shared by all members of the organization. Busro (2018), details the indicators of organizational culture as: Diligence, Sincerity, Patience, and Entrepreneurship.

#### Definition of Compensation

Foglemen and McClorcke (2013) describe employee compensation as a "total reward that contains non-monetary, direct and indirect elements". Raihan et al (2012) explained that employee compensation is all forms of payment or gifts given to employees and arises from their work which consists of a direct component and an indirect component. Ekawati (2018) explains the factors used in determining fairer compensation for teachers are: education, experience, dependents, institutional capacity, and economic conditions

#### Hypotheses

Based on the theoretical review and empirical findings above, the hypotheses proposed in this study are as follow:

*H1: Organizational commitment affects the performance of the Insan Harapan Integrated Islamic School Teacher.*

*H2: Leadership of the Principal towards the performance of Insan Harapan Integrated Islamic School Teachers.*

*H3: Organizational culture affects the performance of the Insan Harapan Integrated Islamic School Teacher.*

*H4: Compensation affects the performance of Insan Harapan Integrated Islamic School Teachers.*

*H6: Organizational Commitment, Principal Leadership, Organizational Culture, and compensation affect the performance of Insan Harapan Integrated Islamic School Teachers.*

### 3. Methodology

#### Research Object

The object of research is a scientific goal to obtain data with specific purposes and uses about something objective, valid, and reliable about something (certain variables), Sugiyono (2017). The object of this research is the Insan Harapan Integrated Islamic School Teachers.

#### Population and Sample

The population in this research was 65 teachers who worked in Insan Harapan Integrated Islamic schools. As the population is less than 100 people, a saturated sample technique will be applied for all teachers.

#### Source of Data

The data used in this study is primary data obtained directly from all employees. Secondary data is data that refers to information collected from pre-existing sources.

#### Data Collection Technique

According to Sugiyono (2017) based on the sources of data collection, data collection can be done by means of a questionnaire.

#### Operational Definition

#### Independent Variables

The independent variables in this research are:

X1 = Organizational Commitment

X2 = Principal Leadership

X3 = Organizational Culture

X4 = Compensation

#### Dependent Variable

The dependent variable is a variable that is explained or influenced by the independent variable. In this study, the dependent variable is: Y = Teacher performance

#### Data Analysis Technique

##### Validity Test

Sugiyono (2017) states that validity is the degree of accuracy between data that occurs on the object of research and data that can be reported by researchers. Criteria for validity testing is done by comparing r count and r table. If r count > r table, the statement item can be said as valid. The r count value is taken in the correlated item-total correlation column, while the r table is determined using the formula  $df = n - 2$ .

##### Reliability Test

Sugiyono (2014) explains reliability as trustworthy or reliable. Based on this opinion, it can be concluded that it is said to be reliable if it provides constant results. Reliability measurement was carried out using the SPSS statistical test tool Cronbach Alpha ( $\alpha$ ). A variable is said to be reliable if it provides a Cronbach Alpha value  $\geq 0.6$  or r count > r table (Sugiyono, 2014).

##### Classical Assumption Test

The classical assumption test aims to see whether or not the regression model is valid to predict the dependent variable based on the input of the independent variable. This means the regression model must be free from several assumptions.

##### Normality Test

The normality test is carried out to check whether the data to be analyzed is normally distributed.

##### Multicollinearity Test

The multicollinearity test aims to test whether the regression model finds a correlation between independent variables. If the independent variables are correlated, these variables are not orthogonal. The meaning of orthogonal variables is an independent variable whose correlation value between independent variables is equal to zero, Ghozali (2015).

A good regression model should not have a correlation between the independent variables. If the tolerance value is <0.10, or equal to the VIF value > 10, it can be said that the regression model has multicollinearity symptoms and vice versa.

##### Heteroscedasticity Test

According to Gozali (2015) the heteroscedasticity test is to test whether in the regression there is an inequality of variance from the residuals of one observation to another. A good regression model is a homoscedasticity or heteroscedasticity does not occur. If the p value > 0.05, is not significant and no heteroscedasticity is occurred. This concludes that the regression model passes the heteroscedasticity test.

##### Hypotheses Test

##### Multiple Linear Regression Analysis

Multiple linear regression analysis is used to measure the presence or absence of influence between the independent variable and the dependent variable.

##### T-Test

This test is used to determine whether each independent variable individually has a significant effect on the dependent variable. With the provisions of t count > t table or the probability of error is less than 5%, it proves that the independent variables partially have a significant effect on dependent variables, than  $H_a$  is accepted, and  $H_0$  is rejected.

##### F-Test

This test is used to determine the simultaneous effect of the independent variables on the dependent variable,

where  $F_{\text{counts}} > F_{\text{table}}$ , then  $H_a$  is accepted, or simultaneously the independent variables are able explain the dependent variable.

#### R-Squared Test

The R-Squared test is intended to measure the ability of how much the percentage of variation in the independent variables in the multiple linear regression models in explaining the variation in the dependent variable. In other words, testing the model using R-Squared, the value of the coefficient of determination is between 0 (zero) and 1 (one) which means the ability of the independent variables to explain the variation of the dependent variable.

## 4. Analysis

### Characteristics of Respondents by Gender

The results of this study seen from the characteristics of respondents based on gender can be seen in Table 1.

Table 1. Characteristics of Respondents by gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pria	17	26.2	26.2	26.2
	Wanita	48	73.8	73.8	100.0
	Total	65	100.0	100.0	

Source: Processed primary data, 2020

As presented on Table 1, the Foundation employees are dominated by women at 73.8%.

### Characteristics of Respondents by Education Degree

The results of this study seen from the characteristics of respondents based on education degree is presented on Table 2.

Table 2. Characteristics of Respondents by Education Degree

Pendidikan					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SMA/SMK	18	27.7	27.7	27.7
	D4/S1	47	72.3	72.3	100.0
	Total	65	100.0	100.0	

Source: Processed primary data, 2020

As presented on Table 2, the Foundation employees are dominated by Bachelor Degree

### Characteristics of Respondents by Years of Service

The results of this study seen from the characteristics of respondents based on years of service is presented on Table 3.

Table 3. Characteristics of Respondents by years of service

Usia Kerja					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5	44	67.7	67.7	67.7
	6-10	19	29.2	29.2	96.9
	11-15	2	3.1	3.1	100.0
	Total	65	100.0	100.0	

Source: Processed primary data, 2020

As presented on Table 3, 67.7% Foundation employees are with the years of service of 0-5 years

#### Validity & Reliability Test Result

Table 4. Validity & Reliability Test Result

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Connected Item - Total Correlation	Cronbach's Alpha if Item Deleted
Komitmen Organisasi	91.43	53.280	.613	.655
Kepemimpinan KepSek	88.43	52.468	.408	.800
Budaya Organisasi	86.91	55.429	.729	.612
Kompensasi	85.57	58.843	.523	.706

Source: Processed primary data, 2020

Based on the data presented in Table 4 above, it is found that  $r$  count  $> 0.30$  and Cronbach Alpha is  $> 0.6$ . All variables are declared valid and reliable

#### Normality Test Result

As shown in Figure 1, the Scatterplot shows the points spreading around the diagonal line

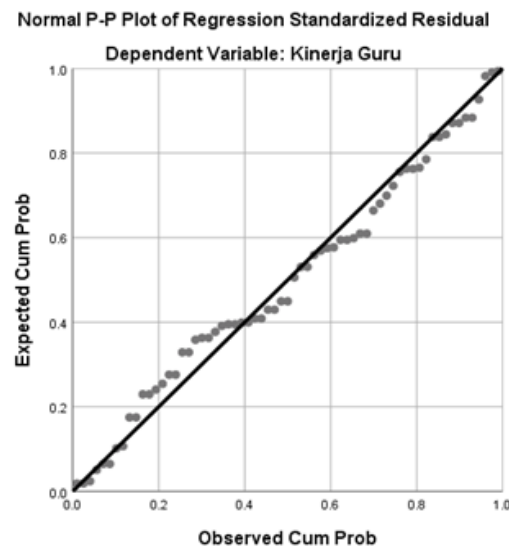


Figure 1. Normality Test Results (P-P Plot)

Source: Processed primary data, 2020

#### Multicollinearity Test Result

Based on data processed using SPSS program version 25.0, VIF value for all independent variables are < 10. There is no symptoms of multicollinearity observed in this regression model.

Table 5. Multicollinearity Test Results

Coefficients <sup>a</sup>								
Model		Unstandar -dized B	Coefficients Std.Error	Standardized Coefficients Beta	t	Sig.	Collinearity Tolerance	Statistics VIF
1	(Constant)	13.746	4.720		2.912	.005		
	Komitmen Organisasi	.669	.176	.379	3.792	.000	.814	1.229
	Kepemimpinan KepSek	.014	.077	.018	.178	.859	.823	1.216
	Budaya Organisasi	-.138	.084	-.166	-1.635	.107	.789	1.267
	Kompensasi	.557	.113	.530	4.927	.000	.701	1.427
Dependent Variable Kinerja Guru								

Source: Processed primary data, 2020

#### Heteroscedasticity Test Result

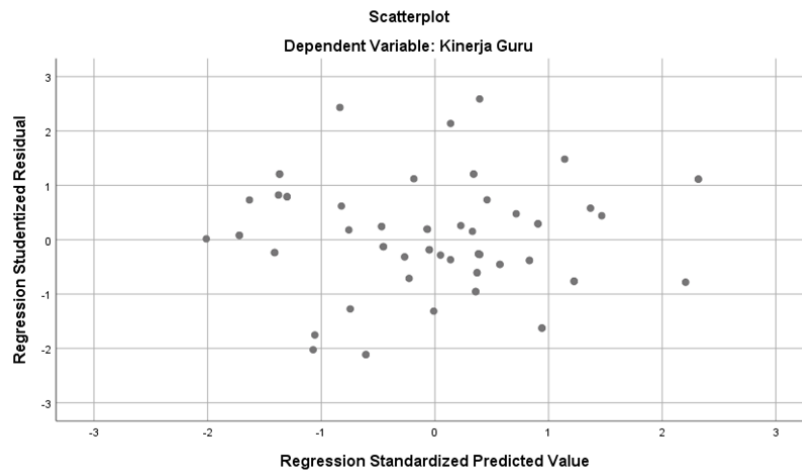


Figure 2: Scatterplot

Source: Processed primary data, 2020

Figure 2 shows that the data is spread above and below the zero line and does not form a pattern. Heteroscedasticity symptoms were not observed in the regression model

Multiple Linear Regression Test Result

Table 6. Multiple Linear Regression Test Result

Coefficients <sup>a</sup>						
Model		Unstandar -dized B	Coefficients Std.Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	13.746	4.720		2.912	.005
	Komitmen Organisasi	.669	.176	.379	3.792	.000
	Kepemimpinan KepSek	.014	.077	.018	.178	.859
	Budaya Organisasi	-.138	.084	-.166	-1.635	.107
	Kompensasi	.557	.113	.530	4.927	.000
b. Dependent Variable Kinerja Guru						

Source: Processed primary data, 2020

Based table 6 above, the following regression equation can be obtained.

$$Y = 13.745 + 0.699X_1 + 0.014X_2 - 0.138X_3 + 0.557X_4 + e$$

It means:

1. The constant has a value of 13,745. This shows that if the value of Organizational Commitment, Principal Leadership, Organizational Culture and Compensation is zero, then Teacher Performance has a value of 13,745.
2. The Organizational Commitment variable has a regression coefficient value of 0.669, this means that if the other independent variables are fixed or unchanged, then every 1 point or 1% increase in the Organizational Commitment variable will increase teacher performance by 0.669. The Organizational Commitment Coefficient is positive, meaning that there is a positive relationship between Organizational Commitment and Teacher

## Performance

3. The Principal Leadership Variable has a regression coefficient value of 0.014, this means that if other independent variables are fixed or unchanged, then every 1 point or 1% increase in the Principal Leadership variable will increase Teacher Performance by 0.014. The Principal Leadership Coefficient is positive, meaning that there is a positive relationship between Principal Leadership and Teacher Performance

4. The organizational culture variable has a regression coefficient value of -0.138. This means that if other independent variables are fixed or unchanged, then every 1 point or 1% increase in the Organizational Culture variable will decrease Teacher Performance by 0.138.

Compensation variable has a regression coefficient value of 0.557, this means that if other independent variables are fixed or unchanged, then every 1 point or 1% increase in the Individual Characteristics variable will increase Teacher Performance by 0.557. Characteristic coefficient is positive, meaning that there is a positive relationship between individual character and teacher performance.

## Hypotheses Test Result

### T-Test

T-Test result shows the following:

- The t count for the Organizational Commitment variable is  $3,792 > 2,000$  t table and the sig value is  $0,000 < 0.05$ . Based on the results obtained,  $H_0$  is rejected and  $H_1$  is accepted for the Organizational Commitment variable. Thus, partially the organizational commitment variable affects teacher performance
- The t count for the Principal Leadership variable is  $0.178 < t$  table of 2.012 and the sig value is  $0.895 > 0.05$ . Based on the results obtained,  $H_0$  is accepted and  $H_2$  is rejected for the Principal Leadership variable. Thus, partially the Principal Leadership variable has no effect on Teacher Performance.
- The t count for the Organizational Culture variable is  $-1,635 < t$  table of 2,000 and the sig value is  $0.107 > 0.05$ . Based on the results obtained,  $H_0$  is accepted and  $H_3$  is rejected for the Organizational Culture variable. Partially the Organizational Culture variable has no effect on Teacher Performance.
- The t count for the compensation variable is  $4,297 > t$  table of 2,012 and the sig value is  $0.000 > 0.05$ . Based on the results obtained,  $H_0$  is rejected and  $H_4$  is accepted for the Compensation variable. Partially the Compensation variable has an effect on teacher performance.

### F-Test

The test results show that the independent variables simultaneously obtained the value of F count = 15,801 > F table of 2.52 with a probability value of F (Sig) is 0.00 (Sig.  $0.00 < 0.05$ ). It can be concluded that Organizational Commitment (X1), Principal Leadership (X2), Organizational Culture (X3), Compensation (X5) simultaneously have an influence on Teacher Performance (Y) of Sekolah Islam Terpadu Insan Harapan.

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	511.389	4	127.847	15.801	.000 <sup>b</sup>
	Residual	485.473	60	8.091		
	Total	996.862	64			
c. Dependent Variable Kinerja Guru						
d. Predictors : (Constant), Kompensasi, Budaya Organisasi, Kepemimpinan KepSek, Komitmen Organisasi						

Source: Processed primary data, 2020



### R-Squared Test

R-Squared test result shows that the R Adjusted number is 0.481, which means that the correlation between the variables of Organizational Commitment, Principal Leadership, Organizational Culture and Compensation with Employee Performance is 48.1%. This means that the percentage of the contribution of the variable Organizational Commitment, Principal Leadership, Organizational Culture and Compensation in the regression model is 48.1%, while the remaining 51.9% is explained by other variables that are not researched or not included in this study.

Based on the results of the analysis above, it can be concluded that Organizational Commitment, Principal Leadership, Organizational Culture and Compensation together can make a large or very strong contribution to Insan Harapan Integrated Islamic School teachers performance.

The results of this study are not in line with the results of research conducted by Puspasari (2010). In a study entitled "The Effect of Job Stress, Work Motivation, and School Organizational Commitment on the Performance of Economics Teachers in Senior High Schools in Malang City." Puspasari found that Organizational Commitment did not have a significant direct effect on the performance of the teachers studied. Widodo (2010) in a study entitled "The Relationship between Principal Leadership, School Organizational Culture and Teacher Work Motivation and Teacher Performance in State Vocational Schools in Bojonegoro Regency, East Java Province" found a relationship between principal leadership and teacher performance.

Suriansyah (2015) through a study entitled School Cultural Relations, Communication, and Work Commitment to Public Elementary School Teacher Performance found a significant influence between school culture and teacher performance. The results of this assessment are in line with the research "The Effect of Compensation and Job Satisfaction on Teacher Performance with Organizational Commitment as an Intervening Variable" conducted by Nur and Wahyudi (2012) which showed a significant effect of compensation on teacher performance.

### 5. Conclusion

Based on the results and discussion above, it can be concluded as follows: Leadership Style has a positive effect on the performance of integrated Islamic School teachers Insan Harapan Batam. The leadership of the Principal has an effect on the performance of integrated Islamic School teachers, Insan Harapan Batam. School culture has no effect on the performance of integrated Islamic School teachers Insan Harapan Batam. Work Ethic has an influence on the performance of integrated Islamic School teachers Insan Harapan Batam. Organizational Commitment, Principal Leadership, Organizational Culture and Compensation together have an effect on Sekolah Islam Terpadu Insan Harapan teachers performance

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## **Determinant factors of Seller Satisfaction in SME Fashion Wholesalers Context**

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### **Abstract**

With a well-built connectedness, the business relationship between SME Fashion wholesalers and millennial resellers will be better at having the same goal, which is to both develop their business. Currently, there is a new trend in shopping known as the Omni Channel Environment, which combines various channels that can be accessed, both offline and online by consumers. This technological development is seen to be able to bring developments in shopping trends at wholesale stores and is widely adopted by resellers, especially those from millennial circles. The relationship between conventional traders and millennial resellers in the context of wholesale is a dyadic relationship that involves two actors in it. Each actor certainly has preferences and expectations that he wants to fulfill to create satisfaction. This study uses an ethnographic approach in gathering information. The purpose of this study is to find out what factors shape the connectedness between traders and millennial resellers, the dynamics of merchant and reseller relationships with the presence of omni-channels, and the perceptions that arise between wholesalers and millennial resellers. This study found connectedness that is driven by satisfaction which has four factors, namely communication quality, empathy, payment quality, and return of goods. The implication of this research can be used by stakeholders to make policies related to the pattern of wholesaler relationships.

**Keywords:** Seller Satisfaction, Connectedness, Fashion stores, Buyer-seller relationship

# **The Influence of Pandemic Covid 19 on the Tourism Sector of Kepulauan Riau Province**

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## **Abstract**

The Covid 19 pandemic has had a significant impact on all aspects of life, such as health, lifestyle, including impacting various sectors in the economy. The tourism sector is one sector that has been affected by the Covid 19 pandemic. Limited human mobility between regions has resulted in a decrease in tourist visits. This study aims to determine the condition of the tourism sector in the Kepulauan Riau Province during the Covid 19 pandemic. This study uses descriptive statistical analysis. The data used is secondary data from the Central Statistics Agency (BPS). The results showed that foreign tourist visits to the Kepulauan Riau during the January to July 2020 period decreased. Cumulatively, foreign tourist visits during January-July 2020 contracted by -81.71% (yoy) with a total of 404 613 visits in January-July 2020, decreasing compared to the number of visits in January-July 2019 which reached 1 623 977 visits. The average room occupancy rate (ROR) of star hotels in the Kepulauan Riau Province in June 2020 reached 14.45 percent. When compared with June of the previous year, the ROR for star-rated hotels in Kepulauan Riau Province decreased by 36.73 points, where the ROR for June 2019 was 51.18 percent. The decrease in the number of foreign tourist visits to the Kepulauan Riau Province has resulted in the dismissal of workers reaching 4 711 people by April 2020. This workforce dismissal has an impact on lowering people's income, thus holding back the performance of large trading and retail business fields due to a decrease in purchasing power. The slowdown in the performance of the wholesale and retail trade business fields was also directly affected by the decline in the number of tourists which resulted in reduced purchases made by tourists. This condition affects the slowing economic growth of the Kepulauan Riau Province where the economy of the Kepulauan Riau in the first quarter of 2020 compared to the fourth quarter of 2019 (q-to-q) experienced a contraction of -4.51 percent. In the second quarter, economic growth continued to contract by -7.55%.

**Keywords:** Tourism, Covid19, Economic Growth

## **1. Introduction**

The Covid 19 pandemic that has entered Indonesia since the first positive case on March 2, 2020 to date has spread in almost all 34 provinces, 449 districts / cities with the number of confirmed cases up to September 17, 2020 reaching 232,628 cases nationally (Task Force for the Acceleration Handling of National Covid 19, 2020). Kepulauan Riau Province is one of the areas affected by Covid 19 with the number of confirmed cases as of 17 September 2020 reaching 1550 cases as shown in Figure 1



Figure 1. Statistical Infographics on the Spread of Covid-19 in the Kepulauan Riau Province

The Covid 19 pandemic has had a changing impact on various living arrangements globally, both in terms of health, lifestyle and economic aspects. The Covid 19 pandemic has forced people to be able to improve their ability to adapt, synergize, collaborate and have empathy. Economic conditions both globally and regionally experienced a downturn due to Covid 19. This trend occurred in almost all sectors of the economy. Including the tourism sector as one of the economic supports of a region.

Tourism activities are multidimensional in terms of socio-cultural, economic and political aspects. Tourism is a process of temporary departure from someone or more to another place outside their place of residence which is driven by various interests such as economic, social, cultural, political, religious, health and other interests such as simply being curious, adding to experience or learning (Suwanto, 2004). As time goes by, tourism continues to develop. Tourism has developed into a global phenomenon, a basic necessity, and a part of human rights that must be respected and protected. Law Number 10 of 2009 states that tourism functions to meet the physical, spiritual and intellectual needs of every tourist with recreation and travel and to increase state income to realize people's welfare. The implementation of tourism is aimed at increasing national income in the context of increasing the welfare and prosperity of the people, expanding and equalizing business and employment opportunities, encouraging regional development, introducing and utilizing tourism objects and attractions in Indonesia and fostering a love of the country and strengthening friendship between nations.

Tourism has an important role as an economic driver of a region. Tourism provides employment, creates demand in the form of goods purchased by tourists such as handicraft products for souvenirs, food products and others as well as service products such as transportation, hotels and other accommodation facilities required by tourists. Tourism activities are also linked to various other sectors in the economy.

Tourism development is developed with a growth and economic equality approach for people's welfare and development that is oriented towards regional development, is community-based, and has the character of empowering the community which includes various aspects, such as human resources, marketing, destinations, science and technology, cross-sector linkages, cooperation between countries, empowerment of small businesses, and responsibility in exploiting natural and cultural resources.

Law No. 10 of 2009 on Tourism which states that the Implementation of Tourism is aimed at increasing national income in order to improve the welfare and prosperity of the people, expand and equalize business opportunities and employment opportunities, encourage regional development, introduce and utilize tourism objects and attractions in Indonesia. as well as fostering a love of the country and strengthening friendship between nations. The development of tourism also encourages and accelerates economic growth. Tourism activities create demand, both consumption and investment, which in turn will lead to production of goods and services. During the tour, tourists shop, thus directly generating market demand for goods and services. Furthermore, tourists indirectly generate demand for capital goods and materials for production to meet tourist demand for these goods and services. In an effort to meet tourist demand, investment is needed in the fields of

transportation and communication, hospitality and other accommodation, industry. Likewise, the tourism sector in the Kepulauan Riau Province. The goal of regional tourism development in the Kepulauan Riau 2016-2021 is "Realizing the Kepulauan Riau as a Highly Competitive Tourist Destination in National and International Markets in a Sustainable manner and Able to Encourage Regional Development and Community Welfare". Meanwhile, the tourism development targets of the Kepulauan Riau region include: a. Increasing the competitiveness of Kepulauan Riau tourism in national and international markets; b. Increase in Tourism Sector Income; c. The development of the Creative Economy in the Kepulauan Riau.

The Covid 19 pandemic that emerged from Wuhan China had a significant impact on various economic sectors in Indonesia, including the tourism sector. Kepulauan Riau Province, is one of the areas affected by the tourism sector due to Covid 19. Kepulauan Riau Province which has an area of 10,595 km<sup>2</sup> is a province in Indonesia bordering Vietnam and Cambodia to the north; Malaysia and West Kalimantan province in the east; the provinces of Bangka Belitung and Jambi Islands in the south; Singapore, Malaysia and Riau province in the west. The Kepulauan Riau province is very strategic because it is directly adjacent to the countries in the Southeast Asian region. This comparative advantage makes Kepulauan Riau Province attractive as a tourist destination for both domestic and foreign tourists, especially tourists from neighboring countries. Moreover, the Kepulauan Riau also have a very interesting natural panorama, especially marine tourism, islands and beaches as an archipelago, as well as historical and cultural tourism such as Penyengat Island and Galang Island. Kepulauan Riau also has Batam Island which is one of the MICE (Meeting, Incentive, Convention and Exhibition) tourist destinations and shopping tours. Batam is also the third largest city as the entrance for tourists after Bali and Jakarta. As a result of the spread of covid 19, it has caused changes in the various structures of human life. People around the world are becoming more careful and always prioritize the importance of maintaining health protocols. Various efforts to prevent the spread of covid 19 implemented in various countries have limited human mobility. The application of Large-Scale Social Restrictions (PSBB) in Indonesia and the lockdown policies taken by several countries, especially those close to the Kepulauan Riau Province, such as China, the Philippines and the closure of Malaysia and Singapore, have also had an impact on the tourism sector in the Kepulauan Riau Province. The impact on the tourism sector will also have an impact on the economy of the Kepulauan Riau Province because tourism activities involve many aspects that affect the movement of the economy such as trade, transportation services, hotel services, consumption services and accommodation. This paper aims to analyze the condition of the tourism sector in the Kepulauan Riau Province. during the Covid 19 pandemic and its further impact on economic conditions.

## **2. Methodology**

The data used in this research is secondary data from several institutions related to the research objectives. Descriptive statistical analysis is used to answer the research objectives, this is done because of the limited availability of time series data so that the analysis is not carried out using a more complex statistical or econometric approach.

## **3. Results and Discussion**

### **3.1. The Impact of the Spread of Covid-19 on Tourist Visits**

The widespread spread of Covid-19 and the implementation of health protocols and restrictions on travel and visits between countries, especially Singapore and Malaysia, have had an impact on the tourism sector in the Kepulauan Riau Province. Moreover, the Kepulauan Riau, especially Batam, is one of the entry points for tourists to Indonesia. The number of foreign tourist visits to the Kepulauan Riau during the Covid-19 pandemic continued to experience a significant decline.



Table 1. Number of Tourist Visits to Kepulauan Riau Province in 2020

Entrance	Foreign Tourist Visits										
	July 2019	Jan- July 2019	Feb 2020	March 2020	April 2020	May 2020	June 2020	July 2020	Jan- July 2020	% Change July 2019 to July 2020	% Change Jan-July 2019 to Jan-July 2020
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Karimun	8 425	65659	7 357	3 581	6	-	2	-	21523	-100.00	-75.09
Tanjungpinang	11 951	99765	3 806	2 079	-	-	-	-	18246	-100.00	-67.22
Bintan	49 247	369481	18 046	4 878	-	-	-	11	63922	-99.98	-82.70
Batam	147 690	1089072	95 256	43 564	1 133	1 798	1 785	1 754	302042	-98.81	-72.27
Total	217 313	1623977	124 465	54 102	1 139	1 798	1 787	1 765	404613	-99.19	-81.71

Visits of foreign tourists to the Kepulauan Riau since February 2020 have been recorded to have decreased and are getting lower in March 2020. In February 2020, foreign tourist visits to Kepulauan Riau contracted by -46.63% (yoy) and continued in March 2020 where they contracted by -79.35% (yoy). Based on the countries of origin of foreign tourists, the decrease in foreign tourist visits to the Kepulauan Riau was due to a decrease in foreign tourist visits from Singapore, Malaysia and China which contracted in March 2020 by -80.21% (yoy), -75.02% (yoy) and -99 respectively. 37% (yoy). Data shows that during the period January-July 2020 the number of foreign tourist visits to the Kepulauan Riau Province continued to decline. In July 2020 the number of foreign tourist visits to the Kepulauan Riau Province only amounted to 1 765 visits, experiencing a contraction of -99.19% (yoy). Cumulatively, the number of foreign tourist arrivals during that time period also contracted by -81.71% (yoy) with the number of visits of 404 613 decreasing compared to the number of visits in January-July 2019 which reached 1 623 977 visits.

The decline in the number of foreign tourist arrivals to the Kepulauan Riau Province was also due to the implementation of travel restrictions and visits between countries that had an impact on the tourism performance of the Kepulauan Riau where the number of international passenger arrivals via air and sea transportation had decreased significantly since February 2020. International flights from Shenzhen and Xian (China) to Batam since 27 January 2020 along with the implementation of lockdown in several regions in China and flights from Kuala Lumpur (Malaysia) to Batam since 17 March 2020 along with the initiation of Movement Control Order (MCO) in Malaysia also contributed to the decline in the number of visits to the Kepulauan Riau Province. Meanwhile, in terms of international crossings, there has been a significant decrease in the frequency of international ferry crossings for the Singapore - Kepri and Johor Bahru (Malaysia) - Kepri routes, from 140 times per day to 5 times per day. This had a significant impact on the number of international passenger arrivals (via air and sea transportation) which contracted by -33.41% (yoy) in February 2020 and lower in March 2020 which contracted by -58.87% (yoy).

Table 2. Number of International Tourists by Nationality (visits)

Country	January	February	March	April	May	June	July	Total	%
	2020	2020	2020	2020	2020	2020	2020		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Singapura	99 575	59 820	25 064	7	2	3	4	184 459	45.46
Malaysia	24 221	16 002	6 635	3	7	7	2	46 858	11.55
Tiongkok	23 786	384	153	-	-	2	-	23 786	5.86
India	11 775	4 524	1 404	2	5	4	1	17 703	4.36
Philipina	4 668	2 212	902	8	21	19	-	6 880	1.70
Others	56 671	41 523	19 944	1 119	1 763	1 752	1 758	124 530	30.69
Total	220 696	124 465	54 102	1 139	1 798	1 787	1 765	405 752	100.00

Foreign tourists visiting the Kepulauan Riau during January-July 2020 were dominated by tourists from Singapore (45.46%), Malaysia (11.55%) and China (5.86%) from various countries such as India, Philippines, UK, Japan, Australia, South Korea and America. As the spread of COVID-19 spreads, various countries implemented policies to restrict travel and visits between countries, including the countries of origin for the largest foreign tourists to the Kepulauan Riau, namely Singapore, Malaysia and China. Singapore since March 18 2020 has urged citizens to postpone all overseas trips and those returning from abroad are given a 14-day Stay-Home-Notice (SHN). In addition, Singapore has also implemented a Circuit Breaker policy (restriction of non-essential activities) from 7 April to 1 June 2020. Malaysia has also implemented a policy since 18 March 2020 implementing a Movement Control Order (MCO), which prohibits Malaysian citizens from traveling abroad. and limiting visits to Malaysia. All people returning from abroad are required to undergo health checks and self-isolate for 14 days. This policy is valid for 14 days from March 18, and has been extended 4 times until June 9, 2020. China since the end of January 2020 implemented a lockdown policy in Wuhan City and several other cities in Hubei Province, China as the center of the initial outbreak of COVID-19. The Chinese government also prohibits its citizens from traveling abroad. In addition, the Indonesian government has also implemented a policy of restricting travel and visits between countries to reduce the potential for an increase in COVID-19 cases from abroad.

On March 20, 2020, the Government of Indonesia calls on all citizens to reduce non-essential travel abroad and limit visits to Indonesia by implementing a suspension of Visit Visa Free, Visa on Arrival and Free Diplomatic / Service Visas. and refusing visits with travel history from China, several regions in South Korea, as well as Iran, Italy, the Vatican, Spain, France, Germany, Switzerland, England in the last 14 days. Travel and visit restriction policies implemented by various countries have an influence on the number of tourist visits to the Kepulauan Riau Province. The number of tourist arrivals from Singapore, Malaysia and China in January-July 2020 contracted by -75.60%, -71.51% and -86.00% (yoy), respectively.

### 3.2. Room Occupancy Rates (ROR) in Star Hotels and Average Length of Stay

The average room occupancy rate (ROR) of star hotels in the Kepulauan Riau Province in June 2020 reached 14.45 percent, an increase of 4.54 points compared to the ROR for May 2020 of 9.91 percent. When compared with June of the previous year, the ROR for star-rated hotels in Kepulauan Riau Province decreased by 36.73 points, where the ROR for June 2019 was 51.18 percent. In June 2020, the ROR for star-rated hotels in Kepulauan Riau Province was 5.26 points lower than the ROR for star-rated hotels nationally, where the average National ROR was 19.71 percent.

Furthermore, when viewed according to the classification, the ROR for 2-star hotels in June 2020 reached 20.53 percent and was the highest ROR compared to other star hotel classes. While the lowest ROR was in June 2020, namely 1-star hotels, only 12.96 percent. Meanwhile, all 5-star hotels during June 2020 in the Kepulauan Riau did not receive guests.

Table 3. Room Occupancy Rate (ROR) by Star Classification Hotel in Kepulauan Riau Province  
(June 2019 and May-June 2020)

No	Star Hotel Classification	TPK (%)		
		Juni 2019	Mei 2020	Juni 2020
(1)	(2)	(3)	(4)	(5)
1.	One Star Hotel	28,19	2,00	12,96
2.	Two Star Hotel	41,62	9,79	20,53
3.	Three Star Hotel	46,84	10,32	13,86
4.	Four Star Hotel	59,15	10,56	13,55
5.	Five Star Hotel	60,46	-	-
	All Star Hotels	51,18	9,91	14,45

The average length of stay of foreign and Indonesian guests at star hotels in the Kepulauan Riau Province during June 2020 was 1.93 days, or a decrease of 0.29 points compared to the average length of stay of guests in May 2020. In June 2020, the average -The average length of stay of Indonesian guests is 1.87 days or 0.33 points lower than the average length of stay of foreign guests which is 2.20 days.

Table 4. Average Length of Stay of Foreign and Indonesian Guests at Star Hotels  
According to Hotel Classification May-June 2020

No	Star Hotel Classification	Average Length of Guest Stay (Days)					
		Foreign Guests		Indonesian Guests		Total	
		May	June	May	June	May	June
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	One Star Hotel	-	1, 00	1,1 6	1,0 6	1,16	1,01
2.	Two Star Hotel	5,82	5, 57	1,6 0	2,4 5	1,69	2,48

3.	Three Star Hotel	3,95	1,93	1,31	1,62	1,36	1,63
4.	Four Star Hotel	6,92	3,00	2,47	1,93	3,37	2,17
5.	Five Star Hotel	-	-	-	-	-	-
	All Star Hotels	6,63	2,20	1,77	1,87	2,22	1,93

### 3.3. The Impact of the Decreasing Performance of the Tourism Sector on the Economy of the Kepulauan Riau Province

The tourism sector is one of the driving sectors in the economy. The decline in the performance of the tourism sector has also influenced the movement of the economic conditions of the Kepulauan Riau Province. According to Liu and Wu (2019) and Santamaria and Fillis (2019) tourism has an effect on economic growth, so that if the performance of the tourism sector is good it will make a positive contribution to economic growth and vice versa. The tourism sector is very important for many countries because it forms a large productive chain involving many actors and industrial sectors, even the total number of direct and indirect activities that interact in the tourism industry forms a large system with different sub-systems (Chim-Miki and Batista -Canino, 2017).

The decline in the number of foreign tourist visits to the Kepulauan Riau Province which had an impact on accommodation performance has led to termination of employment (PHK). Until April 2020, the total workforce affected has reached 4 711 people. This happened because there were 70 hotels affected, which among others experienced permanent closings, temporary closings and reduced work shifts. Termination of employment (PHK) of this workforce has an impact on reducing people's income, thus holding back the performance of the wholesale and retail business fields due to a decrease in purchasing power. Apart from being influenced by a decrease in public spending activities due to a decrease in purchasing power, the slowdown in the performance of the wholesale and retail business fields was also directly influenced by foreign tourist visits because the decline in the number of tourists led to a decrease in purchases made by tourists. Other sectors such as MSMEs, restaurants, transportation which are highly dependent on tourism are also affected. PDRB growth data from the business field side for sectors related to tourism shows a downward trend. In the first quarter of 2020, the wholesale and retail trade business field contracted by -1.53%, much smaller than the growth in the first quarter of 2019 which reached 4.69%. The transportation and warehousing business field in the first quarter of 2020 contracted by -18.45% as well as the business field for providing accommodation and food and drink contracting by -34.50%. In the second quarter, the conditions for these three sectors continued to decline by -6.89%; -53.94 and -38.94, respectively. This condition affects the slowing economic growth of the Kepulauan Riau Province where the economy of the Kepulauan Riau in the first quarter of 2020 compared to the fourth quarter of 2019 (q-to-q) experienced a contraction of -4.51 percent. In the second quarter, economic growth continued to contract by -7.55%.

Table 5. GDP in Side of Business Fields Related to Tourism Sector

Business field	2019					2020	
	I	II	III	IV	Total	I	II
Wholesale and Retail Trade, and Car and Bicycle Repair	4.69	8.75	9.70	1.40	6.10	0.81	-6,89
Transportation and Warehousing	-13.46	-13.19	-6.21	-2.17	-8.87	-7.21	-53,94
Provision of Accommodation and Food and Drink	-1.17	7.28	17.49	15.06	9.70	-19.37	-38,94
GDP growth	4.78	4.64	4.92	5.21	4.89	2.06	-7,55

### 3.4 Kepulauan Riau Province Tourism Sector Recovery Strategy

The uncertain condition of the end of the Covid-19 pandemic has caused uncertainty in the recovery of the tourism sector in the Kepulauan Riau Province. The Bank Indonesia report (2020) states that the recovery process for the world tourism industry is estimated to take a long time. Based on estimates, tourism recovery businesses are estimated to occur six months after the pandemic ends, starting with domestic tourists.

The implementation of the new normal era while still implementing strict health protocols can be a hope for efforts to restore the tourism sector. According to Kiswanto, et al (2020), tourism industry players need to carry out health checks and certification health for workers in the tourism sector. This needs to be done so that tourism workers are free from Covid-19 so that tourists are safe to come and visit. In new normal conditions, new trends will appear in travel. Tourists will pay more attention to tourist protocols, especially those related to health, safety, comfort, sustainable and responsible tourism, and authentic digital ecosystem. Given the very limited mobility of people between countries, tourism business actors can shift priorities to further optimize the potential for domestic tourists. Opening tourist locations while still implementing health protocols, providing promotions for attractive tour packages for tourists that involve accommodation and transportation service providers such as hotels, tour and travel entrepreneurs, restaurants, MSMEs and others to attract domestic tourists.

In addition, tourism businesses can also take advantage of technology to innovate by providing virtual tourism services. Tourism entrepreneurs can explore and package their tourism products such as panoramic beauty, lifting and presenting local cultural values, local handicraft products and others into attractive virtual wista product packaging. Virtual tourism services can also be synergized with other business actors such as MSMEs and freight forwarding services, for example by providing delivery services for goods or souvenirs produced by MSMEs that are of interest to tourists visiting virtually. This virtual tourism opportunity can reach further tourists, including foreign tourists who are still constrained by their mobility due to the visit restriction policies implemented by various countries.

Apart from internal efforts that can be made by business actors in the tourism sector, the recovery of this sector's condition cannot be separated from the need to support the role of both central and regional governments. Various policies are needed both in the form of fiscal and non fiscal stimulus. The government released volume I economic stimulus in the tourism sector, after banning flights to and from China in mid-February. The government implemented discounts on domestic flight tickets and exemption from restaurant and hotel taxes. Initially, the stimulus also included incentives in the form of discounted tickets for international flights, but was later postponed as criticism rolled over the risk of the spread of corona at home from foreign

tourists. Sugihamretha (2020) noted that there are at least 8 government policy packages to accelerate the tourism sector as well as to attract tourist visits amid the corona virus outbreak as follows: (1) Determination of additional State Budget for the Ministry of Tourism and Creative Economy of IDR 298.5 billion; (2) Incentives for airlines, travel agents; incentives in joint promotion schemes, tourism promotion activities. familiarization trip (famtrip) and influencer; (3) Discounts on domestic tickets that can be used by domestic tourists are 51.44 percent on average for 25 percent of the seating capacity in one flight, including: 30 percent discount for 25 percent quota of seats on each flight to 10 tourist destinations. This is valid for three months, namely March, April and May 2020. There is an additional discount of 15.8 percent Avtur from Pertamina. As well as a 5.64 percent discount on flight fares (PJP2u/PSC and NAV) from AP and Airnav so that the total policy will last for three months. The discount applies to domestic airlines with destinations of Denpasar, Batam, Bintan, Manado, Yogyakarta, Labuan Bajo, Belitung, Lombok, Lake Toba and Malang; (4) Encouraging incentives in accordance with the association's suggestion that tax on hotels and restaurants in 10 tourist destinations should be zero; (5) The government will subsidize or provide grants to local governments affected by the reduction in tax rates for hotels and restaurants in the regions by Rp.3.3 trillion; (6) In the APBN there is also IDR 147 billion of physical DAK for tourism, which until now the regions have not been able to use. It is planned that the DAK will be converted into a grant to the regions so that it can spur tourism development; (7) Encouraging the movement of domestic tourists by continuing to carry out promotional campaigns for domestic tourism, encouraging meetings of government agencies and corporations in domestic tourist destinations; (8) Promoting existing events (music, sports) in the country. On the other hand, efforts were also made to attract the potential of MICE and international events to be held in Indonesia.

#### 4. Conclusion

The Covid 19 pandemic has had a significant impact on all aspects of life, be it health aspects, lifestyle, including impacting various sectors in the economy. The tourism sector is one of the sectors affected by the COVID-19 pandemic. Limited human mobility between regions has resulted in a decrease in tourist visits.

Data shows that during the period January-July 2020 the number of foreign tourist visits to the Kepulauan Riau Province continued to decline. In July 2020 the number of foreign tourist visits to the Kepulauan Riau Province only amounted to 1 765 visits, experiencing a contraction of -99.19% (yoy). Cumulatively, the number of foreign tourist arrivals during that time period also contracted by -81.71% (yoy) with the number of visits of 404 613 decreasing compared to the number of visits in January-July 2019 which reached 1 623 977 visits. Foreign tourists visiting the Kepulauan Riau during January-July 2020 were dominated by tourists from Singapore (45.46%), Malaysia (11.55%) and China (5.86%) from various countries such as India, Philippines, UK, Japan, Australia, South Korea and America. Travel and visit restriction policies implemented by various countries have an influence on the number of tourist visits to the Kepulauan Riau Province. The number of tourist arrivals from Singapore, Malaysia and China in January-July 2020 contracted by -75.60%, -71.51% and -86.00% (yoy), respectively.

The average room occupancy rate (ROR) of star hotels in the Kepulauan Riau Province in June 2020 reached 14.45 percent. When compared with June of the previous year, the ROR for star-rated hotels in Kepulauan Riau Province decreased by 36.73 points, where the ROR for June 2019 was 51.18 percent. The decrease in the number of foreign tourist visits to the Kepulauan Riau Province has resulted in the dismissal of workers reaching 4 711 people by April 2020. This workforce dismissal has an impact on lowering people's income, thus holding back the performance of large trading and retail business fields due to a decrease in purchasing power. The slowdown in the performance of the wholesale and retail trade business fields was also directly affected by the decline in the number of tourists which resulted in reduced purchases made by tourists. This condition affects the slowing economic growth of the Kepulauan Riau Province where the economy of the Kepulauan Riau in the first quarter of 2020 compared to the fourth quarter of 2019 (q-to-q) experienced a contraction of -4.51 percent. In the second quarter, economic growth continued to contract by -7.55%.

The implementation of the new normal era by implementing strict health protocols can be a hope for efforts to

restore the tourism sector. Due to the very limited mobility of people between countries, tourism business actors can shift priorities to further optimize the potential for domestic tourists. Opening tourist locations by implementing strict health protocols, providing promotion of attractive tour packages for tourists involving accommodation and transportation service providers such as hotels, tour and travel entrepreneurs, restaurants, MSMEs and others to attract domestic tourists. In addition, tourism businesses can also take advantage of technology to innovate by providing virtual tourism services. The recovery of the condition of this sector also requires support from the role of the government, both central and regional. Various policies are needed, both fiscal and non fiscal stimulus.

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## **Analysis of Customer Satisfaction with the Quality of Service at Edumart Kosuku UNSOED**

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### **Abstract**

This study aims to determine the level of customer satisfaction with service quality at EDUMART KOSUKU UNSOED based on direct evidence, trust, responsiveness, assurance and empathy. This research is a quantitative research. The subjects of this study were EDUMART KOSUKU UNSOED consumers. Data collection used questionnaires and documentation, while data analysis was performed using SPSS software. The results of data analysis show that the consumer satisfaction variable has a significant influence on the variable quality of services provided by Edumart KOSUKU UNSOED based on physical evidence, evidence of trust, evidence of responsiveness, proof of assurance, evidence of empathy and repurchase intention.

**Keywords:** Customer Satisfaction, Service Quality

### **1. Introduction**

KPRI KOSUKU UNSOED is an organization in the form of a union that has been managed well. Based on the complete examination result on KPRI "Kosuku" performed by the supervisor on the performance of KPRI "Kosuku" in the organization and management field, business field, capital field, finance, and other field, we can conclude that KPRI "kosuku" has been well managed according to the current rules.

One of the business field of KPRI KOSUKU UNSOED is a goods business unit that especially provide grocery goods needed by its member. The establishment of goods business unit was first executed at KPRI KOSUKU UNSOED shop. Goods provided in KPRI "Kosuku" is varying in types, such as household necessities, clothing (garments, towels, socks, etc), otomotive tools, etc. Income from goods business unit in 2016 are Rp 57.436.100,00.

On 2018, along with the opening of integrated lab of Economy and Business Faculty of UNSOED, KOSUKU expand the KPRI KOSUKU UNSOED by opening a minimarket called EDUMART in a strategic location in the

front of the integrated lab of Economy and Business Faculty. EDUMART as a new business unit of KOSUKU UNSOED is developing rapidly. It was proven by the amount of sales transaction that reached 5000 transactions per day. This amount of transaction requiring the manager of EDUMART to provide better quality of service so the customer would feel satisfied by EDUMART's service. A good quality service will bring impact on customer's satisfaction and finally leads to the increase of income of EDUMART. This is in accordance with Kotler (2016) that a company may increase the customer satisfaction by lowering the price, increasing the quality of service, and improving the quality of the product.

Quality of service is an important factor in improving the competitiveness of a company. Consumer always have a changed expectations along with the current development. Consumers will assess the service given by comparing the service from one company to the other similar companies. And also by comparing the expected service to the actual accepted service. This research is aimed to learn the consumer satisfaction level based on direct evidence, trust, response, assurance, and good empathy, partially and simultaneously. This research is a form of our contribution as a researcher in particular and UNSOED in general to further advancing the union in Indonesia

## 2. Literature Review

### 2.1. Concept of Service Quality

Service Quality (SERVQUAL) is a descriptive method to describe the customer satisfaction level. This method was developed in 1985 by A. Parasuraman, Valerie A. Zeithaml, and Leonard L. Berry through their article in Journal of Marketing. The method in the journal then being revised by them through an article titled "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality." The concept of service quality, as introduced by Parasuraman, Zeithaml, and Berry can be seen on the following scheme:

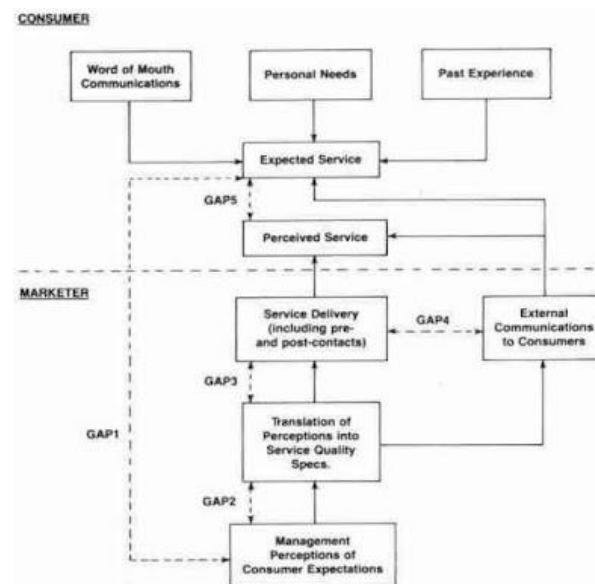


Figure 2.1. Scheme of Service Quality

Service Quality including five main dimension such as :

- 1) Tangibles (direct evidence). Display of physical facilities, tools, personnel, and communication tools.
- 2) Reliability (trust). The ability to display the promised service reliably and accurately.
- 3) Responsiveness. Willingness to help the consumer and provide a prompt service.
- 4) Assurance (guarantee). Knowledge and politeness of the employee and their ability to deliver trust and confidence.

5) Empathy (). Requirements set to give attention and care that individually focused on each consumer.

A lot of ways can be performed to improve the service quality, such as by performing the evaluations and improvement periodically. Some methods to improve the service quality are as follows :

1) Getting feedback from the customer

There are lots of ways to get feedback from the customer, such as performing a survey and follow up to the customer after the service is given. This method can be performed through emails. Other method is by doing a trial test of product to the active customer in social media, giving discount or other benefits to the customer as a reward to the input given, and utilize the technology to monitor the business development such as through website, google analytics, and so forth.

2) Performing a company evaluation

Methods that can be done to perform an evaluation are by survey with the focus on the most important thing to be known. Survey can be performed to learn the empathy or care to the customer, assessing the ability of a company related to their reliability and responsiveness, and to learn the service and product quality based on the customer's direct experience such as the function of the product, hygiene level, employee's appearance, etc.

3) Improving the company service

Improving the company service can be done by giving a clear standard of company service to the employee, training the employee to be someone who is responsible, responsive, and have a high work ethic. If possible, improvement can be performed by giving bonuses to the employee with an achievement. And also by giving the customer a convenience in delivering their input is something that is necessary to be done. But, it will be better if all of improvements of the company service quality is performed sustainably.

## 2.2 Consumer satisfaction

Consumer satisfaction can be displayed through the attitude of a consumer towards a purchase. Satisfaction, according to Kotler (2016) is a happy or disappointment feeling of someone that appear after comparing the considered performance (result) of a product to the expected performance (result). Kotler (2016) explains that a company may improve the consumer satisfaction by selling the product with an adequate price, or increasing the service, and increasing the quality of the product in result. Based on this statement, then there are three things that can affect the consumer satisfaction as follows :

1) Price

Price is also the amount of money charged for a product, or the amount of values exchanged by consumer for the benefit of owning or using a product.

2) Service quality

Service quality is an ability to fulfill the internal and external needs of the consumer consistently according to the procedure. Producer is demanded to try to understand what the consumer wants, so that they have hope to get a good quality service.

3) Product quality

Product quality is an ability of a product to perform its functions, including its durability, it convenience to be used and repaired, and other valuable attributes.

There are some strategies that can be performed by the company to increase the customer satisfaction. Few strategies of customer satisfaction published by Tjiptono (2014) are as follows :

- 1) Marketing strategy as Relationship Marketing Strategi where the exchange transaction between the buyer and the seller is continually going, does not end after the sales end.
- 2) Strategy of superior customer service. This strategy offers a better service compared to other competitor.
- 3) Strategy of unconditional guarantees or extraordinary guarantees. This strategy is a commitment to give satisfaction to the customer that will be the source of dynamism/dynamics of the perfection of the quality of the product or the service and the company performance.

- 4) Strategy of effective complaint management. Complaint management gives an opportunity to change an unsatisfied customer to be satisfied.
- 5) Strategy of company performance improvement. Including various effort such as monitoring and assessing the customer satisfaction continually, giving education and training related to salesmanship communication, giving training to the employee and management worker.
- 6) Applying Quality Function Development (QFD). Quality Function Development (QFD) is a practice of designing a process for responses to the customer needs.

After buying, consumer will experience a stage of post-buy, in this stage a consumer will feel a certain level of satisfaction or dissatisfaction that will affect their next consumption attitude. If a consumer feels satisfied then they will express the next behavior, which is the re-buying. According to Kotler (2016), there are four tools to track and assess the customer satisfaction, which are : complaint and suggestion system, survey on customer satisfaction, ghost shopping, and lost customer analysis.

According to Tjiptono (2014), a customer who feels not satisfied will also interact with different act, some will stay silent while other will file a complaint. Regarding this matter, there are three categories on responses or complaint to dissatisfaction, such as :

- 1) Voice response, which is an effort to deliver a complaint directly and/or asking for a compensation to the related company nor to their distributor.
- 2) Private response which is an act such as informing or warning a colleague, friend or family regarding their experience with the related product or company.
- 3) Third-party response which is an act including the effort to ask for a compensation legally, complain via mass media, or directly visiting a consumer institution, law institurion, etc.

### **3. Research Method**

#### **3.1 Research Approach**

This study is a quantitative and survey research. Quantitative research means that the data of this research is in the form of number/numeral. While survey research, according to Sugiyono (2017) is a research that reveals the existing data without giving any treatment or manipulation on the variable on the study.

#### **3.2 Subject and Setting of the Research**

Subject of this study are the consumers of EDUMART KOSUKU UNSOED. This study was performed for eight months. Population of this study are all of the consumers of EDUMART KOSUKU UNSOED on 2020. Sample are part of the characteristic amount that belongs to the population (Sugiyono, 2017). Sample used must be able to represent and mirror the existing population. This study is using the purposive sampling technique.

#### **3.3 Data collecting technique**

Data used in this study are primary data. Primary data was obtained by distributing questionnaire that has been validated and proven reliable/ has passed the validity and reliability test. Validity test was used to assess the validity level of the instruments for each variable. Reliability test was used to learn whether the instrument used is capable to reveal the data that is trusted and match with the actual condition.

#### **3.4 Data Analysis Technique**

Satisfaction or dissatisfaction is a happy or disappointment feeling of someone that comes from the comparison between the impression of the expected performance of the product. In this study the attributes of satisfaction consists of five aspects such as direct evidence, trust, responsiveness, assurance, and empathy.

## 4. Result and Discussion

### 4.1 General Descriptive of the Respondents

Respondent in this study are 301 people with the age ranged between 28-58 years old. Here are the classification of respondents based on sex, job and membership in KPRI “KOSUKU” UNSOED.

Table 1. Classifications of the Respondents

No	Classification		Quantity	Percentage
1	Sex	Female	242	80,40 %
		Male	59	19,60 %
	<b>Total</b>		301	100 %
2	Job	Lecturer	15	4,98 %
		Education worker	4	1,33 %
		Student	282	93,69 %
	<b>Total</b>		301	100 %
3	KPRI “KOSUKU” UNSOED Membership	Member	24	7,97 %
		Non-member	277	92,03 %
	<b>Total</b>		301	100 %

Source: processed questionnaire data

Based on the data on the table above, we know that female student respondent without KPRI “KOSUKU” UNSOED membership is still more comparing to the respondents from the other classification.

### 4.2 Result

This study consists of two main variable, which is consumer satisfaction variable as independent variable and service quality as dependent variable. Service quality variable also based on six attributes that consists of physical evidence, trust evidence, responsiveness evidence, assurance evidence, empathy evidence and intention of re-buying.

#### 4.2.1 Consumer satisfaction variable

Consumer satisfaction variable is explained into six item of statements. The amount of respondent’s response for this variable is clearly written in the following table :

The calculation above showed that the respondent’s response regarding consumer satisfaction variable have the index % of 78,52 % in the agree category. It means that as much as 78,52 % respondents agreed that, as the consumer of Edumart KOSUKU UNSOED, they feel satisfied with the service given and with the quality of the product that they got from Edumart.

#### 4.2.2 Service quality variable

Service quality variable is based on six attributes that is explained into thirty two questionnaire items. While the summary of index% score is displayed in the following Table 3.

Table 3. Summary of index% score for each indicator

Indicator	% Index score
Physical evidence	80,04%
Trust evidence	78,74%
Responsiveness evidence	76,89%
Assurance evidence	75,30%
Empathy evidence	76,10%
Intention of re-buying	76,91%

Based on the result showed in Table 3, the respondents' response on service quality on physical evidence is that 80.04% of respondents agreed that the service quality of Edumart KOSUKU UNSOED based on physical evidence is good, starting from the location, facilities and infrastructure communication or reservation facility that is available and also the cleanliness and neatness of the place or the employees. On the other hand for service quality variable, based on trust evidence has the %index for 78,74 % in the agree category, means that the respondents agreed that the service quality of Edumart KOSUKU UNSOED based on the trust evidence is good, starting from the promptness of the employee in giving the responses to customer's complaints until the sensibility of the employee in handling the customer needs.

Service quality variable based on responsiveness evidence including the willingness of the employee in helping the customer's necessity, good response-giving when there are complains from the consumer until the employee's willingness in giving the complete information to the customer regarding the product that they sell. Based on the result, we gained a % index of 76,89 % in the agree category. It means that as much as 76,89 % respondents agreed that the service quality of Edumart KOSUKU UNSOED that based on responsiveness evidence is good.

The calculations above showed that the respondents' response regarding the service quality based on the assurance evidence have the %index of 75,30 % in the agree category. It means that as much as 75,30 % respondents agreed that the service quality of Edumart KOSUKU UNSOED that based on assurance evidence is good, starting from how the product is guaranteed to be in good quality, have the licence PIRT/BPOM, not expired and not damaged until the suitable of the product with the customer's expectation. Service quality variable based on empathy evidence has the %index of 76,10 % in the agree category. It means that as much as 76,10 % respondents agreed that the service quality of Edumart KOSUKU UNSOED that based on empathy evidence is good, starting from the care and attention of the employee to the customer, giving tolerance to the customer when there are problems arise, prioritize the customer's interest until building the intimacy with the customer. While the service quality variable based on the intention of re-buyin has the %index of 76,91 % in the agree category. It means that as much as 76,91 % of the respondents agreed that the service quality of Edumart KOSUKU UNSOED that based on the intention of re-buying is good, starting from the willingness of the customer to re-shop at Edumart until their willingness to look for information regarding events/promotion that being held by Edumart.

Based on the result obtained, we learn that the service quality based on physical evidence attribute has the biggest %index, followed by trust evidence, responsiveness evidence, assurance evidence, intention of re-buying, and empathy evidence consequently. The implication of this study is that it is necessary to perform the improvement on the service given to the consumer continuously to keep improving the consumer satisfaction on the service of Edumart KOSUKU UNSOED.

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## **The Influence of Core Competencies, Dynamic Capability, on Competitive Advantages, Brand Performance, towards Internationalization of Indonesia's SME's Brand**

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Indonesia's economic growth is vastly dependent on the results of the SME's business, but there is a scarcity of research in the Indonesia's SMEs Core Competencies to reach internationally. This study identifies the Core Competencies, Dynamic Capability, Innovation Strategies, Brand Communication, Brand Switching Behavior, Competitive Positioning, Competitive Advantages, and Brand Performance to enhance the Indonesia's SMEs' internationalization brand. A structured questionnaire was developed for carrying out the quantitative study. A 300 amount of primary data was distributed based on the statement of global customer of 10 most familiar Indonesia's SME's Brand abroad. The data was collected through a survey in August 2019 - January 2020. The Statistical Package for the Social Sciences (SPSS), Structural Equation Modelling (SEM), with Linear Structural Relationship (LISREL) were performed. The results shows that, the Core Competencies, the international perspective on Core Competencies to gain Competitive Advantage appears to be crucial for Indonesia's SME's Brand Performance

**Keywords:** Core Competencies; Dynamic Capability; Innovation Strategies; Brand Communication; Brand Switching Behavior; Competitive Positioning; Competitive Advantages; Brand Performance.

## **Board Diversity and Financial Statement Fraud with Board of Commissioner Effectiveness and Audit Committee Effectiveness as Moderating Variable**

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### **Abstract**

This study aims to prove whether diversity of directors can reduce the probability of financial statement fraud occurring. This study also wants to prove the relationship between the diversity of directors and the lack of probability of occurrence of financial statement fraud with the effectiveness of board supervision and the effectiveness of the audit committee as moderating variable. This study used purposive sampling with the criteria that the company publishes annual reports from 2016 to 2018 period. The results showed that the diversity of the level of education of the board of directors reduces the probability of financial statement fraud. The results also show that the supervision of the board of commissioners and the audit committee is able to moderate the relationship between board diversity and financial statement fraud. The study was limited to the research period, only three years of research from 2016 to 2018.

**Keywords:** Board Diversity, Financial Statement Fraud, Board of Commissioner, Audit Committee

### **1. Introduction**

Fraud is a prohibited act that can harm various parties. Fraud is one of the actions that gives a negative impact to the company. Steve et al. (2009) states that fraud is an act committed by an individual with the aim of making a profit. According to the Report to the Nations Asia-Pacific Edition issued by the ACFE (The Association of Certified Fraud Examiners), Indonesia ranks first in 36 cases out of a total of 198 cases in the Asia-Pacific region (ACFE, 2020).

ACFE (2020) categorizes fraud into three types of categories, corruption, assets misappropriation, and financial statement fraud. Financial statement fraud is defined by Rezaee & Riley (2009) as intentional misstatement or negligence of financial statement disclosure to manipulate users of financial statements, especially investors and creditors. One type of fraud is financial statement fraud which occupies the last position as much as 9.2% of the total findings of the most fraud in Indonesia according to a survey conducted by the ACFE Indonesia Chapter in 2019 (ACFE Indonesia, 2020). Based on findings in Indonesia fraud in financial statement fraud ranks lowest from all fraud. Furthermore, financial statement fraud is difficult to detect because fraud is in the form of earnings management.

One example of fraud that occurred in Indonesia was at PT. Garuda Indonesia (Persero) Tbk, which committed

a financial statement fraud then caused the company to restate its financial statements (Sukamto, 2019). The occurrence of fraud in companies such as PT. Garuda Indonesia (Persero) Tbk, should be prevented by such as the board of directors, the board of commissioners, and the audit committee.

It is hoped that diversity in the board of directors can help carry out their duties. Decisions taken by company directors are the result of a process of assessment, policy and decision making that comes from their personal background and professional context (Katmon et al., 2019) so that can produce the best decisions that can prevent financial statement fraud.

Muntoro (2006) states that the board of commissioners acts in supervising company policy and provides advice to the board of directors. By conducting supervision, the board of commissioners will strengthen the relationship between the diversity of the directors on the company's board of directors with slackening probability of financial statement fraud occurred in the company.

Moreover, the board of commissioners also has an audit committee that help supervising company policy. In addition, they have significant role to provide opinions independently and professionally to be submitted to the board of commissioners. In general, the audit committee performs tasks related to the supervisory actions performed by the board of commissioners. The audit committee also exclusively responsible for overseeing the quality of financial reports which then helps companies to reduce earnings management practices (Qinghua et al., 2007). With the existence of an audit committee as an organ that assists the board of commissioners in supervising company policy, it is hoped that this audit committee will strengthen the relationship between the diversity of the board of directors on the company's board of directors with reducing probability of occurrence of financial statement fraud in the company.

Recent studies about the diversity of the board of directors has received a lot of attention (Ferreira, 2015). This research is a further research from Katmon et al. (2019) which discusses the diversity of directors on the quality of CSR disclosure. Furthermore, this research also related with the study conducted by Capezio & Mavisakalyan (2016), Lenard et al. (2017), Cumming et al. (2015), Xu et al. (2018), and Ghafoor et al. (2019) about fraud that happened in the company related to one of the diversity of the board in this research. The diversity of the board in previous study only consist gender diversity or proportion of women director on board of directors. This study expanded the diversity of the board not only seeing the diversity from gender perspective, but also adds the diversity of board of directors age, education level and tenure of boards. This study aims to figure out the relationship between the diversity of board of directors and the company's motivation to commit financial statement fraud and the role of the board of commissioners and the audit committee in supervising the company.

## **2. Literature Review**

### **2.1 Upper Echelon Theory**

Upper echelon theory states that organizational outcomes such as organizational strategy and performance levels are explained by characteristics of managerial background (Hambrick & Mason, 1984). Actions taken by executives are based on their personal interpretations of the strategic situations they are facing and from their experiences, values and personality of the executive itself (Hambrick, 2007). Hambrick & Mason (1984) explain that managerial background can predict the outcome of an organization. The combination of certain situations, the characteristics of the upper echelon leads to the strategic choices made by the company and the interaction of the three determines the level of organizational performance. The characteristics of the upper echelon in this theory lead to age, functional track, career experience, formal education, socioeconomic background, financial position, and group heterogeneity.

### **2.2 Behavioural Theory of Boards**

Cyert & March (1963) explain the theory of corporate behavior which is the basis of the upper echelon behavior theory. Cyert & March (1963) explained that companies have a goal orientation and information processing so that companies can compare their performance with their past performance and other companies, especially

competitors. The complexity of the business environment makes it impossible for the upper echelon to understand all the relationships between the variables around them, so that the decision-making process needs to be simplified (Van Ees et al., 2009). It is assumed that the upper echelon has limitations in their ability to process information and solve complex problems (Cyert & March, 1963).

### 2.3 Financial Statement Fraud

Statement on Auditing Standards (SAS) No. 99, AU 316 No. 06 describes misstatements that appeared from fraudulent financial reporting as intentional misstatements or in other words omissions in disclosures in financial statements designed to deceive users of financial statements. This actions will causing financial reports not to be presented in accordance with generally accepted accounting principles (GAAP). The Association of Certified Fraud Examiners (ACFE) defines financial statement fraud as an intentional, wilful act or omission of material facts or misleading accounting data and, when considered with all available information, will cause the reader to change or change his or her judgment or decision (Rezaee & Riley, 2009). Rezaee & Riley (2009) provides a definition that financial statement fraud is a misstatement or deliberate omission of numbers or disclosure of financial statements to deceive users of financial statements, especially investors and creditors.

### 2.4 Board Diversity

Board diversity is defined as the varying composition of the board of directors, which can be categorized into both directly observable (eg, gender, age and ethnicity) and less visible (eg, education and work experience) (Galia & Zenou, 2013). The need for a diverse board is increasing due to the global economy and complex challenges in business (Tan et al., 2014). Diversity in boards is beneficial for improving the quality of firm decisions (Marimuthu & Kolandaisamy, 2009), offering better problem solving (Dobbin et al., 2011) and increasing organizational competitiveness (Gregoric et al., 2009).

Milliken & Martins (1996) in their research stated that board diversity has two sides, at first, the diversity can increase creativity, on the other hand it allows group members to feel dissatisfied and fail to adapt to the group. From this problem, there are indications that stated the board of director's diversity can strengthen the occurrence of fraud.

### 2.5 Board of Commissioners

Peraturan Otoritas Jasa Keuangan Number 33 / POJK.04/2014 concerning Directors and Board of Commissioners or Public Companies explains that the board of commissioners is part of a company that has the duty to carry out general and specific supervision in accordance with the articles of association and provide advice to the board of directors . In addition, as supervisor in the company, the board of commissioners also acts as a representative of the shareholders by ensuring that all management actions are in the best interests of the company (Hermawan, 2011). With its role as supervisor, it is hoped that the board of commissioners can prevent financial statement fraud in the company.

### 2.6 Audit Committee

Peraturan Otoritas Jasa Keuangan Number 55 / POJK.04 / 2015 concerning the establishment and implementation guidelines for the audit committee's work explains that the audit committee is a committee that is responsible and formed by the board of commissioners with the aim of providing assistance in carrying out the functions and duties of the board of commissioners, the audit committee also has duties, responsibilities and authorities during carrying out its duties and responsibilities. Peraturan Otoritas Jasa Keuangan Number 55 / POJK.04 / 2015 also regulates the duties and responsibilities of the audit committee, such as providing recommendations for the appointment of an accountant to the board of commissioners.

### 3. Research Methodology

This study uses secondary data in the form of annual reports from 2016 to 2018 obtained from the Indonesia Stock Exchange website and the other data sources such as Thomson Reuters. The population in this study are all companies listed on the Indonesia Stock Exchange except for companies in the financial sector. The sampling method used in this study is the purposive sampling method, the company should have published annual reports during the 2016 to 2018 period, and the companies are not included in the financial sector companies. The final sample used in this study were 142 companies.

Capezio & Mavisakalyan (2016) explained in their study that fraud occurred in companies is the result of the role of the board of directors in supervising corporate governance that used to assess the effectiveness of the board. The upper echelon has limitations in their ability to process information and solve complex problems (Cyert & March, 1963). That is the reason why the need for a diverse board is increasing due to the global economy and complex challenges in business (Tan et al., 2014). Lenard et al. (2017) and Cumming et al. (2015) stated that the presence of women on the board of directors can help reduce fraud. It related with their monitoring governance role that has to be more effective and diligent (Capezio & Mavisakalyan, 2016). Hambrick & Mason (1984) in the upper echelon theory explain that the characteristics of the age of the upper echelon affect the choice of company strategy. Xu et al. (2018) stated that age is an important factor in taking risks in the decision making process. In addition, older boards of directors have a tendency to recognize that certain business practices are immoral (Deshpande, 1997). On the other hand, younger board of directors will be more innovative and have a higher ability to process new ideas (Van Ness et al., 2010). Xu et al. (2018) in their research also stated that age affects ethical decision making. In the upper echelon theory described by Hambrick & Mason (1984) it is stated that educational background explains a lot about an individual. Hambrick & Mason (1984) also explain that a person's basic knowledge and skills are based on the education he has taken. Individual cognitive values and preferences are examples of how education can influence both. The term of office of the board refers to the length of time a director holds a director position in the organization (Shiah - Hou & Cheng, 2012). Previous literature offers mixed views on the diversity of board tenure. On the one hand, long board tenure has the advantage because directors have greater experience with company policies and expertise in monitoring the reporting process in organizations (Chan et al., 2013). Longer tenure will keep directors in their comfort zone and tend to repeat the same process. So that the existence of a board of directors with a shorter term of office is still needed. For all of those reason, diversity of the boards of directors is expected to help reduce the probability of financial statement fraud occurring in the company.

*H1a: The higher the proportion of women on the board of directors reduces the probability of financial statement fraud occurring in the company*

*H1b: Diversity age of the board of directors reduces the probability of financial statement fraud occurring in the company*

*H1c: Diversity education level of the board of directors reduces the probability of a financial statement fraud occurring in the company*

*H1d: Diversity tenure of the board of directors reduces the probability of a Financial Statement Fraud occurring in the company*

In accordance with the Peraturan Otoritas Jasa Keuangan No. 33 / POJK / 04/2014 about the Board of Directors and the Board of Commissioners or Public Companies, which states that the board of commissioners is in charge of supervising and providing advice to the board of directors. The form of supervision carried out by the board of commissioners is contained in the annual report in the form of a report on the supervisory duties that have been carried out by the board of commissioners during the previous financial year in accordance with Pasal 66 Ayat 2 Undang-Undang No. 40 Tahun 2007.

*H2: The effectiveness of monitoring the Diversity of the Board of Commissioners strengthens the relationship between the Diversity of the Board of Directors and reduce probability of Fraud Financial Statement occurred*

Peraturan Otoritas Jasa Keuangan No. 55 / POJK.04 / 2015 concerning the establishment and implementation

guidelines for the audit committee's work, explains that the audit committee is a committee that responsible and formed by the board of commissioners with the goals of providing assistance in carrying out the functions and duties of the board of commissioners. In its role of helping the company's board of commissioners, the audit committee must have knowledge, experience in their work, and at least one member has an educational background in accounting and finance. With their qualifications, and their duties in assisting the board of commissioners in carrying out their duties, it is hoped that the audit committee can play a role in preventing financial statement fraud in the company by supervising it in accordance with its duties and responsibilities.

*H3: The effectiveness of the Audit Committee strengthens the relationship between the Diversity of Directors and reduce the probability of Fraud Financial Statement occurred.*

Financial Statement Fraud (FSF) in this study calculated using Beneish M-Score Model (Beneish, 1999). The gender diversity of the board of directors or the proportion of women directors (GENDER) in this study was measured using the Blau Index data in the proportion of each sex category of directors in the board of directors (Kılıç & Kuzey, 2016). The age diversity of the board of directors (AGE) is measured using the Blau Index, which is the coefficient of variation of the age of the board of directors (Katmon et al., 2019). The level of education diversity of board of directors is measured using the Blau Index (EDULEVEL), which is the coefficient of variation in the tenure of the board members (Katmon et al., 2019). The tenure of the board of directors is measured using the Blau Index (TENURE), which is the coefficient of variation in the tenure of the board members (Katmon et al., 2019).

The effectiveness of the supervision of the board of commissioners (BOCSCORE) is measured using a score obtained from a list of questions which is in accordance with research conducted by Hermawan (2011). The effectiveness of the audit committee (AUD) is measured using the scoring method developed by the ASEAN Corporate Governance Scorecard (2017). The control variable in this study is measured by the size of the board of directors (Cumming et al., 2015; Lenard et al., 2017; Xu et al., 2018), independence of the board of directors (Cumming et al., 2015), number of board meetings (Cumming et al., 2015), and firm size (Cumming et al., 2015; Lenard et al., 2017; Xu et al., 2018). There are three models used in this study:

$$FSF = \beta_0 + \beta_1 GENDER_{it} + \beta_2 AGE_{it} + \beta_3 EDULEVEL_{it} + \beta_4 TENURE_{it} + \beta_5 BODSIZE + \beta_6 BODIND + \beta_7 BODMEET + \beta_8 SIZE + \epsilon_i \quad (1)$$

$$FSF = \beta_0 + GENDER_{it} + \beta_2 AGE_{it} + \beta_3 EDULEVEL_{it} + \beta_4 TENURE_{it} + \beta_5 GENDER * BOCSCORE + \beta_6 AGE * BOCSCORE + \beta_7 EDULEVEL * BOCSCORE + \beta_8 TENURE * BOCSCORE + \beta_9 BODSIZE + \beta_{10} BODIND + \beta_{11} BODMEET + \beta_{12} SIZE + \epsilon_i \quad (2)$$

$$FSF = \beta_0 + GENDER_{it} + \beta_2 AGE_{it} + \beta_3 EDULEVEL_{it} + \beta_4 TENURE_{it} + \beta_5 GENDER * AUD + \beta_6 AGE * AUD + \beta_7 EDULEVEL * AUD + \beta_8 TENURE * AUD + \beta_9 BODSIZE + \beta_{10} BODIND + \beta_{11} BODMEET + \beta_{12} SIZE + \epsilon_i \quad (3)$$

Where, FSF = Financial Statement Fraud; GENDER = Gender Diversity (the proportion of women) in the Board of Directors; AGE = Age of the Board of Directors; EDULEVEL = Board of Directors Education Level; TENURE = Term of Office of the Board of Directors; BOCSCORE = Board of Commissioners' Oversight Effectiveness Score; AUD = Audit Committee Effectiveness Score; BODSIZE = Size of the Board of Directors; BODIND = Independence of the Board of Directors; BODMEET = Number of Board of Directors Meetings; SIZE = Company Size.

## 4. Results

### 4.1 Descriptive Statistics

Table 1. Descriptive statistics

Variable	fraud=0					fraud=1				
	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
edulevel	406	0.362	0.188	0.000	0.694	20	0.257	0.233	0.000	0.611
age	406	0.150	0.071	0.000	0.395	20	0.152	0.076	0.048	0.375
tenure	406	0.608	0.393	0.000	1.841	20	0.690	0.340	0.000	1.300
gender	406	0.148	0.204	0.000	0.500	20	0.162	0.207	0.000	0.500
bodind	406	0.208	0.163	0.000	1.000	20	0.168	0.110	0.000	0.333
bodmeet	406	17.086	12.187	3.000	72.000	20	18.500	11.095	7.000	48.000
bodsize	406	5.037	1.691	2.000	11.000	20	4.650	1.182	2.000	6.000
size	406	29.458	1.527	24.284	33.474	20	29.393	1.200	27.072	32.215
boc	406	39.776	6.153	0.000	48.000	20	39.450	2.235	34.000	44.000
aud	406	6.468	0.657	5.000	7.000	20	6.050	1.276	2.000	7.000

Source: Secondary data processed by the author.

The table shows the results of the descriptive analysis of this study with 426 company samples for three years, from 2016 to 2018. This study took 142 samples with a total of 426 observations. Of the total existing sample, 406 samples are companies between 2016 and 2018 that were not indicated to have committed financial statement fraud. Meanwhile, as many as 20 samples from 2016 to 2018 were categorized as having indications of committing financial statement fraud. Furthermore, the table shows that as many as 4% of companies that have been observed have indications of committing financial statement fraud. This means that of the total observations, only a few indicated that they had committed financial statement fraud.



## 4.2 Assumption Test Results

### 4.2.1 Multicollinearity

Table 2. Multicollinearity test

Variable	VIF
edulevel	1,06
age	1,15
tenure	1,04
gender	1,02
bodind	1,19
bodmeet	1,26
bodsize	1,65
size	1,60
boc	1,18
aud	1,10

Based on the results in the table above, it can be seen from the table, for all variables the resulting VIF value is smaller than 10. Thus, it can be stated that the model is declared to have no multicollinearity symptoms. So that the assumption of multicollinearity is fulfilled.

### 4.2.2 Overall Fit Model

Table 3. Model fitting information

Model	Log Likelihood	Chi-Square	Prob.
1	-75.674565	10.95	0.2048
2	-74.199723	18.98	0.1237
3	-68.310903	50.89	0.0000

The results of the fitting model test presented in table 3 show that all models 1 and 2 produce a probability value of chi square > significant alpha 5% or 0.05. This indicates a decrease in -2LL values of 10.95 and 18.98 but not really significant, so it can be stated that the model which includes the independent variables does not really contribute. In other words, there is no simultaneous influence on the variables of gender diversity (the proportion of women) on the board of directors, the diversity of board ages, the diversity of board education levels, and the diversity of board tenure controlled by board size, board independence, number of board meetings. board of directors, and company size on financial statement fraud and the moderating effect of the

board of commissioners' supervisory effectiveness score.

However, for model 3 it produces a probability value of *chi square* < *significant alpha* 5% or 0.05. This shows a decrease in the -2LL value of 50.89 and it is significant, so it can be stated that the model by including the independent variable is better than inserting the intercept alone. In this case the model is said to be fit. In other words, there is a simultaneous influence on the variable gender diversity (proportion of women) on the board of directors, the age diversity of the board of directors, the diversity of the education level of the board of directors, and the diversity of board tenure which is controlled by board size, board independence, number of board meetings, and company size on financial statement fraud and the moderating effect of the audit committee effectiveness score.

#### 4.2.3 Goodness of Fit

Table 4. Goodness-of-fit

Model	Criteria	<i>Chi-Square</i>	Prob.
1	<i>Pearson</i>	425.97	0.3701
	<i>Hosmer-Lemeshow</i>	10.33	0.2426
2	<i>Pearson</i>	421.70	0.3599
	<i>Hosmer-Lemeshow</i>	5.67	0.6844
3	<i>Pearson</i>	398.34	0.6766
	<i>Hosmer-Lemeshow</i>	6.03	0.6437

The table shows that the magnitude of the Pearson Chi-Square statistical value and the Hosmer-Lemeshow Chi-Square statistical value in all models produces a probability > significant alpha 5%, so it can be concluded that the results of the Goodness of Fit Pearson Chi-Square and the Hosmer-Lemeshow model are appropriate (there is no difference between the observation results and the predicted results).

#### 4.2.4 Determination Coefficient

Table 5. Pseudo R-square

Model	<i>Pseudo R-Square</i>
1	0.0622
2	0.0805
3	0.1535

The pseudo R-Square in model 1 valued 0.0622 or 6.22%. The result can indicate that the diversity of financial statement fraud variables can be explained by gender diversity (the proportion of women) in the board of directors, diversity of board age, diversity of board education levels, and diversity of board tenure which is controlled by board size, board independence, the number of board meetings, and company size by 6.22%, while the remaining 93.78% was the contribution of other variables was not discussed in this study.

The pseudo R-Square in model 2 valued 0.0805 or 8.05%. This can indicate that the diversity of financial statement fraud variables can be explained by gender diversity (the proportion of women) in the board of directors, diversity of board age, diversity of board education levels, and diversity of board tenure which is controlled by board size, board independence, number of board meetings, and company size by 8.05%, while

the remaining 91.95% is the contribution of other variables was not discussed in this study.

The pseudo R-Square in model 3 valued 0.1535 or 15.35%. the contribution of the relationship between gender diversity (the proportion of women) on the board of directors, diversity of board ages, diversity of board education levels, and diversity of board tenure controlled by board size. board of directors, independence of the board of directors, the number of board meetings, and the size of the company on financial statement fraud by 15.35%, while the remaining 84.65% is the contribution of other variables was not discussed in this study.

#### 4.3 Logistic Regression Results

Table 6. Significance test results

Variable	Coef. (Std. Err.Robust)		
	1	2	3
edu	-2.301345**	-4.302321	-13.2988
	(1.157007)	(5.07821)	(9.699877)
age	2.449583	-16.10687	-16.35157
	(3.819008)	(18.70245)	(35.94194)
tenure	0.5425388	0.723862	9.838033***
	(0.4633566)	(2.436521)	(3.169973)
gender	0.5846012	18.19145**	25.01567**
	(1.136067)	(7.40784)	(11.04768)
bodind	-3.054489**	-2.858092**	-1.47731
	(1.497335)	(1.380058)	(1.121805)
bodmeet	0.0119576	0.0165283	0.0156827
	(0.0156002)	(0.015599)	(0.0182818)
bodsize	-0.2589428*	-0.2364346*	-0.1863953
	(0.1434567)	(0.1332352)	(0.1643853)
size	0.0509284	0.0522994	0.1955811
	(0.1455286)	(0.150081)	(0.2140102)
boc		-0.0374141	
		(0.1106005)	
aud			0.2411444
			(1.090367)
edu_boc		0.0489748	
		(0.1191541)	
age_boc		0.4628918	

		(0.4380033)	
tenure_boc		-0.0040761	
		(0.0608695)	
gender_boc		-0.4427996**	
		(0.1768346)	
age_aud			2.825469
			(5.418176)
edu_aud			1.874411
			(1.580281)
tenure_aud			-1.537062***
			(0.5031896)
gender_aud			-3.951637**
			(1.850369)
_cons	-2.993385	-1.742716	-9.459908
	(4.250601)	(6.327939)	(6.716521)

Information: \* significant 10%, \*\* significant 5%, \*\*\* significant 1%

#### 4.4 Partially Hypothesis Test Results

Based on the results, it can be seen that the model 1 shows that the level of education of the board of director variables have a significant effect on financial statement fraud. Then in model 2, indicate that gender interaction variable with BOC shows a significant influence on financial statement fraud. This means the effectiveness score of board of commissioners' supervision is able to moderate the effect of gender diversity (the proportion of women) on the board of directors on financial statement fraud. Furthermore, in model 3, indicate that the interaction variable tenure with AUD and the interaction between gender and AUD shows a significant influence on the financial statement fraud. This shows that the audit committee oversight effectiveness score was able to moderate the effect of the tenure of the board of directors on the financial statement and the influence of gender diversity (the proportion of women) in the board of directors on the financial statement fraud.

Table 7. Marginal effect results

Variable	Marginal Effect		
	1	2	3
edulevel	-0.09992*	-0.18331	-0.51811
age	0.106352	-0.68626	-0.63705
tenure	0.023555	0.030842	0.383284***
gender	0.025381	0.775081**	0.974597**
bodind	-0.13262**	-0.12177**	-0.05756

bodmeet	0.000519	0.000704	0.000611
bodsize	-0.01124*	-0.01007*	-0.00726
size	0.002211	0.002228	0.00762
boc		-0.00159	
aud			0.009395
edu_boc		0.002087	
age_boc		0.019722	
tenure_boc		-0.00017	
gender_boc		-0.01887**	
age_aud			0.110079
edulevel_aud			0.073026
tenure_aud			-0.05988***
gender_aud			-0.15395**

Information: \* significant 10%, \*\* significant 5%, \*\*\* significant 1%

The marginal effect value of the edu variable is -0.09992 (negative), which means that if the Education Level of the Board of Directors increases by 1 unit, it tends to decrease the company's chances of Fraud Financial Statement occurring by 0.09992 or 9.992%. The marginal effect value of the bodind variable is -0.13262 (negative), which means that if the independence of the Board of Directors increases by 1 unit, it tends to decrease the company's chances of Fraud Financial Statement occurring by 0.13262 or 13.262%. The marginal effect value of the bodsize variable is -0.01124 (negative), which means that if the size of the Board of Directors increases by 1 unit, it tends to reduce the company's chances of Fraud Financial Statement occurring by 0.01124 or 1.124%.

The marginal effect value of the gender\_boc interaction variable is -0.01887 (negative), which means that every 1 unit increase in the Board of Commissioners' Supervisory Effectiveness Score is able to strengthen the influence of Gender to reduce the company's chances of Fraud Financial Statement occurring by 0.01887 or 1.887%.

The marginal effect value of the tenure\_aud interaction variable is -0.05988 (negative) which means that every 1 unit increase in the Audit Committee's Oversight Effectiveness Score was able to strengthen the effect of the tenure of the Board of Directors to reduce the company's chances of Fraud Financial Statement occurring by 0.05988 or 5.988%. The marginal effect value of the gender\_aud interaction variable is -0.15395 (negative) which means that every 1 unit increase in the Audit Committee's Oversight Effectiveness Score is able to strengthen the influence of Gender Diversity (the proportion of women) in the Board of Directors reduces the company's chances of Fraud Financial Statement occurring by 0.15395 or 15.395%.

#### 4.5 Classification Accuracy Test

Classification shows the predictive power of the regression model to predict the probability of financial statement fraud occurring. The classification results can be seen in the following table:

Table 8. Correctly classified results

Model	Correctly classified
1	95.31%
2	95.07%
3	96.24%

Based on the results it can be seen from Table 8 that the predictive power of model 1 in classifying the observations is 95.31%. Then the predictive power of model 2 in classifying the observations is 95.07%. And the predictive power of model 3 in classifying the observations is 96.24%.

## 5. Discussion

Model one (1) has four hypotheses to see the effect of each diversity of the board of directors in relation to a reduced probability or likelihood of financial statement fraud. The test results show that from four types of board of director diversity, only one category has a significant result. The diversity that have significant result is the diversity of education levels.

The test results reject hypothesis 1a which states that the proportion of women on the board of directors reduces the probability of financial statement fraud occurring in the company. Research on the proportion of women on the board of directors by Capezio and Mavisakalyan (2016), Lenard et al. (2017), and Ghafoor, Zainudin, and Mahdzan (2019) shows that the presence of women reduces the likelihood of fraud occurring in companies is not proven in this study. Thus, the proportion of women on the board of directors has not proven beneficial in reducing the possibility of financial statement fraud. This is also supported by looking at the proportion of women on the boards of directors in companies in Indonesia. This effect can be seen from the data obtained by researchers that of the total number of company boards of directors, only 12% of the total number of women directors is from the total board of directors in the sample.

Hypothesis 1b which states that the age of the board of directors reduces the probability of the occurrence of financial statement fraud is also rejected in this study. The age of the board of directors is an important factor in reducing the probability of financial statement fraud occurring. Older boards of directors have a better effect on decision making (Xu et al., 2018). Likewise, the existence of a younger board of directors, where the younger board of directors is expected to be more innovative and have the ability to process new ideas (Van Ness et al., 2010). With the existence of various ages, it is hoped that the company can get the benefits.

The test results of this study do not support the results of previous studies, where the synergy of the older and younger board of directors age group has a positive impact on the company. Milliken and Martins (1996) in their research stated that board diversity has two sides, on the one hand diversity can increase opportunities for creativity, on the other hand it allows group members to feel dissatisfied and fail to adapt to the group. In addition, the results of research conducted by (Xu et al., 2018) argued that an older board average age could prevent fraud. This is the reason why synergy between age groups does not reduce the probability of financial statement fraud occurring.

Hypothesis 1c states that diversity in the level of education of the board of directors reduces the probability of financial statement fraud occurring. The test results of this study support hypothesis 1c. In the upper echelon theory described by Hambrick and Mason (1984) it is stated that educational background explains a lot about an individual. Hambrick and Mason (1984) also explain that a person's basic knowledge and skills are based on the education he has taken. Individual cognitive values and preferences are examples of how education can influence both. Different educational backgrounds show differences in individual attitudes and intelligence (Westphal & Milton, 2000) and the cognitive basis (Hambrick & Mason, 1984).

Hypothesis 1d states that the increasingly diverse tenure of the board of directors will reduce the probability of financial statement fraud being rejected in this research examination. Previous research stated that long board tenure has an advantage because directors have greater experience with company policies and expertise in monitoring the reporting process in organizations (Chan et al., 2013). Thus, directors with short tenures do not have this advantage. However, compared to short tenure boards, long tenure boards are unlikely to carry out innovation activities because they tend to be risk averse and have limited sources of information (Chen, 2013). Longer terms of office will keep directors in their comfort zone and tend to repeat the same process. This is the reason why tenure diversity has no relationship in the tendency to reduce the probability of financial statement fraud occurring.

The results of testing model two (2) show that the effectiveness of board of commissioner supervision is only able to moderate the effect of gender diversity (the proportion of women) in the board of directors on the lack of probability of financial statement fraud occurring. The effectiveness of the supervision of the board of commissioners has not been proven to strengthen the relationship for diversity of age, level of education, and tenure with the reduced probability of financial statement fraud occurring.

Financial services authority regulation Number 33 / POJK / 04/2014 concerning Directors and Board of Commissioners or Public Companies explains that the board of commissioners is part of a company that has the duty to carry out general and / or special supervision in accordance with the articles of association and provide advice to the board of directors. Capezio and Mavisakalyan (2016) in their research state that the existence of a female board of directors on the company's board of directors can direct the company to increase organizational effectiveness. Lenard et al. (2017) and (Cumming et al., 2015) stated that the presence of women on the board can help reduce fraud. With the presence of a board of commissioners whose job is to supervise, and gender diversity (the proportion of women) in the board of directors will reduce the probability of financial statement fraud occurring.

The results of testing model three (3) show that the effectiveness of the audit committee is able to moderate the effect of the tenure of the board of directors and gender diversity (the proportion of women) in the board of directors on financial statement fraud. The effectiveness of the audit committee has not been proven to strengthen the relationship for age diversity and education level with the reduced probability of financial statement fraud occurring.

Regulation of the financial services authority Number 55 / POJK.04 / 2015 concerning the formation and work implementation guidelines of the audit committee explains that the audit committee is a committee that is responsible and formed by the board of commissioners with the aim of providing assistance in carrying out the functions and duties of the board of commissioners. The existence of a female board of directors on the company's board of directors can also direct the company to increase organizational effectiveness (Capezio & Mavisakalyan, 2016). Capezio and Mavisakalyan (2016) further explain that there are three reasons why women's boards can help reduce the occurrence of fraud in companies, one of which is gender differences in behavior that make women tend to be more effective and diligent in their role of monitoring companies. Thus, a board of directors with diverse genders or the presence of women on the board of directors will have a good impact on the company and then reduce the tendency for financial statement fraud to occur due to a better monitoring process accompanied by an audit committee as a task force owned by board of Commissioners.

The audit committee is a committee formed by the board of commissioners to support the effectiveness and implementation of its duties and responsibilities. Shiah - Hou and Cheng (2012) explain that tenure is the length of time a director has held a director position in an organization. Long board tenure has the advantage because directors have greater experience with company policies and expertise in monitoring the reporting process in organizations (Chan et al., 2013). However, boards of directors with shorter tenures carry out more innovative activities in various ways than directors with long terrains (Chen, 2013). Thus, the diversity of board tenure creates a better organization and is complemented by the presence of an audit committee which reduces the probability of financial statement fraud occurring.



## 6. Conclusion

This research prove whether diversity of directors can reduce the probability of financial statement fraud occurring. From four types of diversity examined in this study, only the diversity of the board of director's level of education was proven to be able to reduce the probability of financial statement fraud occurring. In addition, the effectiveness of the board of directors as a moderation also proved able to moderate the influence of gender diversity (the proportion of women) in the board of directors of the financial statement fraud. Meanwhile, the effectiveness of the audit committees was able to influence the tenure of the board of directors and presence of women in the board of directors on the financial statement fraud.

This research has provided new knowledge and enriched the research literature on board diversity and financial statement fraud. The results of the study found that there are benefits from the diversity of levels of education possessed by the board of directors in reducing the probability of financial statement fraud occurring. Thus, it is hoped that the company can have a board of directors with different education level backgrounds so that the decision making process is better and the occurrence of financial statement fraud can be prevented. The role of the board of commissioners as the supervisor of the company and the audit committee that helps carry out the role of the board of commissioners also contributes to reducing the probability of financial statement fraud occurring. Future research is expected to use other categories of fraud such as corruption and misuse of assets as the dependent variable and use other measuring instruments to measure those two. The study was limited to the research period, specifically only three years of research from 2016 to 2018.

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## Customer's Preference in Choosing Electronic Wallet: Study in Bandung

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### Abstract

This research was conducted to determine the consumer preferences in choosing electronic wallet (e-wallet) in Bandung City with a combination of attributes that produce the highest customer value index and to determine the attributes that are value drivers of e-wallet consumers. This research uses quantitative methods and descriptive research types. The sampling method is using nonprobability sampling method with the type of purposive sampling. Samples obtained in this study were 100 respondents. The data analysis technique used is conjoint analysis. Based on the results obtained from this study that is, the combination of attributes that produce the highest customer value index is a usability value of 0.127 with a combination of attributes including, Security with the availability of payment transaction codes, Privacy with there are transaction history features, Ease of Use with the availability of the e-wallet balance return feature to the user's bank account, Pricing with the free balance limit in conducting transactions, Ability to Pay with the availability of the QR code feature, Consumer Benefit by earning reward points. The results of this study indicate that returning e-wallet balances to a user's bank account is a value driver with a usability value of 0.039. Suggestions from this research, where fintech companies in developing e-wallet products with Ease of Use services which the availability of e-wallet balance returns feature to the user's bank account, because consumers want convenience in terms of transferring e-wallet balances back to bank accounts according to user requirements.

**Keywords:** Conjoint Analysis, Customer Value Index, E-Wallet, Preference

### 1. Introduction

The rapid development of information technology in the digital era changes people's behavior in accessing information and the increasing trend of utilizing existing technology services (Upadhayaya, 2012). The growth of internet users has now become a public consumption in supporting the needs of life in unlimited way, including on the economic sector and the financial industry. The impact of the rapid role of information technology and the internet on the financial industry has led to a digital transformation from conventional payment systems then now to become presenting digital-based financial services that are currently growing and expanding access to public financial reach in terms of transactions (N. Singh & Sinha, 2020). The digital financial transaction system actually is very effective and efficient. Based on We Are Social 2018 data, internet users in Indonesia reach 132 million people or more than 50% of Indonesia's population and most of them are mobile internet users (124 million people). The use of the internet as a financial transaction has reached 27% (Darsa, melli et., 2018)

The potential of digital payments indicates a growing industry in the financial technology (fintech) sector. The

development of fintech in Indonesia is increasing, and this is indicated by the massive e-commerce startup companies in the field of financial technology that have sprung up in recent years. Fintech is developing in various sectors, including digital payment startups, peer to peer lending, personal finance, crowdfunding, and so on (Oktaviani et al., 2019). Fintech plays a role in providing accessibility to the public to make it easier to use financial products, increase financial literacy, and carry out a more effective, practical and safer financial transaction process compared to conventional financial service systems. The development of the fintech industry has become one of the most profitable industry in the e-commerce market. The e-commerce market has changed the pattern of public transactions towards using payment methods in online business (Darsa, melli et., 2018). The presence of digital-based payment system innovations affects the lifestyle and habits of the society to become consumptive. Digital transactions, which are increasingly in demand, have become a trend among the wider society because of its simplicity. The more online transactions and businesses develop, the more various payment methods can be used in making online buying and selling transactions. Besides making it easier for e-commerce businesses to serve their customers, the variety of alternative payment methods also makes it easier for customers. Now online business customers have many choices in making payments (Rasyid & Natali, 2019).

Based on the value of digital payments in Southeast Asia in 2018, Indonesia's digital payment market was at US \$ 21.49 billion (Rp.293.3 trillion), and it is predicted that in 2022 with an average annual growth of 15, 3%, the value of Indonesia's digital payment transactions will reach US \$ 37.97 billion (IDR 518.2 trillion). The fintech sector presents an electronic money feature as a non-cash payment instrument that is in demand by the public in carrying out various transaction needs (Bezhovski, 2016). Most of the transaction processes that used to be carried out using cash, nowadays people are starting to switch to digital payments with non-cash transactions (Abdullah et al., 2011). The growth in the use of electronic money is increasing, encouraging people to adapt to a cashless lifestyle or known as a cashless society. Daily Social survey data related to electronic money users in Indonesia in 2017 showed that out of 1055 respondents, 56.80% had electronic money for a year or less. As for 42.43% of respondents feel electronic money helps control spending (Rizaldi & Faruqi, 2020). The results of a survey of the average growth of non-cash transactions from 2014 to 2018, including electronic money, debit cards and credit cards. This data shows that electronic money experienced significant growth in 2018 with an average transaction volume of 94.7% and a transaction volume of IDR 2.9 billion, compared to debit cards with an average of 18.6% and a transaction volume of IDR 577.3 million in 2018, and credit cards with an average of 7.1% and a transaction volume of IDR 330.1 million in 2018. The survey shows that electronic money has dominated and is increasingly in demand by the public in making transactions (Oktaviani et al., 2019)

The increasing number of electronic money users is marked by the massive penetration of the internet and the use of smartphones in Indonesia. The results of a survey regarding company competition with the most popular digital wallet (e-wallet) products used by consumers in Indonesia during 2018, states that Go-pay is the most popular e-wallet company and many users with an average of 79, 4%, followed by Ovo at 58.4% in second place, LinkAja at 55.5% in third position, and followed by Dana at 34.2% and Paytren at 19.3% (Rizaldi & Faruqi, 2020). The tendency of e-wallet users to have many alternatives in choosing e-wallets is due to the lack of fulfillment of something or there are attributes that are not owned by an e-wallet, both promotions and benefits or other features offered then e-wallet users can easily switch to other e-wallets that are more attractive or beneficial to users in fulfilling the transaction needs. Therefore, e-wallet users also have their own preferences or choices that suit their wants and needs (Nidhi Singh et al., 2020a). Consumers have their own assessment of the value contained in a product or service. By knowing the level of consumer preference, companies can determine consumer choices when faced with a variety of choices for similar products or services so that an evaluation of the strengths and weaknesses of the product or service can be carried out.

Based on a survey by Dana who conducted research that the city of Bandung is the largest e-wallet user in Indonesia at 69.4% and the tendency of e-wallet users to have many alternatives in choosing e-wallets (S. Moertini et al., 2011) So that the company must be able to find out consumer preferences which can meet consumer's priority needs. Based on this explanation, it can be justified in this study for researchers interested in conducting research. Based on the explanation of the research background that has been described above,

then the questions that can be identified from the problems in this study are:

1. What are the consumer preferences in choosing Electronic Wallet-based digital payments (e-wallets) in Bandung?
2. What is the combination of attributes that consumers want the most in choosing digital payments based on Electronic wallet (e-wallet) in Bandung?

## 2. Literature Review

Electronic Money (E-Money) according to Bank Indonesia regulation No 11/12 / PBI / 2009 concerning electronic money is a payment instrument that meets the following elements: (1) Issued on the basis of the value of money deposited in advance by the holder to the issuer, (2) Value for money is stored electronically in a medium such as a server or chip, (3) Used as a means of payment to merchants who are not issuers of the electronic money, and (4) The value of electronic money deposited by the holder and managed by the issuer is not a deposit as referred to in the law governing banking (Darsa, melli et., 2018).

(Bezhovski, 2016) define e-wallet or mobile wallet “as a digital container accessed by a mobile device (ie, smartphone) that stores wallet applications, payment credentials, loyalty cards, and coupons, and is used to make proximity and remote mobile payments. The definition according to (Nidhi Singh et al., 2020b) defines "electronic wallet is a digital wallet which allows users to make electronic commerce transactions quickly and securely."

While customer preferences are “the target audience might like the product but not prefer it to others. The communicator must then try to build consumer preference by comparing likely quality, value, performance, and other features to those of competitors” (Abdullah et al., 2011). In this definition, it is explained that preference is how the target audience or consumers have an interest in a product but are not more interested in other products. So that a communicator must be able to arouse consumer preferences by making comparisons in terms of quality, value, performance, and other features of products owned by competitors (Kang et al., 2018). Customer preferences are expectations, likes, dislikes, motivations that drive customer purchasing decisions. They complement customer needs in explaining customer behavior. For example, a customer needs clothing and they'd prefer a particular color, style,, motifs, brand and size (Alphadita et al., n.d.)

Where consumer preferences are at the alternative evaluation stage in the purchase decision process. At this stage, consumers make choices from a variety of products or services with a variety of different attributes (Pandy et al., 2017). Preference is a standardization or criterion factors that determine consumers in determining and deciding the choice of various existing products or services. In this stage, to be able to find out the preferences that arise in consumers, it is shown using the stages of the effect hierarchy model in the following figure (Park, 2004):

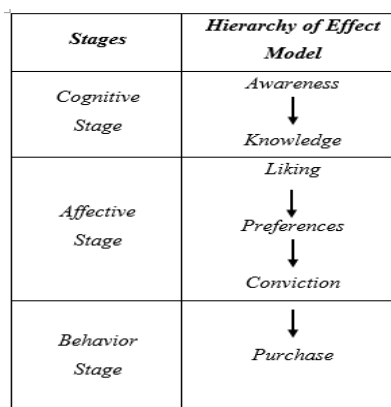


Figure 1. The stage of effect hierarchy model



Awareness means that at this stage consumers begin to become aware of a product. Knowledge means that at this stage consumers already know and understand about a product. Liking means that at this stage consumers begin to like a product. Preferences means that at this stage, consumers prefer a product over various other products. Conviction means that at this stage, it has the context of consumer confidence in making purchasing decisions for a product (Upadhayaya, 2012). Purchase to buy means that at this stage, consumers have full confidence or are loyal to a product where consumers do not hesitate in deciding to buy a product without the need for other considerations. The preference stage is a consumer determinant that a company needs to observe and study by influencing and manipulating consumers in every decision-making process. Consumer preferences is a benchmark for business to find out consumer wants and needs so that companies can develop a product based on product attributes that are in accordance with consumer choices (Kalinic et al., 2019).

The meaning according to (Ali et al., 2019) states that product attributes are the involvement of the benefits offered from a product and service through the development of a product or service. Meanwhile, the definition of attributes according to (N. Singh & Sinha, 2020) is all features, both tangible and intangible, of a good or service that customers can assess. It can be concluded from the above definition, with the attributes attached to a product or service that consumers use to assess and measure the suitability of the characteristics of the product or service with the needs and desires of consumers (Nan et al., 2020). It is important for companies to know what attributes can influence purchasing decisions so that strategies can be determined to develop and improve products in order to better understand the needs and desires of consumers (Bezhovski, 2016).

In determining the preference attributes of electronic wallet (e-wallet) users, the author refers to previous journal / research references from Pacific Business Review International which were researched by Jasmin Padiya and Ashok Bantwa (2018) with the title "Adoption of E-Wallets: A Post Demonetization Study in Ahmedabad City". In the journal / research, there are attributes that can be used as a reference to describe the preferences of e-wallet users and the journal is suitable for measuring this research. The attributes used in this study include security, privacy, ease of use, pricing, ability to pay, consumer benefits (Padiya et al., 2018).

1. Security: According (Seetharaman et al., 2017) summarizes the security of electronic payment systems into four subcategories, namely payment authentication requiring proof of identity for both the payer and the payee, payment integrity ensuring the prevention of unauthorized modification of payment data, payment authorization ensuring the prevention of unauthorized withdrawals without explicit permission of the account holder, and confidentiality of payments ensures absolute confidentiality of payment transactions (S. Moertini et al., 2011).

2. Privacy: Reviewing privacy from a transaction perspective, (Kallanmarthodi & Vaithiyanathan, 2012) define privacy as the ability to understand data protected by authorized principals only. So that the protected data is protected from piracy or can be known by someone other than the user. (Roy & Sinha, 2014) argue that privacy is the protection of sensitive user data.

3. Pricing: (Rizaldi & Faruqi, 2020) define transaction costs as expenses that must be paid by customers in purchase transactions. For example, administrative or processing costs are deducted when you top up your balance. Continuous fees or transaction fees consist of fees charged by consumers to banks, payment providers, or merchants for using various payment instruments that are loaded on mobile phones. The relevant cost addressed to consumers is the cost, net of gifts or discounts for using the payment instrument.

1. Ease of Use: Ease of use is an important role, because transactions online or via internet connectivity are often complex and complicated to use (Nidhi Singh et al., 2020a). Ease of use is related to efficiency, which has been defined by (Prof. Hußmann, 2006) as "the ease and speed of accessing and using the website".

2. Ability to Pay: According (Au & Kauffman, 2008) to in his journal, he explains that in mobile payments, consumers make it possible to access a wider range of payment instruments at the point of sale in transactions, including payment instruments for general purposes and merchant-specific instruments that give consumers the right to reward in purchases that have been made.

3. Consumer Benefit: According to (Briggs & Brooks, 2011) consumer benefit is a service with quality

performance and a brand that has high value which can affect the intention to adopt the service.

Here is the framework of thinking on this research:

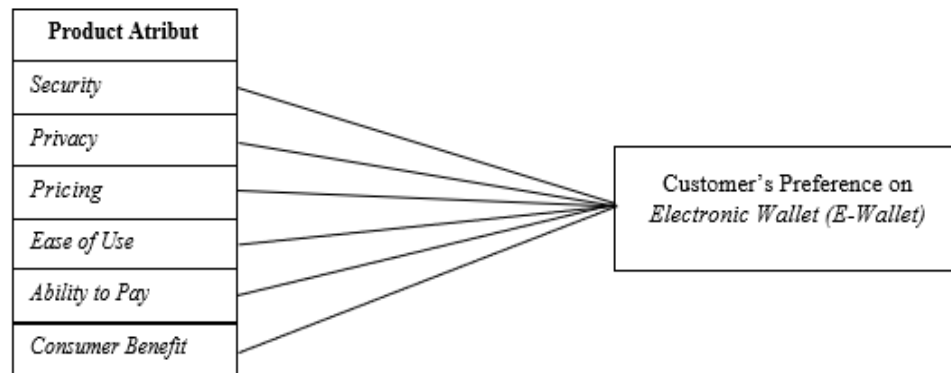


Figure 2. The Framework of Thinking

### 3. Research Methodology

The research method used is the quantitative method in this research, according to (Urs, 2015) this method is a scientific method because it meets scientific principles, namely, concrete / empirical, objective, measurable, rational, and systematic. This method is called quantitative because the research data is in the form of numbers and the analysis uses statistics. Based on the objectives of this research structure, it is included in the type of descriptive research. Where descriptive research describes the characteristics or functions of a variable or several variables in certain situations. The type of investigation used by researchers is correlational research, where correlational research is the relationship of a study regarding the main variables that the researcher describes in conducting research (Rachna & Singh, 2013).

The analytical method used by researchers in this study is conjoint analysis. According to Hair et al. (2010: 266) explain that conjoint analysis is a multivariate technique developed specifically with the aim of understanding how respondents generate preferences for several kinds of objects such as products, services, ideas. In this study, there are variables called attributes and sub-variables called levels in conjoint analysis. Level is a non-metric value, specifically describing a factor that has at least two or more levels but usually does not exceed four or five levels (Chen et al., 2019)

The explanation according to (Ali et al., 2019) explains that conjoint analysis is a quantitative method to determine consumer preferences carried out in research. This preference is observed from each combination of a product that provides the greatest benefit that is felt or will be felt. So that it can influence consumers in the purchasing decision process based on product or service selection. The use of conjoint analysis is to find out the attributes of a product or service that are the main choice or most preferred by consumers, and also to help determine the composition of the attributes of a new product or service and to analyze the attributes of a new product or service. which has entered the market so that the company can improve the product (Kalinic et al., 2019). In this study, the variables used are the attributes used in the analysis of consumer preferences in choosing an electronic wallet (e-wallet), taken from previous journals by Padiya and Bantwa (2018). There are several attributes that are used as references in this study, including: Security, Privacy, Ease of Use, Pricing, Ability to Pay, Consumer Benefit. In conducting this research, the researcher used Likert scale measurement with interval data type. In this study, the population taken by researchers was electronic wallet (e-wallet) users in the city of Bandung. This study uses a confidence level of 95%, so that the value of  $z = 1.96$  is obtained. The error rate is set at 10%. The probability of the population being sampled and the probability not being sampled are 0.5 respectively. From the calculations, it is obtained by the number of samples taken of 96, rounded to 100 respondents.



In this study, the sampling used by researchers was the nonprobability sampling technique. In this study, the nonprobability sampling technique used in sampling was purposive sampling technique. This purposive sampling technique is used by researchers because not all samples have criteria that match the phenomenon under study. The determination of this sample is determined with certain considerations, where the predetermined sample can represent and obtain information on answers to research problems. In the research conducted, the selected sample is electronic wallet (e-wallet) users in Bandung.

#### 4. Result and Discussion

This study aims to determine how consumer preferences in choosing electronic wallets (e-wallets), by creating stimuli that form profiles that contain factors or attributes and a combination of levels or sub-attributes. Stimuli are formed by processing data with SPSS using an Orthogonal design, where from each attribute and several predetermined levels form 16 stimuli. The conjoint analysis method used in this study is a traditional conjoint analysis with the full-profile method. Where there are 100 respondents obtained, and these respondents fully assess each profile by rating and determining the level of preference. The results of data processing were carried out using SPSS. The things that are important to note from the results of SPSS data processing are the correlation and significance values, the importance value between attributes and utility values.

Correlations <sup>a</sup>		
	Value	Sig.
Pearson's R	.710	.001
Kendall's tau	.383	.021
Correlations between observed and estimated preferences		

Importance Values	
Security	13.583
Privacy	12.280
Ease of Use	24.695
Pricing	13.152
Ability to Pay	13.581
Consumer Benefits	22.709
Averaged Importance Score	

Based on the results of data processing the correlation value above, it can be seen that the correlation values of Pearson's R and Kendall's Tau are not much different, namely with a value of 0.710 and 0.383. The two correlation values have a significance value of <0.05, where the respective values obtained in the image above are 0.001 for Pearson's R and 0.021 for Kendall's Tau. So it can be concluded that the estimated results from this conjoint analysis are in accordance with the actual data. And this research can be accepted in the field to describe consumer preferences in choosing E-Wallet in Bandung City.

Importance value is a value that shows the importance of each attribute of a product based on the assessment given by consumers. In this study, where the value of importance shows if the higher the value of importance, then an attribute is increasingly important and becomes a priority for consumers in choosing E-Wallet. Conversely, if the importance value is low, then an attribute is declared unimportant and not a priority for consumers (Lectron, 2015).

It is known from the image above that data shows the importance value of each E-Wallet attribute. In this study, the highest importance value is in the Ease of Use attribute with a value of 24.695, second place is the Consumer Benefit attribute with an importance value of 22.709, third place is the Security attribute with an importance value of 13.583, in fourth place there is the Ability to Pay attribute with a value Interest is 13,581, fifth is the Pricing attribute with an interest value of 13,152, and the last is Privacy with an interest value of 12,280. Based on the results of these data, it can be concluded that out of 100 respondents considered that the Ease of Use attribute was the most important attribute and the Privacy attribute was the least important attribute.

The utility value or utility value is the value that is owned by each level of the attribute resulting from the value obtained by the respondent based on questionnaire data processing using SPSS. The utility value shows a value that can create customer satisfaction with the level of the E-Wallet attribute. In this study, researchers used six attributes, namely Security, Privacy, Ease of Use, Pricing, Ability to Pay, and Consumer Benefit. Where from the six attributes, there are levels or sub-attributes that have a level or value of utility. The utility value shows the level of value at the attribute level, where if the value is positive it explains that the importance of the level is high and vice versa if the value is negative, the value is low.

Table 1. The Result of the Utility Value of Each Attribute Level

<b>Utilities</b>			
		Utility Estimate	Std. Error
Security	Transaction code	.033	.023
	OTP code usage	-.033	.023
Privacy	Transaction history	.000	.023
	Accuracy of private data	.000	.023
Ease of Use	Features layout	.029	.031
	Return of e-wallet balance	.039	.036
	merchant partnership	-.068	.036
Pricing	Free admin inter-bank fee	-.010	.023
	Free of limited balance	.010	.023
Ability to Pay	NFC feature	-.020	.023
	QR code feature	.020	.023
Consumer Benefit	Discount offering	.000	.031
	Cashback offering	-.025	.036
	Reward point	.025	.036
(Constant)		3.254	.026

The customer value index aims to determine consumer preferences for the attributes in choosing e-wallets. In this study, the value of consumer preferences can be determined based on the value of the usefulness of each profile. To get the customer value index value in this study, it can be obtained from the total utility value of each profile at the attribute level. The following is the result of the total utility value of each profile:

Table 2. The Total Utility Value Of Each Profile

No. Stimuli	Total value of utilities	Rank
1	0,127	1
2	0,051	6
3	-0,019	10
4	0,072	3
5	-0,004	8
6	-0,024	11
7	0,052	5
8	-0,071	15
9	-0,040	13
10	-0,009	9
11	0,092	2
12	-0,039	12
13	-0,070	14
14	0,032	7
15	-0,091	16
16	0,057	4

The table above shows the results of the total utility value calculations for each combination of the profile attribute levels. The total utility value of each profile shows that the profile that has the lowest customer value index is the 15th profile with a total utility value of -0.091. It can be concluded that the 15th profile is the profile that is the least preferred or not the preference of respondents in choosing e-wallets. The combination of level attributes of this profile includes use of OTP codes, transaction history, partnering at various merchants, free from bank administration fees, use of the QR code feature, and discount offers. Based on the results of the calculation of the total utility value of each profile, it shows that the profile that has the highest customer value index value is the 1st profile with a total value of 0.127. It can be concluded that the 1st profile is the most preferred profile or the respondent's preference in choosing e-wallets. The combination of attribute levels in this profile includes payment transaction codes, transaction history, returning balances to bank accounts, free from balance restrictions, using the QR code feature, and earning reward points.

Table 3. Customer Value Index

Profile 1		
Attribute	Level	Utilities value
Security	Transaction code for every transaction	0.033
Privacy	History transaction record	0.000
Ease of use	Easy to return of balance to account bank	0.039
Pricing	Free of limited balance on e-wallet	0.010

Ability to pay	QR code for payment and transaction process	0.020
Consumer benefit	Reward point	0.025
<b>Total value of Utilities</b>		<b>0.127</b>

The value driver shows the level attribute with the highest utility value compared to other level attributes. This value is determined to determine which level attribute is considered the most important and has a great influence on consumer preferences in choosing e-wallets. In determining the value driver at the profile attribute level, it is necessary to have the result of the highest customer value index value, namely the 1st profile that has been obtained. In the 1st profile, the attribute that becomes the respondent's value driver in choosing an e-wallet is the Ease of Use attribute with a utility value of 0.039. This shows that the Ease of Use attribute with the level of return of balances to the user's bank account has a major influence on consumer preferences in choosing e-wallets.

## 5. Conclusion and Suggestion

1. The combination of the attributes: (1) payment transaction code, (2) transaction history, (3) return of e-wallet balances to user's bank account, (4) free from balance limits, (5) use of the QR code feature, and (6) earning reward points are a combination attributes that become respondents' preference in choosing e-wallet.
2. In the business process, it is necessary to know the value driver as the company's main factor in developing the output received by consumers on the value of a good or service. This aims to determine consumer demand, which in order to meet consumer needs and desires. Based on this study, the results of data processing on determining the value driver for the combination of attributes show that the main factor for consumers in choosing e-wallets is the ease of use attribute with the availability of the e-wallet balance return feature to the user's bank account.

Based on the results of this study, researchers suggest that it is necessary to apply for companies in the fintech industry to e-wallet product development to find out consumer preferences with appropriate attributes, namely, in terms of customer convenience (ease of use) with the availability of balance returns. e-wallet to the user's bank account, then in terms of security consumers feel security if there is a payment transaction code after making a payment, in terms of user benefits, consumers feel the benefits of obtaining reward points, in terms of ability to make transactions (The ability to pay) where using the QR code feature is an easy feature for consumers to process transactions, in terms of service fees and transactions where consumers want free balance restrictions in making transactions, in terms of history transaction feature where consumers can find out a list of transactions made before.

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# Destination Competitiveness of Selected Farms in the 8th District of Cavite

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## Abstract

There is a plethora of literature on tourism, particularly on agro-tourism enterprises. However, a dearth in local literature had been notably observed as regards to the farm destinations' competitiveness in the 8th District of Cavite. As such, prompted the researcher to embark on a research journey utilizing descriptive method. This study dealt with farms' economic profile, factors of farm destination competitiveness, and supply side stakeholders' level of agreement on farm destination competitiveness. There were 158 supply side stakeholders that participated in the conduct of this research. The Data Analysis used was frequency and percentage, and weighted mean. The supply side stakeholders "Strongly Agree" (M=4.33) that the farms have abundant natural resources attractions, "Agree" (M=4.10) on created resources, "Agree" (M=3.57) on the support resources, "Moderately Agree" (M=3.09) on Destination Management, "Strongly Agree" (M=4.34) on the competitive environment, and "Agree" (M=4.16) on the qualifying and amplifying determinants. Results suggested the need to intensify destinations, strengthen Destination Management and continuously create destination demand to ensure tourists visitation.

**Keywords:** farm destination, destination competitiveness, predictors

## 1. Introduction

Global report confirms the changing landscape of agriculture specifically with the introduction of farm tourism. The combination of agriculture and tourism is considered as a strategy to diversify and transform the farms into a tourist destination. Dar (2017) uncovers that the emergence of farm tourism took place when small farm holders organized themselves into cooperative and make a more efficient and profitable production.

Farm tourism is a business of attracting tourists to travel to a destination for leisure and educational purposes while uplifting economic undertakings that can provide both the farm and community additional income (Gabor, 2016). With the farm tourism business potential, many farm owners transform their agricultural land to farm destinations.

Farm tourism is now one of the most valuable businesses in the Philippines. Southeast Asian Regional Center for graduate Study & Research in Agriculture (SEARCA) as cited in Ocampo (2019) confirms that the Philippines is now abreast with other agro-tourism destinations all over the world including Taiwan, Hawaii, Tuscany, Mallorca, California, and Brazil. Domingo (2019) asserts that even as the world develop in terms of technology, agriculture and farms are regaining importance due to people's awareness of living healthy and desire for a more fit way of life.

This study focuses on the destination competitiveness of farms in the 8th District of Cavite. Questions include, the economic profile of farms as identified by farm managers; factors of farm's internal and external competitiveness as identified by farm managers; and supply side stakeholders' level of agreement on destination competitiveness of farms in terms of resources, Destination Management, competitive environment, and qualifying and amplifying determinants.



## 2. Review of Related Literature

### Farm Destinations in the 8th District of Cavite

The Philippines president Hon. Rodrigo R. Duterte signed a law in September 14, 2018 creating an 8th legislative district for the province of Cavite under Republic Act Number 11069 (Ranada, 2018). The 8th District is comprised of the city of Tagaytay and the municipalities of Alfonso, General Aguinaldo, Magallanes, Maragondon, Mendez, Naic, and Ternate. It is formerly a part of the 7th District of Cavite with a total land area of 43,581.01 hectares. (Figure 1)

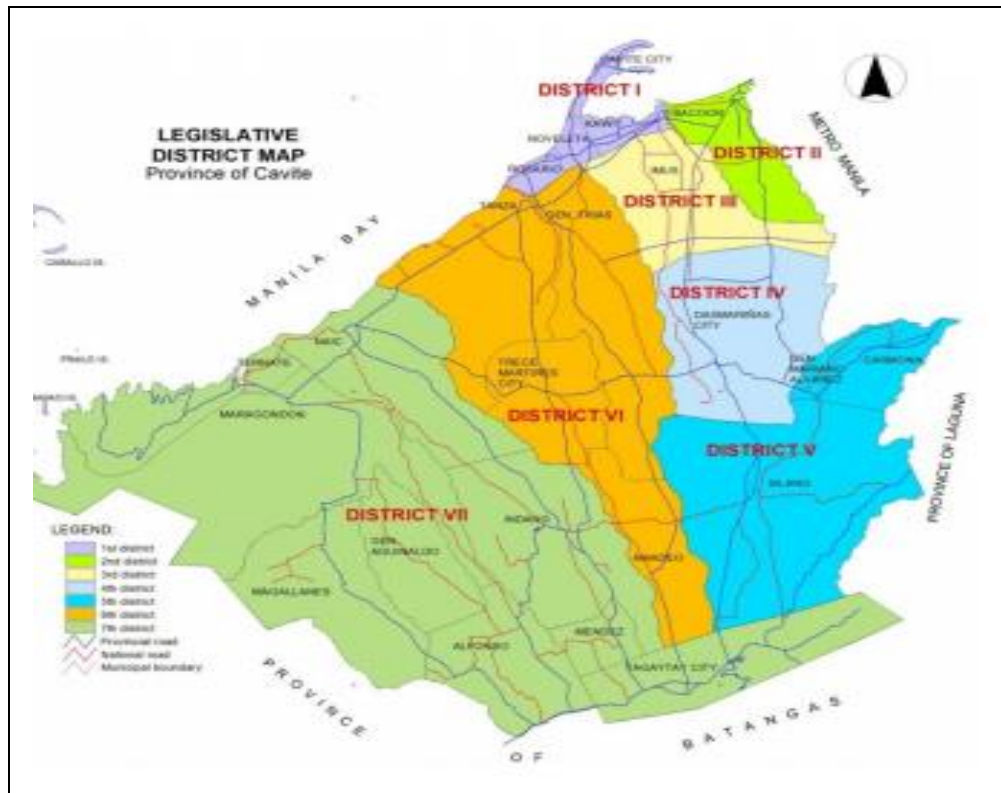


Figure 5. Legislative District Map of Cavite.

Source: Cavite Ecological Profile 2017

Captured with the potential of farm tourism, the establishment of farm destinations in the province of Cavite has emerged. Its growth is attributed to having been endowed with good climate, beautiful nature, and mountainous attributes. Cavite is picturesque of scenic destination with wonderful mountains, cave, and falls that can truly fascinate the tourists. Surrounded by natural resources, the city dwellers prefer to visit the upland area of Cavite where the 8th district is located and take spoil from the city hustle and bustle, with a journey to a rural lifestyle and tranquility.

Currently, there are 34 farm destinations existing in the 8th District of Cavite, out of which four are accredited by the Department of Tourism. Due to its popularity to both foreign and local tourists, influx in the province increased by 11% in 2017, reaching 6.62 million arrivals, domestic tourism alone made an estimated 96,720,627 on that year (Santiano, 2018). In the 8th District of Cavite, there were 3,661,342 tourists that visited in 2017 (Cavite Ecological Profile, 2017).

### Competitiveness of Farm Destinations

The world is filled with dynamic conditions and direct upgrading of enterprises. In today's global market,

businesses are looking for the right way to maintain their competitiveness and sustain over time. Consumers now are faced with arrays of choices and competition cannot be avoided. Yvahogo (2006) state that the concept of competitiveness has evolved and has proven to be broad and not precisely defined. Various authors define competitiveness, for Huggins (2000) as cited in Tsai, H., Song, H., & Wong, K.F. (2009) competitiveness involves an element of productivity, efficiency and profitability as a means of achieving growth in the standard of living and increasing the social well-being. Eventually, the issue of competitiveness in farm destinations has become important. A destination is considered competitive if it can satisfy and meet the tourists' expectations with memorable experiences. It remains competitive as long as it can create a competitive advantage which is largely based on valuable, rare, and cannot be easily substituted assets or resources (Barney, 1991).

#### Factors of Competitiveness of Farm Destinations

Farm destinations have to promote specific factors that distinguish them from a similar destination. Identifying factors that influence competitiveness is imperative to compete. The factors comprise of core resources, supporting resources, Destination Management, competitive environment, and qualifying and amplifying determinants form part in the Integrated Model of Destination Competitiveness of Dwyer et al (2003). This model has been empirically tried in Korea and Australia in 2001, Slovenia in 2014 and in Serbia in 2009 (Armenski et al., 2011). Some of the variables identified in the Destination and Sustainability model of Ritchie and Crouch (2000,2003) have been included in this model. Ritchie & Crouch model is the most familiar conceptual model in tourism article and has been the foundation of many research literature about destination competitiveness (Goffi, 2013).

The Integrated Model of Destination Competitiveness seeks to a more realistic picture of associations between diverse parts that is custom fitted to a particular characteristics of destination competitiveness. Its main determinants are inherited, created and support resources that were grouped together to give emphasis on the importance of resources towards competitiveness as well as the destination management, situational conditions, and demand condition (Armenski et al., 2011).

The destination can increase competitiveness if it can improve the resources inside its framework (Day, 2016). The resources serve as the lifeblood of the destination (Page, 2010) because they create appeal, ambiance, experience, and attractions. However, the destination cannot depend on natural attractions alone, created resources are imperative to compete. Natural resources are components that exist without the inputs of people (Sawe, 2018) while cultural resources have features like historic sites, heritage, and conventional. In his study in Istanbul, Yozcu (2016) disclosed that the rate on competitiveness is high due to endowed and created resources. In addition, Huachin et al. (2014) divulged that in their study in Annah Rais Longhouse Homestay Sarawak, Malaysia both cultural heritage attractions and natural resources found to have a positive impact on the development of destination competitiveness from the residents' viewpoint.

Support resources are also essential to achieve competitiveness, it is one of the reasons why prospective tourists choose the farm destination over the other. These helping resources are provided by the farms to add value to the main attractors. A destination with lots of core resources and attractors but lack in supporting factors may find it difficult to compete. In their study, Michael, Reisinger, and Hayes (2019) found that the factors influencing the tourism competitiveness of the United Arab Emirates are the destination resources, destination infrastructure, and support services, and the general business environment.

Likewise, the qualifying condition of farm destinations has a lot to do with tourists' decision to visit. Choenkwan et al. (2015) revealed in their study that the main determinants of the successful agro-tourism in Phu Ruea District, Northern Thailand are not only the richness of natural resources, scenic landscapes, and pleasant climate but the accessibility and distance as well. Moreover, Eid, El-Kassrawy, and Agag (2019) proved in their study that political (in) stability and destination image have strong effect on tourists' satisfaction and their intention to recommend UAE as a tourist destination.

Taking into account also are the situational conditions that built a competitive environment. The situational condition can moderate, alter, or mitigate destination competitiveness by filtering the impact of the other groups of factors and thus may be positive or negative in their influence on competitiveness (Dwyer & Kim,

2003). Several types of situational conditions that impact destination competitiveness are destination location, micro and macro environment, strategies of firms, security, safety, and the political aspect (Omerzel, n.d).

In the same manner, destination competitiveness specializes in activities to qualify destinations by establishing policies, making plans and overseeing the quality of services. The creation of tourism policy and empowering conditions is one of the pillars of travel and tourism competitiveness (Calderwood & Soshkin, 2019) that enables the farms to compete. When ineffectively managed and conditioned, cultural and natural assets of destinations can deteriorate, wrongdoings might develop, women and youths maybe abused, and money related benefits can moreover spill out of the economy (Weldearegay, 2017). Destination Management includes elements that upgrade the attractiveness of the inherited and created assets and fortify the quality of the supporting factors.

### 3. Research Methods

This study utilized Descriptive research design. The descriptive research describes the farm profile, factors of destination competitiveness, and supply-side stakeholders' level of agreement on farm destinations competitiveness. This study covered the 10 selected farm destinations in the 8th District of Cavite. Two farms were selected from Tagaytay City, four farms from Alfonso, one farm from Maragondon, and three farms from Mendez-Nuñez.

A total of 158 supply-side stakeholders were accounted for this study. These include the 10 farm managers and other supply-side stakeholders that determine the degree of tourism competitiveness in the district. They were composed of Local Government Unit Officers, Municipal Tourism Officers, Barangay Tourism and Environment Management Officers, farm workers, business partners from Technical Education and Skills Development Authority (TESDA), Agriculture Training Institute (ATI), and farm local suppliers. Purposive sampling was used to determine the farm destinations from the list of farms provided by the Department of Tourism provincial office. Farms operating for five years or more were selected.

The researcher-made questionnaire was the main instrument of the study, the instrument developed has moderate internal reliability. Following content validity, the significant correlation between indicators has high validity measures. The result of reliability testing is done by using Cronbach's alpha. Statistical tools used to analyze the gathered data from the participants were frequency, percentage, and weighted mean.

### 4. Results and Discussion

Economic Profile of farm destinations in the 8th District of Cavite as identified by Farm Managers.

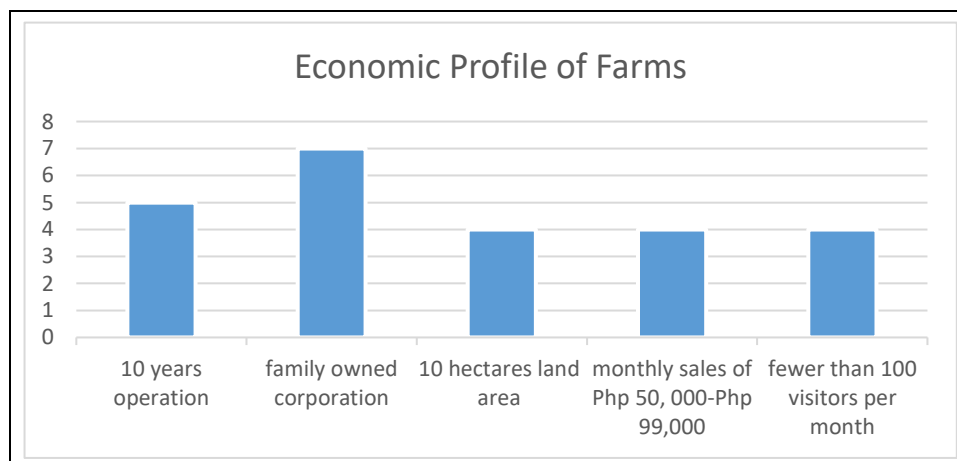


Figure 1. Economic profile of farms in the 8<sup>th</sup> District of Cavite

The finding reveals that from among the participating farms, five are operating for more than 10 years, seven are owned by family corporations, four farms have more than 10 hectares of land area, four generate monthly sales of Php 50,000 to Php 99,999, and four farms have an average number of fewer than 100 tourists visit per month.

#### Farm Resources

All participating farm destinations in the 8th District that offer crop attractors, natural attractors, and have structural designs. It can be attributed to the fact that the district is located in the mountainous area of Cavite. The 8th District of Cavite, having been located in a region with rich natural resources, could arguably be premised as high in inherited resources. Definitely, many factors of environment like natural resources play essential roles in attracting travelers to visit (Huachin et al. 2014). In his study, Abocejo (2015) found that in Cebu City, Philippines tourism destination competitiveness is strengthened by its diverse historical and natural resources and rich cultural milieu. Likewise, Ancincovo (2014) revealed that at Zlin region is competitive in endowed resources and that the nature, architecture, traditions and pleasant environment are perceived as strong competitive factors of the destination.

Created resources are tourism superstructures which are manmade (Mihalic, 2013). In the 8th District of Cavite six farms have created resources in the form of educational and eight have leisure activities. It implies that farm destinations in the district are set up to offer real educational opportunities and joyful experiences for tourists. The finding shows that all farm destinations have mobile communication, restroom, water, electricity, and informational signages as support resources. It implicit that farm destinations in the district have high regard for support resources on tourism infrastructures. The quality of supporting services is important to achieve tourist satisfaction, Budiasa and Ambarawati (2014) in their study at Salak Sibetan, Bali Indonesia disclosed that even though the destination was supported by stakeholders and was continuously developed still it has few numbers of tourists due to conditions like limited capacity of the people in agro-tourism, limited budget to provide many standard facilities, lack of adequate promotion and limited agro-tourism landscaping.

Supply side stakeholders' level of agreement on factors of Destination Competitiveness.

The supply side stakeholders "Strongly Agree" that the farm destinations at the 8th District of Cavite have inherited resources as factor of competitiveness ( $M=4.32$ ). It simply denotes that the farm destinations primary competitive advantage is on natural resources. Serdarusic and Tustonijic (2017) revealed in their study that in Lika Region, the most important factors of tourists stay in the destination is the preserved nature and unpolluted environment. In addition, Hanafiah et al. (2016) uncover that core resources and attractions serve as the fundamental factors in motivating tourists to visit one destination over the other.

The supply-side stakeholders "Agree" that farm destinations have created resources as a factor of destination competitiveness ( $M=4.10$ ). It implies that farm destinations offer created resources through variety of attractors and activities for tourists. The highest level of agreement pertains to the educational activities offered based on the appropriate needs of visitors or tourists ( $M=4.43$ ). It affirms to the claim of Notorio et al. (2016) that in the province of Cavite, farm tourism is highly recognized for the educational tours.

The supply-side stakeholders "Agree" on the support resources factors of destination competitiveness ( $M=3.57$ ). This evinces that farm destinations have destination competitiveness in terms of support resources.

The supply side stakeholders "Moderately Agree" on destination management ( $M=3.09$ ). This connotes that the farm destinations at the district need to strengthen the management of some elements that make up the destinations. The participants "Strongly Agree" that farm destinations have competitive environment on demand condition ( $M=4.34$ ). It indicates that farm destinations in the district have the ability to create demand from tourists. In the study of Sachitra and Chong (2018) in Sri Lanka, they have found that the marketing capability of farm destinations have significant relationship with competitive advantage.

The supply-side stakeholders "Agree" on the situation condition qualifying and amplifying determinants of farm destinations ( $M=4.16$ ). The highest mean is that the destination is safe ( $M=4.91$ ). It implies that the district farm destinations' situational conditions encourage competitiveness on safety. Lago (2017) in his study in the

province of Quezon, Philippines disclosed that tourism and agriculture were relatively strong in terms of situational condition and safety and security is one of the major consideration of tourists to visit the agritourism destinations.

## 5. Conclusions

Farm destinations are viewed as a small scale, low impact farms that provide continuous income all year through the various farm resources offerings. In terms of offerings, inherited resources are the major attractors of farm destinations. This can be attributed to the fact that the district is located in the mountainous area of the southern part of Cavite with rich natural resources. The farm destinations have high demand condition which is accredited to the fact that Tagaytay City, one of the famous destinations in the Philippines is situated in the 8th District of Cavite. In terms of Destination Management, there is a need to strengthen some elements that make up the destinations in order to enhance activities specifically towards competitiveness and sustainability.

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## **Percieved Organizational Support And Knowledge-Sharing Behaviour : an Evidence To Improve Organizational Performance Of School Principals in The Education Office Central Java**

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### **Abstract**

The performance of school principals is not optimal in mastering the main tasks and functions, this happens because there are still gaps in optimizing the performance of school principals. This study develops and proposes a new basic model by adopting the concept of Percieved Organizational Support and Knowledge sharing behavior which is expected to realize an increase in the performance of school principals. This study proposes four hypotheses using quantitative research methods. The model was tested on 110 respondents who were selected through a purposive sampling method from the Department of Education and Culture in Central Java using AMOS 22 as a data analysis tool and the results of the study were four hypotheses accepted. The main finding in this study is that the variable Knowledge sharing behavior and percieved organization support has succeeded in driving the performance of school principals, so that knowledge sharing behavior and percieved organization support become competency development strategies in improving the performance of school principals.

**Key words:** Performance organization, Percieved Organization Support, Knowledge Sharing Behavior, Education OfficeY

## 1. Introduction

There are several previous studies that discuss issues that examine performance. Among other things, Dharma (2005) states that performance appraisal is based on the understanding, knowledge, expertise, expertise and behavior needed to carry out a job well and analyzes the attributes of a person's behavior according to the criteria specified for each work of a high-performance / high-commitment organization. that "success and maintaining the success of high-level performance requires a good location and work environment practice and is able to develop and provide changes towards better the elements of knowledge and the ability of employees to create value" (Appelbaum et al., 2009).

Performance, when linked to the sharing of knowledge from service users and frontline service personnel, will affect organizational performance (Melton and Hartline (2013) Berry, Shankar, Parish, Cadwallader, and Dotzel (2006) serving leadership and employee creativity has been shown to be influential. However, as a basis, the mechanism by which leaders serve leads to employee creativity, the various studies above show that organizational performance has not been maximized, so by previous researchers it is necessary to further study how and in what elements the leadership serves to motivate followers to sharpen input. their opinion for the organization involves behavioral creativity, therefore it needs to be optimized to improve behavior and perceptions in the organization. Perceptions of organizational support affect behavior outside work roles and employee intensity. The higher the perception of organizational support in terms of traditional healers Bro, job security, will make employees feel obliged to reciprocate by voluntarily engaging in behavior outside their work roles. In understanding organizational support, several studies have proven that high POS also has a positive impact on employees in terms of subjective well-being both on and off the job. Thus, POS was found to be associated with higher levels of job satisfaction (Caesens and Stinglhamber 2014).

Sharing knowledge can be seen as "the media or receipt of task information, stimuli and responses along with knowledge in providing assistance to others and to synergize with others to provide solutions or develop ideas, results or more sophisticated ways" (Park and Kim, 2015) Knowledge sharing can take place when people want knowledge from various parties to find solutions, are willing to provide assistance to others and are able to learn skills in developing abilities from others (Davenport and Prusak, 2000; Yang, 2007).

There is some empirical evidence related to increasing organizational performance being able to improve performance, but there are still some research gaps, the results of the description above are evidence related to the inadequacy of various factors that try to improve performance, related to this research gap, this research seeks to develop new conceptual models related to increased performance. organizations by taking the concept of Percieved Organizational Support and knowledge sharing behavior as an effort to drive organizational performance through competitive motivation and emotional competence.

## 2. Study the literature

### 2.1. Motivation Coqnitive, Percieved Organization Support, Performance Organization.

Studies carried out in the latter part of the decade claim not only that achievement motivation is a type of personality psychology and corresponds to the extent to which one can carry out challenging scientific facets. Success can be linked to the ability to cope with the positive effects of the moment doing the work (for example Nygård & Gjesme, 1973) the emotional conditions that are prevented and experienced by employees with high achievement motivation while doing the task if there are problems can overcome the negative effects caused by inappropriate trials, thereby minimizing the need to initiate adjustments knowledge (see for example Schuch, Zweekings, Hirsch & Koch), 2017; van Steenbergem et al., 2009). This concept of motivation provides an explanation of behavior as a result of a conscious choice drawn from alternatives related to psychological processes, specific views and modeling of beliefs and attitudes. . This description is based on personal beliefs about the subjective possibility that a particular behavior or effort by the individual focuses on the success of a particular area. The purpose of choosing is to increase pleasure and reduce dislike. Furthermore, certain

achievements are believed by individuals to produce certain things (Tjahjono, 2007).

An action that is considered constructive organizational behavior forming part is a picture of psychological capital in future research (Luthans, Avolio, Avey & Norman, 2007). Cognitive Motivation which provides a foundation of self-awareness, is often interpreted as a process and pattern of behavior, which is built on psychological competition that is meaningful and at the same time contributes to the development of these competencies, is formed on the basis of transparency, openness and trust, guides meaningful goals and focuses on follower development (Gardner, Avolio, Luthans, May & Walumbwa, 2005; Luthans & Avolio, 2003; Walumbwa et al., 2008). Cognitive processes are essential for many behaviors that have cognitive competence. This is very important for many behaviors that have clinical and social relevance (for example, Young et al., 2009) and are normatively associated with (developing) physical and mental conditions (Diamond, 2013), such as mathematics and reading ability in early childhood and social functions (Blair & Razza, 2007; Carlson & Moses, 2001). Conversely, the ability to know the cognitive side of the agreement has a detrimental effect on society, for example, alcohol abuse, crime, and antisocial behavior (eg Chamorro et al., 2012). Positive Motivation which has characteristic features; Individuals who are challenged, anticipate, build internalized creativity with a balanced process and transparent relationships, are human resources capable of increasing confidence in performing conflict tasks, able to fight negative emotions that arise with conflicting experiments so as to encourage organizational support. Perceived organization support (POS) is expected with employees to show a picture of understanding consistent with statements about whether the organization rewards their involvement and will treat them well or ill in different circumstances. Eisenberger et al. (1986). Further exploratory and confirmatory factor analysis with employees from work and organizational backgrounds provides facts for high internal reliability and unidimensionality scale. Eisenberger et al 1986. Perceived Organizational Support (POS) according to Eisenberger. Et al (1986) in Liu (2004). POS represents a significant part of the social exchange linkages between employees and superiors, because POS implies what the organization has given to employees according to what employees believe.

This study underscores the idea that organizations need to provide support to employees at start-up and during organizational change initiatives, because POS is significantly associated with trust in management and organizational change attitudes. This can be achieved through, caring for opinion, caring for well-being, giving consideration goals and values. (Eisenberger, Fasolo, and Davis La Mastro's 1990). Thus, cognitive motivation becomes a factor in increasing employee job satisfaction which in the end can be interpreted as organizational support, with optimal organizational support that can encourage an increase in Organizational Performance.

Organizational performance is the totality of the performance achieved by an organization. Organizational performance can be seen from the level of how far the organization can achieve its goals based on previously agreed goals. Public Emotional Competence Contribution, where people are recognized by others as competent actors based on appropriate emotional displays, as described in research on emotional work, public Emotional Competence also includes not showing emotions in situations that are considered to require emotional control to achieve rewards and structure organization. Thus, Emotional Competence will be able to increase the competence of human resources needed by the organization to build organizational support that will increase its products / outputs, which in turn increase organizational performance.

*H1. The higher the positive motivation, the higher the perceived organization support.*

*H3. The higher the perceived organization support, the higher the Performance Organization*

## 2.2. Emotional Competence, Knowledge Sharing Behavior, Performance Organization.

Emotion, in this case, is conditioned institutionally and has an important intersubjective component (Barbalet, 2001; Fields, Copp, & Kleinman, 2007). Emotion not only influences people's involvement with institutions but is also closely related to the management and creation of discipline and order. institutional (Creed et al., 2014; Moon, 2013; Shott, 1979). The ability to position oneself in society, to feel and show certain emotions in certain circumstances is related to important social status, such as class and gender (Nixon, 2009; Reay, 2004). The need to manage and experience personal emotions and emotional displays in a secure manner that is valued by institutional references makes some people and groups privileged over them in other positions. For example,

Creed et al. (2014) explained that, from an institutional perspective, shame is not only an intrapersonal emotion but serves a disciplinary function by subtly providing facilities in accordance with the institutional order by providing appropriate facilities enabling people to internalize it. In short, internalized attachments in ethics make people seek something that is valid as an actor in the institutional process and thus affirms themselves and their expectations of the institutional setting. People value the naturalness and originality of themselves and others' emotions refer to institutional ethics to establish themselves as competent actors, they involve emotional regulation and seek to present emotions in institutional settings. Emotional Competence provides an explanation of the ability to experience and display emotions that are deemed appropriate for the role of actors in institutional ethos, in other words, the ability to experience emotions needed to get authorization from others. Contribution of Emotional Competence, where people are recognized by others as actors competent based on appropriate emotional displays, as described in research on emotional labor (eg. Hochschild, 1983). Public EC also includes not showing emotions in situations that are considered to require emotional control (eg, Diefendorff & Greguras, 2009).

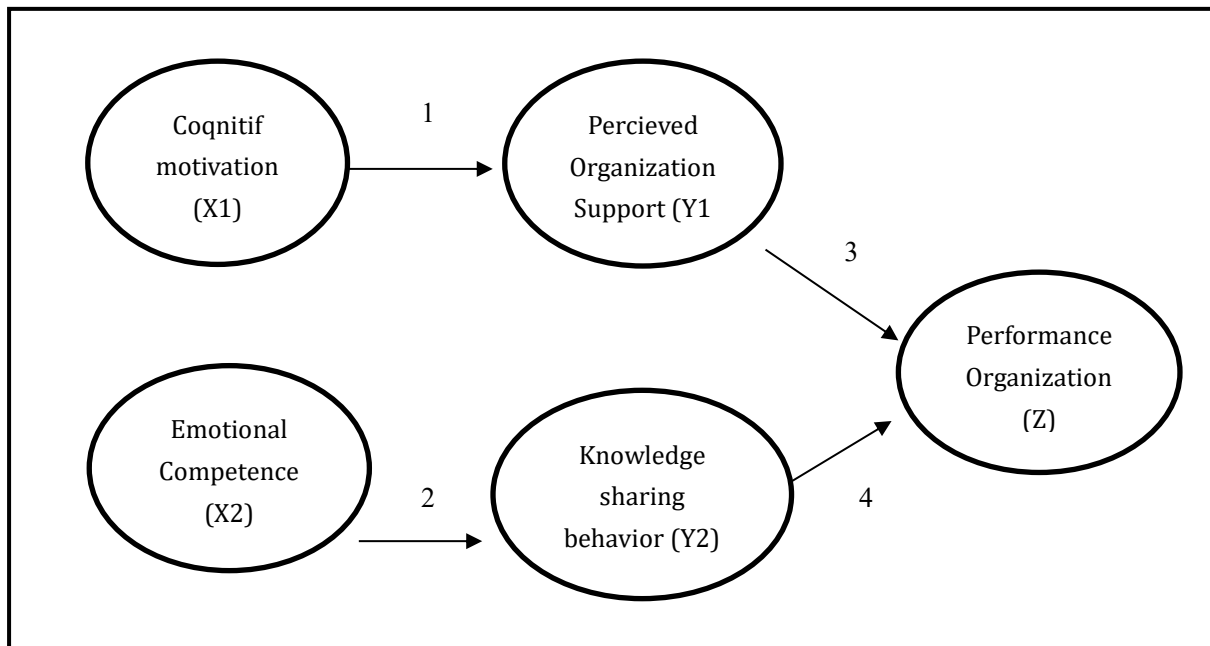
Actions can appear fluid and professional because of their real emotional expression (Grandey, 2000) -To illustrate, we consider what roles might be played with emotions in order to be authorized as competent academics. The conventional wisdom is that emotions are the product or by-product of action and awareness (for example, successful academics feel proud and satisfied, while unsuccessful ones feel embarrassed and frustrated). Emotional Competence development is one of the factors that increase employee job satisfaction, where employees can communicate with various parties at work, thus encouraging knowledge transfer which can be interpreted as knowledge sharing behavior within the organization. Knowledge sharing behavior (KSB), gives understanding as individuals who exchange knowledge and ideas through discussions to make knowledge or popular ideas, that is the meaning of sharing knowledge. Hislop (2002) proposes an idea that the relationship between various attitudes and behaviors of employees to share knowledge and employees who are ready to share knowledge is an effort to correlate the two-sided relationship of understanding between ethics and personality. This relationship between the will of employees to participate in sharing this knowledge is a crucial process for the organization to be successful. There are several organizations that benefit from leveraging knowledge sharing (O'Dell & Grayson, 1998). They found that companies like Buckman Laboratories and Texas Instruments and the huge savings at Dow Chemical and Chevron were capable of sharing knowledge. Cheng (2002) stated that sharing knowledge can help employees to understand about work and admit it personally within the department. After sharing knowledge is formed, the company will be able to increase the synergy competitive side. Many employees are not ready to share their knowledge (Chow, Deng, & Ho, 2000). They illustrate that this phenomenon occurs because employees are afraid of losing their knowledge. Although many organizations use technology to support knowledge-sharing behavior, the problem still exists and is far from successful (Grumbley, 1998). Encouraging employees to share knowledge is a constraint because that knowledge is within them and is evidence of strength for them (Grumbley, 1998). Because of his condition, Mason and Pauleen (2003) note that sharing this knowledge is a formidable challenge for those who are leaders. Once knowledge sharing is built up, companies will be able to have a sustainable competitive advantage. This has the potential to create optimal Knowledge sharing behavior so that it can improve Organizational Performance.

Organizational performance is the totality of the work achieved by an organization, the performance of the organization can be seen from the level to which the organization can achieve its goals based on predetermined goals. The development of emotional competence increases employee job satisfaction, where employees can communicate with each other with various parties, thus encouraging the transfer of knowledge so as to improve products / outputs which can then encourage increased organizational performance.

*H2. The higher the Emotional Competence, the higher the Knowledge sharing behavior*

*H4. The higher the Knowledge sharing behavior, the higher the Performace Organization.*

### 2.3. Model



## 3. Methodology

### 3.1. Population and Sampling

Techniquesm The data collection technique used a structured questionnaire. The population was taken from the principal in the province of Central Java. These personnel are selected because they are responsible for carrying out the main duties of the principal's function and the completion of work and for guiding and directing the activities of the education unit to achieve goals. Therefore, they must have knowledge of the strategic orientation that their organization is pursuing, and their technical capabilities. This survey was carried out by visiting the site with a cover letter explaining the purpose and importance of the study, promising strict confidentiality of the responses, and having received permission from the leadership and regulatory authorities. For this study, an easy-to-use sampling method for selecting samples. Distribution of printed questionnaires is based on accessibility criteria, the questionnaire that is submitted is 110 questionnaires and 110 questionnaires are complete and usable. This study measures all study constructs using a multi-item scale obtained from literature and questionnaires in Indonesian. Furthermore, a list of measurement items with standardized estimates and critical ratios to evaluate the construct validity of the concepts used in this study is based on the AMOS output of confirmatory factor analysis (Arbuckle 2012).

### 3.2. Sampling and data collection

The survey was conducted by distributing questionnaires to 110 school principals in the Education and Culture Office of Central Java Province, using a purposive sampling technique. The criteria for responding are permanent lecturers who have carried out the e-learning process.

The characteristics of the respondents are: characteristics based on gender: 40 men (36.37%) and 70 women (63.63%); based on age: under 40 years: 10 people (9.1%), 40 to under 45: 40 people (36.37%), 45 to under 55: 35 people (31.81%), and above 55: 25 people (22.72%); 3) according to group: IVA group: 65 people (59.1%), IIID group: 38 people (34.54%), IIIC group: 7 people (6.36%), 4) According to years of service: less than 4 years: 8 people (7.27%), 4 to 8 years: 54 people (49.1%), 8 to 12 years: 42 people (38.18%), over 12 years: 6 people (5.45%).

### 3.3. Validity and Reliability Testing

Researchers designed a questionnaire with 14 questions. The measure consisted of a multi-item scale adopted from previous research. Table 1 shows the variables used in our model, as well as descriptive statistics.

#### 3.3.1. Validation Test.

The validity test is carried out by using the loading factor or Average Variance Extracted technique for all constructs higher than the cut-off level of the standard 0.50 which is carried out by correlating the value obtained from each question item with the total value.

#### 3.3.2. Reliability Test.

Malhotra (2006: 75) an instrument is said to be reliable if the Cronbach Alpha value is greater than or equal to 0.6 ".

Research instruments and test results are presented in tabular form.

Table 3.1. Research instruments and test results

Name and reflective scale items (measured on a Likert scale of 1-5 points which indicates the extent to which the respondent agrees with the following statement)	Local loading standards
Organizational performance (Cronbach's $\alpha = 0.729$ )	
-service quality.	0,622
- satisfaction served	0,688
-achievement of objectives	0,712
Cognitive motivation (Cronbach's $\alpha = 0.720$ )	
- Specific jobs	0,669
- Positive organizational commitment	0,722
- Commitment to career advancement	0,883
- Positive working climate	0,8813
Emotional competence (Cronbach's $\alpha = 0.831$ )	
- To take positive initiatives of organizational policies	0,890
- High work dedication	0,782
- Morale increased	0,774
- Developing self-organization.	0,711
Perceived Organizational Support (Cronbach's $\alpha = 0.802$ )	
- Care about opinion	0,892
- Concerned about welfare	0,741
- Consider goals and values	0,762
Knowledge sharing behavior (Cronbach's $\alpha = 0.813$ )	
- Coordination	0,883
- Target	0,725
-Sharing knowledge	0,616



## 4. Results and Discussion.

### 4.1. Model Feasibility Testing

Researchers used variance-based structural equation modeling (SEM), namely, partial least-squares SEM, to analyze the data in this study the inclusion of formally measured constructs and due to our small sample size (Haenlein & Kaplan, 2004; Hair Jr., Hult, Ringle, and Sarstedt, 2016; Reinartz, Haenlein, & Henseler, 2009; Richter, Cepeda, Roldan, & Ringle, 2016).

The table of Goodness of Fit criteria for testing the feasibility of the whole model (full model) in the SEM analysis, is shown in the table

Tabel 4,1, Criteria Goodness of Fit Model

<i>Goodness of fit indices</i>	<i>Cut-off value</i>	<i>Cut-off value of The Result</i>
$\chi^2$ ( Chi-Square )	Diharapkan kecil	Diharapkan kecil
<i>Significant Probability</i>	$\geq 0,05$	93,274
CMIN/DF	$\leq 2,00$	0,408
RMSEA	$\leq 0,08$	0,062
GFI	$\geq 0,90$	0,819
TLI	$\geq 0,95$	0,843
CFI	$\geq 0,95$	0,978

Source: Secondary data processed in this study

By looking at the RMSA figure that is less than 0.08. And although the GFI, TLKI and CFI figures show a figure smaller than 0.9, there is no problem with the arrangement of the model.

### 4.2. Hypothesis test.

The next step is testing the hypothesis for the causal relationship between variables using the CR-Critical ratio criteria equal to or greater than 2.0 (Arbuckle 2012). Then testing the empirical analysis model (output model). The outer model is a model that determines the relationship between latent constructs and their indicators. In other words, the hypothesis defines how each indicator is related to other latent constructs, as described in the Table.

Table 4.2. Hypothesis Testing Results

Hypotheses	Estimate	S.E	Critical Ratio	P value ( $\leq 0,05$ )	Results
<i>H1 The higher the achievement motivation, the higher the perceived organization support.</i>	0,821	0,55	2,228	0,00	H1 accepted
<i>H3. The higher the perceived organization support, the higher the Performance Organization.</i>	0,722	0,49	2,416	0,00	H3 accepted



<i>H2. The higher the emotional competence, the higher the Knowledge sharing behavior.</i>	0,741	0,47	2,318	0,02	H2 accepted
<i>H4. The higher the Knowledge sharing behavior, the higher the Performace Organization.</i>	0,805	0,41	2,388	0,00	H4 accepted

Source: Secondary data processed in this study

H1. The role of cognitive motivation, influencing Perceived Organization Support (table 4.2.) Describes the relationship model of positive motivation with Perceived Organization Support. The findings of the relationship between the two variables indicate that there is a significant relationship between the strategic role of CM and POS ( $t = 2,228 > 1.96$ ) with significance value ( $0.00 < 0.05$ ). Therefore, Hypothesis 1 is accepted.

H2. The role of Emotional Competence, influencing Knowledge Sharing Behavior (table 4.2.). Describe a model of the structural relationship between Emotional Competence and Knowledge Sharing Behavior.  $0.02 < 0.05$ ). Therefore, Hypothesis 2 is accepted.

H3. The role of Perceived Organization Support, influencing Organizational Performance (table 4.2.) Describes the relationship model between Perceived Organization Support and Organizational Performance. The structural path findings indicate that there is a significant relationship between the strategic role of POS and PO ( $t = 2.416 > 1.96$ ) with a significance value ( $0.00 < 0.05$ ). Therefore, Hypothesis 3 is accepted.

H4. The role of Knowledge Sharing Behavior influencing Organizational Performance (table 4.2.) Describes the structural relationship model of Knowledge Sharing Behavior support with Organizational Performance. The findings of the structural paths indicate that there is a significant relationship between the strategic role of KSB and PO ( $t = 2.388 > 1.96$ ) with a significance value ( $0.00 < 0.05$ ). Therefore, Hypothesis 4 is accepted.

## 5. Discussion

Based on the empirical test results of the proposed model, it can be seen that the structural model is good. Hypotheses H1, H2, H3 and H4 are accepted, and they influence the model to be applied in improving organizational performance (school principals) in the Central Java Provincial Education Office. With Positive Motivation (CM) the concept of personality psychology and refers to the extent to which a person enjoys doing challenging cognitive tasks.

This enjoyment is associated with the capacity to anticipate positive effects when performing tasks (Nygard & Gjesme, 1973), perceived organizational support has a positive and significant impact on organizational commitment, the higher the perceived organization support, the higher the performance of human resources, this is in line with Gustiana's research. Bawi (2015) has tested Percieved Organization Support according to Rhoades and Eisenberger (2002) referring to employees' perceptions of the extent to which the organization assesses their involvement. With increased coordination and organizational goals that are understood by employees and building a culture of knowledge sharing (Mathuramaytha, 2012) it is proven to encourage improvement. service institutions so that organizational performance increases.

Based on the results of the empirical test of the proposed model, it can be seen that the structural model is good and tested with the Goodness of Fit criteria to test the feasibility of the whole model (full model) in SEM analysis. Based on hypothesis testing, H1, H2, H3 and H4 are accepted, and they affect the model to be applied in improving the performance of school principals at the Central Java Provincial Education Office. With the latent construct of positive motivation (CM) inherent in Specific Work, by providing guidance, direction, and encouragement to subordinates, specific roles, by providing motivation to always work well (Avolio, Gardner, & Walumbwa (2007), has proven to have a significant effect. Against Percieved Organizational Support (POS) The latent construct positive motivation is a concept from the psychology of personality and refers to the extent to which a person enjoys performing challenging cognitive tasks. with the capacity to anticipate positive

influences when performing these tasks (eg Nygård & Gjesme, 1973). Emotional Competence (EC) encourages employees to treat institutions that care about welfare and pay attention to their opinions, which is a form of Knowledge Sharing Behavior (KSB) proven to encourage the improvement of institutional services so that organizational performance increases. Public institutions in Indonesia recognize the importance of excellent service by prioritizing internal improvements by building knowledge-sharing behavior and institutional support for employees, so that employees can work better.

## 6. Conclusion

Resources as the main capital that are important for an organization or institution. Optimal use of human resources will be able to improve organizations in realizing institutions to maximize their profitability, the concept of emotional competence has been able to cause companies to shift to organizational learning related to compensation, careers and others, which turns out to be able to lead organizations to a concept of productivity results that will later be able to maximize the advantages of the institution, the emergence of the concept of organizational innovation and task implementation has been able to lead organizations to achieve maximum results. These findings have answered the formulation of problems as stated earlier regarding solving organizational performance problems, this model has contributed several hypotheses that have been accepted as a result of data analysis, The two concepts of mediation have also succeeded in showing their mediation to improve organizational performance, this implies that the concept has driven organizational performance.

### 5.1 Advice and implications

This research has provided a new basic model as a new answer to solving performance problems which is expected to provide a novelty for resolving organizational performance. The concept of organizational support mediation has been able to provide employee cognitive output to provide ideas for organizational development and task implementation quality as well as does not directly lead to increased performance.

5.2 Upcoming research agenda Future research is expected to provide a clear picture of the results to improve teamwork performance, this can be added to research variables in this model, including Emotional Competence, cognitive motivation to make research related to relationships between Knowledge Sharing Behavior and Percieved Organization Support to improve organizational performance.

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## Knowledge Sharing Behavior And Percieved Organization Support, An Effort To Encourage Performance Organization

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### Abstract

The Education Office as a public institution that provides educational services to the community has experienced a decline in target achievement, this is possible because the performance of the leadership is not responsive to problems that arise, and / or there is discommunication between leaders and subordinates and among subordinates. This study develops and proposes a new basic model by adopting the concept of knowledge sharing behavior and percieved organization support as a mediation with Authentic Leadership and Communication Satisfaction as independent variables, which are expected to improve performance. This study proposes four hypotheses using quantitative research methods. The model was tested on 120 respondents who were selected through purposive sampling method from educational institution in Central Java Province Indonesia, using AMOS 22 as a data analysis tool and from the research results obtained four accepted hypotheses. The main finding in this study is that the variables of knowledge sharing behavior and percieved of organizational support have succeeded in mediating the Authentic Leadership and Communication Satisfaction variables, so as to encourage an increase in the performance of the Education institution.

**Keywords:** *knowledge sharing behavior, percieved organization support, Performance Organizatioan and Education Office.*

### 1. Introduction

Superior human resources are those who are able to produce a high level of competition for companies such as intellectuality, creativity and critical thinking (Rowland 2013, Chen and Huang 2009; Tanand Nasurdin 2011). The ability from the aspect of innovation is an aspect that must be done by human resources in terms of capabilities (Jime'nez-Jime'nez and Sanz-Valle 2008). The success or failure of an organization depends on the human resource capabilities of the organization, either individually or as a team. This must be done because innovation is the strategic side of planning in further organizational development and development so that it is impossible for an organizational innovation to be realized in real terms without strategic planning from its human resource planning (Farazmand 2004). Competition and changes in the competitive organizational environment require organizations to innovate so that the organization remains competitive (Farazmand 2004) (Jime'nez-Jime'nez and Sanz-Valle 2008). The achievement of organizational targets as an indicator of organizational success is not only realized from the ability of strategic human resources, but the need for



dynamic teamwork (Rowland 2013) (Eisenberger et al. 2001).

From these problems, theoretically it has been discussed in several journals as an effort to improve institutional performance, weak coordination weakens performance. Then Other authors convey work culture, work discipline and coordination, where work discipline partially affects performance and coordination partially affects performance. From this description, there is empirical evidence related to improving organizational performance, but there are still some research gaps. The results of the above description are evidence that various factors are not optimal that try to improve performance. Researchers seek to develop a conceptual model for improving organizational performance, related to the research gap above by adopting Knowledge sharing behavior (Hussain et al., 2017) and Percieved organization support (Gigliotti et al., 2018) to improve performance that mediates authentic leadership (Leroy et al., 2015) and Communication Satisfaction (Vermeir et al, 2018), the effect on performance is expected to improve organizational performance.

## 2. Study the literature

### 2.1. Authentic Leadership (AL), Knowledge sharing behavior (KSB), Performace Organization (PO).

Constructive leadership that has occurred in line with the increasing need for effective leadership today is a type of authentic leadership and in studies conducted in recent years it is not only stated that traditional leadership styles are starting to be abandoned, because with ethical and specific behavior affecting followers, it is also a theoretical basis of this approach with concepts such as positive organizational behavior; transformative leadership and ethical viewpoints such as ethical and specific behavior (Avolio, 1999; Avolio & Gardner, 2005; Luthans, 2003; Luthans & Avolio, 2003). Constructive organizational behavior is considered to form a substructure of the concept of psychological capital in future studies (Luthans, Avolio, Avey & Norman, 2007). Processes and patterns of behavior, which are built on positive psychological competencies, which are defined as self-awareness, are the basis for the formation of Authentic Leadership which turns out to be a reference and contribute to the development of these competencies that are formed, and on the basis of transparency, openness and trust; guiding meaningful goals and focusing on follower development (Gardner, Avolio, Luthans, May & Walumbwa, 2005; Luthans & Avolio, 2003; Walumbwa et al., 2008). As a leader who is very aware of himself (deeplyaware) in thinking and acting, and is perceived by others as a person who is aware of the moral values of himself and others; broad-minded and strong; aware of the context in which it is located; feeling confident, having hope, optimism, resilience, and high moral character are the characteristics of authentic leadership (Avolio, Luthans & Walumbwa 2004). As a leadership behavior pattern that promotes, internalized moral perspective, balanced processes and relational transparency and self-awareness in leadership is defined as authentic leadership (Walumbwa et.al. 2008).

The parameters used to measure authentic leadership refer to the journal entitled 63 "Authentic Leadership: Development and Validation of A Theory-Based Measure" developed by (Walumbwa, et.al, 2008). They (authentic leaders) behave like being sincere with others (by telling others what is true even if it is difficult) and being honest with themselves (e.g. admitting their own mistakes) is their way of portraying their true selves, and their values A person's personal values are reflected in their behavior (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008). There are components in the Authentic Leadership measure consisting of; Self Awareness, defined as the extent to which a leader is aware of his strengths, limitations and how the leader influences others (Avolio, Gardner & Walumbawa, 2007; Riggio, 2011). Authentic leaders encourage openness to others by giving them the opportunity to come up with ideas, challenges and opinions which are characteristics of transparent leadership. Leaders are honest and have no hidden agendas, to be straightforward when dealing with others. Moral, related to the leader set high standards for moral and ethical conduct. Authentic leaders have ethics, what is the right thing to do and care about ethics and fairness and Balanced Processing is defined as the extent to which leaders ask for sufficient opinions and points of view before making important decisions. An effective authentic leader will consider all options and contra views before taking a series of actions. Plans are carefully thought out and discussed openly.

The relationship between authentic leadership and several antecedent variables has been the object of research



by several studies on leadership. From the results of the study, it was revealed that the principal variable was identified as having a positive relationship with authentic leadership (Walumbwa, Wang, Wang, Schaubroeck & Avolio, 2010). In addition, there are also other antecedents of trust in leaders (Clap-Smith, Vogelgesang & Avey, 2009; Wong et al., 2010), organizational dedication (Jensen & Luthans, 2006; Walumbwa et al.), job satisfaction (Jensen & Luthans, 2006). ; Walumbwa et al., 2008), and personal identity variables (Wong, Spence Laschinger & Cummings 2010). Self-awareness, internalized moral perspective, balanced and relational transparent processes, which are the characteristics of authentic leadership will encourage conditions or situations for employees to share knowledge, both institutionally and in silence. Authentic leadership that has characteristics; Self-awareness, internalized moral perspective, balanced processes and transparent relationships, are human resources that can increase trust, communication, information systems / technology, appreciation and organizational structure, so that knowledge sharing behavior is built.

The exchange of knowledge by individuals and their ideas through discussion to create new knowledge or ideas, that is the meaning of sharing knowledge or what is popularly known as Knowledge sharing behavior (KSB). Thus it can be said that the relationship between workers' attitudes and behavior is a two-way reciprocal process between attitudes and behavior, the relationship between workers' willingness to be involved in sharing knowledge. In order for an organization to be successful, the above processes are necessary (Hislop 2002). Knowledge sharing has been done by several organizations and they benefit (O'Dell & Grayson, 1998). By sharing knowledge, companies such as Buckman Laboratories and Texas Instruments and the big savings at Dow Chemical and Chevron made huge profits (Cheng (2002). Thus it can be conveyed that sharing knowledge can help employees to understand their work and bring personal recognition in organizations. The company will be able to have a sustainable competitive advantage after knowledge sharing is built up. However, it was found that many employees did not want to share their knowledge (Chow, Deng, & Ho, 2000). This phenomenon occurs because employees are afraid of losing valuable knowledge. The problem is that many organizations are far from successful even though they apply technology to support knowledge-sharing behavior (Grumbley, 1998). Knowledge is a sign of strength for employees, so encouraging employees to share knowledge is a problem for organizations (Grumbley, 1998), and because of the situation, they note that this is a formidable challenge for most managers (Mason and Pauleen 2003).

Sharing knowledge that can be done with information / technology systems, trust, communication and appreciation and organizational structure is positively related to the organization (Al-Alawi et al 2007). Organizations will be able to have a sustainable competitive advantage once knowledge sharing is built. This has the potential to create optimal Knowledge sharing behavior so that it can improve Organizational Performance.

The totality of the work achieved by an organization is a reflection of organizational performance, the extent to which the organization can achieve its goals, which can be seen from the level of achievement based on predetermined goals. Employee performance (individual) and organizational performance are two sides which are the basis of the concept of performance. Individual work output in an organization is an employee performance indicator which is a quantitative and qualitative measure that describes the level of achievement of goals / objectives (Bastian 2001), which have been determined by taking into account indicator elements. Self-awareness, internalized moral perspective and balanced processes and transparent relationships are characteristics of authentic leadership, and with human resources who are able to increase trust, communication, information systems / technology, appreciation and organizational structure. Authentic leadership will be able to increase the competence of human resources needed by the organization to build knowledge-sharing behavior that will increase its products / outputs, which in turn improves organizational performance.

From the description above it can be proposed the following hypothesis:

*H1. The higher the Authentic Leadership, the higher the Knowledge sharing behavior.*

*H3. The higher the Knowledge sharing behavior, the higher the Performance Organization.*

## 2.2 Communication Satisfaction (CS), Percieved organization support (POS), Performace Organization (PO)

Organizational leaders want employees to be effective and efficient communicators for the organization, where communication satisfaction occurs so that they can do their job well. Ultimately better communicators will create a more optimal and comfortable workplace. Communication satisfaction is a satisfaction that employees have in communicating with all members of the organization. Several aspects of interpersonal, group, and organizational communication are aspects of satisfaction where communication satisfaction is interpreted (Gumus & Hamarat 2014). Satisfaction also describes an evaluation of an internal affective state, while climate is a description of external conditions for individuals (Pace & Faules, 2006). Down & Hazen (1977) found that communication satisfaction has two variables, namely informational communication and relational communication. Informational communication focuses more on content satisfaction, communication flow between employees, communication environment, organizational point of view, and organizational integration. Satisfaction with the communication relationship between other organizational members is a form of relational communication, which tends to be more towards the responses and attitudes of employees (Pincus, 1986, in Okay & Okay, 2009; Gray & Laidlaw, 2004). Communication Satisfaction is a condition where communication satisfaction occurs at the level of individual satisfaction with various aspects of communication in the organization, with dimensions, the ability to suggest improvements, where individuals in the organization are required to be creative. Efficient use of communication channels, where individuals must be able to effectively utilize the organizational communication facilities. Fairness value in communication is needed to get support from the organization and information about the organization must be obtained by individuals as a whole and Organizational Integration must always be built to support individuals to improve their performance. Fairness value in communication is needed to get support from the organization, which is a condition where communication satisfaction occurs at the level of individual satisfaction with various aspects of communication in the organization, which will create job satisfaction which can then be interpreted as organizational support. The consistent pattern of agreement shown by employees with statements about whether the organization appreciates their contributions and will treat them well or ill in different circumstances is interpreted as organizational support or percieved organization support (Eisenberger et al. 1986). Employees of various occupations and organizations provide evidence for high internal reliability and a scale of unidimensionality is an exploratory and confirmatory factor analysis (Eisenberger et al 1986 in Liu (2004) .Social exchange relationships between employees and superiors. Percieved organization support represents an important part of a percieved organization. support, because POS implies what the organization has provided to employees. This study emphasizes that the need for an organization to provide support to employees before starting and during organizational change initiatives, because support and trust in management and change in cooperative attitudes are positive impacts of POS. Communication satisfaction is a factor that increases employee job satisfaction which can then be interpreted as organizational support. This can be achieved through, caring about opinion, caring about well-being, considering goals and values (Eisenberger, Fasolo, and Davis La Mastro's 1990). Thus communication satisfaction becomes a factor that increases employee job satisfaction which is positively related to trust in management and changes in cooperative attitudes, thus optimal organizational support can encourage increased organizational performance.

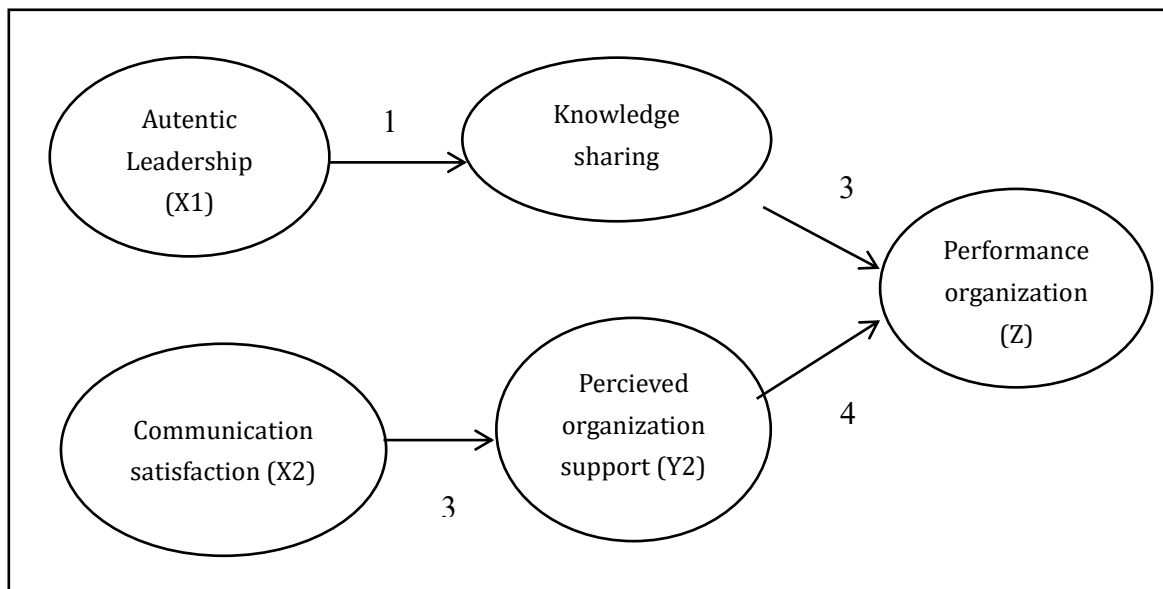
As stated earlier that organizational performance is the totality of the work achieved by employees in an organization, organizational performance can be seen from the level to which the organization can achieve goals based on previously set goals.

From the description above it can be proposed the following hypothesis:

*H2. The higher the communication satisfaction, the higher the Percieved organization support.*

*H4; The higher the Percieved organization support, the higher the organization's Performance.*

## 2.3. Model



Source: Secondary data processed in this study.

## 3. Methodology

### 3.1. Population and Sampling Techniques.

Data were collected using a very structured questionnaire. The target population is employees with certain criteria, namely leaders and staff who have the opportunity to become leaders (employees of class III and IV). These personnel are selected because they are responsible for implementing operational policies and work completion and for guiding and directing employee activities to achieve goals. Therefore, they must have knowledge of the strategic orientation that their organization is pursuing and their technical capabilities. This study proposes four hypotheses using quantitative research methods. The model was tested on 120 respondents who were selected through a purposive sampling method, by selecting employees of Class III and IV with a minimum group work period of 8 years and the Education and Training Center who had been attended, from the Education and Culture Office of Central Java Province using AMOS 22 as a data analysis tool.

### 3.2. Sampling and data collection

The research was conducted by distributing questionnaires to 120 employees of the educational institution in Central Java Province Indonesia, with a purposive sampling technique. The criteria for respondent are employees of Class III and IV who have participated in Training and Education Team IV and III. The characteristics of the respondents were: 1) characteristics based on gender: 73 men (60.83%) and 47 women (40.67%); 2) based on age: over 30-40 years old: 25 people (20.83%), 41-50 years old: 45 people (37.50%), ages 51-60 years: 50 people (41.66%) . 3) according to echelon position: haven't got a position: 56 people (46.66%), echelon IV: 45 people (37.50%), echelon III: 18 people (15.0%), echelon II: 1 person (0.83%), 4) According to Group: Group IV: 36 people (30%), Group III: 84 people (70%).

### 3.3. Validity and Reliability Testing.

Researchers designed a questionnaire with 17 questions. The measure consisted of a multi-item scale adopted from previous research. Table 1 shows the variables used in our model, as well as the indicators and question items.

#### 3.3.1. Validation Test.

The validity test is carried out by using the loading factor or Average Variance Extracted technique for all constructs higher than the cut-off level of the standard 0.50 which is carried out by correlating the value obtained from each question item with the total value.

### 3.3.2. Reliability Test.

Malhotra (2006: 75) an instrument is said to be reliable if the Cronbach Alpha value is greater than or equal to 0.6 ".

Research instruments and test results are presented in table form.

Table 3.1. Research instruments and test results.

No	Variable	Cronbach's Alpha	Indicator	Local loading standards
1	Performance Organization (PO) Palmer In Mahsun (2006)	0,831	service quality.	0,819
			satisfaction served	0,822
			achievement of objectives	0,823
2	Autentic Leadership(AL) (Avolio, Gardner, & Walumbwa (2007)	0,828	specific work	0,797
			specific role	0,781
			positive psychological capacity	0,795
			positive ethical climate	0,865
3	Communication Satisfaction(CS) (Downs & Hazen, 1977)	0,864	opportunity to discuss organizational policies	0,813
			mutual trust	0,817
			freedom of opinion	0,811
			knowledge of organization.	0,789
4.	Percieved organization support (POS), (Eisenberger, Fasolo, dan Davis La Mastro's 1990)	0,818	care about opinion	0.826

			care for well-being	0.845
			consider goals and values	0.768
5.	Knowledge sharing Behavior(KSB) (Mathuramaytha, 2012)	0,813	Coordination	0.823
			Target	0.785
			sharing knowledge	0.872

#### 4. Results and Discussion

##### 4.1. Model Feasibility Testing

Researchers used variance-based structural equation modeling (SEM), namely, partial least-squares SEM, to analyze the data in this study the inclusion of formally measured constructs and due to our small sample size (Haenlein & Kaplan, 2004; Hair Jr., Hult. , Ringle, and Sarstedt, 2016; Reinartz, Haenlein, & Henseler, 2009; Richter, Cepeda, Rold an, & Ringle, 2016).

The table of Goodness of Fit criteria to test the feasibility of the whole model (full model) in the SEM analysis, is shown in the table.

Table 4.1. Goodness of Fit Model Criteria

<i>Goodness of fit indices</i>	<i>Cut-off value</i>	<i>Cut-off value of the Results</i>
$\chi^2$ ( Chi-Square )	Diharapkan kecil	101,28
<i>Significant Probability</i>	$\geq 0,05$	0,502
CMIN/DF	$\leq 2,00$	98
RMSEA	$\leq 0,08$	0,042
GFI	$\geq 0,90$	0,811
TLI	$\geq 0,95$	0,732
CFI	$\geq 0,95$	0,928

Source: Secondary data processed in this study.

By looking at the RMSA figure that is less than 0.08. And although the GFI, TLKI and CFI figures show a figure smaller than 0.9, there is no problem with the arrangement of the model.

#### 4.2. Hypothesis test

The next step is testing the hypothesis for the causal relationship between variables using the CR-Critical ratio criteria equal to or greater than 2.0 (Arbuckle 2012). Then testing the empirical analysis model (output model). The outer model is a model that determines the relationship between latent constructs and their indicators. In other words, the hypothesis defines how each indicator is related to the other latent constructs, as described in the Table.

Table 4.2. Hypothesis Testing Results

Hypotheses	Estimate	S.E	Critical Ratio	P value ( $\leq 0,05$ )	Results
<i>H1. The higher the Authentic Leadership, the higher the Knowledge sharing behavior.</i>	0,805	0,32	2,248	0,00	H1 accepted
<i>H3. The higher the Knowledge sharing behavior, the higher the Performace Organization.</i>	0,728	0,46	2,528	0,03	H3 accepted
<i>H2. The higher the communication satisfaction, the higher the Percieved organization support</i>	0,811	0,48	2,334	0,01	H2 accepted
<i>H4. The higher the Percieved organization support, the higher the organization's Performance.</i>	0,722	0,73	2,118	0,00	H4 accepted

H1. The role of Authentic Leadership, influencing knowledge sharing behavior (table 4.2.) Describes the structural relationship model between Authentic Leadership and Knowledge sharing behavior. The findings of the structural pathway indicate that there is a significant relationship between the strategic role of AL and KSB ( $t = 2.248 > 1.96$ ) with a significance value ( $0.00 < 0.05$ ). Therefore, Hypothesis 1 is accepted.

H2. The role of communication satisfaction, affecting Percieved organization support (table 4.2.) Describes the structural relationship model of Communication satisfaction with Percieved organization support. The findings of the structural pathway show that there is a significant relationship between the strategic role of AL and KSB ( $t = 2,334 > 1.96$ ) with a significance value ( $0.03 < 0.05$ ). Therefore, Hypothesis 2 is accepted.

H3. The role of knowledge sharing behavior, influencing the Performace Organization (table 4.2.) Describes the structural relationship model of Knowledge sharing behavior with the Performace Organization. The findings of the structural pathway indicate that there is a significant relationship between the strategic role of the Navy and the KSB ( $t = 2.528 > 1.96$ ) with a significance value ( $0.01 < 0.05$ ). Therefore, Hypothesis 3 is accepted.

H4. The role of Percieved organization support has an effect on the Performace Organization (table 4.2.) Describing the structural relationship model of Percieved organization support with the Performace Organization. The findings of the structural pathway show that there is a significant relationship between the strategic role of AL and KSB ( $t = 2.118 > 1.96$ ) with a significance value ( $0.00 < 0.05$ ). Therefore, Hypothesis 4 is accepted.

#### 4.3. Discussion

From the results of the empirical test of the proposed model, it can be seen that the structural model is good and tested with the Goodness of Fit criteria to test the feasibility of the whole model (full model) in SEM analysis. Based on hypothesis testing, H1, H2, H3 and H4 are accepted, and have an effect on the model to be applied in improving the organizational performance of the educational institution in Central Java Province. With the latent construct of Authentic Leadership (AL) inherent in Specific Work, by providing guidance, direction, and encouragement to subordinates, specific roles, by providing motivation to always work well (Avolio, Gardner, & Walumbwa (2007), has been proven to have a significant effect. on Knowledge Sharing Behavior (KSB). The latent construct of Communication Satisfaction (CS) is characterized by the development of conditions in which employees can discuss organizational policies, trust and knowledge of the organization is sufficient (Downs & Hazen, 1977) encourages employees to work better, because employees feel supported by the institution. With increased coordination and institutional goals that are understood by employees and a culture of sharing knowledge (Mathuramaytha, 2012) and treating institutions that care about welfare and have their opinions paid attention to which is a form of organizational support (Eisenberger, Fasolo, and Davis La Mastro's 1990), it is proven to encourage increase in institutional services so that organizational performance increases. Public institutions in Indonesia recognize the importance of excellent service by prioritizing internal improvements by building knowledge-sharing behavior and institutional support for employees, so that employees can work better.

#### 5. Conclusion

The success of an organization can be seen from the level of its performance, the high level of organizational performance is very dependent on its resources. Resources are essential assets for organizations, optimal utilization of human resources will be able to deliver the organization, in encouraging organizations to maximize institutional performance, the concept of strategic human resources has been able to make organizations move towards organizational learning related to compensation, careers and others but has been able to deliver organization in a concept of productivity results that will later be able to maximize organizational performance. The presence of the concept of novelty in the organization has been able to lead the organization to achieve optimal results. These findings have answered the formulation of the problem as stated earlier regarding the resolution of organizational performance problems. This model has contributed several hypotheses that have been accepted as a result of data analysis. Two mediation concepts have also succeeded in showing their mediation to improve organizational performance, this shows that this concept has been able to boost organizational performance.

#### 6. Implications, and Suggestions for Future Research

This research has provided a new space for the completion of organizational performance, that knowledge sharing behavior and perceived organization support have created a proactive interaction and its impact in improving organizational performance. As a whole or comprehensively it can be said that the concept of authentic leadership and communication satisfaction makes it possible to improve knowledge sharing behavior and institutional support and organizational performance. The organization should be able to give attention to the development of human resources in the organization. This is the main reference for increasing performance targets which not only relies on a past resource management concept but is more directed at how to increase institutional productivity results, besides that the leader's side is also a reference for increasing innovation and completing tasks in the organization, because this will bring positive impact on improving organizational performance.

##### 6.1. Advice and implications

This research has formed a new basic model as a novel concept building as an answer to solving performance problems, which is expected to provide a novelty to solve the problem of improving organizational performance.



The mediation concept of Knowledge sharing Behavior and Percieved organization support has been able to provide output of employee performance to contribute to organizational development and bring better organizational performance improvements.

## 6.2. Upcoming research agenda

The research provides space for other researchers, which in the future is expected to provide a clearer picture of the results to improve organizational performance, by adding new concepts as other research variables. In this model, among others, Knowledge sharing Behavior and Percieved organization support which mediates authentic leadership and communication satisfaction to improve organizational performance.

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# Task Implementation Quality and Organizational Innovation : Do They as Antecedent for Driving Force Organizational Performance of Principal?

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## Abstract

This research is a basic research to fill research gaps in the study of improving organizational performance, although improving organizational performance is still quite a difficult effort in terms of its implementation, but its achievement must be optimized. This raises the question of what should be considered as a consideration in an organizational performance. The purpose of this study is to develop a conceptual model to explain the process of how Task Implementation Quality and Organizational Innovation, Strategic Human Resource Role and Leadership Effectiveness for driving Organizational Performance. The novelty in this research is to produce a new basic conceptual model that contains the quality of task implementation and organizational innovation as a strategic mediation for the role of human resources and leadership effectiveness as a key role for improving organizational performance. Five hypotheses were developed and proposed and the model proposed was tested using 120 principal school respondents under Central Java provincial education institutions consisting of school principals, using AMOS 22 data analysis was carried out and supported the five proposed hypotheses. The importance of the quality of task implementation and organizational innovation in supporting the improvement of organizational performance for strategic position holders.

**Keywords:** Task Implementation Quality, Organizational Innovation, Strategic Human Resource Role, Leadership Effectiveness, Organizational Performance, Central Java

## 1. Introduction

The success or failure of an organization depends on the ability of the organization's human resources both individually and as a team, superior human resources are human resources capable of producing competitive advantages for companies such as intellectuality, creativity and critical thinking (Rowland 2013) (Chen and Huang 2009; Tan and Nasurdin 2011). The ability in terms of innovation that must be carried out by human resources is an aspect that must be done by human resources in terms of capabilities (Jime'nez-Jime'nez and Sanz-Valle 2008), this must be done because innovation is the strategic side of planning in further organizational development and development so it is impossible for an organizational innovation to be realized in real terms without strategic planning from its human resource planning (Farazmand 2004). competition and changes in the organizational environment are quite competitive requires organizations to make innovations so that the organization remains competitive (Farazmand 2004) (Jime'nez-Jime'nez and Sanz-Valle 2008).

Organizational innovation that is quite progressive from the ability of human resources that are strategic enough in building organizational development ideas to achieve organizational targets. achievement of organizational targets as an indicator of organizational achievement is not only achieved by strategic human



resource capabilities, there is a need for dynamic teamwork in this achievement Rowland 2013) Eisenberger et al. 2001. There is some empirical evidence related to an increase in organizational performance but there are still some research gaps, the results of the description above are evidence related to the inadequacy of various factors that try to improve performance, related to this research gap, this study seeks to develop a conceptual model related to improving organizational performance by why, People are not products, they are the main asset of an innovative company (Gupta and Singhal 1993). Human resources are involved in the entire innovation process, because 1) they think that the innovative capacity of a company lies in the intelligence, imagination and creativity of employees (Mumford 2000), its implications and support are needed in developing and implementing innovation (Vracking 1990). Several studies (Jiang et al. 2012; Jime'nez-Jime'nez and Sanz-Valle 2008; Tan and Nasurdin 2011) have outlined the positive relationship between human resources and innovation. A study conducted by Sanders et al. (2010) show that satisfaction in human resource practices and work content has a positive relationship with innovative behavior; However, satisfaction with major rewards shows a negative relationship with innovative behavior. Based on the existing gap, this study comes with knowledge sharing as a mediating variable. By referring to previous research, it is expected that the relationship between the strategic role of human resources and organizational innovation is positive.

## 2. Literature review

Duty standards for employees are based on the coordination of a mixture of individual entity norms and the professionalism of the same work task can be associated with different and inappropriate quality standards because the quality standards of employee professionalism are sometimes higher or lower than what is determined by the company management. The quality of good task execution is indicated by the willingness of good employees, mutual coordination to support various values of trust and feeling tied to one another, thus encouraging team work performance.

Employees work according to their respective duties and abilities, a main measure of the quality of the main task to regulate the assessment of employees' abilities when compared with their main tasks which are predominantly influenced by the relationship between individual norms of professionalism and the organization itself. Employees' professional norms and identity will determine the contribution to task perception and their job demands are predominantly influenced by the relationship between individual norms of professionalism and the organization itself. Employees' professional norms and identity will determine the contribution of their job perceptions and job demands (Semmer et al. 2007). Employee excellence in the organization can also be a related interpretation framework. perceptions of the main task of employees. Professional values and job relationships between employees are expected to influence employee assessments of the quality of the main task (Drazin et al. 1999).

Humans as resource assets in a management factor that are quite potential are the main asset in an organization, this main asset from the human side is needed by an organization that always innovates in advancing the organization. Humans are always involved in organizational innovation because humans are an organizational element that is capable providing creativity, imagination and intelligence (Mumford 2000), besides that a support for ideas or thoughts and implications is also needed in an organizational development (Vracking 1990). Several previous researchers have tried to describe the relationship between human resources and organizational innovation. Previous research results have shown that a positive relationship can be created if there is satisfaction in human resource practices and work content can be provided by humans who are superior in terms of skills and competencies (Jiang et al. 2012; Jime'nez-Jime'nez and Sanz-Valle 2008; Tan and Nasurdin 2011). In addition, the concept of leadership also offers efforts to increase organizational innovation, a leader who has effectiveness will be able to work with his own leadership style based on communication behavior between superiors and subordinates and build good relationships between superiors and subordinates. in solving problems, when the organization wants to make an innovation in the organization the role of a leader who is effective enough will be able to encourage employees to generate new ideas to work better. a leader who always assesses employees will also be able to stimulate creative thinking because they feel valued in the company, so basically the effectiveness of a leader is able to create job satisfaction to work better



so that employees will be able to realize innovations that will be carried out in the company optimally, Organizational innovation indirectly brings an increase in organizational performance because the process of continuity and organizational adoption really requires an intensity of innovation which will later be adjusted to the organizational characteristics of Damanpour and Wischnevsky (2006). Organizational innovation if optimized within the company is optimal enough, there will be optimal achievement of targets as well for the organization, this is indirectly expected to bring an increase in organizational performance MI may have an indirect performance impact

1 For a more detailed description of the generation and adoption process and the differences between characteristics organizations that produce innovation and adopt innovation, see Damanpour and Wischnevsky (2006).

H1: the higher the strategic human resource role, the higher the organizational innovation.

H2: the higher the leadership effectiveness, the higher the organizational innovation

H5: the higher the organizational innovation, the higher the organizational performance

Based on the behavior of superiors in communicating, relationships with subordinates and their ability to solve problems. Employee job satisfaction is a feeling that supports or does not support the employee in relation to his job or his condition. Employee assessment of work with their condition is closely related to employee job satisfaction. This is because a positive assessment can increase employee job satisfaction, while a negative assessment can lead to employee job dissatisfaction. The effectiveness of leaders in creating good working conditions will affect employee job satisfaction. Previous research conducted by Wicaksono (2013) stated that leadership effectiveness has an effect on employee job satisfaction. Likewise with other research conducted by Yanti (2011), Tjandra and Setiawati (2013), Septiana (2013) and Trianka (2015) which stated that leadership has an effect on employee job satisfaction. The current view of human resources is to create entirely new roles and agendas for areas that focus not on traditional human resource activities, such as staffing and compensation, but on results. Human resources do not have to be determined by what a leader has. Effective leadership effectiveness will determine the style of leadership performed, but focuses on something that delivers results, which enrich organizational value to customers, investors, and employees (Ulrich 1998). Here it can be seen that the value of the organization is determined by the human resources available.

H3: The higher the role of strategic human resources, the higher the quality of task implementation

H4: The higher the quality of task implementation, the higher the team work performance

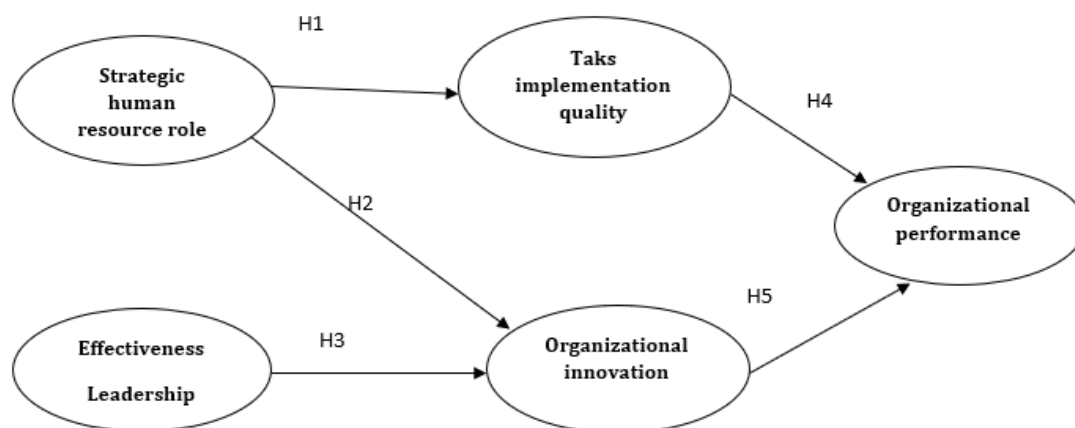


Figure 2.1 Model

Source: The results of a researcher's study developed in this study.

The figure shows that the quality of task implementation and organizational innovation as antecedents to encourage organizational performance of the principal in the perspective of the education department in Central Java.

### 3. Methodology

#### 3.1 Population and sampling techniques

Data were collected using a structured questionnaire. The target population is school principals with certain criteria, namely teachers and staff who are likely to be selected because they are responsible for implementing operational policies and work completion.

as well as to guide and direct employee activities to achieve goals. Therefore, they must have knowledge of the strategic orientation that their organization is pursuing and their technical capabilities. This study proposes four hypotheses using quantitative research methods. The model was tested on 120 respondents who were selected through a purposive sampling method, by selecting principals with class tenure and training and training teams that had been followed, from the Central Java Provincial Education Office using AMOS 22 as a data analysis tool.

#### 3.1 sampling and data collection

Researchers designed a questionnaire with 14 questions. The measure consisted of a multi-item scale adopted from previous research. Table 1 shows the variables used in our model, as well as descriptive statistics.

##### 3.3.1 Instrument.

Table 3. 1 Research instruments are presented in tabular form

Name and reflective scale items (measured on a Likert scale of 1-5 points indicating the extent to which the respondent agrees with the following statement)	Local loading standards
Human resource role strategy (Cronbach's $\alpha = 0.802$ )	
- Leaders are strategic partners	0.716
- Leaders are strategic partners	0.820
- Expert leader in administration	0.724
- Leaders are role models	0.643
Leadership Effectiveness (Cronbach's $\alpha = 0.792$ )	
- Leaders value the achievements of subordinates	0.665
- The leader provides facilities for E learning	0.732
- Leaders appreciate the contributions made by subordinates	
- Leaders are willing to help when subordinates are in need	0.622
Organization innovation (Cronbach's $\alpha = 0.726$ )	0.713
- The institution has developed academic learning using e-	

learning.	0.688
- The process of introducing e-learning at this institution has been going well.	0.713
- The institution has developed the latest e-learning technology innovations.	0.812
- Institutions are much more innovative.	
Taks implementation quality (Cronbach's $\alpha = 0,841$ )	0.699
- Quality of doing work	
- The spirit of enforcing discipline	0.822
- High quality work	0.910
- Carry out work efficiently	0.711
Organizational performance (Cronbach's $\alpha = 0.827$ )	0.813
- Develop new skills	
- Responsive to the changing needs of other teams	0.712
- Responsive to changing organizational conditions	0.796
- The effectiveness of cooperation across functional boundaries	0.881
	0.912

### 3.3 Testing Instruments

#### a. Validation Test

The validity test was carried out by using the factor loading technique or Average Variance Extracted for all constructs higher than the cut-off level of the standard 0.50 which was carried out by correlating the value obtained from each question item with the total value.

#### b. Reliability Test

Malhotra (2006: 75) an instrument is said to be reliable if the Cronbach Alpha value is greater than or equal to 0.6 ".

## 4. Data analysis techniques

### 4.1 Discrete analysis

The survey was conducted by distributing questionnaires to 120 school principals in the province of Central Java, Indonesia, using a purposive sampling technique. The criteria for responding are permanent lecturers who have carried out the e-learning process. The characteristics of the respondents are:

1) characteristics based on gender: 62 men (59.33%) and 58 women (40.67%)

2) based on age: under 30 years old: 20 people (16.67%), 30 to under 40: 45 people (25%), 25 to under 50: 56

people (20.33%), and above 50: 20 people (16.67%)

3) according to: group 3d: 25 people (20.83%), group 4a: 20 people (16.67%), group 4b: 22 people (17.33%),

4) According to years of service: less than 2 years: 16 people (13.33%), 2 to less than 10 years: 12 people (0.83%), 5 less than 12 years: 10 people (8.33 %), 10 to less than 15 years: 13 (8.67%), over 15 years: 15c people (12.5%)

Researchers used variance-based structural equation modeling (SEM), namely, partial least-squares SEM, to analyze the data in this study because of the inclusion of formally measured constructs and because of our small sample size (Haenlein & Kaplan, 2004; Hair Jr., Hult, Ringle, and Sarstedt, 2016; Reinartz, Haenlein, & Henseler, 2009; Richter, Cepeda, Roldan, & Ringle, 2016).

*Goodness of Fit criteria table to test the feasibility of the whole model (full model) in SEM analysis.*

Table 4.1 Goodness of Fit Model Criteria

<i>Goodness of fit indices</i>	<i>Cut-off value</i>	<i>Cut of Value of the Results</i>
$\chi^2$ (Chi-Square)	<i>Expected small</i>	92,282
<i>Significant Probability</i>	$\geq 0.05$	0.308
<i>CMIN / DF</i>	$\leq 2.00$	85
<i>RMSEA</i>	$\leq 0.08$	0.01
<i>GFI</i>	$\geq 0.90$	0.811
<i>TLI</i>	$\geq 0.95$	0.838
<i>CFI</i>	$\geq 0.95$	0.972

By looking at the RMSEA figure that is less than 0.08. And although the GFI, TLKI and CFI figures show a figure smaller than 0.9, there is no problem with the arrangement of the model.

Table 4.2 Hypothesis testing

<i>Hypotheses</i>	<i>Estimate</i>	<i>SE</i>	<i>Critical Ratio</i>	<i>P value (<math>\leq 0.05</math>)</i>	<i>Results</i>
<i>H1: the higher the strategic human resource role, the higher the organizational innovation</i>	0.826	0.38	2,152	0.00	accepted
<i>H2: the higher the leadership effectiveness, the higher the organizational innovation</i>	0.734	0.42	2,224	0.01	accepted
<i>H3: the higher the organizational innovation, the higher the organizational performance</i>	0.924	0.63	2,312	0.00	accepted
<i>H4: the higher the organizational innovation, the higher the organizational performance</i>	0.884	0.69	2,526	0.00	accepted
<i>H5: the higher the Taks implementation quality, the higher the organizational performance</i>	0.553	0.7	2,431	0.03	accepted

H1. Perastrategic human resource role n, influencing organizational innovation (table 4.2.) describes the structural relationship model of organizational innovation with organizational performance. The findings of the structural pathway show that there is a significant relationship between the strategic role of AL and KSB ( $t = 2.152 > 1.96$ ) with a significance value ( $0.00 < 0.05$ ). Therefore, Hypothesis 1 is accepted.

H2. The role of leadership effectiveness, influencing organizational innovation (table 4.2.) Describes the structural relationship model of Communication satisfaction with Percieved organization support. The findings of the structural pathway show that there is a significant relationship between the strategic role of AL and KSB ( $t = 2.334 > 1.96$ ) with a significance value ( $0.03 < 0.05$ ). Therefore, Hypothesis 1 is accepted.

H3. The role of organizational innovation, influencing the Performace Organization (table 4.2.) Describes the structural relationship model of Knowledge sharing behavior with the Performace Organization. The findings of the structural pathway indicate that there is a significant relationship between the strategic role of the Navy and the KSB ( $t = 2.528 > 1.96$ ) with a significance value ( $0.01 < 0.05$ ). Therefore, Hypothesis 1 is accepted.

H4. The role of organizational innovation has an effect on the Performace Organization (table 4.2.) Describes the structural relationship model of Percieved organization support with the Performace Organization. The findings of the structural pathway show that there is a significant relationship between the strategic role of AL and KSB ( $t = 2.118 > 1.96$ ) with a significance value ( $0.00 < 0.05$ ). Therefore, Hypothesis 1 is accepted.

## 5. Discussion

Strategic human role and leadership effectiveness is able to show its role as an independent variable that affects the mediation variable besides that the two mediation variables have also succeeded in showing their influence on organizational performance variables, a concept of strategic human resource role implies an act of leadership to become partners for employees, experts in administration to coordinate tasks between employees, besides being role models and agents of change for employees, this will have an impact on improving the quality of employee tasks in addition to improving the quality of their work, an optimal human resource development strategy will be able to improve task implementation quality from members organization. In addition, the development of human resources that is oriented towards achieving optimal results in the organization will have an impact on increasing organizational innovation, this is because the attitude of the leader who is able to reflect the needs needed by subordinates will be able to provide a view to make employee organizations better employees. will be able to generate creative ideas and ideas on the cognitive thinking of organizational members so that they are able to strive to make optimal innovations besides organizational innovation is also supported by an effective leader, the attitude of a leader who is able to respect employee achievement and is able to provide what consumers need stimulating employees' thinking in terms of creative ideas to innovate the concept of task implementation quality and innovation This organization that is implemented optimally is expected to be able to boost the ability to achieve optimal results as an output of soft skills from employees to improve teamwork performance. Testing the empirical analysis model (external model). The outer model is a model that determines the relationship between latent constructs and their indicators. In other words, it defines how each indicator is related to other latent constructs, as described in the Table

## 6. Conclusions, Managerial Implications, and Suggestions for Future Research

### 6.1. Conclusion

Resources are an essential asset for optimal human resource utilization companies that will be able to lead companies in corporate media realization to maximize their profitability, the concept of strategic human resource roles has been able to make companies shift to organizational learning related to compensation, careers and others but has been able to deliver organization In a concept of productivity results that will later be able to maximize company profits, the presence of the concept of organizational innovation and task implementation has been able to lead the company to achieve optimal results. This model has contributed several hypotheses that have been accepted as a result of data analysis, two concepts of mediation have also

succeeded in showing their mediation to improve team work performance, this implies that the concept has driven the performance of team work.

#### Theoretical and managerial implications

Research has provided room for the completion of team work performance that organizational innovation and task implementation have made a proactive interaction and the impact in improving team work performance as a whole or comprehensively can be said that the concept of strategic human resource role and effectiveness of leadership allows for increasing organizational innovation, task implementation. quality and performance of team work. companies should hope to be able to provide attention to the development of human resources in the organization, this is the main reference for increasing company targets which not only relies on a past resource management concept but is more directed at how to increase the company's productivity results, besides that, the leadership side is also a reference for increasing innovation and completing tasks in the company because this will have an impact on improving teamwork performance.

#### 6.2. Implications

This research has provided a new basic model as a new answer to solving performance problems which are expected to provide a novelty for resolving teamwork performance. The concept of organizational innovation mediation has been able to provide employee cognitive output to provide ideas for organizational development and task implementation quality as well as does not directly lead to increased performance. The company is expected to be able to cognitively articulate organizational innovation as an effort to improve performance besides productive innovation will be able to bring performance at an optimal level, besides that the company optimally also optimally monitors the progressive completion of employee tasks for the resulting quality this will have an impact. the minimal risk of work errors that have an impact on increasing the completion of tasks optimally which have an impact on improving work team performance

#### 6.3. Future Research

Future research is expected to provide a clear picture of results to improve team performance, this work can be added to research variables in this model, including objective-oriented team spirit, value congruence to make research related to the relationship between strategic human resources and leadership effectiveness to improve team work performance.

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## **Job Performance And Innovation Organization Are Antecedents To Improve Case Study Organization Performance In Dinas Pendidikan, Semarang City, Central Java Province**

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### **Abstract**

This study tries to develop a conceptual model as an effort to improve organizational performance, low organizational performance is a gap and a reflection that organizations to increase targets, low organizational performance are a way to improve organizational performance. This study develops and proposes a new basic model with variable job performance variables and organizational innovation as a driving force of organizational performance, the owner proposed using quantitative research methods, model testing of 120 respondents selected through purposive sampling method from the Semarang City Education Office in Java. In the middle by using AMOS 22 as a data analysis tool, from the results of soft research it is accepted and the main findings in this study are the variable of work performance, the Innovation Organization shows that the concept is the driving force of organizational performance so that organizational performance, Organization Innovation is a key strategy in improving organizational performance.

**Key words:** Job performance, Innovation Organization, Performance Organization, Education Office.

## 1. Introduction

An organization is said to be capable of being a superior organization whose existence is determined by the human resource capabilities of the organization, excellence in the organization cannot be separated from intellectual abilities, creativity and critical thinking power by superior human resources (Rowland 2013, Tanand Nasuridin 2011, Chen and Huang 2009), from the aspect of human resource capabilities, an important thing for human resources to do is innovation (Jime'nez-Jime'nez and Sanz-Valle 2008), because innovation is the strategic side of planning in organizational development and development, with its role strategic organizational innovation will be realized in real terms from its human resource planning (Farazmand 2004), organizations are required to innovate so that the organization remains competitive in competition and changes in the organizational environment (Farazmand 2004) (Jime'nez-Jime'nez and Sanz-Valle 2008), achieving organizational targets an indicator of success The results require strategic human resource capabilities supported by dynamic teamwork (Rowland 2013) (Eisenberger et al. 2001), organizations to gain competitive advantage and superior productivity of work performance are the main keys (Singh, 2016), work performance makes organizational functions run well, namely with knowledge and skills that can provide employee guidance to carry out various activities (Ghani et al., 2016) ), employee performance determines organizational performance (Farooqui & Nagendra, 2014). Thus it can be said that work performance is an important part of organizational life to achieve competitive advantage which is the achievement of stages as individual work achievements. Value congruence makes it easier for individuals to invest more in pursuit of organizational goals (May, Gilson, & Harter, 2004), when workers have the belief that their personal values match those of the organization they will have high attachment and self-involvement to the organization. Research related to improving organizational performance still has several gaps, theoretically this problem has been discussed in several studies as an effort to improve organizational performance, weak coordination in organizations causes weak performance (Ripzon Efendi, lies kumara dewi 2019), work culture, discipline work, coordination, work discipline partially affect performance and coordination partially affect performance (Darmanto RF 2018). The description above is evidence that from various factors there is a lack of optimism to improve performance, this study seeks to develop a conceptual model related to this research gap, namely improving organizational performance by taking the concepts of Communication Competence and Value Congruence as an effort to drive organizational performance through Job Performance and Innovation. Organization.

## 2. Study the literature

### 2.1. Competency Communication (CC), Job Performance (JP), Performance Organization (PO)

Knowledge, skills and attitudes that are appropriate in managing messages that can be mastered in a person are communication competences, competencies that are owned are very helpful in improving employee performance (Sriwidodo and Budi 2010), (Yudistira and Siwantara 2012), competencies inherent in a leader can easily direct, encourage or motivate all employees in carrying out their work which leads to work performance, work performance can be influenced by wise communication competencies and politeness, receiving feedback, sharing information, how well someone is performing at their job, work performance is behavior what employees do while working and performance can be determined by the skill level of their own human resources (Salas, Rosen, Held, & Weissmuller, 2009).

Achievement of organizational results is determined by work performance, namely the skills and expertise that are applied in carrying out tasks with due regard to efficiency aspects (Sonnentag and Frese 2002), work performance can be defined as all behaviors performed by employees while working in the organization, relevant results in work arrangements is a measure achieved by employees as work performance, with the work performance of employees who are able to achieve relevant work quantities, can achieve organizational goals well and are able to accept performance appraisals, the organizational performance will change for the better or increase.

From the description above it can be proposed the following hypothesis:

*H1. The higher the Communication Competency, the higher the Job Performance.*

*H3. The higher the Job Performance, the higher the Performance Organization.*

## 2.2. Value Congruence (VC), Innovation Organization (IO), Performance Organization (PO)

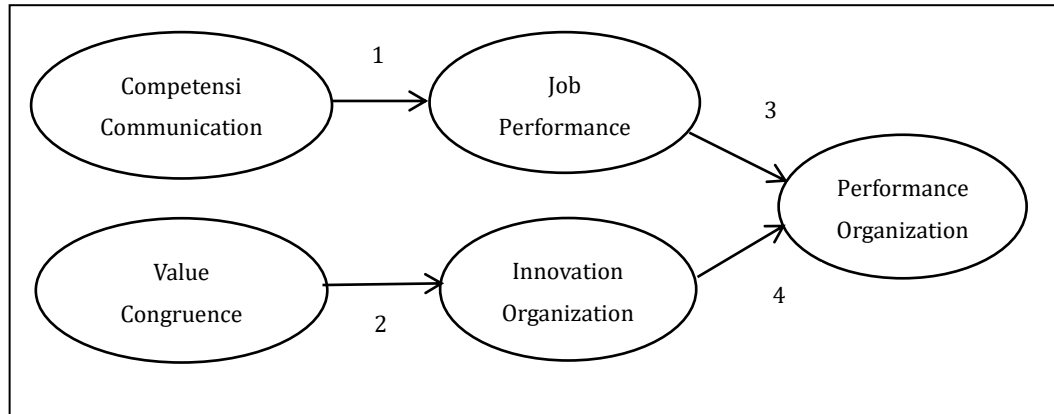
Value Congruence is the alignment between organizational values and employees' personal values, when workers believe that their personal values match those of the organization at work, and their work roles are as expected by the organization, they will find more meaningfulness in work, and in turn have higher self-engagement and involvement, value congruence makes it easier for individuals to invest more in pursuing organizational goals because they experience the meaning of their work roles (May, Gilson, & Harter, 2004), competition and changes in the organizational environment that are quite competitive require organizations to innovate so that the organization remains competitive (Farazmand 2004) (Jime'nez-Jime'nez and Sanz-Valle 2008), that experience has an important contribution to the organization, this is related to organizational success (Avendo, 2011). considered the intrinsic value of self-motivation (Ryan & Deci, 2000), research has supported that employee value congruence has an impact on achieving organizational goals through job involvement (Brown & Leigh, 1996; May et al., 2004), with altruism, brotherhood and security, it encourages the innovation organization to work on employees cognitively, behaviorally, and emotionally (Kahn, 1990, 1992), Organizational innovation is defined in this research as the tendency of organizations to develop new things with better success in delivering a service, a measure that can be measured such as a certificate of quality that is commonly used for established studies in developed countries, may not apply to companies that are very erratic and dynamic. the nature of the software development industry (Mac Cormack and Verganti, 2003). In terms of human resources capabilities, innovation is an aspect that must be done by human resources (Jime'nez-Jime'nez and Sanz-Valle 2008), the ability of human resources to innovate makes the organization remain competitive (Farazmand 2004), successful or whether an organization depends on the ability of human resources owned by the organization, both individually and as a team, with development of electronic learning, the process of introducing electronic learning, cutting-edge technology innovation, following technological developments shows a concept that innovation organizations affect organizations as long as they experience a competitive process of competition, the goals that can be achieved by organizations are work indicators that are described in quantitative and qualitative (Bastian, 2001), organizational performance is the work that the organization can achieve in total (Surjadi, 2009),

The hypothesis that can be submitted is:

*H2. The higher the Value Congruence, the higher the Innovation Organization.*

*H4; The higher the Innovation Organization, the higher the organization's Performance.*

## 2.3 Model



## 3. Methodology

### 3.1. Population and Sampling Techniques.

Data were collected using a very structured questionnaire. The target population is employees with responsibility for implementing operational policies and completing work to achieve goals. Therefore, they must have knowledge of the strategic orientation demanded by their organization. This study proposes four hypotheses using quantitative research methods. The model was tested on 120 respondents who were selected through purposive sampling method, using AMOS 22 as a data analysis tool.

### 3.2. Sampling and data collection

The research was conducted by distributing questionnaires to 120 employees of the Semarang City Education Office, Central Java Province, using a purposive sampling technique. The characteristics of the respondents are:

- 1) based on gender: 63 male (52.5%) and 57 female (42.5%);
- 2) by age: under 30 years old: 30 people (16.67%), 30 to under 40: 41 people (30%), 40 to under 50: 29 people (37.33%), and over 50: 20 people (16%);
- 3) according to structural position: Head: 3 people (2.5%), Head of Section: 15 people (12.5%), Staff Employees: 102 people (85%);
- 4) According to years of service: less than 5 years: 20 people (16.6%), 5 less than 10 years: 13 people (10.83%), 10 to less than 15 years: 15 (12.5%), over 15 years: 72 people (60%).

### 3.3. Validity and Reliability Testing.

Researchers designed a questionnaire with 16 questions. The measure consisted of a multi-item scale adopted from previous research. Table 1 shows the variables used in our model, as well as the indicators and question items.

#### 3.3.1. Validation Test

The validity test is carried out by using the loading factor or Average Variance Extracted technique for all constructs higher than the cut-off level of the standard 0.50 which is carried out by correlating the value obtained from each question item with the total value.

#### 3.3.2. Reliability Test

Malhotra (2006: 75) an instrument is said to be reliable if the Cronbach Alpha value is greater than or equal to 0.6, Research instruments and test results are presented in tabular form.

Table 3.1. Research instruments and test results

No	Variabel	Cronbach's Alpha	Indicator	Local loading Standart
1	Performance Organization (PO) Palmer dalam Mahsun (2006)	0,831	service quality.	0,819
			satisfaction served	0,822
			achievement of objectives	0,823
2	Job Performance (Fogarty <i>et al</i> ,2000)	0,829	Quantity of work pekerjaan	0,871
			Ability to achieve goals	0,754
			Evaluation received	0,812
3	Innovation Organization	0,864	Development of electronic learning	0,819
			The process of introducing electronic learning	0,761
			Cutting-edge technology innovation	0,815
			Following technological developments	0,851
4.	Competensi Communication	0,818	Thoughtful and courtesy	0,578
			Receipt of feedback	0.652
			Sharing information informasi	0.716
5.	Value Congruence	0,813	Altruism	0,883
			brotherhood	0.814
			security	0.828

#### 4. Results and Discussion

##### 4.1. Model Feasibility Testing

Researchers used variance-based structural equation modeling (SEM), namely, partial least-squares SEM, to analyze the data in this study the inclusion of formally measured constructs and due to our small sample size (Haenlein & Kaplan, 2004; Hair Jr., Hult, Ringle, and Sarstedt, 2016; Reinartz, Haenlein, & Henseler, 2009; Richter, Cepeda, Roldan, & Ringle, 2016).

The table of Goodness of Fit criteria for testing the feasibility of the whole model (full model) in the SEM analysis, is shown in the table.

Tabel 4.1. Criteria Goodness of Fit Model

Goodness of fit indices	Cut-off value	Cut-off value of the Results
$\chi^2$ ( Chi-Square )	Diharapkan kecil	101,28
<i>Significant Probability</i>	$\geq 0,05$	0,502
CMIN/DF	$\leq 2,00$	98
RMSEA	$\leq 0,08$	0,042
GFI	$\geq 0,90$	0,811
TLI	$\geq 0,95$	0,732
CFI	$\geq 0,95$	0,928

Source : Secondary data processed in this study

By looking at the RMSA figure that is less than 0.08. And although the GFI, TLKI and CFI figures show a figure smaller than 0.9, there is no problem with the arrangement of the model.

##### 4.2. Hypothesis test

The next step is testing the hypothesis for the causal relationship between variables using the CR-Critical ratio criteria equal to or greater than 2.0 (Arbuckle 2012). Then testing the empirical analysis model (output model). The outer model is a model that determines the relationship between latent constructs and their indicators. In other words, the hypothesis defines how each indicator is related to the other latent constructs, as described in Table 3.

Tabel 4.2. Hasil Pengujian Hipotesis

Hypotheses	Estimate	S.E	Critical Ratio	P value ( $\leq 0,05$ )	Results
<i>H1: The higher the Communication Competency the higher the Job Performance</i>	0,810	0,30	2,122	0,00	H1 accepted
<i>H2: The higher the Value Congruence the higher the Innovation Organization</i>	0,720	0,41	2,314	0,00	H3 accepted
<i>H3: The higher the Job Performance</i>	0,723	0,49	2,512	0,02	H2 accepted



<i>the higher the Performance Organization</i>					
<i>H4: The higher the Innovation Organization the higher the Performance Organization</i>	0,822	0,80	2,374	0,00	H4 accepted

H1. The role of communication competency, influencing job performance (table 4.2.) Describes the structural relationship model between communication competency and job performance. The findings of the structural path indicate that there is a significant relationship between the strategic role of CC Competency and JP ( $t = 2.122 > 1.96$ ) with a significance value ( $0.00 < 0.05$ ). Therefore, Hypothesis 1 is accepted.

H2. The role of Value Congruence, influencing the Innovation Organization (table 4.2.) Describes the structural relationship model Value Congruence with the Innovation Organization. The findings of the structural pathway show that there is a significant relationship between the strategic role of VC and IO ( $t = 2.314 > 1.96$ ) with a significance value ( $0.00 < 0.05$ ). Therefore, Hypothesis 1 is accepted.

H3. The role of Job Performance, which affects the Performance Organization (table 4.2.) Describes the structural relationship model between Job Performance and the Performance Organization. The findings of the structural paths indicate that there is a significant relationship between JP's strategic role and PO ( $t = 2.512 > 1.96$ ) with a significance value ( $0.02 < 0.05$ ). Therefore, Hypothesis 1 is accepted.

H4. The role of the Innovation Organization in the Performance Organization (table 4.2.) Describes the structural relationship model between the Innovation Organization and the Performance Organization. The findings of the structural paths show that there is a significant relationship between the strategic role of IO and PO ( $t = 2.374 > 1.96$ ) with a significance value ( $0.00 < 0.05$ ). Therefore, Hypothesis 1 is accepted.

#### 4.3. Discussion

From the results of the empirical test of the proposed model, it can be seen that the structural model is good and tested with the Goodness of Fit criteria to test the feasibility of the whole model (full model) in SEM analysis. Based on hypothesis testing, H1, H2, H3 and H4 are accepted, and have an effect on the model to be applied in improving the Performance Organization, with the construct of Competency Communication (CC) wise and politeness, receiving feedback, sharing information affecting Job Performance, skill level of resources. human determinants of performance (Salas, Rosen, Held, & Weissmuller, 2009); effective communication of internal process development is supported by information technology (Kannabiran 2010), latent Value Congruence with altruism, brotherhood and security encourages Innovation Organization on employee performance, the impact of employee value congruence in achieving organizational goals through job involvement (Brown & Leigh, 1996; May et al. , 2004); improve the innovation process (Raymond and Bergeron, 2008)

## 5. Conclusion

Organizations can achieve optimal results, their existence cannot be separated from the optimal use of human resources that are able to produce organizational changes to get maximum benefits or results, the concept of competency communication and value congruence has been able to make organizations shift to organizational learning related to performance that can maximize performance. Organizational performance, with the concept of organizational innovation and value congruence is able to lead organizations to achieve optimal results, the results of these findings answer the formulation of problems as has been put forward regarding solving organizational performance problems. performance and innovation organization are two mediation concepts that have succeeded in showing their mediation to improve organizational performance, this implies that the concept has driven organizational performance.

## 6. Implications, and Suggestions for Future Research.

### 6.1. Suggestions and implications

As a new answer to solving performance problems, this research is able to provide a new basic model which is expected to be able to provide a novelty for completing organizational performance, the concept of organizational innovation mediation and job performance has been able to provide employee cognitive output to provide ideas for organizational development and indirectly leads to an increase in minerja

### 6.2. Upcoming research agenda

Future research is expected to provide a clear picture of the results to improve performance, this can be added to research variables in this model to improve organizational performance, namely the Job Performance model and Organizational Innovation which mediates Communication Competence and Value Congruence to improve Organization Performance. Authentic leadership and communication satisfaction to improve organizational performance.

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## **Company Performance : An Antecedent for Driving Firm Value through Corporate Governance and Ownership Structure**

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### **Abstract**

This research tries to develop a conceptual model to improve company value which is a key indicator in showing agent performance, in this case the manager, but an agency conflict sometimes arises. When investors as company owners sometimes find a condition of bias that will cause agency conflict. A concept of corporate governance exists as a solution to resolve. Together with outside ownership of the company and company performance, a basic model is proposed to solve this problem by using company performance as mediation through corporate governance and the ownership structure 3 hypothesis is proposed. The model was tested on 90 companies listed on the Indonesian stock exchange using AMOS as a data analysis tool and 3 hypotheses were accepted. The role of company performance which plays a role as a mediator has been able to show its role as an antecedent to driving the increase in company value.

**Keywords:** ownership structure of corporate governance; company performance, company value.

### **1. Background**

Companies that have been established by the owners of capital have the main essence in such establishment is to increase the value of the company which is oriented towards increasing the prosperity of shareholders or stake holders (Brigham and Enhardt, 2005). This concept can be realized if the stakeholders have the correct agent or manager 2 who are able to run the company according to what the shareholders want, but sometimes a controversy arises regarding the realization of the above goals, agents or managers sometimes have a goal that sometimes deviates from the goals of the shareholders. previous shareholders, so that agency conflicts often arise between agents and stake holders. This conflict of interest that arises will have an impact on losses incurred by stakeholders, this is because there is a gap to have more incentives for personal use by agents, learning from the case of a company that went bankrupt in the era of the Indonesian monetary crisis in 1998 the concept of corporate governance was present as a optimal solution to reduce agency problem.



Regarding the concept of modern management, there is separation between stakeholders, agents and operational authority, this is done so that the main objective of this separation is to increase the market value of the company, not only to provide prosperity for shareholders (Brigham and Houston, 2007; Brealey et al. , 2008). A contradiction occurs when this separation occurs because agency conflicts also occur related to the orientation of increasing market value. This is also carried out by the separation between owners, agents and executives who are considered professionals in the company Velnampy, (2013) (Shleifer and Vishny, 1997). The concept of GCG with its various proxies has provided optimal oversight of managers in carrying out their roles so that they always pay attention to the interests of shareholders, so that decisions made in their implementation not only benefit them but also provide benefits for shareholders as principal (Boubakri, 2006). 2003), however, an assessment related to the increase in company value is not only related to the optimization of the GCG side, it is also necessary to consider the company's market value as a measure of company performance. Companies listed on the Indonesian stock exchange, on average, supervision related to market mechanisms is still not optimal, the status of developing countries which this nation bears does not provide a measure of professionalism in controlling its market mechanisms, departing from this the role of internal mechanisms is needed to control this (Kim et al. al. 2010), (Syakhroza, 2003). Agency theory plays a role in providing an understanding regarding the delegation of authority to a manager or agent in making decisions in companies that are oriented towards increasing company value. When managers get an increase in the share portion of the shareholders, this has the excess of the manager to increase the company value of Jensen and Mecking. 1976). A foreign ownership is also able to provide a fairly good legislative function for a company, because in this case the supervision of foreign investors that is implemented will tend to have a different form of supervision from domestic investors. Ruan et al. (2011) (Khouri et al. 2004; Zeitun and Tian , 2007; Tan, et al., 2007). Wei et al. (2005) by Chung and Kim (2005); and Nurhan et al (2007); Namu Haddad and Horrison (1993); the results of research conducted by Sulong and Nor (2008) (Khouri et al. 2004; Zeitun and Tian, 2007; Tan, et al., 2007), there is a controversial meaning related to foreign ownership, while Lin's research (2007) does not address significant results.

A management structure has a fairly important and significant essence on firm value because the management structure has a role in terms of increasing control and monitoring of dividend value, government regulations that have an impact on companies and a foreign ownership that can reduce agency costs, the output of these things is increase in firm value, Sulong and Nor (2008), Oxelheim and Randoy (2001), Latah and Dickins (2012), Babatunde and Olaniran (2009), and Stefanescu (2011) but negative and significant results from the above conditions have been studied by Obradovich and Gill (2013). Previous studies have also shown the role of corporate governance in increasing firm value and company performance. The concept of board size as a proxy for corporate governance also has a contribution to influence firm value and company performance. Kumar and Singh (2013), Haniffa and Hudaib (2006) ), and Gill and Mathur (2011) a measure of public ownership as an external shareholding entity is also able to influence the optimization of a company value that was previously enhanced by company performance, this is inseparable from a contribution of public ownership in providing oversight of performance of Agent Purba (2004), Hardiningsih (2011), although their role is very minority in the ownership of capital in companies, but based on experience and theoretical knowledge, in optimal company management, so that input suggestions will also determine policy. adopt policies taken by management (Kiswanto, 2015). Other assumptions have been studied regarding the reduction in the proportion of independent boards which are expected to reduce agency costs and conflict in decision making so that decisions can be taken proportionally and efficiently. Sulong and Nor (2008), the output of this will later increase firm value by Oxelheim and Randoy. (2001), Fallatah and Dickins (2012), Sami et al. (2009), and Babatunde and Olaniran (2009), however, different results show that the board of directors, whose proportion is quite large, is able to provide a good supervisory function on the performance of managers so that they do not work which has an impact on the losses of shareholders. Abbasi et al. (2012), Rouf (2011), and Stefanescu (2011).

An independent board is also needed in increasing company value and company performance. The presence of this independent board is considered necessary as a tool used by the company in resolving what the company's real goals are, making the company's strategic plan and how the strategic plan is implemented. This independent board is able to have a role as an observer. the strategic plan (Purwantini, 2011). The controversy

regarding the role of the independent council on company value is quite controversial by Purwantini (2011) and De Zoysa et al. (2010) have research results that do not have a significant effect on this independent board variable, while Siallagan and Machfoedz (2006) have also revealed significant results related to this result that Siallagan and Machfoedz (2006) consider the independent board to be able to provide an optimal measure of increase in firm value. Every company listed on the Indonesian stock exchange is required to have independent commissioners whose number is at least 30%, the existence of this independent commissioner is expected to be able to provide a supervisory function in reducing fraudulent financial statements so that the accountability and transparency of financial reports presented by the agent will be more objective when presented Dechow et al. (1996), Machfoedz Siallagan (2006). Specific objectives in this study are to test and analyze empirically related to the increase in corporate value in terms of corporate governance, the proportion of foreign and public ownership mediated by company performance, whether the company's performance will later be able to mediate the influence between corporate governance, the proportion of foreign and public ownership. to company value or not.

## 2 Literature review and Hypotesis Development

### 2.1 Agency theory

Agency theory has the concept of making a mapping relationship between the parties, in this case the shareholders who provide a working authority for the agents, in this case the principals and managers. But in its implementation there is quite frequent controversy because each party between the agent and the shareholder arises an interest which results in a deviation between the objectives of the share holder and the agent. The implication of this is that agency costs arise to reduce this conflict Jensen and Meckling (1976). The stock owners and agents must make an agreement that will reduce agency costs from the emergence of this agency conflict Jensen and Meckling (1976).

### 2.2 Ownership and Mangerial Structure

An empirical evidence from previous research studies has provided sufficient results to provide a clear perspective that ownership structures and managerial structures in reducing agency conflicts, Demsetz and Villalonga (2001) have provided significant evidence related to the endogeneity of ownership structures, in their research successfully demonstrated two the aspect of ownership structure, namely the five shareholders with the largest share ownership portion and partly as another structure, is share ownership by management, in this case, is an agent that acts as an endogenous. There are various research results that support this concept, among others, if there is a large portion of share ownership from the management and share ownership in a large portion it will be able to significantly increase the value of the company's shares Shleifer and Vishny (1986).

Share ownership by a party, be it an individual or a foreign institution, will have a significant impact on the company, this portion of ownership is usually 5% (Barbosa and Louri, 2005). These foreign investors will be able to bring good and positive governance to the company because they will bring innovative ideas to develop their professional-based company development, this is because these foreign investors will be able to provide a form of governance that emphasizes responsibility, transparency and openness. better. The results of research showing that foreign ownership have a significant impact on firm value have been studied by Utama (2006), which resulted in a fairly good corporate governance being able to have relationship practices that can optimize firm value. A somewhat controversial finding was given by Haddad. and Horrison (1993), which implies that foreign ownership can increase firm value but company productivity will be slow due to the influence of foreign interference, a very contradictory result has been shown by Sawalu et al. (2012) stated that the foreign ownership structure has no effect on firm value for go public companies in Nigeria.

In a company, the existence of an independent board is deemed necessary in terms of helping to implement strategic plans on a regular basis, so that this has an impact on increasing company value. Purwantini (2011), and De Zoysa et al. (2010). However, research that does not choose influence is shown by Siallagan and Machfoedz (2006). The existence of the independent I I board in the company will be able to reduce the firm

value of Dechow et al. (1996). the effectiveness of supervision and improvement in the quality of financial reports can be increased by the presence of independent commissioners, good quality financial reports will increase investor confidence in investing in the company, this excess will be able to increase the value of the company's shares so that the company's value will also increase (Siallagan and Machfoedz 2006 ; Sulong and Nor 2008; Oxelheim and Randoy 2001; Fallatah and Dickins, 2012; Sami et al, 2009; Babatunde and Olaniran, 2009). The results of the controversial findings show that the independence of the board of commissioners does not have an impact on the firm value of Helland and Sykuta (2005) while the independence of the board of directors will be able to monitor the duties of managers in carrying out their work. (2012), Rouf (2011), and Stefanescu (2011).

### 2.3 Company Performance and Company Value.

The company's performance is an indicator of the assessment of the company's operational activities in a period of one year, this is a reflection of various company policy implementations. Many parties have an interest in the company's performance. Among other things, investors, potential investors and creditors, the company's performance is a reflection of the various parties dealing with the company. When the signal that the company has a good performance then becomes an attraction for various parties to have a relationship with the company, investors will be interested in investing while the creditors will have confidence in the company in providing funds for the company in the form of debt. Indicators in assessing company performance include return on assets (ROA), return on equity (ROE) (Uchida, 2006). In the performance appraisal of the Agent's company, it must be oriented towards the prosperity of the shareholders, while the company value is measured by considering the value of a company's shares on the stock exchange market, namely the ups and downs of the stock price on the stock market. The level of measure of the increase in share prices will be a barometer of the increase in shareholder prosperity, this measurement usually uses a thermometer of financial statements, price book value, which is a measure of the market value of securities which usually consists of the stock market, bonds and long-term debt value.

Hypothesis:

*H1: The higher good corporate governance the higher firm performance*

*H2: The higher ownership structure the higher firm performance*

*H3: The higher corporate performance the higher firm value .*

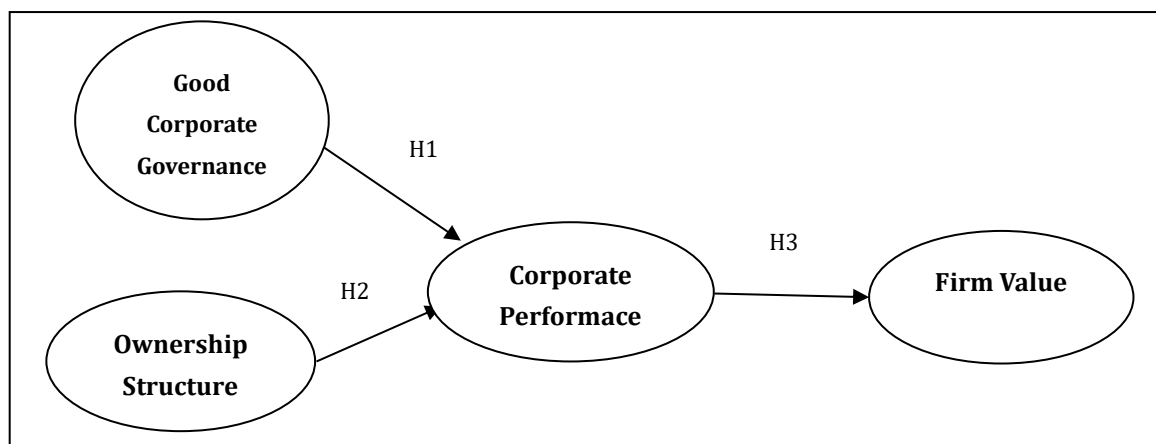


Figure 1. Framework

Source : Processed research results

### 3. Research methods

This research design uses a quantitative approach, with a population of all companies listed on the Indonesia Stock Exchange in 2016-2019. The data was determined by using purposive sampling method. The corporate governance variable is measured by board of commissioners, board size, independent commissioner, ownership structure is measured by public and foreign ownership, company performance is measured by ROA and firm value from PBV perspective. The analysis tool uses the Structure Equation Model approach.

### 4. Result and discussion

#### 4.1 Create Validity and Reliability Tests

Testing the research data used Structural Equation Modeling (Semmer et al. Analysis) with the AMOS program. This approach is carried out by testing the resulting parameters of the good fit and immediately testing the research hypothesis about the causality relationship developed in the model.

Name and reflective scale items (measured on a Likert scale of 1-5 points which indicates the extent to which the respondent agrees with the following statement)	Local standards	loading
<b>Corporate governance (Cronbach's <math>\alpha</math>= 0,725 )</b>		
- Board comp	0,612	
- Board size	0,731	
- Indipenden Commiseri	0,622	
<b>Ownership Structure (Cronbach's <math>\alpha</math>= 0,713 )</b>		
- Foreign ownership	0,568	
- Public ownership	0,789	
<b>Corporate Performance (Cronbach's <math>\alpha</math>= 0,698)</b>		
- ROA	0,831	
- ROE	0,829	
<b>Firm Value (Cronbach's <math>\alpha</math>= 1,000)</b>		
- PBV Present Value	1,000	

The findings of this study are also shown in Table 2 which formulates 3 hypotheses. The three hypotheses developed here are intermediate relationships ownership structure with company performance, corporate governance with company performance and company performance with company value.

Table 2 illustrates the relationship between corporate governance, ownership structure and company performance and company value. The t-value and probability scores describe a positive and significant relationship for each variable. The discussion of each variable relationship is as follows:

Hypotheses	Estimate	S.E	Critical Ratio	P value ( $\leq 0,05$ )	Results
<i>H1: The higher the good corporate governance, the higher the p[ula performance of the company</i>	0,613	0,39	2,153	0,00	Accepted
<i>H2: the higher the ownership structure, the higher the company's performance</i>	0,728	0,44	2,266	0,00	Accepted
<i>H3: The higher the company's performance, the higher the company's value.</i>	0,924	0,52	2,826	0,00	Accepted

H1; The structural path findings indicate that there is a significant and positive relationship between GCG and firm performance ( $t = 2.153 > 1.96$ ) that there is a significant and positive relationship between GCG and firm performance ( $t = 2.153 > 1.96$ ) with a significance value ( $0.000 < 0.05$ ) Hypothesis 1 is accepted.

H1; The structural path findings indicate that there is a significant and positive relationship between ownership structure and firm performance ( $t = 2.153 > 1.96$ ) that there is a significant and positive relationship between GCG and firm performance ( $t = 2.153 > 1.96$ ) with a significance value ( $0.000 < 0.05$ ) Hypothesis 1 is accepted.

H2; The structural path findings indicate that there is a significant and positive relationship between ownership structure and firm performance ( $t = 2.266 > 1.96$ ) that there is a significant and positive relationship between ownership structure on firm performance ( $t = 2.266 > 1.96$  with a significance value ( $0.000 < 0.05$ ) Hypothesis 2 is accepted.

H3; The structural path findings indicate that there is a significant and positive relationship between firm performance and firm value ( $t = 2.826 > 1.96$ ) that there is a significant and positive relationship between firm performance on firm performance ( $t = 2.266 > 1.96$  with a significance value ( $0.000 < 0.05$ ) Hypothesis 3 is accepted.

Table 4.1 Goodness of Fit Model criteria

Goodness of fit indices	Cut-off value	Cut of Value of the Results
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$\chi^2$ ( Chi-Square )	Expected smallil	94,553
<i>Significant Probability</i>	$\geq 0,05$	0,541
CMIN/DF	$\leq 2,00$	98
RMSEA	$\leq 0,08$	0,042
GFI	$\geq 0,90$	0,831
TLI	$\geq 0,95$	0,802
CFI	$\geq 0,95$	0,829

By looking at the RMSEA figure that is less than 0.08. And although the GFI, TLKI and CFI figures show a figure smaller than 0.9, there is no problem with the arrangement of the model.

Before the variable is tested the hypothesis, this can be tested with a test rifle which is carried out to test the goodness of fit, the test results listed above mean that the model is quite feasible to be tested and used.

This study conducted a study to determine the relationship between GCG and ownership structure with firm value through company performance as a mediating variable. In this study, trying to analyze the role of management structure in corporate governance. Ownership structure uses indicators of foreign and public ownership. Meanwhile, the Corporate Governance variable uses the board of directors (size of the board of commissioners), the board of commissioners and independent commissioners, while the company performance uses the indicator of return on assets. price book value (PBV) as an indicator to measure firm value.

In this study, corporate governance is differentiated between ownership structure and management structure, both structures are measured by five indicators, financial performance is measured by one indicator, and firm value is measured by one indicator. The results showed that corporate governance, ownership structure and company performance also had a significant effect on firm value. This meaning implies the result that the variables of good corporate governance and ownership structure are fundamental factors in improving the company's performance, the role of foreign and public ownership will be able to increase supervision of agents so that agents will always work better because they not only feel that they are being monitored by internal investors but also by the public and foreigners who tend to have more professional supervision with their various knowledge so far for better management so that this will make a company target achievement, besides that good corporate governance in terms of committee composition and audit independence will be able to provide objective intervention related to what is the obligation of company managers to work better and be able to provide the best results for the company, optimal company performance results will be able to provide a form of investor trust for the company. For the company, a fairly good PBV signal will be able to make investors see the positive side and will think cognitively based on their experience to invest in the company, this will have the potential to increase company value.

## 5. Conclusion

Based on the results of the research and discussion above, it can be concluded that the ownership structure and management structure have a significant effect on firm value. The measurement results show that the variable that has the greatest direct influence is the variable of corporate performance, followed by ownership. The research model also measures the indirect effect between variables on the Firm Value variable. From the measurement results, the variables that have an indirect effect are generally still low.



## 6. Suggestion

In future studies, it is hoped that the sample can be considered which is differentiated between several company sectors, so that the results can be compared with this study. It is also recommended for further research to increase the number of samples or increase the year of research.

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# Task Implementation Quality and Organizational Innovation: Do They as Antecedent for Driving Force Organizational Performance of Principal?

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## Abstract

This research is a basic research to fill research gaps in the study of improving organizational performance, although improving organizational performance is still quite a difficult effort in terms of its implementation, but its achievement must be optimized. This raises the question of what should be considered as a consideration in an organizational performance. The purpose of this study is to develop a conceptual model to explain the process of how Task Implementation Quality and Organizational Innovation, Strategic Human Resource Role and Leadership Effectiveness for driving Organizational Performance. The novelty in this research is to produce a new basic conceptual model that contains the quality of task implementation and organizational innovation as a strategic mediation for the role of human resources and leadership effectiveness as a key role for improving organizational performance. Five hypotheses were developed and proposed and the model proposed was tested using 120 principal school respondents under Central Java provincial education institutions consisting of school principals, using AMOS 22 data analysis was carried out and supported the five proposed hypotheses. The importance of the quality of task implementation and organizational innovation in supporting the improvement of organizational performance for strategic position holders.

**Keywords:** Task Implementation Quality, Organizational Innovation, Strategic Human Resource Role, Leadership Effectiveness, Organizational Performance, Central Java

## 1. Introduction

Companies that have been established by the owners of capital have the main essence in such establishment is to increase the value of the company which is oriented towards increasing the prosperity of shareholders or stake holders (Brigham and Enhardt, 2005). This concept can be realized if the stakeholders have the correct agent or manager 2 who are able to run the company according to what the shareholders want, but sometimes a controversy arises regarding the realization of the above goals, agents or managers sometimes have a goal that sometimes deviates from the goals of the shareholders. previous shareholders, so that agency conflicts often arise between agents and stake holders. This conflict of interest that arises will have an impact on losses incurred by stakeholders, this is because there is a gap to have more incentives for personal use by agents, learning from the case of a company that went bankrupt in the era of the Indonesian monetary crisis in 1998 the concept of corporate governance was present as a optimal solution to reduce agency problem.

Regarding the concept of modern management, there is separation between stakeholders, agents and operational authority, this is done so that the main objective of this separation is to increase the market value of the company, not only to provide prosperity for shareholders (Brigham and Houston, 2007; Brealey et al. , 2008). A contradiction occurs when this separation occurs because agency conflicts also occur related to the orientation of increasing market value. This is also carried out by the separation between owners, agents and



executives who are considered professionals in the company Velnampy, (2013) (Shleifer and Vishny, 1997). The concept of GCG with its various proxies has provided optimal oversight of managers in carrying out their roles so that they always pay attention to the interests of shareholders, so that decisions made in their implementation not only benefit them but also provide benefits for shareholders as principal (Boubakri, 2006). 2003), however, an assessment related to the increase in company value is not only related to the optimization of the GCG side, it is also necessary to consider the company's market value as a measure of company performance. Companies listed on the Indonesian stock exchange, on average, supervision related to market mechanisms is still not optimal, the status of developing countries which this nation bears does not provide a measure of professionalism in controlling its market mechanisms, departing from this the role of internal mechanisms is needed to control this (Kim et al. 2010), (Syakhroza, 2003). Agency theory plays a role in providing an understanding regarding the delegation of authority to a manager or agent in making decisions in companies that are oriented towards increasing company value. When managers get an increase in the share portion of the shareholders, this has the excess of the manager to increase the company value of Jensen and Meckling. 1976). A foreign ownership is also able to provide a fairly good legislative function for a company, because in this case the supervision of foreign investors that is implemented will tend to have a different form of supervision from domestic investors. Ruan et al. (2011) (Khouri et al. 2004; Zeitun and Tian, 2007; Tan, et al., 2007). Wei et al. (2005) by Chung and Kim (2005); and Nurhan et al (2007); Namu Haddad and Horison (1993); the results of research conducted by Sulong and Nor (2008) (Khouri et al. 2004; Zeitun and Tian, 2007; Tan, et al., 2007), there is a controversial meaning related to foreign ownership, while Lin's research (2007) does not address significant results.

A management structure has a fairly important and significant essence on firm value because the management structure has a role in terms of increasing control and monitoring of dividend value, government regulations that have an impact on companies and a foreign ownership that can reduce agency costs, the output of these things is increase in firm value, Sulong and Nor (2008), Oxelheim and Randoy (2001), Latah and Dickins (2012), Babatunde and Olaniran (2009), and Stefanescu (2011) but negative and significant results from the above conditions have been studied by Obradovich and Gill (2013). Previous studies have also shown the role of corporate governance in increasing firm value and company performance. The concept of board size as a proxy for corporate governance also has a contribution to influence firm value and company performance. Kumar and Singh (2013), Haniffa and Hudaib (2006) ), and Gill and Mathur (2011) a measure of public ownership as an external shareholding entity is also able to influence the optimization of a company value that was previously enhanced by company performance, this is inseparable from a contribution of public ownership in providing oversight of performance of Agent Purba (2004), Hardiningsih (2011), although their role is very minority in the ownership of capital in companies, but based on experience and theoretical knowledge, in optimal company management, so that input suggestions will also determine policy. adopt policies taken by management (Kiswanto, 2015). Other assumptions have been studied regarding the reduction in the proportion of independent boards which are expected to reduce agency costs and conflict in decision making so that decisions can be taken proportionally and efficiently. Sulong and Nor (2008), the output of this will later increase firm value by Oxelheim and Randoy. (2001), Fallatah and Dickins (2012), Sami et al. (2009), and Babatunde and Olaniran (2009), however, different results show that the board of directors, whose proportion is quite large, is able to provide a good supervisory function on the performance of managers so that they do not work which has an impact on the losses of shareholders. Abbasi et al. (2012), Rouf (2011), and Stefanescu (2011).

An independent board is also needed in increasing company value and company performance. The presence of this independent board is considered necessary as a tool used by the company in resolving what the company's real goals are, making the company's strategic plan and how the strategic plan is implemented. This independent board is able to have a role as an observer. the strategic plan (Purwantini, 2011). The controversy regarding the role of the independent council on company value is quite controversial by Purwantini (2011) and De Zoysa et al. (2010) have research results that do not have a significant effect on this independent board variable, while Siallagan and Machfoedz (2006) have also revealed significant results related to this result that Siallagan and Machfoedz (2006) consider the independent board to be able to provide an optimal measure of increase in firm value. Every company listed on the Indonesian stock exchange is required to have independent

commissioners whose number is at least 30%, the existence of this independent commissioner is expected to be able to provide a supervisory function in reducing fraudulent financial statements so that the accountability and transparency of financial reports presented by the agent will be more objective when presented Dechow et al. (1996), Machfoedz Siallagan (2006). Specific objectives in this study are to test and analyze empirically related to the increase in corporate value in terms of corporate governance, the proportion of foreign and public ownership mediated by company performance, whether the company's performance will later be able to mediate the influence between corporate governance, the proportion of foreign and public ownership. to company value or not.

## **2 Literature review and Hypotesis Development**

### **2.1 Agency theory**

Agency theory has the concept of making a mapping relationship between the parties, in this case the shareholders who provide a working authority for the agents, in this case the principals and managers. But in its implementation there is quite frequent controversy because each party between the agent and the shareholder arises an interest which results in a deviation between the objectives of the share holder and the agent. The implication of this is that agency costs arise to reduce this conflict Jensen and Meckling (1976). The stock owners and agents must make an agreement that will reduce agency costs from the emergence of this agency conflict Jensen and Meckling (1976).

### **2.2 Ownership and Mangerial Structure**

An empirical evidence from previous research studies has provided sufficient results to provide a clear perspective that ownership structures and managerial structures in reducing agency conflicts, Demsetz and Villalonga (2001) have provided significant evidence related to the endogeneity of ownership structures, in their research successfully demonstrated two the aspect of ownership structure, namely the five shareholders with the largest share ownership portion and partly as another structure, is share ownership by management, in this case, is an agent that acts as an endogenous. There are various research results that support this concept, among others, if there is a large portion of share ownership from the management and share ownership in a large portion it will be able to significantly increase the value of the company's shares Shleifer and Vishny (1986).

Share ownership by a party, be it an individual or a foreign institution, will have a significant impact on the company, this portion of ownership is usually 5% (Barbosa and Louri, 2005). These foreign investors will be able to bring good and positive governance to the company because they will bring innovative ideas to develop their professional-based company development, this is because these foreign investors will be able to provide a form of governance that emphasizes responsibility, transparency and openness. better. The results of research showing that foreign ownership have a significant impact on firm value have been studied by Utama (2006), which resulted in a fairly good corporate governance being able to have relationship practices that can optimize firm value. A somewhat controversial finding was given by Haddad. and Horrison (1993), which implies that foreign ownership can increase firm value but company productivity will be slow due to the influence of foreign interference, a very contradictory result has been shown by Sawalu et al. (2012) stated that the foreign ownership structure has no effect on firm value for go public companies in Nigeria.

In a company, the existence of an independent board is deemed necessary in terms of helping to implement strategic plans on a regular basis, so that this has an impact on increasing company value. Purwantini (2011), and De Zoysa et al. (2010). However, research that does not choose influence is shown by Siallagan and Machfoedz (2006). The existence of the independent I I board in the company will be able to reduce the firm value of Dechow et al. (1996). the effectiveness of supervision and improvement in the quality of financial reports can be increased by the presence of independent commissioners, good quality financial reports will increase investor confidence in investing in the company, this excess will be able to increase the value of the company's shares so that the company's value will also increase (Siallagan and Machfoedz 2006 ; Sulong and Nor 2008; Oxelheim and Randoy 2001; Fallatah and Dickins, 2012; Sami et al, 2009; Babatunde and Olaniran, 2008).



2009). The results of the controversial findings show that the independence of the board of commissioners does not have an impact on the firm value of Helland and Sykuta (2005) while the independence of the board of directors will be able to monitor the duties of managers in carrying out their work. (2012), Rouf (2011), and Stefanescu (2011).

### 2.3 Company Performance and Company Value.

The company's performance is an indicator of the assessment of the company's operational activities in a period of one year, this is a reflection of various company policy implementations. Many parties have an interest in the company's performance. Among other things, investors, potential investors and creditors, the company's performance is a reflection of the various parties dealing with the company. When the signal that the company has a good performance then becomes an attraction for various parties to have a relationship with the company, investors will be interested in investing while the creditors will have confidence in the company in providing funds for the company in the form of debt. Indicators in assessing company performance include return on assets (ROA), return on equity (ROE) (Uchida, 2006). In the performance appraisal of the Agent's company, it must be oriented towards the prosperity of the shareholders, while the company value is measured by considering the value of a company's shares on the stock exchange market, namely the ups and downs of the stock price on the stock market. The level of measure of the increase in share prices will be a barometer of the increase in shareholder prosperity, this measurement usually uses a thermometer of financial statements, price book value, which is a measure of the market value of securities which usually consists of the stock market, bonds and long-term debt value.

Hypothesis:

*H1: The higher good corporate governance the higher firm performance*

*H2: The higher ownership structure the higher firm performance*

*H3: The higher corporate performance the higher firm value .*

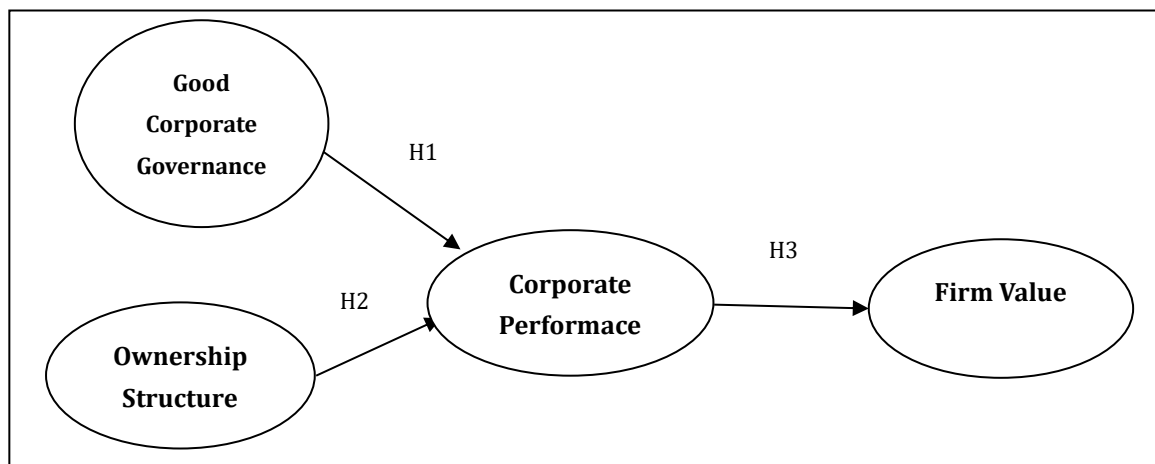


Figure 1. Framework

Source : Processed research results

### 3. Research methods

This research design uses a quantitative approach, with a population of all companies listed on the Indonesia Stock Exchange in 2016-2019. The data was determined by using purposive sampling method. The corporate governance variable is measured by board of commissioners, board size, independent commissioner; ownership structure is measured by public and foreign ownership, company performance is measured by ROA and firm value from PBV perspective. The analysis tool uses the Structure Equation Model approach.

#### 4. Result and discussion

##### 4.1 Create Validity and Reliability Tests

Testing the research data used Structural Equation Modeling (Semmer et al. Analysis) with the AMOS program. This approach is carried out by testing the resulting parameters of the good fit and immediately testing the research hypothesis about the causality relationship developed in the model.

Name and reflective scale items (measured on a Likert scale of 1-5 points which indicates the extent to which the respondent agrees with the following statement)	Local loading standards
<b>Corporate governance (Cronbach's <math>\alpha = 0,725</math>)</b>	
- Board comp	0,612
- Board size	0,731
- Indipenden Commiseri	0,622
<b>Ownership Structure (Cronbach's <math>\alpha = 0,713</math>)</b>	
- Foreign ownership	0,568
- Public ownership	0,789
<b>Corporate Performace (Cronbach's <math>\alpha = 0,698</math>)</b>	
- ROA	0,831
- ROE	0,829
<b>Firm Value (Cronbach's <math>\alpha = 1,000</math>)</b>	
- PBV Present Value	1,000

The findings of this study are also shown in Table 2 which formulates 3 hypotheses. The three hypotheses developed here are intermediate relationships ownership structure with company performance, corporate governance with company performance and company performance with company value.

Table 2 illustrates the relationship between corporate governance, ownership structure and company performance and company value. The t-value and probability scores describe a positive and significant relationship for each variable. The discussion of each variable relationship is as follows:

Hypotheses	Estimate	S.E	Critical Ratio	P value ( $\leq 0,05$ )	Results
<i>H1: The higher the good corporate governance, the higher the p [ula performance of the company</i>	0,613	0,39	2,153	0,00	Accepted
<i>H2: the higher the ownership structure, the higher the company's performance</i>	0,728	0,44	2,266	0,00	Accepted
<i>H3: The higher the company's performance, the higher the company's value.</i>	0,924	0,52	2,826	0,00	Accepted

H1; The structural path findings indicate that there is a significant and positive relationship between GCG and firm performance ( $t = 2.153 > 1.96$ ) that there is a significant and positive relationship between GCG and firm performance ( $t = 2.153 > 1.96$ ) with a significance value ( $0.000 < 0.05$ ) Hypothesis 1 is accepted.

H1; The structural path findings indicate that there is a significant and positive relationship between ownership structure and firm performance ( $t = 2.153 > 1.96$ ) that there is a significant and positive relationship between GCG and firm performance ( $t = 2.153 > 1.96$ ) with a significance value ( $0.000 < 0.05$ ) Hypothesis 1 is accepted.

H2; The structural path findings indicate that there is a significant and positive relationship between ownership structure and firm performance ( $t = 2.266 > 1.96$ ) that there is a significant and positive relationship between ownership structure on firm performance ( $t = 2.266 > 1.96$  with a significance value ( $0.000 < 0.05$ ) Hypothesis 2 is accepted.

H3; The structural path findings indicate that there is a significant and positive relationship between firm performance and firm value ( $t = 2.826 > 1.96$ ) that there is a significant and positive relationship between firm performance on firm performance ( $t = 2.266 > 1.96$  with a significance value ( $0.000 < 0.05$ ) Hypothesis 3 is accepted.

Table 4.1 *Goodness of Fit Model criteria*

<i>Goodness of fit indices</i>	<i>Cut-off value</i>	<i>Cut of Value of the Results</i>
$\chi^2$ ( Chi-Square )	Expected smallil	94,553
<i>Significant Probability</i>	$\geq 0,05$	0,541
CMIN/DF	$\leq 2,00$	98
RMSEA	$\leq 0,08$	0,042
GFI	$\geq 0,90$	0,831
TLI	$\geq 0,95$	0,802
CFI	$\geq 0,95$	0,829

By looking at the RMSEA figure that is less than 0.08. And although the GFI, TLKI and CFI figures show a figure smaller than 0.9, there is no problem with the arrangement of the model.

Before the variable is tested the hypothesis, this can be tested with a test rifle which is carried out to test the goodness of fit, the test results listed above mean that the model is quite feasible to be tested and used.

This study conducted a study to determine the relationship between GCG and ownership structure with firm value through company performance as a mediating variable. In this study, trying to analyze the role of management structure in corporate governance. Ownership structure uses indicators of foreign and public ownership. Meanwhile, the Corporate Governance variable uses the board of directors (size of the board of commissioners), the board of commissioners and independent commissioners, while the company performance uses the indicator of return on assets. price book value (PBV) as an indicator to measure firm value.

In this study, corporate governance is differentiated between ownership structure and management structure, both structures are measured by five indicators, financial performance is measured by one indicator, and firm value is measured by one indicator. The results showed that corporate governance, ownership structure and company performance also had a significant effect on firm value. This meaning implies the result that the variables of good corporate governance and ownership structure are fundamental factors in improving the company's performance, the role of foreign and public ownership will be able to increase supervision of agents so that agents will always work better because they not only feel that they are being monitored by internal investors but also by the public and foreigners who tend to have more professional supervision with their various knowledge so far for better management so that this will make a company target achievement, besides that good corporate governance in terms of committee composition and audit independence will be able to provide objective intervention related to what is the obligation of company managers to work better and be able to provide the best results for the company, optimal company performance results will be able to provide a form of investor trust for the company. For the company, a fairly good PBV signal will be able to make investors see the positive side and will think cognitively based on their experience to invest in the company, this will have the potential to increase company value.

## 5. Conclusion

Based on the results of the research and discussion above, it can be concluded that the ownership structure and management structure have a significant effect on firm value. The measurement results show that the variable that has the greatest direct influence is the variable of corporate performance, followed by ownership. The research model also measures the indirect effect between variables on the Firm Value variable. From the measurement results, the variables that have an indirect effect are generally still low.

## 6. Suggestion

In future studies, it is hoped that the sample can be considered which is differentiated between several company sectors, so that the results can be compared with this study. It is also recommended for further research to increase the number of samples or increase the year of research.

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## **Underpricing IPO: A Corporate Governance Contribution and The Emerging of Contagion Effect as a Perspective Industrial Inter Transfer to Companies That Do IPO in 2016-2019. An Abstract**

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### **Abstract**

The objective of this research is to examine the effect of corporate governance on underpricing level at Initial Public Offering, and this research is to empirically examine about the market reaction, intra industry effect of underpricing announcement. The corporate governance factors tested include board size, proportion of board independence, the existence of audit committee, auditor quality. The companies which choosed are underpricing and non underpricing firms 2016-2019 technique of analysis data used multiple regression and one sample t test analysis. Based on the results of the research showed that the number of board size and quality auditor has a negative significant impact on the underpricing level, while board independent and comitte auditte do not have a significant efeect on the underpricing level. this research can not prove intra industry transfer on the event window periods.

**Keywords :** IPO, underpricing, corporate governance, board size, proportion of board independence, audit committee, auditor quality, intra industry transfer.

## Sustainability of Labor Absorption of Coastal Communities Through the Development of Fishery Port Infrastructure

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### Abstract

Ports as the main infrastructure in the maritime sector play a very important and quite strategic main role in the growth of industry and trade using these ports. Port management that is effective, efficient and professional will be able to provide fast, smooth and safe services to make this happen. This requires a form of sustainability of port infrastructure support that is equipped with facilities of interest. The Nusantara Fishery Port in Central Java has a strategic role in improving the welfare of coastal communities in Central Java and its surroundings, one of which is through the absorption of labor. The main objective of this research is to describe and analyze the development of the Nusantara Fisheries Port in the Central Java region in the plan to absorb the workforce of coastal communities and to determine the supporting and inhibiting factors. This research is a qualitative descriptive research. The samples were taken from the Pantura and Cilacap areas, the development of Nusantara Fisheries Port in Central Java. There are two types of development, namely physical and non-physical development. In the development area, apart from being supported by adequate facilities, a business unit will also be built in the form of an industry to absorb the workforce around the coastal community. With the existence of adequate facilities and the operation of the industry, there will be employment in it. However, so that the development of the Nusantara Fishery Port in Central Java does not disturb the condition of the waters and the surrounding environment, it must be equipped with an AMDAL or provide CSR to avoid conflicts with the surrounding community because existing companies might injure the environment.

**Keywords:** sustainability, manpower, development, Port, Central Java.

### 1. Introduction

Fishery port is a port used as a means of fishery activities covering aspects of production, processing of fishery products as well as from the aspect of marketing. Fishing ports are different from commercial ports in general. Apart from having facilities in accordance with ports in general, fishery ports must be equipped with facilities that support the smooth running of fishery business activities, such as fish auctions, ice factories, cold storage and others. Like fishing ports in general, the Nusantara Pekalongan fishing port and Cilacap ocean fishing port are fishing ports located in Central Java. The port has facilities to support fishery business activities such as boats with a GT > 10 tons to maximize the yield from fishing, the TPI (Fish Auction Place) Facility to distribute the catches of fishermen, and has facilities for repairing nets and drying nets.

Cilacap Ocean Fishing Port is one of the ports that has a large enough potential as evidenced by the high frequency of ships entering the port. Apart from the large frequency of incoming vessels, another potential that exists at the port is the transaction value which reaches Rp. 150 billion from the sale of various types of fish, totaling 6,763.09 tons of fish. However, this potential is inversely proportional to the economic conditions and welfare of the coastal communities around the port. The economic condition of the people around the port is still not prosperous because there are still many workers who do not have the opportunity to work at the port. Inequality is also one of the problems that causes poverty. This, especially related to the economic benefits of the utilization of coastal and marine resources, is enjoyed by certain community groups such as ship crews and

fisheries businessmen, but has not been exploited by coastal communities and fishermen. Apart from gaps in income, gaps in ownership are just more serious problems (Syarief, 2001).

Based on the problems that occur above, it is necessary to sustain the support of port infrastructure that is equipped with attractive and adequate facilities. In addition, it is necessary to provide optimal employment. Given the important role of fishing ports in improving the welfare of coastal communities around the port.

## **2. Literature review**

### **2.1. Port**

According to the Directorate General of Capture Fisheries (2005), a fishing port is a fishery area that functions as a fishing boat landing place, a fish landing place, a marketing place, a place for the implementation of quality guidance for fishery products, a place for collecting catch data, a place for extension and development of fishing communities and to streamline fishing boat operations.

Meanwhile Jinca (2011) states that a sea port is an area of water that is protected against storms, waves and currents, so that ships can carry out movement, lean on, dump anchors in such a way that loading and unloading of goods and movement of passengers can be carried out properly. The main function of a sea port is a cargo transfer function and an industrial function seen from the point of view of the port entrepreneur, completing facilities for the needs of ship activities at the port, including shipping lanes to enter and exit ships from and to the port, mooring equipment, dock loading and unloading activities, checking goods, warehousing, providing local transportation networks in the port area.

### **2.2. Fishery port**

Fishery port is a combination area between land and sea areas with certain boundaries as a place for government activities and a fishery business system that functions as a place for fishing boats to dock, dock ships, load and unload fish, as well as a place for marketing equipped with safe shipping facilities other fishery supporting activities. Several criteria for the carrying capacity of fishery port development according to Lubis

- 1) Data collection system and quality.
- 2) Aspirations from central and local government
- 3) Quality of human resources
- 4) The condition of the road infrastructure to PP or PPI.
- 5) Conditions for transportation to and from PP or PPI.
- 6) PP or PPI facilities.
- 7) Land availability.

With these seven criteria, it will be concluded whether the development of a fishing port can be recommended or not. Recommendations can be directed at 2 alternatives, Organizing and managing a fishing port is often related to the economic condition of a country, especially the public interest. According to Lubis (2012, pp. 77-81) there are 4 types of port management, each type has a different pattern, namely:

- 1) Management by local government.
- 2) Management by public companies (semi-public).
- 3) Management by the central government.
- 4) Private management.

### **2.3. Labor**

Labor is a person who is able to do work in order to produce goods or services both to meet their own needs and for the community. Law Number 13 of 2013 concerning Manpower article 39 paragraph 3 states that all government policies, both central and regional in the sector, are directed at realizing the expansion of job

opportunities both within and outside of work relations. Law Number 13 of 2003 concerning Manpower article 1 paragraph 2 states that labor absorption will not be separated from job opportunities that occur in the community. The government as a public servant is responsible for striving to expand job opportunities both within and outside of work relationships.

#### 2.4. AMDAL

AMDAL stands for "Environmental Impact Analysis". AMDAL is a formal study process that is used to estimate the impact on the environment by planned project activities with the aim of ensuring that there are environmental impact problems that need to be analyzed at an early stage of project planning and design for consideration by decision makers.

Meanwhile, according to Mukono (2005), AMDAL is a study of the major and significant impacts of a planned business and / or activity on the environment required for the decision-making process regarding the conduct of a business and / or activity.

According to PP. 27 of 1999, the meaning of AMDAL is a study of major and important impacts for decision making of a planned business and / or activity on the environment which is required for the decision-making process regarding the conduct of a business and / or activity.

### 3. Research Methods

This research is a descriptive research with a quantitative approach. Descriptive research is research that aims to solve a problem based on data. This research was conducted at the Cilacap Ocean Fishing Port, Central Java Province. The location selection was based on the consideration that Cilacap ocean fishing port is a port with considerable potential but the coastal communities around the port are still not prosperous. Data was collected by direct observation in the field and obtained directly from several sources related to the object of research. The data analysis technique is to analyze the causes of the inequality of the coastal community around Cilacap port.

### 4. Discussion

#### 4.1. Cilacap Ocean Fishery Port Facility Development

Based on the approval of the Minister of State Apparatus Empowerment No. 86 / M / PAN / 4/2001 dated April 4, 2001, the Cilacap fishing port was developed into a Cilacap ocean fishing port. The construction of the Cilacap Fishery Port was carried out from 1991 to 1994. On May 20, 1994 to May 24, 1995, operational trials were conducted. The President of the Republic of Indonesia inaugurated the Cilacap Ocean Fishing Port on November 18, 1996. This fishing port serves fishing vessels carrying out fishery activities in Indonesian waters and ZEEI; has mooring and anchoring facilities for fishing boats, has 11 docks with a total area of 1,212.8 m<sup>2</sup> and has 3 ponds with a total area of 15 hectares capable of accommodating fishing boats approximately 118 units there are loading and unloading and marketing activities with 79,666.55 tonnes of fishery products in 2016 Therefore, the Cilacap Ocean Fishery Port was chosen as the Minapolitan area of Cilacap Regency and continues to develop and improve the economy in the fisheries sector. Minapolitan is an area-based conception of marine and fisheries economic development based on the principles of integration, efficiency, quality and high exploration.

#### 4.2. Cilacap Ocean Fishing Port Development in the Coastal Community Workforce Absorption Plan

##### 4.2.1. Improve service quality

In the implementation of fishery port functions for technical services on fishing boats and port at fishery ports, fishery business services and facilities, facilitation and coordination for increasing the production, distribution and marketing of fishery products, facilitating the publication of research results, production and marketing of fishery products. efforts to improve services for these activities continue to be optimized.



In improving services, PPS has a policy by taking efforts by implementing Standard Operation Procedure (SOP), increasing the capacity of port human resources, providing service support equipment, installing information / service information boards, distributing data and information appropriately, meeting with stakeholders through co-operation activities. morning and socialization of provisions / regulations related to port services.

#### 4.2.2. Improvement of port facilities and infrastructure

In order to realize PPS Cilacap as a minapolitan area, efforts to improve port facilities and infrastructure will continue to be carried out optimally in order to provide facilities for port service activities properly, so as to increase fisheries and other supporting businesses from pre-production, production to post-production. so that it has an impact on labor absorption, the development of the community's economy which ultimately leads to the welfare of the marine and fisheries community.

The policy to improve port facilities and infrastructure includes refinement, development and maintenance of port facilities, including: Preparation of land around the southern port, construction of revetments with concrete sheet pile construction, toilets, IPAL, Kiospesisir, cool rooms and fisher shelters. Revetment repair, dredging of ponds and port channels periodically as needed. Maintenance of other operational facilities will also receive proportional attention.

#### 4.2.3. Pengembangan sistem informasi perikanan

The fisheries information system development policy is aimed at improving the quality, accuracy of data as fishery information in the PPS Main Performance Indicators with several kinds of information delivery in the form of statistical books, leaflets and posters with the development of information distribution networks, including through quick and electronic media, socialization, visitors every other event opportunity.

### 4.3. Internal and External Factors of Cilacap Fishing Port Development in the Coastal Community Workforce Absorption Plan

#### 4.3.1. Supporting Factors

##### 4.3.1.1. Power

By paying attention to stake holders in order to maintain their existence and ability to compete, Cilacap Ocean Fishing Port has the following strengths:

- a. The location of PPS Cilacap which directly faces the Indonesian Ocean is a Fishery Management Area (WPP-573) with several fish resource diversity and has high economic value that is still potential for management to be developed.
- b. The commitment of the central and local governments is high in the field of fisheries and marine development and is supported by the existence of UPT-PPS Cilacap.
- c. The authority and duties and functions of fishing ports are increasingly broad and clear.
- d. Availability of human resources in adequate and usable numbers and supported by operational costs.
- e. Availability of facilities and infrastructure that are continuously developed and refined according to the master plan.
- f. The availability of statistical data and the Fishery Port Information Center which can support the management and utilization of fish resources in a responsible manner
- g. Integrated supervision infrastructure is available and operational in the PPS Cilacap area.

##### 4.3.1.2. Opportunity

The opportunities that can be utilized in order to achieve the goals and objectives of the development and development of capture fisheries according to the vision and mission of PPS Cilacap are as follows:

- a. The growth and development of the business climate is in line with local government policies that encourage increased investment in the Cilacap Regency area.

- b. The strengthening of the value of foreign currencies against the rupiah will encourage export development and increase foreign exchange.
- c. The increasing market share of fishery products, both locally and nationally, is in line with the increase in population, the level of education and awareness of the community which is increasing to consume nutritious and healthy food products.

#### 4.4. Obstacle Factors

##### 4.4.1. Weakness

Apart from its strengths, an analysis of the internal environment also takes into account the elements of weakness that must be considered, among others:

- a. Inadequate human resource management and technical capabilities.
- b. Inadequate facilities support the quality of landed fishery production.
- c. Limited operational costs and maintenance of port infrastructure facilities.

##### 4.4.2. Challenge

- a. Government policy in determining fuel prices has not been in favor of fishermen and the fishing industry.
- b. The existence of duplication of regulations and various types of fishery levies which confuse and hinder fishery business development.
- c. The rise of IUU fishing in territorial waters and ZEEI.
- d. Security disturbances and weak law enforcement at sea.
- e. The increasing access of foreign products to the domestic market as a consequence of the implementation of free trade. This causes competition for fishery products to become tighter.
- f. Fishery business is still dominated by small fishermen and the utilization of which is based on coastal waters.
- g. The community's low ability to absorb information available at the Fishery Port Information Center.
- h. The low quality of human resources in fisheries, especially fishermen, who can be seen from the low level of education causes the transfer of technology and skills to be not as expected, so that it has an impact on the ability of business development.
- i. The low quality of fishery products causes the selling value of fishery products to be low.
- j. Community resistance to development (fisheries) policies is increasing.

#### 5. Conclusion

- a. Cilacap fishing port is developed to become Cilacap ocean fishing port. Cilacap Ocean Fishery Port which was selected as the Minapolitan area of Cilacap Regency and continues to develop and improve the economy in the fisheries sector.
- b. In implementing the development of the Cilacap Ocean fishing port in the plan to absorb the workforce of the coastal community, efforts will be made in the form of improving service quality, improving port facilities and infrastructure, and developing fishery information systems.
- c. There are two factors for the development of the cilacap ocean fishing port in the plan to absorb the workforce of the coastal community, namely inhibiting factors and supporting factors. Supporting factors that support this are the strengths and opportunities that exist at the Cilacap Ocean Fishing Port. While the inhibiting factors are weaknesses and challenges that must be faced in the context of

the development of the Cilacap Ocean Fishing Port in the framework of the plan to absorb the workforce of the coastal community.

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# Optimization of Embarkation and Debarcation Services as Proof of the Implementation of Case Study SOP-Based Services at PT PELNI and PT PELINDO PERSERO

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## Abstract

Indonesia is one of the countries whose development has been taken into account by other countries throughout the world. From various aspects, especially on natural resources which incidentally can produce material value which is very abundant and has become one of the parts that continues to boost the country's economy. With such conditions, then one consequence is the mindset of the community that continues to grow until the increasing needs of the community. This study seeks to examine the application of E-ticketing at PT Pelni Semarang Branch as a proof of optimizing embarkation and debarkation services on the basis of the application of the existing SOP system at PT PELNI Semarang branch. By using descriptive qualitative research methods and samples taken at PT PELNI Semarang, the results of the study are as follows: Service procedures for selling marine ticket tickets provide prospective consumers with information about their desires, conducting shipreservation information on departure and price schedules, making invoices, payment, printing, and then bookkeeping. certain times there is a surge in the number of potential passengers so it is not proportional to the number of available fleets, or changes in departure schedules due to natural factors and so on so that the ship departure time of PT. PELNI is not in accordance with the desires of the prospective customer, the sales clerk will provide an alternative schedule for the departure of other ships, among others there are also shortages, among others, there are still brokers in this case the agent to take passengers can enter the ship and also if there is a tide up to the passenger lounge this should also be a concern for the management of PT Pelni Semarang.

**Keywords:** Optimization, Embarkation, Debarkation, PT PELNI

## 1. Introduction

Indonesia is a country consisting of thousands of islands stretching for miles, from the largest to the smallest. Geographically, this is what makes sea transportation / sea transportation an effective and efficient means because of its large carrying capacity and the cost is relatively cheap. Therefore, sea transportation is more in demand than land and air transportation.

Judging from its geographical condition which consists of many islands, Indonesia has wide water areas that separate from one island to another. This marine transportation mode can be more supportive of community activities from any sector because it can reach even remote areas effectively and efficiently. It should be noted, this sea transportation facility must also be supported by the transportation activity forum in the form of ports.

As one of the important factors supporting sea transportation, the main function of a port is a meeting place for several or more modes of transportation with various interrelated interests. At the port, there is a transfer of goods from ship to public transport and vice versa from public transport to ship. Apart from moving goods, meetings from the banking, business and customs sectors can be held at the port. On that basis, why ports are one of the main axes in Indonesia in supporting economic aspects, especially from the marine sector

In its strategic location, the role of ports is very important to support industrial and trade activities that can contribute more to the country from the development sector. With such a basic theory, there will be consequences for how to manage skillfully and professionally so that services can be desirable. The port only provides services for goods and passengers.

When the port has started to operate and be used for the public, it must be supported by adequate facilities and services according to standards. The marine passenger terminal is an important facility to support passenger service activities at the port. This is because the port as the main place in serving the transfer from one transport to another has different characteristics.

According to D.K Ching (2000) circulation is an invisible rope that connects the spaces in a building, so that circulation is a vital connecting infrastructure that connects various activities. The current condition of ports in Indonesia is still not considered good in the process of community service, especially in the movement of goods and passenger services. As a result, the process of movement, access to circulation between one activity and another, activities of embarkation and debarkation as well as the distribution of passenger circulation routes and passenger transports encountered many obstacles and did not run smoothly. Several people have even been found who are ticket brokers to passengers who do not have tickets on board.

A port with various activities and capacities of people and goods should be taken into account in planning its operations. Proper planning of the marine ship terminal, not only can make activities easier and more convenient but also can be the beginning of a commercial door that is achieved. Transportation in Indonesia has a role in advancing trade at home and abroad, this can be seen from the development of transportation which is starting to show progress. Ports are the main sector in promoting trade. However, the reality in the field is that it is often seen that some passengers such as hawkers can still board the ship without having a ticket first. A well-managed port will certainly support trade and industrial activities. The port will become a link between the construction of roads, railroad networks, and warehousing for distribution places. No less important is the role of a port as a focal point for the economy and trade and a collection of business entities such as shipping and agencies, warehousing, freight forwarding, and so on.

Passenger visits at the port of Semarang for 2013 alone reached 859,942 passengers so that it needs strict supervision so that the SOPs implemented by PT. Pelindo and PT. Pelnindo went as expected so that the SOP for Embarkation and Debarkation of passengers at Makassar port was according to standards. In terms of function and role, whether the Port of Makassar, in this case the Port of Indonesia IV, is able to play an active role in providing services, especially in terms of embarkation and debarkation originating from various islands in the territory of Indonesia.

## 2. Results And Discussion

Ticket is one of the travel documents that passengers must have as a ferry user, namely ships. PT Pelayaran Nasional Indonesia (Persero) Semarang Branch is one of the state-owned enterprises which is engaged in ship operations. PT Pelayaran Nasional Indonesia (Persero) 's shipping service can be done at ticket sales counters at branch offices or at authorized sales agents. What is meant by authorized sales agent is an agent that has been registered and has a work contract with PT Pelayaran Nasional Indonesia (Persero) in the case of ticket sales. Ticket sales at Sales Counters at Branch Offices and Sales Agents are carried out with the same administrative procedure, except that there is an additional administrative fee for ticket purchases at the Sales Agent.

Administration of marine ticket sales at PT Pelayaran Nasional Indonesia (Persero) Semarang Branch which has a procedure / series from selling to purchasing tickets.

- A. Ticket purchase procedure in accordance with the PT PELNI (Persero) Ticket Marketing Standard Operational Procedure (SOP) is as follows:

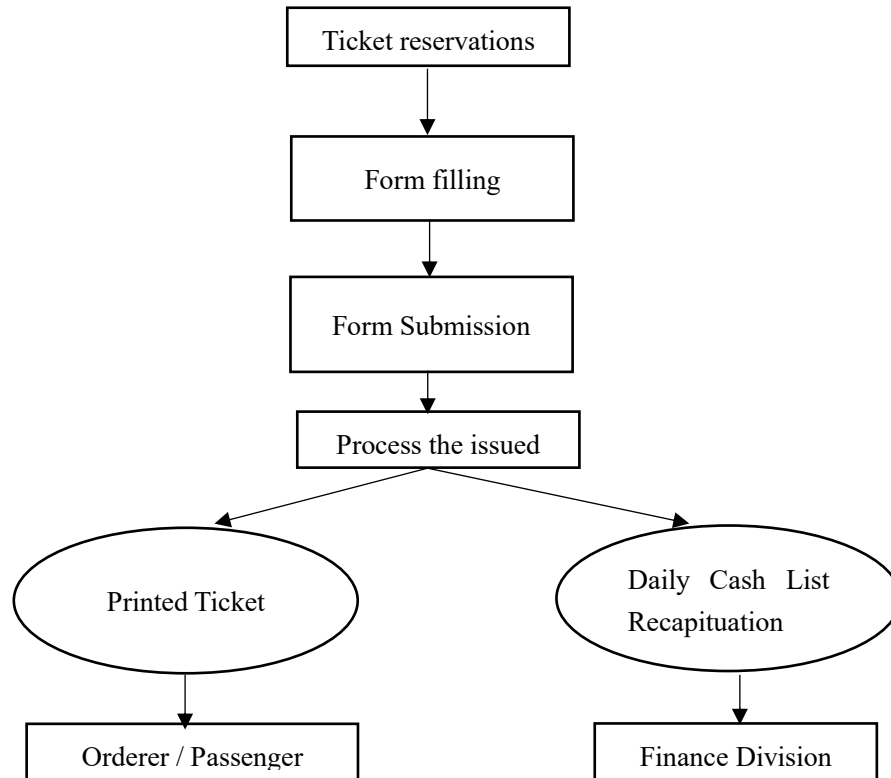
1. Fill out the form provided by the officer for free clearly. Every prospective buyer who comes at the ticket sales counter or PELNI ticket sales agents will be given a free ticket booking form.



2. After filling out the form provided clearly and completely, prospective buyers can submit the form to the counter clerk who serves it. Buyers must be orderly and queued with other fellow buyers so that the buying process can run smoothly.
  3. From the data listed on the form, the officer can then fill in the ticket data or issued tickets. Filling in ticket data is done using the ticketing application owned by PT Pelayaran Nasional Indonesia (Persero) through the sales menu.
  4. After all the required data has been inputted on the ticketing application, the prospective buyer must pay the price or tariff according to the applicable tariff provisions.
  5. After the buyer has made the payment, the officer will then give the printed ticket.
  6. The buyer must be careful and check after receiving the ticket given by the officer before leaving the queue to ensure there is or not an error in the data or information stated on the ticket he receives. If all the information listed on the ticket is correct, the buyer can leave the counter.
- B. The process to become a ticket sales agent for PT Pelayaran Nasional Indonesia (Persero) goes through several stages, namely as follows:
1. Prospective sales agents submit a written application addressed to the Commercial Director and attach all general requirements.
  2. The PKP Senior Manager evaluates the application letter for a prospective agent, the completeness or correctness of the administration, and conducts a site survey.
  3. If the results of the evaluation and survey state the truth and are worthy of approval, then the PKP Senior Manager will notify his approval in writing by letter to the prospective PT PELNI Ship Ticket Sales Agent.
  4. After obtaining approval from the PKP Senior Manager, the PT PELNI Ship Ticket Sales Agent is asked to prepare the required infrastructure with the specifications further stipulated in the agreement.
  5. If the infrastructure is declared ready to operate, a cooperation agreement contract is signed by the Branch Head and the head of PT Pelayaran Nasional Indonesia (Persero) Ship Ticket Sales Agent.
  6. The PKP Division provides a registration number or online access permit to the PT Pelayaran Nasional Indonesia (Persero) Ship Ticket Sales Agent.

All sales administration processes in general, from ordering to submitting tickets to the customer and reporting the Daily Cash List Recapitulation, can be described as a flow as shown in the chart below:





Ticket Sales Administration Flow Chart

With the above procedures and conditions, it is hoped that the sale and purchase of tickets by e-ticketing can run safely. On the other hand, at the port of Tanjung Emas, hundreds of counterfeit tickets were found, according to what Akhmad Sujadi said as Manager of Communication and Institutional Relations of PT Peln, said "PT Peln found hundreds of fake tickets at Tanjung Emas Port, Semarang, Central Java. The ticket does not match the name of the passenger who will be traveling ". Thursday (11/11/2018).

From the data obtained from the Manager of Communications and Institutional Relations of PT Peln, the authors present the answers to these problems by implementing an online e-ticketing system to facilitate ticket sales. Prospective customers will be served by sales officers who will listen to the wishes of customers and try to get as much information as possible from potential customers. On the other hand, the sales officer will provide complete information about the schedule of ships including the day, date, time of departure, class, estimated price and the ship to be used.

#### 1. Findings Facts The process of the online ticketing system

The results of the research are in the form of interview answers explaining the informants' answers regarding the implementation process. By implementing this online ticketing system, each passenger is required to fill in the passenger's name and identity number when ordering a ticket on the ticket booking schedule. This ensures that passengers traveling according to identity, making it easier to identify, adjust manifest and also make it easier to manage insurance in the event of a disaster.

He explained, Departure Consul Service (DCS) passenger ticketing control system with barcode to check the validity of identity on ticket with passenger identity has been done. This policy has been implemented since August 2015 starting from Tanjung Priok, Batam, Tanjung Balai, Medan, Semarang, Surabaya and other ports, which has been implemented together with passenger terminal operators and government representatives at the port.

## 2. Finding Facts on Obstacles to Implementation of the online ticketing system process

In any job, of course, what all parties expect for the workers themselves and the company is a work success and effectiveness. All there must be obstacles and obstacles that occur at the time of its implementation, resulting in failure or things that are not desirable from the work. Implementation of the online ticketing process is also the same. To explain the obstacles that occur, researchers conducted interviews, Sales in providing services to potential customers, namely:

### a. Good greeting.

A good greeting is the first step in sales service. An officer must first greet and invite potential customers to sit politely and friendly, while preparing the ones that will be used to serve potential customers.

### b. Asking needs.

The sales clerk must ask the prospect's intentions and what information is required.

Manage and develop sea transportation in order to ensure the accessibility of the community to support the realization of the insight of the archipelago '. PT Peln carries out its responsibilities by not only being limited to navigating commercial routes, but also serving shipping with the outermost small islands route (Presidential Decree No. 78 of 2005 concerning the Management of the Outermost Small Islands). In addition, the use of natural resources in the context of sustainable development and community empowerment in order to increase welfare can be achieved according to the target targets.

With the application of this online ticketing system, each passenger is required to fill in the passenger's name and identity number when ordering a ticket when booking a ticket. This ensures that passengers traveling according to identity, making it easier to identify, adjust manifest and also make it easier to manage insurance in the event of a disaster. All ticket data entry processes are carried out online using the ticketing application. Ticketing application is an Oracle application specially created for ticket management. The ticketing application can be opened and used by interested parties or parties who have main duties and functions related to ticketing.

The on-line system implemented by PT. PELNI (Persero) Semarang. In the procedure of selling ship tickets for PT. It is a testament to technological advances that have changed consumer perceptions about the length and complexity of the process for being able to travel by ship. From this writing, it can be concluded that:

Marine ticket sales service procedures make prospective customers provide information on their wishes, make ship reservations to get information on departure schedules and prices, create invoices, make payments, print, and then do bookkeeping.

## 3. CONCLUSION

Based on the description above, to be able to provide better service for consumers, it must be able to improve several things including: improving service quality, adding experts who can improve work efficiency. Equip himself with supporting facilities, for example procuring secondary electricity generators and recruiting field staff. In addition to the above suggestions, there are constructive criticisms that, if they can be used as material for thought in the future, including in terms of ticketing, it is better if PT. PELNI (Persero) Semarang, equips itself with secondary electricity producers so that it does not depend entirely on the primary electricity supply from PLN. In terms of human resources, PT. PELNI (Persero) Semarang. Be more selective in recruiting new

managers or employees so that frequent management changes can be avoided, because with the change in management they automatically have to adapt first, this can hinder the progress of the company. PELNI (Persero) Semarang.

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## **The Implementation of Financial Inclusion for Indonesian Migrant Workers Post Placement. An Abstract**

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### **Abstract**

The financial arrangements made by PMI are very close to the Permanent Income Hypothesis theory created by Milton Friedman combined with Life Cycle Income Hypothesis by Ando Modigliani. The Life Cycle Hypothesis emphasizes on how to make choices so that living standards are maintained despite changes in income throughout life, whereas the Permanent Income Hypothesis emphasizes more on forecasting the level of income throughout life. Milton Friedman states that current consumption depends on current income and projected income. The objective of this study are 1) to identify the use of inclusive finance for PMI and their families in the main areas of origin in Indonesia based on Regions (case studies in three main regions); 2) to analyze factors that influence the utilization of remittances by PMI and their families in consumption and both short- and long-term investment in accordance with the theory of permanent life cycle hypothesis; 3) to analyze the role of stakeholders in the implementation of inclusive finance that encourages the economic improvement of PMI families and the community through entrepreneurship. This research used a mixed method, which is a combination of quantitative and qualitative methods. A mixed method is a research model that is not only oriented to the research method but also obtains in-depth answers for the problem. The analytical instruments that used in this research are : ATLAS.ti, descriptive statistical analysis combined with qualitative analysis, and regression, which directly compares data obtained in three regions, was used to answer the second goal. Meanwhile, the Matrix of Alliances and Conflicts: Tactics, Objectives and Recommendations (MACTOR) was used to answer the third goal. This study found that one important point in the economic development of PMI and their family was financial and banking education and economic empowerment through entrepreneurship. The results of data processing using ATLAS.ti shows that entrepreneurship during the placement in Hong Kong is influenced by (1) training, (2) motivation, (3) assistance and (4) capital. The most dominant indicator for training is softskill followed by hardskill. Motivation is the second influential factor in entrepreneurship. Motivation is influenced by the IMW's desire to be independent, followed by entrepreneurial courage, and desire to be close to the family. These results indicate that the motivation for independence with the jargon of Becoming Employer or the desire not to become a worker is the most dominant indicator.

**Keywords** : Life Cycle Income Hypothesis, Migrant Workers, Remitten.

## Corporate Governance and Firm Size On Earnings Management : Indonesia Listed Companies

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### Abstract

This study examines the effects of Corporate Governance and Firm Size on earnings management Indonesia listed companies sector of Infrastructure, Utilities & Transportation. Earnings management is often used as an opportunistic action to make up financial statements in the interest of management, therefore, it is necessary to investigate the relevant factors and significant tools to monitor it. This study attempt to contribute findings and determinants of earnings management in Indonesia. Earnings management are still interesting topic related to business norms in Indonesia as emerging capital market. The analysis method works with panel data regression by using E-Views software. The modified Jones model (1995) was used to measure accrual-based earnings management. Corporate Governance using Independent Commissioners, Audit Committee, and Institutional Ownership. The results of this study indicate Institutional Ownership structure, Audit Committee and Firm Size have significant influences on Earnings Management, while Independent Commissioners has no significant impact.

**Keywords:** Corporate Governance, Independent Commissioners, Audit Committee, Institutional Ownership, Firm Size, Earnings Management

### 1. Introduction

Several earnings management case in the past has been found in some Indonesia listed companies such as case of Toshiba Indonesia corp, Bakrie Group case , the case of Bank Lippo, PT Inovisi Infracom (INVS) case in year 2017 and latest case of Garuda Indonesia (2019). These earnings management case had negative impacts to many parties including the credibility financial statements and corporate governance company itself. Stakeholders may decided misleading business decision based on these financial report data and even public society indirectly have these negative effects in the future. Investors from public society, who are concerned with probability stock returns examine the companies' earnings frequently (Shen & Chih, 2007).

Earning management practices is still interesting topic in emerging country and in capital market inefficiency such as Indonesia (Suhardianto & Harymawan, 2011). Indonesia individual investor do not take in to consideration the occurrence of Earning management when do financial analysis listed companies. The recent case of earnings management is Garuda Indonesia (GIAA) 2019, which recorded their transaction with Mahata as income royalty comply with PSAK 23, agreed by Management and Commissioners, while the other view after investigation done by OJK the transaction was approved as rental income. Therefore, this study have motivation to examine the effect of Corporate Governance in Indonesia listed companies Infrastructure, utilities and transportation sector especially on earnings management.

Many previous studies have found some tools to monitor earning management that is corporate governance. In study by Shah et al. (2009) mentioned at Dechow et al. (1996) predictors factor to lower earning manipulation are bigger percentage of independent directors and existence of audit committee as part of Good Corporate Governance. Corporate Governance consists of Board of directors may have role to control the limit earning



management (Xie et al., 2003), independent boards protect shareholders from agency problem. The role of institutional ownership structure in the long term prevent accruals management that cope to beat benchmark earnings (Lin & Manowan, 2012). The members on audit committees should help detect earnings management in the company (Blue ribbon panel). Firm size also suggest to have an impact over earnings management practices of the sample firms from small to larger firm.

This study wants to find whether predictors of earnings management that use have significant effect or not

## 2. Literature Review

### 2.1. Earnings Management

Earnings management happens when managers take advantage from accrual accounts in a precondition preparation stage to alter earnings on financial report to either mislead company financial performance or to influence future contracts (Healy & Wahlen, 1999, in Mashayekhi, 2008). Managers of the firm, politically connected or not, might use earnings management practices to enhance corporate value (Braam et al., 2015). There are some background hypothesis to do earnings management for example Debt (equity) covenants hypothesis, Political cost hypothesis and investors' expectation or analysts' forecast hypothesis.

Agustia et al., 2020 explained Accrual-based earnings management (AEM), as one of earnings management practices, "is executed through managerial influence and discretion to accruals, which the existing prevailing accounting principles and regulations also require" or estimates within the generally accepted accounting principles to achieve earnings objectives. The method are for instance, the depreciation of fixed asset impairment, the valuation of inventories, estimation of bad debt expense and increase or decrease income by creating accruals. This study choose Accrual-based earnings management approach with model of measurement from Modified Jones Model Discretionary Accruals (DA) as proxy to measure earnings management activities which was introduced by Dechow et al. (1995).

### 2.2. Corporate Governance

One of economic recovery program in Indonesia, the Indonesian government has formed the National Committee for Corporate Governance (NCCG) after 1997 economy crisis which hit the country. Following, the Jakarta Stock Exchange (JSX), as Self Regulatory Organisations (SROs) in Indonesia capital market has also issued the decree of JSX's Director No. Kep-315/BEJ/06/2000 to get market confidence. The decree obliges the listed companies to have Independent Commissioners, Audit Committee, and Corporate Secretary in the Board company structure to achieving Good Corporate Governance. Board composition is an important corporate governance mechanism includes determining the composition of independent director, executive directors, the qualifications, defining audit and compensation (Man & Wong, 2013). This study used internal mechanisms of Corporate Governance represented by the boards of independent commissioners, audit committee, and institutional ownership structure.

#### 2.2.1. Board of Independent Commissioners

Board of Independent Commissioners composition is proportional with the company shares not owned by majority shareholder and independent commissioners should be at least 30% of the number of board size (JSX, 2000). The independent Commissioner should be : not have affiliated link with majority shareholder, not have affiliation relation with company manager, the Board Director or/and Commissioners related listed firm, not engaged as commissioner in other affiliated firm and individual who understand stock market rules (Siregar & Utama, 2008). The board of commissioners has the task of overseeing and supervising how the board of management performs operational of the company. Proportion of Independent Commissioner can constrain manager to practice earnings management that requires transparency financial reporting (Kusumawati et al., 2015). The number of independent director of boards have concern and need to oversee the management and is expected for controlling management's behaviour (Bukit & Nasution, 2015). Chen et al. (2015) research's finding also the same Independence commissioner can effectively monitor earnings management in transparent and better information environment.

This study is proxied Board of Independent Commissioners percentage from the number of Independent Commissioner compare to total number of Commissioner related firm. This study address the view by testing following testing :

**H1** Boards of Independent Commissioners negatively affect earnings management.

#### 2.2.2. Audit committee

An audit committee requires at least three members, one must be an independent board, the other members should be from outside parties, and at least one of whom has accounting/finance skills (Siregar & Utama, 2008). The audit committee may have more direct role and access in controlling financial reporting by manager; furthermore, an active and well functioning audit committee may prevent earnings management and its function to be more effective monitors with independent directors from external parties (Xie et al., 2003). Other roles also, provide assurance for firms to comply with laws and regulations (Man & Wong, 2013). Xie et al. (2003) showed the number of audit committee meetings has a significant negative coefficient, it is explained that the more active audit committee is engaged with the less of discretionary current accruals. Many previous studies related to audit committee showed negative significant effect to earning management such as Wedari (2004), Siregar dan Utama (2005), Nasution dan Setiawan (2007), Andrianto dan Anis (2014), and Sari dan Putri (2014). While, the study of Muda et al. (2018), partial testing 325 manufacturing company listed in IDX, indicates audit committee has no influence on earnings management. This study is proxied Audit Committee from the number of audit committee in related firms.

**H2** Audit Committee negatively affect earnings management.

#### 2.2.3. Institutional ownership structure

Proportion ownership structure of a firm of shares owned by institutional and individual shareholders. Institutional investors who exercise discretion of investment of others and invest in large amount of money such as financial institution, insurance firm, pension fund, and associated firms with the above categories (Yang et al., 2009). Institutional investors have motivation to mitigate the managers' earning management and monitor the firms with the intention of holding their share for the long time period (Shah et al., 2009). This view is proved by studies, Rajgopal and Venkatachalam (1998); Cheng and Reitenga (2000) and Kang et al. (2013) indicated institutional ownership linked with less discretionary accruals. In contrary, Kwak et al. (2009b in Lin & Manowan, 2012) explain that "as the percentage of institutional ownership of banks increases, income smoothing through provision on loan loss increases". Lin & Manowan (2012) found a significant positive relationship between ownership by temporary institutional investors (holding stocks portfolios with high turnover) and earning management. Yang et al. (2009) observed no association between institutional ownership to constrain earning management in Malaysia firm. Bao & Lewellyn (2017) found controlling ownership/largest shareholder percentage of total shares outstanding affect positive significant to earnings management and institutional ownership has no significant relation to earnings management. This study is proxied Institutional ownership structure from the total shares owned by institutional investor compare to outstanding shares related firm.

**H3** Institutional ownership structure negatively earnings management.

#### 2.3. Firm Size

Firm size is frequently defined for accessibility public information in the market, such information for large firm usually be more accountable and well presented than for small firm (Siregar & Utama, 2008). In the previous studies, the relationship between firm size and earnings management found the result are in the opposite direction. Some studies are found that firm size have positive effect on earnings management, such as the study of Moses (1987), Michaelson et al. (1995), Nassirzadeh et al. (2012), Kouki et al. (2011), Amertha et al. (2014), Ali et al. (2015) and Halim et al. (2005). According to Shen & Chih (2007), firm size has positive effect on earnings management, explain that the larger firms face capital market pressure greater than small firms, because they are closer scrutiny by bankers and analysts.

On the opposite view, financial data for big size firms should be more accessible on the market more than for

small size firms, so large firms have less incentive to smooth the income (Siregar & Utama, 2008). The size hypothesis shows that the larger firms is, the larger the probability to choose an accounting method, more advanced internal control systems, and more competent audit team that will lower earnings smoothing (Amertha et al., 2014). Previous studies found the same result, negative effect, such as, Lee and Choi (2002), Tangjitprom (2013) and Dwi Lusi Tyasing Swastika (2013). In this study, Firm Size is proxied by using the nature logs (Ln) of total asset.

**H4** Firm Size negatively affects earnings management.

This study describe the following hypothesis in figure 1 to analyze the relationship between corporate governance and firm size to accruals earning management.

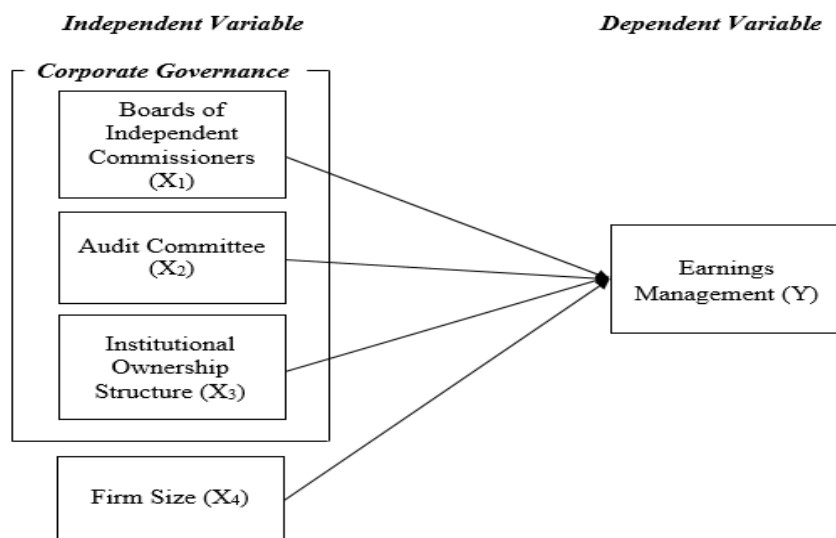


Figure. 1. Conceptual Design

### 3. Method Data and Analysis

#### 3.1. Type of the Study

This type of study was created on causal associative research that need to observe the relationship or explain the effect of independent variables to dependent variables.

#### 3.2. Population and samples

The population of this study are registered companies in Indonesia Stock Exchange Infrastructure, Utilities & Transportation sector. This sector as one of service sector which experience high promising growth in the recent decade as Indonesia economics' growth increase demand for this sector and this sector become one of big four contributor to non oil gas industry. The demand of Infrastructure, Utilities & Transportation sector has increased positively as Indonesians' population grow. This sector play important role in Indonesia economics development and support Indonesia government's target or program in recent decade. According to El Diri et al. (2020) the level of industry competition as proxy by market concentration, can increase companies' tendencies to participate on earning management. There are 33 companies listed in this sector, 13 companies were deleted from sample criteria as not fulfill completed data on financial statements during period of 2011-2017, and then 2 companies were also deleted after found could not get sufficient data for the proxy variable. Hence, the total sample are 18 listed companies during period 2011-2017 as showed in table below.

Table 1. The sample research

Subsector	Code	Companies
<b>Energy</b>	LAPD	Leyand International Tbk
	PGAS	Perusahaan Gas Negara (Persero) Tbk
	RAJA	Rukun Raharja Tbk
<b>Toll, Road, Airport and Allied Products</b>	CMNP	Citra Marga Nusaphala Persada Tbk
	META	Nusantara Infrastructure Tbk
<b>Telecommunication</b>	TLKM	PT. Telekomunikasi Indonesia Tbk
	ISAT	PT. Indosat Tbk
	FREN	PT. Smartfren Telecom Tbk
	TBIG	PT. Tower Bersama Infrastructure Tbk
	EXCL	PT. XL Axiata Tbk
<b>Transportation</b>	GIAA	PT. Garuda Indonesia (Persero) Tbk
	APOL	Arpeni Pratama Ocean Line Tbk
	BULL	Buana Lintas Lautan Tbk
	CASS	Cardig Aero Services Tbk
	HITS	Humpuss Intermoda Transportasi Tbk
<b>Non Building Construction</b>	INDY	Indika Energy Tbk
	SUPR	Solusi Tunas Pratama Tbk
	TOWR	Sarana Menara Nusantara Tbk

### 3.3. Data Analysis Method

The data were analyzed using regression method of panel data using Eviews software.

### 3.4. Data Testing

This study used preliminary test with Classic Assumption Test aims to test the regression model can fulfill basic assumption for regression analysis that are the residual normality testing in Ordinary Least Square method, no autocorrelation, no multicollinearity, and no heterocedasticity.

### 3.5. Estimation of Panel Data Regression Model

Earning management derived from total accruals (Net Income minus cashflow from operating activity) and discretionary accruals using the modified jones models (Dechow, 1995). Previous studies such as Massa et al. (2015), (Arun et al., 2015) (Call et al., 2014) (El Diri et al., 2020a) (Shah et al., 2009) use the most commonly used, powerful and acceptable model for discretionary component of accruals from Dechow et al. (1995) to measure earnings management as proxy. The equation below as dependent variable:

$$DACCit = \frac{TACCit}{TAit-1} - \left\{ \alpha_1 \left( \frac{1}{TAit-1} \right) + \alpha_2 \left( \frac{\Delta REVit - \Delta RECit}{TAit-1} \right) + \alpha_3 \left( \frac{PPEit}{TAit-1} \right) \right\}$$

Where as:

DACCit : discretionary accruals company i at periode of t

TACCit : total accruals company i at periode of t

ΔREVit : the changes of revenue company i at periode of t

ΔRECit : the changes of account receivables company i at periode of t

PPEit : gross property, plant & equipment company i at periode of t

TAit-1 : total asset company i at periode of t-1

α1-α3 : regression parameters

The panel data equation model is a grouping of cross section data and time series data:

$$Yit = \alpha + \beta_1 Xit + \beta_2 Xit + \beta_3 Xit + \beta_4 Xit + \varepsilon it$$

where :

Yit = Earnings management (LogDA)

α = Constant

X1it = The boards composition of independent commissioners (BIC)

X2it = Audit committee (AC)

X3it = Institutional ownership structure (IOS)

X4it = Firm Size (FS)

β1....β4 = Coefficients Regression

i = ith entity

t = tth entity

ε = error

This study used estimation of panel data regression model to choose the best model between Common Effect, Fixed Effect and Random Effect. By using Chow test to choose between Common Effect and Fixed Effect, the next step by using Hausman Test to choose between Fixed Effect and Random Effect.

## 4. Result and discussion

### 4.1. Result

The below equation are the results from the multiple regression the process to get dependent variable Earning Management measured by discretionary accruals (DA).

$$\left( \frac{TACC}{TAit-1} \right) = 548461971 (X1) + 1.470829 (X2) + 0.955517 (X3)$$

(1)

$$NDAit = 548461971 \left( \frac{1}{TAit-1} \right) + 1.470829 \left( \frac{\Delta REVit}{TAit-1} - \frac{\Delta RECit}{TAit-1} \right) + 0.955517 \left( \frac{PPEit}{TAit-1} \right)$$

2

(2)

#### 4.1.1. Descriptive Statistical Analysis

Table 2. Descriptive Statistic

	<b>DA</b>	<b>BIC</b>	<b>IOS</b>	<b>AC</b>	<b>Ln FS</b>
<b>Mean</b>	0.796976	0.415778	0.679103	3.349206	29.91673
<b>Median</b>	0.832000	0.400000	0.684500	3.000000	30.21950
<b>Maximum</b>	2.561000	0.750000	1.000000	5.000000	32.92170
<b>Minimum</b>	0.055000	0.000000	0.084000	0.000000	27.23280
<b>Std. Dev.</b>	0.472847	0.142203	0.167856	0.870103	1.579722
<b>Skewness</b>	0.760710	-0.042511	-1.191429	-0.664599	-0.018618
<b>Kurtosis</b>	3.923006	2.992048	5.037154	6.851975	1.692937
<b>Jarque-Bera</b>	16.62496	0.038282	51.59704	87.17350	8.976445
<b>Probability</b>	0.000245	0.981041	0.000000	0.000000	0.011241
<b>Sum</b>	100.4190	52.38800	85.56700	422.0000	3769.508
<b>Sum Sq. Dev.</b>	27.94808	2.527726	3.521972	94.63492	311.9403
<b>Observations</b>	126	126	126	126	126

Table 2 reports the descriptive statistics of the 33 sampel firms with 126 number data of observations. It shows that the mean of Discretionary Accruals is 0.796976 and the mean Audit Committee is 3.349206. The mean Board of Independent Commissioners is 41,5778 %, the mean Institutional Ownership structure is 67,9103 % and the mean Firm Size is 29.91672.

#### 4.1.2. Classic Assumption Test

##### 4.1.2.1. Normality testing

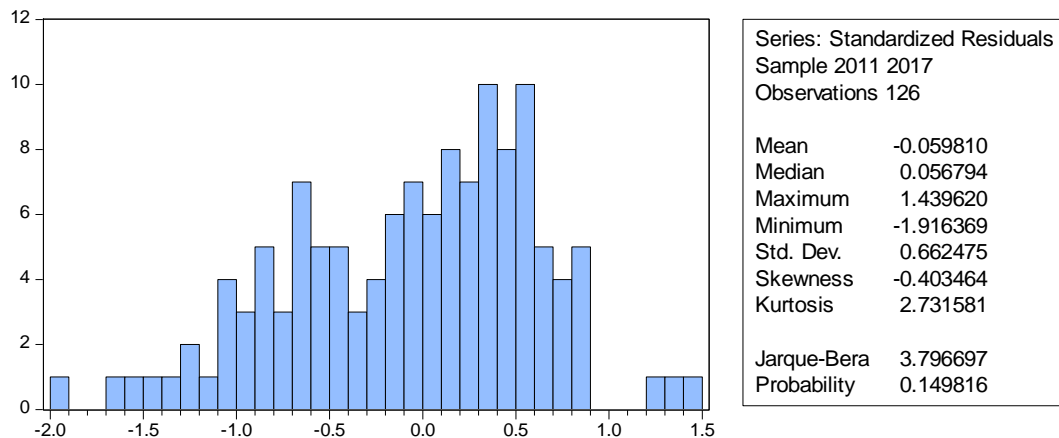


Figure. 2. Normality Testing

In Figure 2 show JB probability 0,149816 which is bigger than prob. Significant  $\alpha = 0,05$  and Jarque-Bera 3,796697 is less than Chi-Square table 9,488. Thus, can conclude the residual normal distribution.

##### 4.1.2.2. Autocorrelation testing

Table 3. Autocorrelation testing

Cross-section fixed (dummy variables)

Weighted Statistics			
R-squared	0.780383	Mean dependent var	-0.388852
Adjusted R-squared	0.736037	S.D. dependent var	0.906947
S.E. of regression	0.503806	Sum squared resid	26.39730
F-statistic	17.59772	Durbin-Watson stat	1.764067
Prob(F-statistic)	0.000000		

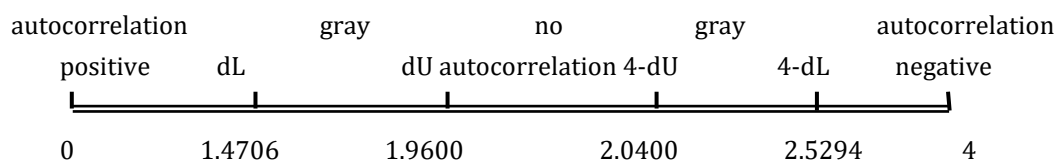




Table 3 show Durbin-Watson stat 1,764067, the area between dL 1,4706 and 1,9600 dU is gray area. The data sample can be concluded in the gray area.

#### 4.1.2.3. Multicollinearity testing

Table 4. Multicollinearity testing

	LogDA	BIC	IOS	AC	FS
LogDA	1.000000	-0.116828	0.283900	0.024727	-0.259218
BIC	-0.116828	1.000000	-0.070067	0.309688	0.126430
IOS	0.283900	-0.070067	1.000000	-0.107553	-0.105189
AC	0.024727	0.309688	-0.107553	1.000000	0.442940
FS	-0.259218	0.126430	-0.105189	0.442940	1.000000

Table 4 shows correlation testing that coefficient correlation between variable have less than 0,90. Thus, there are no multicollinearity in this regression model.

#### 4.1.2.4. Heterocedasticity testing

Table 5. Heterocedasticity testing

Method: Panel EGLS (Cross-section weights)

Date: 09/06/20 Time: 21:00

Sample: 2011 2017

Periods included: 7

Cross-sections included: 18

Total panel (balanced) observations: 126

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.732799	1.331250	-0.550459	0.5832
BIC	-0.095797	0.145574	-0.658063	0.5120
IOS	-0.065317	0.125605	-0.520021	0.6042
AC	-0.006111	0.017265	-0.353920	0.7241
FS	0.038115	0.044492	0.856665	0.3936

Table 5 shows Glejser test that Prob. of BIC, IOS, AC and FS greater than 0,05, so can be concluded no heterocedasticity between independent variables to dependent variable.

## 4.2. The Selection of Panel Data Regression Model

### 4.2.1. Chow Test & Hausman Test

Table 6. Chow & Hausman Testing

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	6.465253	(17,104)	0.0000
Cross-section Chi-square	90.866309	17	0.0000

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section and period random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.800926	4	0.0439

From table 6 shows that Prob. is smaller than  $\alpha = 0.05$ . Based on the testing result to select the best model using Chow test and Hausman test, it can be decided that the model is more suitable to follow the Fixed Effect Model, than Common Effect or Random Effect Model. Therefore, this use Fixed Effect Model (FEM) for regression .

#### 4.2.2. Hypothesis testing

Table 7. Hypothesis testing Fixed Effect

Dependent Variable: LOGDA

Method: Panel EGLS (Cross-section weights)

Date: 09/06/20 Time: 21:08

Sample: 2011 2017

Periods included: 7

Cross-sections included: 18

Total panel (balanced) observations: 126

Linear estimation after one-step weighting matrix

White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.19752	2.234771	5.458063	0.0000
BIC	-0.301938	0.249313	-1.211077	0.2286
IOS	0.388368*	0.136700	2.841031	0.0054
AC	0.045217**	0.022914	1.973325	0.0511
FS	-0.432573*	0.069734	-6.203175	0.0000

#### Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics			
R-squared	<b>0.780383</b>	Mean dependent var	-0.388852
Adjusted R-squared	0.736037	S.D. dependent var	0.906947
S.E. of regression	0.503806	Sum squared resid	26.39730
F-statistic	17.59772	Durbin-Watson stat	1.764067
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.607546	Mean dependent var	-0.454005
Sum squared resid	28.36139	Durbin-Watson stat	1.594712

\* Significant at 5% alpha level

\*\* Significant at 10% alpha level

Therefore, the equation data panel regression model of this study, as follow :

$$DA = 12.19752 - 0.301938 BIC + 0.045217 AC + 0.388368 IOS - 0.432573 FS$$

### T-statistics

Partial Testing t -statistic found partially Board of Independent Commissioner no significant negatively affect to earnings management with Prob. 0,2286 > p significant 0,05, so reject Hypothesis 1. Institutional Ownership has Prob. 0,054 < 0,01 significant positively affect to earnings management at level confidence interval 95% contrary with negative direction from proposed hypothesis, so reject Hypothesis 2. Audit Committee has positively significant affect to earnings management at confidence interval level 90%, opposite direction with hypothesis so reject Hypothesis 3. Firm size has negatively affect to earnings management Prob 0,000 < 0,05, thus accept Hypothesis 4.

### F- statistics

F test is carried out to determine if the independent variables have significant impact on the dependent variables simultaneously. The fixed effect model can be seen in the table 7 above, indicate the value of F stat is 17.59772, the table value is 3,179 with Prob. significance value (F-statistic) of 0,0000 < 0,05. This explain independent variables i.e. Corporate Governance consists of Board of Independent Commissioner, Institutional Ownership, Audit Committee and Firm Size at the same time affects earnings management as dependent variable.

### Coefficient of Determination

From above table 7 shows the the coefficient determination with observing the Adjusted R-squared value as 0.736037. It means 73,6073% of Earnings management can be explained by Corporate Governance i.e Board of Independent Commissioner, Institutional Ownership, Audit Committee and Firm Size.

## 5. Conclusion

The modified Jones model was able to analyze earnings management in listed company sector Infrastructure, Utilities & Transportation IDX and the sample firms vary from small to large firm.

Hypothesis 1 is rejected. The boards composition of independent commissioners (BIC) have no significant effect on earning management, similarly finding with Wedari, L. K. (2004), Dwi Lusi Tyasing Swastika (2013). Different with Shah et al. (2009) showed the proportion of the board director have a negative influence on earnings management, their role can reduce earnings management practices.

Hypothesis 2 is rejected. Institutional ownership structure (IOS) have positive significant partially effect with tiny value on earning management. Institutional ownership showed interest on company value or stock value, the same result's study also found by Adrianto & Anis (2014) and Fanani (2014). In the same result of research by Lin & Manowan (2012), with the sample of 18.969 active US firms on Compustat during period 1996-2001, for institutional ownership who hold diversified portfolio with high return, found positive significant on earnings management. This findings show more likely same with Bao & Lewellyn (2017) controlling ownership of largest shareholder of 1200 firms in 24 emerging markets have positive significant to earnings management.

Hypothesis 3 is rejected. Audit committee (AC) have positive significant effect on earning management more likely same result study from Bukit & Nasution (2015). Contrary finding with Waweru & Prot (2018), El Diri et al. (2020a) and survey literature of Man & Wong (2013).

Hypothesis 4 is accepted. Firm Size (FS) have negative significant partially on earning management, the result in line with Dwi Lusi Tyasing Swastika (2013), Waweru & Prot, (2018) and El Diri et al. (2020b). The same result also showed by Tangjitprom (2013) who observed 5.152 listed firms traded on NYSE or NASDAQ during 2002-2010. This study's result in line with political cost hypothesis (size hypothesis) from Watts and Zimmerman (1986), it indicates that the bigger firm has the bigger probability to manage lower income or

lower level of earnings management with purpose to reduce the political cost.

### **Implication/limitation and suggestions**

The result's study can imply and be useful information to stock investor as fundamental analysis for IDX listed company sector Infrastructure, utilities & transportation. The implication of Good Corporate Governance practices in Infrastructure, utilities & transportation sector IDX listed companies cannot help to constraint earnings management practices. The sample of this study vary from small to big firm and the result show bigger firm can manage lower earnings management.

Future study suggests to use earning management practices combined with real earnings management and accrual-based earnings management approach. The conceptual model can modify to expand the design framework such as adding CG as moderating variable or include the role of female board of director as trust leadership as part of corporate governance.

Future researchers encourage to study about this topic with more sample not only in one sector and also can extend the length of study period.

The regulations on corporate governance in Indonesia were implemented in early 2000, most of the listed companies especially sector in Infrastructure, utilities & transportation have complied with the corporate regulation. However in the reality, not all companies complied corporate governance seriously or just follow the requirements of JSX regulation.

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# **The Influence of the Leadership Style, Commitment, of Organizational, Organizational Climate, Organizational Culture and Compensation on Turnover Intention at PT PCI Elektronik International Batam**

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## **Abstract**

The aim of this study are to analyze the influence of leadership style, commitment of organizational, organizational climate, organizational culture and compensation on turnover intention at PT PCI Elektronik International Batam. This study used a quantitative method and used Scale Likert. This study is analyzed using multiple linear regression and the test of hypothesis using t test (partial) and f test (simultan). The result of the study are (1) leadership style has no significant effect on turnover intention at PT PCI Elektronik International Batam, (2) commitment of organizational has significant effect on turnover intention at PT PCI Elektronik International Batam, (3) organizational climate has no significant effect on turnover intention at PT PCI Elektronik International Batam, (4) organizational culture has significant effect on turnover intention at PT PCI Elektronik International Batam, (5) compensation has significant effect on turnover intention at PT PCI Elektronik International Batam. The result of f test showed that leadership style, commitment of organizational, organizational climate, organizational culture and compensation simultaneously influenced 95,7% on turnover intention at PT PCI Elektronik International Batam.

**Keywords:** Leadership Style, Commitment of Organizational, Organizational Climate, Organizational Culture, Compensation, Turnover Intention

## **1. Introduction**

Facing a tight business today and in the future, a company must operate a combination of all resources they have such as human resources, machine, and capital to create a product and service that relevant to the goal of company. Human is a source that always needed by a company. Human resources can influence the efficiency and the effectiveness of the company and also to construct and to produce goods and service, maintenance the quality and the quantity, to supply the product and allocate all human resource need that needed by the company.

The organization of the company is made based on a certain objective or vision of the company. The problem is the hope of each individuals of the workers can be not same with the objective of the company. The issue causing a dynamics in the company. One of the dynamics in the company is turnover intention. The high level of turnover intention will cause negative impacts to the organization, such as: creating unstable organization, decreasing of service quality and increasing of recruitment and training budget. Effort to decrease turnover intention are greatly influenced by leadership style, work commitment, organizational climate, organizational culture and compensation. This research will explain the influence of leadership style, work commitment, organizational climate, organizational culture and compensation on turnover intention at PT. PCI Elektronik International Batam.

These are the definition of all variables that influenced turnover intention. Leadership style is a way of a person to influence the habit of the subordinate to encourage the productivity and work satisfaction of the worker to get the goal of organization. The function of a leader is covering all fields or aspects. A leader has great responsibility to lead and manage the subordinate in a team to achieve the target of the company. Commitment of organizational is a condition of a worker following the objectives of organization and still stay inside. Work climate is a manifestation of culture values of organization. So that, the changing of policy based on the supporting values that change the policy itself. Generally, the values such as, justice, openness, and unity can be a strong foundation to start the changing. The work climate such as dishonest, disrespect, no empathy and no encourage make an uncomfortable work climate in the organization. Organizational culture are dominant values which is spread and be a philosophy value in the organization as a guidance for the organization to maintain the worker and consumer.

Compensation is all income such as money, goods, directly or indirect goods for the worker as a reward because of their performance in the organization or a company and also income to pay their need. Good procedure of compensation is needed both of directly or indirect as a reward for the worker.

#### 1.1 Purpose of Research

1. To analyze the influence of leadership style on turnover intention at PT. PCI Elektronik International Batam.
2. To analyze the influence of commitment of organizational on turnover at PT. PCI Elektronik International Batam.
3. To analyze the influence of organizational climate on turnover intention at PT. PCI Elektronik International Batam.
4. To analyze the influence of organizational culture on turnover intention at PT. PCI Elektronik International Batam.
5. To analyze the influence of compensation on turnover intention at PT. PCI Elektronik International Batam.
6. To analyze the influence of leadership style, commitment of organizational, organizational climate, organizational culture and compensation on turnover intention at PT. PCI Elektronik International Batam.

## 2. Literature Review

### 2.1. Leadership Style

Leadership style is representing philosophy, skill and attitude of a leader in politic and integrate all the individual mindset to achive the target of the company, Heidjrachman and Husnan in Frengky Basna(2016:320).

### 2.2. Commitment of Organizational

Commitment of organizational is a condition of a worker that still want to stay and continue their work in the organization or company, Robbins and Judge in Zelvia (2015)

### 2.3. Organizational Climate

Organizational climate has psychology meaning and not only talk about physic but also has meaning of the atmosphere, situation of the worker inside. It is about a condition of how the worker interact one each other and effecting one each other Yoeyong Rahsel (2016).

#### 2.4. Organizational Culture

Organizational culture is a sequence of values, beliefs, and norms that influence the way of the worker thinking, feel and have behave in the organization, Agwu (2014).

#### 2.5. Compensation

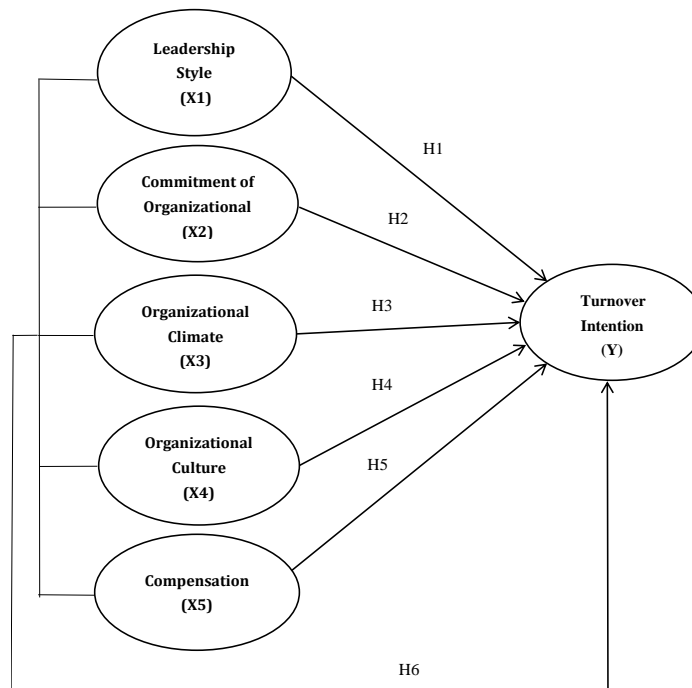
Compensation is all rewards given by the company to the worker because of their performance and work in the organization, Wibowo (2015:11).

#### 2.6. Turnover Intention

Turnover intention is resignation or moving out from the organization, dismissal or the death of the worker, Putra dan Wibawa (2015).

#### 2.7. Research Hypothesis

- 1) There is an influence of leadership style on turnover intention at PT. PCI Elektronik International Batam.
- 2) There is an influence of commitment of organizational on turnover intention at PT. PCI Elektronik International Batam.
- 3) There is an influence of organizational climate on turnover intention at PT. PCI Elektronik International Batam.
- 4) There is an influence of organizational culture on turnover intention at PT. PCI Elektronik International Batam.
- 5) There is an influence of compensation on turnover intention at PT. PCI Elektronik International Batam.
- 6) There are influence of leadership style, commitment of organizational, organizational climate, organizational culture and compensation on turnover intention at PT. PCI Elektronik International Batam.



**Fig .1.** Conceptual Frame Work

### 3. Methodology

This is a quantitative research. According to Sugiyono (2014:23) the research design and steps must be specific, clear and detail. This quantitative research is used to study a certain population or sample using research instrument and test the hypothesis based on data. The analysis is used for describing the collected data based on respondent's answer through the item distribution from each variable also using Scale Likert and processed by using SPSS application version 20. The design of the research is connecting variable x and y ; leadership style (X1), commitment of organizational (X2), organizational climate (X3), organizational culture (X4), compensation (X5) and turnover intention (Y)

#### 4. Results

Table 1: t- test results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.541	.797		1.934	.055
X1	.083	.067	.051	1.245	.215
X2	.088	.034	.065	2.582	.011
X3	.013	.029	.011	.442	.659
X4	1.072	.030	.982	35.548	.000
X5	-.168	.070	-.105	-2.405	.018

Table 2: f- test results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3690.091	5	738.018	610.541	.000 <sup>b</sup>
Residual	159.561	132	1.209		
Total	3849.652	137			

#### 5. Discussion

Results of this research are all independent variables (leadership style, commitment of organizational, organizational climate, organizational culture and compensation) have influence on turnover intention. The following is a description of research analysis based on each variables.

- 1) Based on the calculation, the significant value of leadership style is .215 and the t- value is .1245 > t - table 0,67635. Means that leadership style has influence but not significant on turnover intention variable.
- 2) Based on the calculation, the significant value of commitment of organizational is .011 and the t- value is .2582 > t - table 0,67635. Means that commitment of organizational has significant influence on turnover intention variable.
- 3) Based on the calculation, the significant value of organizational climate is .659 and the t- value is .442 > t - table 0,67635. Means that organizational climate has influence but not significant on turnover intention variable.
- 4) Based on the calculation, the significant value of organizational culture is .000 and the t- value is .35.548 > t - table 0,67635. Means that organizational culture has significant influence on turnover intention variable.

- 5) Based on the calculation, the significant value of compensation is .018 and the t- value is  $-2.405 < t$  -table 0,67635. Means that compensation has significant influence but cannot change the value of turnover intention variable.
- 6) From the ANOVA test or F-test, the F Count is 3.91 and with probability of 0.000. The probability is smaller ( $<$ ) than 0.05, so regression models can be used to predict turnover intention. SPSS shown the output of the f - value 610.541 and significance is 0.00. F count 610.541 > F-table 3.91 , significance .000  $<$  0.05, it mean significance. It is concluded that Leadership Style, Commitment of Organizational, Organizational Climate, Organizational Culture and Compensation are simultaneously influence turnover intention of the worker.

## 6. Conclusion

- 1) Partially, the influence of leadership style has no significant influence on turnover intention at PT. PCI Elektronik International Batam. It means turnover intention is not included in leadership style at PT. PCI Elektronik International Batam. The company has appropriate leadership style to achieve the target. This result is in line with Diatmika I Gede (2017).
- 2) Partially, the influence of commitment of organizational significant influence on turnover intention at PT. PCI Elektronik International Batam. It means turnover intention is included in commitment of organizational at PT. PCI Elektronik International Batam. A weak commitment will followed by decision of worker to do turnover intention. This research is in line with Kharismawati, Dewa Ayu Putu (2016).
- 3) Partially, the influence of organizational climate has no significant influence on turnover intention at PT. PCI Elektronik International Batam. It means turnover intention is not included in organizational climate at PT. PCI Elektronik International Batam. This research is in line with Tadampali Andi Caesar To (2016).
- 4) Partially, the influence of organizational culture has significant influence on turnover intention at PT. PCI Elektronik International Batam. It means turnover intention is included in organizational culture. This research is in line with Paaisal La Ode Rachmat (2018).
- 5) Partially, the influence of compensation has significant influence on turnover intention but if the variable X increase the variable Y will not increase and instead it. This research is in line with, Widayati Catur (2016).
- 6) Simultaneously, the influence given by the five independent variables are highly positive. It means every variables; leadership style, commitment of organizational, organizational climate, organizational culture and compensation have correlation and influence on turnover intention of worker

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## Appendix

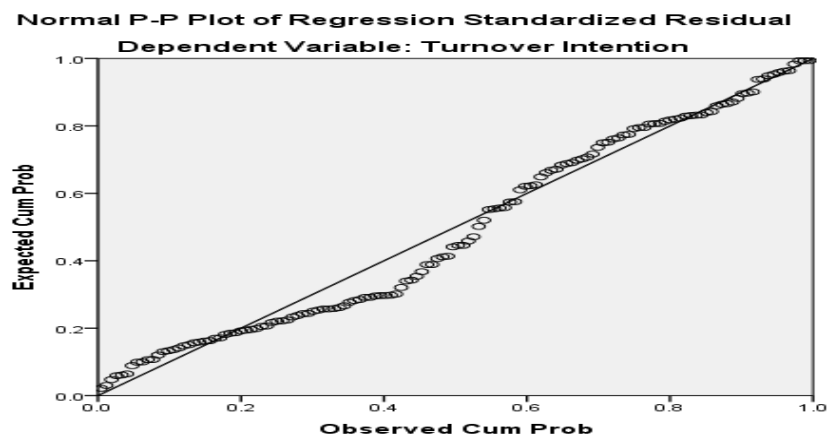


Fig.2. Normally Test

Table 1: t- test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.541	.797		1.934	.055
X1	.083	.067	.051	1.245	.215
X2	.088	.034	.065	2.582	.011
X3	.013	.029	.011	.442	.659
X4	1.072	.030	.982	35.548	.000
X5	-.168	.070	-.105	-2.405	.018

a. Dependent Variable: Turnover Intention

Table. 2. Tolerance and VIF

Variabel	Collinearity Statistics	
	Tolerance	VIF
(X1)	.188	5.310
(X2)	.497	2.012
(X3)	.469	2.133
(X4)	.411	2.432
(X5)	.165	6.079

Table. 3. f- test

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3690.091	5	738.018	610.541	.000 <sup>b</sup>
Residual	159.561	132	1.209		
Total	3849.652	137			

Table. 4. R Square Result

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979 <sup>a</sup>	.959	.957	1.09945

# The Effect of Competence, Communication, Organizational Culture, and Training Toward Nursing Performance in PT. ABCB

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## Abstract

Human resources are one of the main factors in determining company performance. The objective of the study are to analyze the influence of competencies toward the performance of nurses of PT. ABCB, to analyze the influence of communication toward the performance of nurses of PT. ABCB, to analyze the influence of Organizational Culture toward performance of nurses of PT. ABCB, to analyse the influence of Training toward the performance of nurses of PT. ABCB, to analyze the Competencies, Communication, Organizational Behaviour and Training simultaneously toward the performance of nurses of PT. ABCB. The population in this study were 278 nurses taken from Nursing Departement of PT. ABCB. Samples taken based on Slovin with leeway limit of 5% as many as 153 nurses. Data collection technique in research by delivering questionnaires. The study used SPSS software ( Statistical Package for the Social Science). Based on the result of the analysis and discussion, the research conclusions are : 1) Competence has significant effect toward the Nurses Performance of PT. ABCB; 2) Communication has significant effect toward the Nurses Performance of PT. ABCB; 3) Organizational Behaviour has significant effect toward the Nurses Performance of PT. ABCB; 4) Training has significant effect toward the Nurses Performance of PT. ABCB; 5) The adjusted R square value of 0.95 indicates that 95 % of Nurses Performance can be explained by independent variables including Competence, Communication, Organizational Culture, and Training, and the remaining 3% are explained by other variables outside the research.

**Keywords** : Nurse Performance, Competence, Communication, Organizational Behaviour, Training.

## 1. Introduction

The success of the Hospital is determined by the quality of the people who work in it, not only to win the competition in health industry and rapid environmental changes, but also to maintain commitment and consistency in improving its performance while still prioritizing the patients safety.

The performance of each individual is the main key to the success of achieving productivity because performance is an outcome where people and other resources bring the final results based on the quality level and standards that have been set.

Human resources with high competence can provide excellent and valuable services (Gaol, 2014). This means that the hospital not only able to delighting the customers but also oriented customer value. In this case, the services provided are focused on patient and family centered. Therefore, the Hospital is not merely pursuing the achievement of high work productivity, but rather the performance of each individual in the process of achieving it.

Nursing services are an integral part of hospital services. Nurses work to serve patients for 24 hours daily. Nurses duties according to their function in providing nursing care such as assessing patient needs, implementing plan cares, evaluating the results of nursing care, documenting the nursing process (Akbar, 2018). PT. ABCB as one of the health service institutions has been expected by the community to be able to provide good health services in accordance with the quality standards set by the Ministry of Health through national accreditation by KARS, international standards through the Joint Commission International (JCI), ISO 9001 : 2015 and ISO 14001: 2015. Minister of Health Decree No. 228 of 2002 states that "standards technical

specifications or something that is standardized as a benchmark in carrying out activities."

There are several problems occur while improve nurse performance in Awal Bros Batam Hospital such as:

Table 1. Problems at PT. ABCB

No	Current condition	Remark
1	Nurses competencies have not been fully met in terms of educational composition	Current percentage: Nurse + S1 Nursing versus D3 Nursing + D3 Midwifery is 38.49%: 61.51% while the standard is 40%: 60%.
2	There are difficulties to get the training for nurses in order to fulfill the critical care competencies because the training held by proffesion organization outside Batam.	Fulfillment of BTCLS competence in emergency room nurses 63%, ICU certificate 95%, Basic HD 83%, Neonate Resuscitation 67%, Basic Surgery 83%
3	Communication ability of nurses have not been evenly distributed and communication failures occur either by new nurses or senior nurses that affect nurse performance.	The PRIMA assessment for the July-Dec 2019 period, in the category of listening and asertiveness, there were 21% of nurses who scored below 80, with a minimum standard value of 80 for each individual nurse.
4	Organizational culture in PT. ABCB, namely PRIMA (Professional, Neat, Worship, Listening, Assertive) service culture has not been fully implemented in daily activities.	Achievement of PRIMA grades in the nursing department in 2019 is still 93%
5	Training conducted internally and externally is not enough to improve nurse performance	From the assessment after three months of training, the achievement below 80% are: 1) the ability to understand the vision and mission of Organization 79%, 2) the ability of nurses to be professional in serving patients according to the standard 76%, 3) the ability to use spilkit in B3 pollution by 77%, 4) the ability to explain the function of duties and position 77%, 5) the ability to run the task flow in the unit 75%, 6) the ability to explain indicators and unit performance targets 72%, 7) the ability to carry out basic procedures according to the tasks in the unit 79%.

The purpose of this study are: to determine and analyze the effect of Competence toward Nurse Performance of PT. ABC, to find out and analyze the effect of Communication toward Nurse Performance of PT. ABCB, to find out and analyze the effect of Organizational Culture toward Nurse Performance of PT. ABCB, to find out the effect of Training toward Nurse Performance of PT. ABCB, to find out and analyze the effect of Competence, Communication, Organizational Culture, and Training simultaneously toward Nurse Performance at PT. ABCB.

"Performance is the result of concrete work that can be observed and measured." Gaol (2014).

According to Wibowo (2016), the criteria used to assess employee performance are as follows: 1) Quantity of Work, 2) Quality of Work, 3) Job Knowledge, 4) Creativeness,, 5) Cooperation, 6) Dependability, 7) Initiative, 8) Personal Qualities.

According to Mclelland in (Gaol, 2014) defines competence "as a fundamental characteristic possessed by someone who directly influences excellent performance." In other words, competence is what outstanding performers do more often in more situations with better results, than what average performers do. Competence can be described as a combination of knowledge, skills, abilities and personal attributes that can be observed and measured that affect employee performance.

(Gaol, 2014) mentions that there are 18 general competencies, namely: 1. Achievement orientation (Orientation on results), 2. Analytical thinking (The ability to analyze), 3. Conceptual thinking (Mastering the concept) 4. Customer service orientation (Customer-oriented), 5. Developing others, 6. Directiveness, 7. Flexibility, 8. Impact and influence, 9. Information seeking (Ability to explore information), 10. Initiative, 11. Integrity, 12. Interpersonal understanding, 13. Organizational awareness (Organizational awareness), 14. Organizational commitment (Commitment to the organization), 15. Relationship building (ability to build relationships), 16. Self confidence (Confidence), 17. Team leadership (ability to lead), 18. Team work and cooperation (the ability to cooperate).

Anjaswarni (2016) states that communication can be interpreted as a process of exchange, deliver, and receive of news, ideas, or information from one person to another.

According to Wibowo (2017), communication is considered effective if it is timely, accurate, complete, not ambiguous, and is accepted by recipients, reducing errors and improving patient safety. Communication can take by verbally, electronic, or written. Poor communication can endanger the patient. Communication that is prone to errors is when verbal commands, or orders by telephone, verbal communication, when delivering the results of the examination of critical results that must be delivered by telephone. This can be caused by differences in accent and dialect. Good and standardized communication with patients, the patient's family, and service providers can improve patient care processes, messages are received and understood as intended by the sender of the message or communicator, the message is followed up with an act by the recipient or communicant and there are no obstacles to it .

Miller in (Mulyadi, 2015) states that organizational culture is a fundamental value and passion how to manage and organize it. These values are beliefs that are held firmly and sometimes are not revealed. Thus these values and spirit will underlie the nature of the organization in an effort to respond to challenges, while according to Daniel in (Mulyadi, 2015) states that organizational culture is the strength and potential of an organization to coordinate and control the behavior of organizational members. So that the strength of a good organizational culture, will affect the increasing quality of information and coordinating behavior.

According to O'Reily and Jehn quoted by (Mulyadi, 2015) there are seven main characteristics of organizational culture: 1) Innovation and risk taking, 2) Attention to detail, 3) Outcome orientation, 4) People orientation (5) Team-oriented, 6) Aggressiveness, 7) Stability.

Training is a process designed to increase technical knowledge and skills, or improve employee performance. The basic principles of learning include: participation, repetition, relevance, transfer, and feedback.

According to Sein (2017) to be effective, training and development must use learning principles. A learning process will help as far as: 1) Participants have the motivation to learn. 2) The material taught has meaning and is related to the needs of the participants. 3) The new teaching material does not conflict with the previous

teaching material.4) New teaching material can be used. 4) There is feedback about failure or success in learning new material. 5) Participants are active in the learning process, 6) The learning situation provides an opportunity to practice the material that has just been received. 7) Materials are divided into more learned units. 8) Given the opportunity for individual guidance to help participants learn new material. 8) The learning situation is adjusted to individual differences in aspects of speed, depth, amount, sequence of materials to be taught.

The research hypotheses are as follows: H1: Competence influences nurses performance at PT. ABCB, H2: Communication influences nurses performance at PT. ABCB, H3: Organizational Culture influences nurses performance at PT. ABCB, H4: Training influences toward the performance of nurses at PT. ABCB, H5: Competence, Communication, Organizational Culture and Training simultaneously influence toward performance of nurses at PT ABCB.

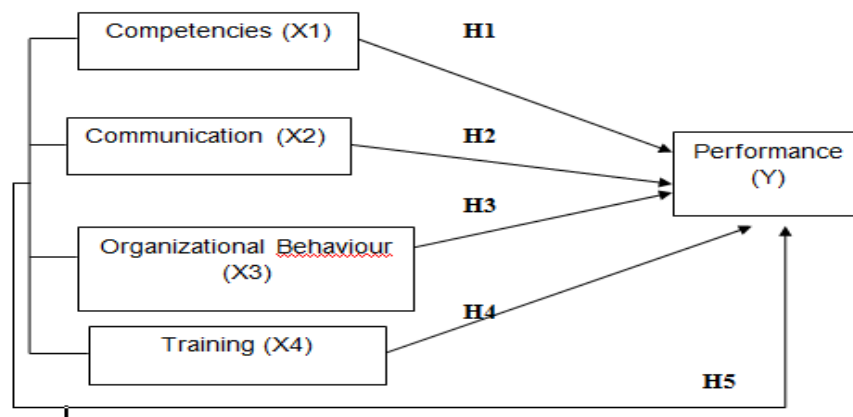


Figure 1. Research Model

## 2. Research Methods

This research is quantitative research, which is designed to find and explain causal relationships between variables through hypothesis testing (explanatory research). The variables studied are related to the variables of Performance, Competence, Communication, Organizational Culture, and Training.

Data Collection technique are initial observation, library research and field research by distributing research instruments in the form of questionnaires with a Likert scale to a sample of 153 nurses at PT. ABCB.

## a. Research Results and Discussion

Table 1. t Test Results.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
(Constant)	17.791	1.244		14.296	.000
Competencies	.765	.057	.488	13.493	.000
Communication	.295	.065	.228	4.551	.000
Organizational Culture	.095	.042	.099	2.266	.025
Training	.267	.048	.220	5.530	.000

Tabel 2. F Test Result

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	7508.469	4	1877.117	707.855	.000
Residual	392.472	148	2.652		
Total	7900.941	152			

## b. Discussion

From the results of statistical research, shows that the independent variables affect the Nurse's Performance.

### 1. Effect of Competence toward Nurse Performance.

$T_{count}$  value for the competency variable is  $13,493 > 1,655 t_{table}$  and sig value  $0,000 < 0.005$ . Based on these results  $H_0$  is rejected and  $H_1$  is accepted, thus partially the competency variable has a significant effect toward nurse performance. This research is in line with the results of Pranata's research (2018) which states that competence has a significant effect on the performance of employees at Malang Syariah National Pension Funds.

### 2. Effects of Communication toward Nurse Performance.

From the t test results obtained that the  $t_{count}$  for the communication variable is  $4,551 > 1,655 t_{table}$  and sig value  $0,000 > 0.05$ , so based on the results obtained,  $H_0$  is rejected and  $H_2$  is accepted. Thus partially the communication variable has a very strong positive effect toward nurse performance. From the results of deep interviews with several nurses obtained information that communication that is prone to errors is when verbal orders, telephone commands, verbal communication, delivery of critical results. This is due to differences in dialect, choice of service language (verbal), intonation (vocal) and good appearance and body language (paralanguage) also greatly influence whether communication will succeed or not. This research is in line with Anjarwani's (2016) theory which states that one of the obstacles to communication is the existence of language



mismatch used by communicators and communicants. This study is also in line with Nurhalimah's research (2016) which shows a significant positive effect between communication and nurses' performance in the inpatient room of Dustira Cimahi Hospital.

### 3. The Effect of Organizational Culture toward Nurse Performance.

The results of this study obtained the  $t_{\text{count}}$  for the organizational culture variable is 2,256 greater than  $t_{\text{table}}$  of 1,6555 and a significance value of  $0.025 < 0.05$ . Based on these results,  $H_0$  is rejected and  $H_3$  is accepted. Thus partially, organizational culture variables significantly influence the performance of nurses in PT. ABCB. This study is in line with Silvia's (2016) research, The Effect of Competence and Organizational Culture on Employee Performance which shows that Organizational Culture is strongly positive influence toward employee performance at Adirama hotels.

### 4. Effects of Training toward Nurse Performance.

$T_{\text{count}}$  value for the training variable is 5,530 > 1,655  $t_{\text{table}}$  and the significance value is  $0,000 < 0.05$  then  $H_0$  is rejected and  $H_4$  is accepted. With this result, the training variable partially has a significant positive effect on the performance of nurses at PT. ABCB. The statement was in line with Ardakani's research (2016) which showed that nurses' communication skills training improved nurses' self-efficacy, an ability to organize, do a task, achieve a goal, produce something, implement actions in order to achieve a certain skill level. This study was also supported by the results of Majid's (2016) research which showed the more frequent training, the higher the effect on the performance of nurses at Pelamonia Hospital in Makassar.

Effect of Competence, Communication, Organizational Culture and Training simultaneously toward Nurse Performance.

From the results of the F test it is known that the independent variables jointly obtained  $F_{\text{count}}$  value = 707,855 with a probability value F (Sig) of  $0.00 < 0.05$ , then competency, communication, organizational culture, and training simultaneously have a significant influence toward performance of nurses at PT. ABCB.

## c. Conclusion

The conclusions of the study are as follows: Competence has a positive and significant effect toward nurse performance at PT. ABCB, Communication has a positive and significant effect toward nurse performance at PT. ABCB, Organizational Culture has a positive and significant effect toward nurse performance at PT. ABCB, Training has a positive and significant effect toward performance of nurses in PT. ABCB, Competency, Communication, Organizational Culture, and Training simultaneously has a positive and significant effect toward Nurse Performance in PT. ABCB.

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## Discounted Cash Flow to Determine The Fair Price of Shares in Sub-Sector Buildings Construction During COVID-19 Pandemic

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### Abstract

This study aims to determine the fair price for building construction sub-sector using the Discounted Cash Flow method. Determining the fair price of shares is one of the bases for making investment decisions. The phenomenon of the COVID 19 pandemic has resulted in a decline in stock exchanges around the world. It has made investors afraid to invest in stocks. This research can help determine the right time to invest in stocks by determining the fair price of stocks, looking for under-valued stocks and reducing the risk of investing in stocks. The building construction sub-sector is one of the sectors that affect the COVID 19 pandemic. Building construction companies shares have great potential with the plan to relocate the capital city of Indonesia. Are the shares of companies in the building construction sub-sector already undervalued? What is the fair price for the shares in 2020? This study analyzes the stock valuation method that other researchers have not widely studied, namely the discounted cash flow valuation to determine the fair price of shares. This study uses three discounted cash flow models: dividend discount model, free cash flow to equity, and free cash flow. Data from the financial reports of 8 sample companies in the building construction sub-sector were processed using the discounted cash flow method and the mean absolute percentage error. This study's results indicate that the ADHI has a fair price of Rp.1,187; NRCA is a fair price of Rp.309; PTTP has a fair price of Rp.1,557; SSIA is a fair price of Rp. 385; WIKA has a fair price of Rp. 1,948, and WSKT is a fair price of Rp.1.563. The investment decision is to buy, while the issuer JKON has a fair price of Rp 223, and a TOTL of a fair price of Rp 313 overvalued with a suggestion of an investment decision to sell. The decline in stock prices as a result of the COVID 19 pandemic turned out to be making many stocks undervalued so now is the right time to invest in shares of companies that are undervalued and have good fundamentals, because if the economy recovers the stock price will return to price naturally.

**Keywords:** Stock Fair Price, Discounted Cash Flow, COVID 19, Building Construction, Stock Investment

### 1. Introduction

The fair price of shares is one of the references in investing in stocks. Determining the fair price of shares is included in fundamental analysis, there are many methods to determine the fair price of shares, one of which is the discounted cash flow method. The stock market has experienced a decline due to the Covid19 virus pandemic, knowing the fair price of shares can help investment decisions and reduce the risk of investing in stocks.

This study aims to determine the fair price of shares in the building construction sub-sector in 2020 and determine whether the stock is undervalued or overvalued to help investment decisions. This study also aims to determine the best method for determining the shares' fair price in the building construction sub-sector. Fair price refers to the intrinsic value of the security. Determining fair price can be valued by comparing the present value of the expected future cash flows in the asset. Besides, it has calculated by the amount of cash flow, the expected growth rate in cash flows, and the uncertainty associated with cash flow receipts (Nadica et al., 2014).

Stock valuation using the discounted cash flow method is perfect for finding a stock's fair price (Kramna, 2014). The development of the construction sector, which grew well in the last ten years, namely 2009-2019, made the performance of shares in the Property, Real Estate & Building Construction sectors also significantly increased; it reflected in the stock returns of the Property, Real Estate & Building sectors. Construction amounted to 243.24% in 2009-2019 (IDX Property Fact Sheet, 2019). The stock return data shows that the Property, Real Estate & Building Construction sector shares have experienced enormous increases over the last ten years. In the first quarter of 2020, global stock exchanges fell due to the COVID 19 pandemic's impact, which caused the world economy to decline, including the JCI, which also fell by -27.95% year to date. The Property, Real Estate & Building Construction sector also experienced a decline of -32.84% year to date.

Table 1. IDX Statistics 1st Quarter 2020

IDX Indices Highlights				
Index	Q1 2020			YTD Change
	Highest	Lowest	Close	
Composite Index (IHSG)	6.325	3.938	4.539	-1.761
	14-Jan	24-Mar	31-Mar	-27,95%
Property,RE & Bld. Construction	504	308	338	-165
	3-Jan	24-Mar	31-Mar	-32,84%
LQ45	1.032	567	691	-323
	14-Jan	24-Mar	31-Mar	-31,87%

Source: idx.co.id.

The objectives of this study are: To calculate the fair price for construction sub-sector shares on the Indonesia Stock Exchange in 2020; to determine the condition of the shares of the construction sub-sector on the Indonesia Stock Exchange in 2020, whether they are undervalued or overvalued; To compare the best method for determining the fair price of shares.

## 2. Literature Review

### 2.1. Fair Price of Shares

The fair price of shares or the intrinsic value of shares is the value that an asset has obtained from the fundamental asset assessment (Kramna, 2014). The fair price of shares is the fundamental value of a share that helps make stock investment decisions (M Haritha et al., 2013). The fair price of shares is the actual price of a share obtained from a company's valuation. Relative stock valuation is an assessment based on the use of standard stock market prices as a multiple of several standard variables such as income, book value and a comparison with the valuation of shares or similar companies to determine whether the stock has a fair price or is currently under fair or too expensive (Nadica et al., 2014).

### 2.2. Discounted Cash Flow

Discounted cash flow is a method that uses two approaches, namely the Dividend Discount Model (DDM) and the cash flow approach (Free Cash Flow to Firm (FCFF), Free Cash Flow to Equity (FCFE)) to determine the fair price of shares (Nadica et al., 2014). ). The discounted cash flow method is a method that assesses the entire business with an approach based on the company's free cash flow or free cash flow for owners and creditors and a discount rate that reflects all sources of operations and company financing and determines the company's

equity in its business (Kramna, 2014).

#### 2.2.1. Dividend Discount Model (DDM)

Hasanah and Rusliati (2017) state that the dividend discount model is a method for determining intrinsic value by discounting cash flows to project dividends earned by investors. This method applied to companies that are stable and always pay dividends.

#### 2.2.2. Free Cash Flow To Firm (FCFF)

According to Adhy et al. (2014), free cash flow to the firm (FCFF) is cash available to investors, after all, operating costs (including taxes) have paid, and the necessary investments in current and fixed capital have made. FCFF is calculating the company's value that must be reduced by debt when the company wants to know the value of its capital.

#### 2.2.3. Free Cash Flow to Equity (FCFE)

Pandya (2019) states that free cash flow to equity (FCFE) is an assessment of free cash flow available to shareholders after fulfilling investments in fixed assets, working capital, and debt payments. This method helps in estimating the value of equity directly by focusing exclusively on equity cash flows. This cash flow of equity is then discounted by the cost of equity capital to calculate equity's present value. FCFE prioritizes working capital investment, fixed asset investment, company operating expenses, and tax expenses, but interest expense uncharged.

### 3. Method, Data and Analysis

This study's population were all companies of the building construction sub-sector listed on the Indonesia Stock Exchange (IDX) in the 2015-2019 period, namely 18 companies. In this study, a purposive sampling technique with specific criteria. This research sample is companies listed on the Indonesia Stock Exchange (BEI), building construction sub-sector for the period 2015-2019. Selecting companies as research samples are by looking at the data on the companies official website and the [rti.co.id](http://rti.co.id) website. The sample criteria for this study are Building construction sub-sector companies listed on the Indonesia Stock Exchange (IDX) during the 2015-2019 period had already conducted Initial Public Offering (IPO) before 2015; Companies that have never lost at the end of each year (on the company's annual financial statements) during 2015-2019; Companies that always pay dividends during the 2015-2019 period. The sample of this study are PT. Adhi Karya Tbk (ADHI), PT. Jaya Konstruksi Manggala Pratama Tbk (JKON), PT. Nusa Raya Cipta Tbk (NRCA), PT. PP Tbk (PTPP), PT. Surya Semesta Internusa Tbk. (SSIA), PT. Total Bangun Persada Tbk (TOTL), PT. Wijaya Karya Tbk (WIKA), PT. Waskita Karya Tbk (WSKT).

This study used secondary data. This research uses observational data collection methods and documentation of the financial statements of company of the building construction sub-sector for 2015-2019, which obtained from the website [www.idx.co.id](http://www.idx.co.id), [www.rti.co.id](http://www.rti.co.id) and [www.reuters.com](http://www.reuters.com). The analysis used to find a fair price for shares uses the Discounted Cash Flow (DCF) method with three approaches, namely the Dividend Discount Model (DDM), Free Cash Flow to Equity (FCFE), and Free Cash Flow to Firm (FCFF). To determine the fair price of shares using the Discounted Cash Flow (DCF) method using the following formula:

$$PV = \frac{CF_1}{(1+K)^1} + \frac{CF_2}{(1+K)^2} + \frac{CF_t}{(1+K)^t} + \dots + \frac{CF_{t+n+1}}{(1+K)^{n+1}}$$

$$PV = \sum_{t=1}^n \frac{CF_t}{(1+K)^t}$$

Information:

PV = Present value of a share

CF<sub>t</sub> = Company cash flow

$K_e$  = Required return / discount rate

$n$  = Number of cash flow periods

$t$  = Time

This study uses Discounted Cash Flow analysis with several approaches, namely:

### 3.1 Dividend Discount Model (DDM) Method

Constant growth dividend discount model (DDM) used with the assumption that the companies sampled in the building construction sub-sector have generally entered the maturity stage, so dividend growth is considered constant. The following are the steps for a DDM valuation analysis:

- Calculate the annual dividend growth rate (growth).
- Determine the Return Of Equity (ROE) of each issuer from the 2019 annual financial report data

$$ROE = \frac{Net\ Income}{Equity}$$

- Determine the Reinvestment Rate (RR) of each companies

$$RR = 1 - DPR$$

- Determine the company growth projection

$$g = ROE \times RR$$

$$Projected\ growth = 1 + g$$

- Determine Earning Per Share (EPS) and Price Earning Ratio (PER).

$$EPS = \frac{Net\ Income}{Number\ of\ Outstanding\ Shares}$$

$$PER = \frac{Stock\ Price}{EPS}$$

- Determine the projected total EPS and total dividends.

$$Proyeksi\ EPS = EPS\ beginning \times Projected\ growth$$

- Calculating the expected rate of return or discount rate, using the Capital Asset Pricing Model (CAPM) method.

$$K_e = R_f + \beta(R_m - R_f)$$

Information:

$K_e$  = Cost of equity as discount rate.

$R_f$  = Risk free rate.

$\beta$  = Beta.

$R_m$  = Market Return

- Determine the equity value and fair price of the sample issuers using the DCF formula:

$$PV = \frac{CF_1}{(1+K)^1} + \frac{CF_2}{(1+K)^2} + \frac{CF_t}{(1+K)^t} + \dots + \frac{CF_{t+n+1}}{(1+K)^{n+1}}$$

$$PV = \sum_{t=1}^n \frac{CF_t}{(1+K)^t}$$

- i. Determine whether the stock is undervalued or overvalued.

### 3.2 Free Cash Flow To Equity (FCFE)

The Free Cash Flow to Equity (FCFE) approach to determining shares' fair price is through the following stages:

- a. Classification of data for the last sample company financial statements, 2018-2019, is to determine the 2019 FCFE as the basis for projecting the FCFE model.
- b. Determine the FCFE 2019 value with the formula:

$$FCFE = Net\ Income - (Capex - Depreciation\ \&\ Amortization) - \Delta Non\ Cash\ WC + Net\ Borrowing$$

- c. Determine the number of FCFE projections for the next five years or until 2024 with the sample issuers' projected growth.
- d. The projection of FCFE for five years is discounted with the discount rate or cost of equity (Ke) to determine the sample companies' equity value.
- e. Determine the fair price for the sample issuer's shares by dividing the total equity value by the number of shares outstanding.

### 3.3. Free Cash Flow to Firm (FCFF)

Free Cash Flow to Firm (FCFF) approach to determining the fair price of shares through the following stages:

- a. Classify the sample issuers' financial statement data in 2019 to determine the 2019 FCFF as the basis for projecting the FCFF model.
- b. Determine the 2019 FCFF value with the formula:

$$FCFF = Net\ Income + Depreciation\ \&\ Amortization + \Delta Non\ Cash\ WC + Interest(1 - Tax)$$

- c. Determine the number of FCFF projections for the next five years or until 2024 with the projected growth of the sample companies.
- d. The FCFF projection for five years is discounted with the weighted average Cost of capital (WACC) as the discount rate to determine the enterprise value, then deducted by net debt to determine the equity value of the sample issuers.
- e. Determine the Cost of equity (Ke) for each of the sample issuers in the same way above, then determine the Cost of debt (Kd) of all sample issuers obtained from the average of bank credit interest rates, with the formula:

$$Kd = i \times (1 - Tax)$$

- f. Determine the weight of the debt value and the weight of the value of equity against each sample issuer's total funding.
- g. Determine the weighted average Cost of capital (WACC), with the formula:



$$WACC = Kd \left( \frac{D}{D+E} \right) + Ke \left( \frac{E}{D+E} \right)$$

- h. Determine the fair price for the shares of the sample companies by dividing the total equity value by the number of shares outstanding.
- i. Determine the condition of the fair price of the shares of the sample issuer at the market price, whether undervalued or overvalued.

Mean Absolute Percentage Error (MAPE) approach to see the degree of estimated value bias to its actual value. The MAPE calculation method will produce an error calculation, a reasonable expectation of growth in the fair share price at a value below 10% which indicates excellent performance and 10% -20% indicates good performance, if it exceeds the nominal then the growth rate of the fair share price is considered inaccurate (Hanuwati et al., 2016).

$$MAPE = \frac{\sum_{t=1}^n \left| \frac{y_1 - y_t}{y_1} \right|}{n} \times 100\%$$

If the fair price > the market price, it means undervalued so that the investor decides to buy. If the fair price < market price, then the shares are considered too expensive or overvalued so that the decision taken by investors is to sell. If the fair price of shares = the market price of the shares, the stock price can be assessed in a fair condition so that investors decide to hold.

## 4. Result and Discussion

### 4.1. Determine the Growth Projection of Sample companies

Table 2. The value of the growth of the sample companies

Code	ROE	RR	Growth	Growth projections
ADHI	9,73%	0,80	7,78%	108%
JKON	2,19%	0,70	1,54%	102%
NRCA	8,28%	0,50	4,11%	104%
PTPP	6,97%	0,78	5,44%	105%
SSIA	1,68%	0,71	1,20%	101%
TOTL	16,30%	0,32	5,28%	105%
WIKI	13,64%	0,78	10,64%	111%
WSKT	3,53%	0,77	2,72%	103%

### 4.2. Determine the Value of the Cost of Equity (Ke)

The cost of equity is determined by:

- a. The value of Return Market (Rm) is determined based on the average return on the IHSG per year for the 2009-2019 period. The data in this study is the JCI closing price of 2009 ( 2,534), and in 2019 (6,300), it means the average Rm obtained of 14.86% per year.

$$R_m = \frac{\frac{\text{Final Price}}{\text{Beginning Price}} - 1}{\text{number of years}}$$

- b. The Risk-Free Rate ( $R_f$ ) value is determined based on the BI 7-day (Reverse) Repo Rate April 2020 benchmark interest rate, namely 4.50%.
- c. The beta value ( $\beta$ ) of each of the sample companies shares is determined based on the [www.reuters.com](http://www.reuters.com) website.
- d. These data processed with the Capital Asset Pricing Model (CAPM) formula:

$$K_e = R_f + \beta(R_m - R_f)$$

Table 3. Cost of Equity

Code	Beta (Reuters)	$R_f$ (BI Rate)	$R_m$ (IHSG 2009-2019)	$K_e$ (CAPM)
ADHI	1,87	4,50%	14,86%	23,87%
JKON	0,21	4,50%	14,86%	6,68%
NRCA	0,62	4,50%	14,86%	10,92%
PTPP	2,47	4,50%	14,86%	30,09%
SSIA	1,06	4,50%	14,86%	15,48%
TOTL	1,34	4,50%	14,86%	18,38%
WIKA	2,18	4,50%	14,86%	27,08%
WSKT	2,35	4,50%	14,86%	28,85%

#### 4.3. Determine the equity value and fair price of shares

##### 4.3.1. Dividend Discount Model (DDM)

The stages of determining the equity value and fair price of shares with DDM are:

- a. Determine Earning Per Share (EPS) and Price Earning Ratio (PER) sample emiten.

Table 4. EPS

Code	EPS 2019	EPS 2018	EPS 2017	EPS 2016	EPS 2015
ADHI	186	181	145	88	130
JKON	3	16	19	20	14
NRCA	41	47	61	40	79
PTPP	150	242	234	165	153
SSIA	20	8	250	13	64
TOTL	52	61	72	65	56
WIKA	255	193	134	112	102
WSKT	69	292	286	126	77

Table 5. Average PER

Code	Closing Price 2019	PER 2019	PER 2018	PER 2017	PER 2016	PER 2015	Average PER
ADHI	1.585	8,52	8,76	10,95	18,01	12,17	12
JKON	500	166,7	31,25	26,32	25	35,71	57
NRCA	384	9,37	8,17	6,3	9,6	4,86	8
PTPP	1.485	9,9	6,13	6,34	9	9,71	8
Code	Closing Price 2019	PER 2019	PER 2018	PER 2017	PER 2016	PER 2015	Average PER
SSIA	655	32,75	81,88	2,62	50,38	10,23	36
TOTL	436	8,38	7,15	6,06	6,71	7,79	7
WIKI	1.990	7,8	10,32	14,85	17,74	19,58	14
WSKT	1.175	17,03	4,02	4,11	9,31	15,22	10

b. Determine the projected total EPS and total dividends.

$$\text{Projected EPS} = \text{Initial EPS} \times \text{Projected growth}$$

The projected total EPS is the sum of the 2019-2024F EPS.

Table 6. EPS Projection

Code	EPS 2019	EPS 2020F	EPS 2021F	EPS 2022F	EPS 2023F	EPS 2024F	Total EPS
ADHI	186	200	216	233	251	271	1.357
JKON	3,0	3,0	3,1	3,1	3,2	3,2	19
NRCA	41	43	44	46	48	50	273
PTPP	150	158	167	176	185	195	1.032
SSIA	20	20	20	21	21	21	124
TOTL	52	55	58	61	64	67	356
WIKI	255	282	312	345	382	423	2.000
WSKT	69	71	73	75	77	79	443

- c. The projection of total dividends obtained is the average dividend payout ratio (DPR) multiplied by the projection of total EPS. DPR data for each companies obtained from the website [www.rti.co.id](http://www.rti.co.id).

Table 7. Projected Total dividends

Code	DPR 2018	DPR 2017	DPR 2016	DPR 2015	DPR 2014	Average DPR	Projected total dividends
ADHI	19,99%	19,96%	30,01%	10,20%	19,99%	20,03%	272
JKON	20,62%	30,53%	32%	32,14%	33,08%	29,67%	6
NRCA	63,83%	65,57%	75%	20,73%	26,82%	50,39%	137
PTPP	20,02%	20,03%	30,01%	19,99%	19,97%	22,00%	227
SSIA	8,00%	82,00%	15,00%	20,00%	20,00%	29,00%	36
TOTL	65,57%	69,44%	69,23%	71,43%	62,50%	67,63%	241
WIKA	20,00%	20,02%	29,97%	19,95%	20,03%	21,99%	440
WSKT	25,00%	19,93%	30,06%	20,05%	19,83%	22,97%	102

- d. Determine the equity value and fair price of the sample companies shares.

Equity value in the dividend discount model (DDM) is a projection of future cash flow obtained in year five or projections in 2024, obtained from the sum of the projection of the share price in 2024 with the projection of the total dividend received.

Table 8. Projection of Future Cash Flow in 2024

Share Price	2020F	2021F	2022F	2023F	2024F	Future CF 2024
ADHI	2.342	2.524	2.721	2.932	3.161	3.432
JKON	174	176	179	182	185	190
NRCA	327	340	354	369	384	521
PTPP	1.299	1.370	1.444	1.523	1.606	1.833
SSIA	720	729	737	746	755	791
TOTL	395	416	438	461	485	726
WIKA	3.966	4.388	4.855	5.371	5.943	6.383
WSKT	704	724	743	764	784	886

- e. Determine the fair price of shares in 2020 for each sample issuer using the discounted cash flow (DCF) formula.

$$PV = \sum_{t=1}^n \frac{CF_t}{(1+Ke)^t}$$

$$Fair\ Price = \frac{Future\ CF}{(1 + Ke)^5}$$

Table 9. The result of DCF formula with DDM

Code	Fair Price in 2020	Closing Price Q1 2020	Margin Of Safety	Explanation
ADHI	1.187	535	122%	Under valued
JKON	136	414	-67%	Over valued
NRCA	309	280	10%	Under valued
PTPP	499	550	-9%	Over valued
SSIA	385	440	-13%	Over valued
TOTL	312	310	1%	Fair valued
WIKA	1.948	835	133%	Under valued
WSKT	253	484	-48%	Over valued

#### 4.3.2. Free Cash Flow to Equity (FCFE)

The following is a table of the results of calculating the fair price of shares with the Free Cash Flow to Equity (FCFE) model :

Table 10. 2018-2019 financial statement classification & fair price of share with FCFE Model

WIKA	2019	2020F	2021F	2022F	2023F	2024F	Total
Proyeksi FCFE	11.347.547	12.554.985	13.890.901	15.368.965	17.004.302	18.813.648	
Discount Factor		1,27	1,62	2,05	2,61	3,31	
PV Equity Value		9.879.218	8.600.886	7.487.965	6.519.051	5.675.511	38.162.631
Harga Wajar							4.254

Table 11. FCFE model WIKA and WSKT

Keterangan	WIKA( in million idr )		WSKT( in million idr )	
	2018	2019	2018	2019
Net Income		2.621.015		1.028.898
Depreciation & Amortization		2.059.138		2.343.987
Aktiva Lancar	45.731.940	42.335.472	66.989.130	49.037.843
Kas & Setara Kas	13.973.766	10.346.734	10.845.678	9.258.310
Aktiva Lancar Bersih Non Cash	31.758.174	31.988.738	56.143.452	39.779.533
Kewajiban Lancar	28.251.951	30.349.457	56.799.725	45.023.495
Bag. Jk. Pendek dr. Hutang Jk. Panjang	296.673	1.078.850	416.500	833.000
Kewajiban Lancar Bersih Non Debt	27.955.278	29.270.607	56.383.225	44.190.495
Non Cash WC (CA-CL)	3.802.896	2.718.131	(239.773)	(4.410.962)
Δ Non Cash WC		(1.084.765)		(4.171.189)
Capex		(1.075.170)		(860.189)
Hutang(Pinjaman)	28.040.921	32.548.380	84.658.785	84.212.480
Net Borrowing		4.507.459		(446.305)
FCFE (2019)		11.347.547		7.957.958
Equity		19.215.733		29.118.469
Jumlah Saham		8.970		13.573

WSKT	2019	2020F	2021F	2022F	2023F	2024F	Total
Proyeksi FCFE	7.957.958	8.174.561	8.397.060	8.625.616	8.860.392	9.101.558	
Discount Factor		1,29	1,66	2,14	2,76	3,55	
PV Equity Value		6.344.443	5.058.077	4.032.527	3.214.912	2.563.073	21.213.033
Fair Price							1.563

for other sample emiten ADHI, JKON, NRCA, PTPP, SSIA and TOTL using the same steps as in table 10 and 11.

Table 12. Result of FCFE Model

Code	Fair Price 2020	Closing Price Q1 2020	Margin Of Safety	Statement
ADHI	7.096	535	1226%	Under valued
JKON	223	414	-46%	Over valued
NRCA	925	280	230%	Under valued
PTPP	1.557	550	183%	Under valued
SSIA	1.302	440	196%	Under valued
TOTL	149	310	-52%	Over valued
WIKA	4.254	835	410%	Under valued
WSKT	1.563	484	223%	Under valued

#### 4.3.3. Free Cash Flow to Firm (FCFF)

The projected FCFF for five years is discounted with the weighted average cost of capital (WACC) as the discount rate to determine the enterprise value, then deducted by net debt to determine the equity value of the sample issuers. To determine WACC as a discount rate in the following ways:

- Determine the cost of equity (Ke) for each sample companies in the same way above, then determine the cost of debt (Kd) of all sample issuers obtained from the average bank credit interest rates January-December 2019, namely the average 9.91%. Cost of debt (Kd) can calculation using the formula:

$$Kd = i \times (1 - T)$$



Table 13. Bank Interest Rate

Month	Interest Rate
January	10,11%
February	10,07%
March	10,04%
April	10,03%
May	10,02%
June	9,96%
July	9,91%
August	9,88%
September	9,83%
October	9,75%
November	9,70%
December	9,66%
Average	9,91%

Source: BI.go.id

$$K_d = 9,91\% \times (1 - 25\%) = 7,44\%$$

(The effective rate of Corporate Income Tax is 25% in 2019, Law No.36 of 2008).

- b. Determine the fair price for the shares of the sample issuer by dividing the total equity value by the number of shares outstanding.
- c. Determine the condition of the fair price of the shares of the sample issuer at the market price, whether undervalued or overvalued.

The following is a table of the results of the calculation of the fair share price using the Free Cash Flow to Firm (FCFF) model.

Table 14. Financial Report 2019 & Fair Price FCFF Model

Item	WIKa(In million IDR)	WSKT(In Million IDR)
Net Income	2.621.015	1.028.898
Depr.+Amor.	2.059.138	2.343.987
Tax	25%	25%
Interest Expense	884.252	3.620.534
Interest(1-Tax)	663.189	2.715.401
Capex	(1.075.170)	(860.189)
Δ Non Cash Wc	(1.084.765)	-4171189
Net Debt( Net Borrowing)	4.507.459	(446.305)
FCFF	3.183.407	1.056.908
Growth	10,64%	2,72%
Ke	27,08%	28,85%
Kd	7,44%	7,44%
WACC	18,72%	19,59%
Interest Bearing-Debt	14.235.988	22.162.363
Ekuitas	19.215.733	29.118.469
Total	33.451.721	51.280.832
D/E+D	42,56%	43,22%
E/E+D	57,44%	56,78%
Total Share	8.970	13.573

Table 15. FCFF Model WIKa and WSKT

WIKa	2019	2020F	2021F	2022F	2023F	2024F	Total
FCFF	3.183.	3.522.	3.896.	4.311.	4.770.	5.277.9	
Projection	407	138	912	563	336	25	21.778.874
Discount Factor		1,19	1,41	1,67	1,99	2,36	
		2.966.	2.764.	2.576.	2.401.	2.237.6	
PV		699	743	535	139	83	12.946.798
Enterprise Value							34.725.673
Net Debt							4.507.459
Equity Value							30.218.214
Fair Price							3.369

WSKT	2019	2020F	2021F	2022F	2023F	2024F	Total
FCFF	1.056.9	1.085.6	1.115.2	1.145.5	1.176.	1.208.7	
Projection	08	75	25	80	761	91	5.732.032
Discount Factor		1,20	1,43	1,71	2,05	2,45	
		907.81	779.74	669.74	575.26	494.11	
PV		1	7	8	8	5	3.426.689
Enterprise value							9.158.720
Net Debt							(446.305)
Equity value							9.605.025
Fair Price							708

for other sample emiten ADHI, JKON, NRCA, PTPP, SSIA and TOTL using the same steps as in table 14 and 15.

Table 16. Result of FCFF Model

Code	Fair Price 2020	Closing Price Q1 2020	Margin Of Safety	Statement
ADHI	4.421	535	726%	Under valued
JKON	2.030	414	390%	Under valued
NRCA	1.151	280	311%	Under valued
PTPP	4.367	550	694%	Under valued
SSIA	2.656	440	504%	Under valued
TOTL	1.342	310	333%	Under valued
WIKA	3.369	835	303%	Under valued
WSKT	708	484	46%	Under valued

#### 4.3.4. Mean Absolute Percentage Error (MAPE) Analysis

The stages of conducting data analysis using MAPE are as follows:

- Determine the y1 data's value, using the closing price of shares in the 2015-2019 period, and then the value is added up.
- Determine the yt data's value, namely using the respective values of the projected fair price of shares in 2020 using the FCFE, FCFF, and DDM models.
- Find the absolute value of y1 (closing price) minus yt (projected fair share price) each year; then, the values added.
- Determine the percentage of error, namely the sum of the absolute value of y1 (closing price) minus yt (projected fair share price) divided by the total data value of y1 (closing price) divided by the number of periods, five years. The smaller the percentage of error, the better the projection model for the stock's fair price

The following is a table of data analysis results using Mean Absolute Percentage Error (MAPE):

Table 17. Fair Price FCFE, FCFF dan DDM Models

Valuation Models	Fair Price	Closing Price Q1 2020	Margin of Safety	Stocks	Percentage MAPE
<b>PT. Adhi Karya Tbk. (ADHI)</b>					
FCFE	7.096	535	1226%	Undervalue	60,05%
FCFF	4.421	535	726%	Undervalue	29,87%
DDM	1.187	535	122%	Undervalue	6,66%
<b>PT. Jaya Konstruksi Manggala Pratama Tbk. (JKON)</b>					
FCFE	223	414	-46%	Overvalue	11,89%
FCFF	2.030	414	390%	Undervalue	53,87%
DDM	136	414	-67%	Overvalue	15,05%
<b>PT. Nusa Raya Cipta Tbk. (NRCA)</b>					
FCFE	925	280	230%	Undervalue	21,65%
FCFF	1.151	280	311%	Undervalue	31,82%
DDM	309	280	10%	Undervalue	6,09%
<b>PT. PP Tbk. (PTPP)</b>					
FCFE	1.557	550	183%	Undervalue	8,53%
FCFF	4.367	550	694%	Undervalue	12,16%
DDM	499	550	-9%	Overvalue	16,32%
<b>PT Surya Semeste Internusa Tbk. (SSIA)</b>					
FCFE	1.302	440	196%	Undervalue	26,19%
FCFF	2.656	440	50%	Undervalue	74,22%
DDM	385	440	-12%	Overvalue	6,34%
<b>PT Total Bangun Persada. Tbk (TOLT)</b>					
FCFE	149	310	-52%	Overvalue	15,09%
FCFF	1.342	310	333%	Undervalue	24,20%
DDM	313	310	1%	FairValue	9,69%
<b>PT. Wijaya Karya Tbk. (WIKA)</b>					
FCFE	4.254	835	410%	Undervalue	23,33%
FCFF	3.369	835	303%	Undervalue	13,52%
DDM	1.948	835	133%	Undervalue	3,37%
<b>PT. Waskita Karya Tbk. (WSKT)</b>					
FCFE	1.563	484	223%	Undervalue	4,04%
FCFF	708	484	46%	Undervalue	12,62%
DDM	253	484	-48%	Overvalue	17,36%

Based on data analysis and discussion, the summary of data analysis below:

Table 18. Summary

Code	Stock Price	Fair Price	Closing Price Q1 2020	Methods	Percentage MAPE	Stock	Conclusion
ADHI	1.187		535	DDM	6,66%	Undervalue	Buy
JKON	223		414	FCFE	11,89%	Overvalue	Sell
NRCA	309		280	DDM	6,09%	Undervalue	Buy
Code	Stock Price	Fair Price	Closing Price Q1 2020	Methods	Percentage MAPE	Stock	Conclusion

PTPP	1.557	550	FCFE	8,53%	Undervalu e	Buy
SSIA	385	440	DDM	6,34%	Undervalu e	Buy
TOTL	313	310	DDM	9,69%	Fairvalue	Sell
WIKA	1.948	835	DDM	3,37%	Undervalu e	Buy
WSKT	1.563	484	FCFE	4,04%	Undervalu e	Buy

## 5. Conclusion

The best method to determine the fair price of shares in the building construction sub-sector is the dividend discount model (DDM) method. The research conclusions of the eight samples studied showed five stocks, namely ADHI, NRCA, SSIA, TOTL and WIKA with the smallest and best MAPE using the dividend discount model (DDM) method, then followed by three stocks namely JKON, PTPP and WSKT with the smallest and best MAPE using free cash flow to equity (FCFE) method. This study only uses three methods to calculate stock price valuations. Further research suggested using other methods to determine fair prices to reduce risk when making investment decisions. other than that this research only examines companies in the construction sub-sector, for further research, other sectors can be added such as consumer goods industry, mining, finance, agriculture, miscellaneous industry, industry basic & chemicals, infrastructure, utilities & transportation

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## Digital Taxes in Southeast Asia: A Review

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### Abstract

Digital taxes as a part of fiscal policy have been either proposed, announced, or implemented by numerous governments worldwide, including countries in Southeast Asia. Such policies are introduced to capture the tax revenue potency derived from the digital economy. This study examines the digital tax policies in six Southeast Asian countries, namely Malaysia, Singapore, the Philippines, Thailand, Vietnam, and Indonesia. Data were collected from a literature survey on scholarly databases and online articles that discussed the digital tax policies in the respective countries. This paper contributes to the taxation discipline by presenting and analysing the current landscape of digital taxes across Southeast Asian countries. This study uncovers that in Southeast Asia, only these six states already have political agendas with taxation on the digital economy. These countries are the largest economies with the highest growth of the digital economy in the region. Most of them are also the member states of the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS). Besides, the main finding of this study is that the regional trend of digital taxes in Southeast Asia is imposing consumption tax and digital service tax on digital trades. The measures for direct tax, however, have yet to be taken by the policymakers due to the absence of international consensus on taxing rights allocation over the profits of multinational digital enterprises.

**Keywords:** Digital Economy, Digital Tax, Literature Review, Southeast Asia, Tax Policy, Taxation

### 1. Introduction

Many governments across countries have started to introduce and impose digital taxes on digital businesses and trades. Tech giants like Amazon, Google, Facebook, Netflix, and Spotify have profited from the firm and exponential growth of digital business not only in their origin country but, more importantly, in market countries. As an emerging region, Southeast Asia has a significant size of the digital economy in the world. A study shows that the internet economy of Southeast Asia reached US\$100 billion in 2019 and is predicted to multiply to US\$300 billion by 2025 (Google, Temasek, Bain & Company, 2019). The region's internet economy contribution towards Gross Domestic Product increased from 1.3% in 2015 to 3.7% in 2019 and is projected to hit 8% by 2025 (ibid.). It shows that the role of the internet economy has become more central to the whole economy over the years.

In a recent study by Bunn, Asen, and Enache (2020), some other Organisation for Economic Cooperation and Development (OECD) countries are found to have already implemented digital taxes in the form of cross-border consumption taxes (e.g., Australia, Canada, European Union countries, Iceland, Japan, New Zealand, Norway, and South Korea) and unilateral DST (e.g., France, United Kingdom, Austria, and India). Meanwhile, in the Southeast Asia context, such information is still very limited. Until this research is conducted, there is no single study on digital taxes in Southeast Asia that could be found. This study, therefore, contributes to present the current landscape of digital taxes in the region. Have all countries in the Southeast Asia region implemented

digital taxes? What are the details of the formulated policies? Why do Southeast Asian countries implement digital taxes? What is the trend of digital tax implementation in the region? These are the questions that this study wishes to tackle.

## 2. Digital taxes: definition, types, and principles

Digital trade in this paper mainly covers transactions on electronic commerce. The OECD (2002) defines electronic commerce with a narrow definition as “the sale or purchase of goods or service...conducted over the internet. The goods and services are ordered over those networks, but the payment and the ultimate delivery of good or service may be conducted on or off-line” (p.89). As there are economic activities involved, digital taxes seem imperative to be imposed.

To date, there is no unified definition of digital taxes. This paper follows the description of digital taxes developed by Bunn, Asen, and Enache (2020), stating that digital taxes cover policies that primarily target businesses providing goods or services through digital means using a different tax rate or tax base. Digital taxes in their study also cover digitally ordered and/or digitally delivered goods and services, depending on each country's policy. Digital taxes are further categorised into several types of policy. The explanation of each type is as follows.<sup>8</sup>

- a. Consumption taxes  
Consumption taxes consist of Value-Added Tax (VAT) and other taxes on goods and services. Many countries have expanded the coverage of consumption taxes to include digital goods and services.
- b. Digital service taxes  
Digital service taxes are imposed on gross revenues derived from a particular set of digital goods or services or calculated based on the number of digital users in a country.
- c. Tax regimes for digital businesses  
Tax preferences are policies that lessen the tax burden on digital companies such as research and development (R&D) credits and patent boxes. Even though most regimes are also available for other businesses/sectors, some mainly are designed for digital business models,
- d. Virtual permanent establishment (PE) rules  
The policies contain redefinition of the existing PE rule to include digital companies without a physical presence in a jurisdiction. These virtual/digital PEs commonly defined using specific standards, including connection with the local market.
- e. Withholding taxes on digital services  
Withholding taxes are charged on a gross basis. Some jurisdictions use the taxes instead of corporate taxes or consumption taxes to tax digital companies' revenue related to the transactions within a country. As gross income taxes, these taxes do not replace income and consumption taxes.

Like other tax policies, to design digital taxes, policymakers need to adhere to digital tax principles. According to OECD (2015), the basic principles of tax policy related to the digital economy are as follows.

- a. Neutrality  
Taxation should be neutral and equitable between any kinds of business activities. It also means that the tax system generates revenue while minimising discrimination favoring, or against, any specific economic option. It infers that the same taxation principles should apply to all kinds of business while handling certain features unless it may harm an equal and neutral application of the principles.
- b. Efficiency  
The cost to comply with taxation regulations for business and the cost to collect tax revenues for governments must be minimised as far as possible.
- c. Certainty and simplicity

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<sup>8</sup> The following sentences in the paragraph are cited from the same source (Bunn, Asen, & Enache, 2020) unless otherwise stated.



Tax rules must be clear and simple for taxpayers to understand. A simple tax system enables both individual and corporate taxpayers to understand easier their taxation rights and obligations. Conversely, a complex tax system favours aggressive tax planning that may lead to deadweight losses for the economy.

d. Effectiveness and fairness

Taxpayers are imposed the right amount of tax at the right time. Double taxation and unintended double non-taxation should be avoided to ensure fairness. Besides, any potential for tax avoidance and evasion should also be minimised. Regarding tax systems' efficiency, the ability to enforce is substantial as it affects the collectability and tax administration.

e. Flexibility

Tax systems should be flexible and dynamic enough to follow economic and technological development to fulfil the government needs of tax revenues. Tax systems keep adapting continuously.

f. Equity

The equity principle consists of horizontal and vertical equity. Horizontal equity implies that taxpayers with similar situations should pay the same amount of tax. Meanwhile, vertical equity suggests that taxpayers with better circumstances should pay a higher amount of tax as a proportion of their income.

### 3. Research method

This study employs a literature review as the methodological lens, specifically using the integrative approach. Such an approach is appropriate for critical examination of an emerging topic (Snyder, 2019), such as digital taxes.

#### 3.1 Literature search method

Data were collected from multiple sources: scholarly databases and the internet, such as media coverage. Scopus was used as the primary source for the choice of scholarly databases because of its broad scope and indexing (Maflahi & Thelwall, 2016). Besides, to enrich the data collection, the authors also searched other scholarly databases, such as ProQuest, JSTOR, SSRN, and Google Scholar. To find relevant papers discussing the digital tax policies in Southeast Asian countries, the search was conducted by using a combination of keywords "digital", "tax", "commerce", "online", and the name of Southeast Asian countries (e.g., "Singapore", "Vietnam", "Myanmar").

As the digital tax is a relatively new topic, there is a limited number of academic papers in those scholarly databases that could be found. Only four Southeast Asian countries have been the study context of the collected academic papers, namely Singapore, Malaysia, Thailand, and Indonesia. Accordingly, the authors then searched for online articles on the subject of digital taxes in these respective countries and other countries to support the analysis. Similar keywords were employed to find relevant articles across various online sources, such as government websites and news outlets. From the search made on online sources, two other countries (i.e., the Philippines and Vietnam) are identified to have proposed or constituted digital tax policy as well.

#### 3.2 Analysis method

This study's findings comprise mainly of data synthesized from the aforementioned data sources, aimed at integrating ideas to produce unique conception (Torraco, 2005). After describing the current landscape of digital taxes in six Southeast Asian countries, the authors analysed the policies by looking at the commonalities and differences to see a pattern or trend more clearly. The authors endeavoured to determine why only six governments have the political agendas to enact taxation regulations on the digital economy. In the end, the authors brought the discussion of this study to the context of countries outside the Southeast Asia region, mainly European countries, so a better understanding of the direction of the development of digital taxes as a discourse can be put forward.

### 4. Results: Digital taxes in six Southeast Asian countries

The digital tax policies that have been introduced by the governments of Southeast Asian countries are presented below.

#### 4.1. Malaysia

The Malaysian government has imposed a digital tax effective since 1 January 2020 for the international and local digital firms to pay a fair share of tax (Kuek, 2020). Specifically, the Malaysian government imposes a 6% rate on digital services provided by foreign digital providers (KPMG, 2020a). The government expects that the introduction of this DST will level the playing field for local digital businesses – besides gaining more tax revenue (Medina, 2020b). Foreign service providers with an annual turnover of more than RM 500,000 (USD 120,000) in Malaysia should collect and remit the DST (Beh & Sheah, 2019).

The Royal Malaysian Customs Department (RMCD) in its guide regulates the example of digital services covering: online licensing of software; firewalls; mobile contents and video games; provision of e-books, movies, music, streaming services; search engines and social networks; online advertising platforms; and internet-based communications (Beh & Sheah, 2019). However, there are some exemptions for this charge, including online-learning, online newspapers, online academic journals, and educational reading materials (KPMG, 2020a). This DST, which is a form of “hybrid tax” between consumption tax and income tax (Geringer, 2020, p.3-4), is the first and only digital tax policy that has been implemented by the Malaysian tax authority. Like many other countries worldwide, the Malaysian government has yet to introduce any unilateral direct tax measures.

#### 4.2. Singapore

Similar to the DST policy of the Malaysian government, Singapore also has put into effect a regulation on Goods and Service Tax (GST) provided by overseas digital providers since 1 January 2020 (Inland Revenue Authority of Singapore [IRAS], n.d.-a). Foreign digital service providers should, therefore, register and be charged for GST, while before, only services provided by local companies were subject to GST (Medina, 2020a). The rate of this consumption tax is 7%, but the government is already planning to raise the rate to 9% between 2021 and 2025 so it can finance future infrastructure projects and improve expenditure on social welfare (ibid.).

GST is a self-assessed tax that the businesses required to assess their need to register for GST. The threshold for foreign digital companies including marketplaces to be subject to GST is an annual global turnover of more than S\$1 million (US\$ 738,000) and more than S\$100,000 (US\$ 73,800) Singapore-sourced in-scope revenues (IRAS, n.d.-b). The digital services include downloadable digital content, subscription-based media, software programs, and electronic data management (ibid.).

#### 4.3. The Philippines

Taxing the digital economy has already been on the government’s agenda even before the recent health crisis for additional revenue sources (Castañeda, 2020). As reported by CNN Philippines, the legislative body of the Philippines has just very recently approved the bill no. 6765 or “Digital Economy Taxation Act” on imposing 12 per cent VAT on digital transactions (Arcangel, 2020). The bill requires network orchestrators – “persons, typically aided by information technology, that create a network of accredited service providers and service consumers, and act as intermediaries that facilitate the matching of a consumer’s services needs with a provider’s available service” – and electronic commerce platforms to withhold the taxes by appointing them as withholding agents (Villegas, 2020). It implies that overseas digital companies such as Netflix, Spotify, Amazon, and other firms should assess, levy, and collect VAT on their services as well as remit the tax to the Philippines government. The digital services cover, among others, online licensing or software, mobile applications, provision of digital content such as music and information, online advertisements, e-learning and online courses, and online platform (Beh & Sheah, 2019).

#### 4.4. Thailand

Under the current Thai Revenue Code, Thailand consumer is required to remit VAT for service provided by foreign service providers (Sumaiyarat, 2019, p.99-100). However, practically, there is no VAT remitted to the government by the consumer in Thailand (ibid.). As such, Thailand’s cabinet has proposed a bill regulating that overseas service providers should pay, meaning collect and remit, VAT (Tanakasempipat & Thepgumpanat, 2020). This move’s motive is primarily economic, which is to gain tax revenues from global technology giants (ibid.). This bill still needs voting in Thailand’s parliamentary. It requires non-resident firms or online platforms

that make higher than 1.8 billion Baht (US\$ 57,434.59) per annum from offering digital services in Thailand to pay 7 per cent VAT (ibid.).

After becoming a VAT registrant, foreign digital providers need to remit and report the VAT to the Revenue Department every month (Van & Suthinan, 2020). The services that are included in this draft bill are, for example, services related to the supplying of digital content such as online gaming, music and film streaming, online advertising, e-books, online learning courses as well as online news website subscription. (ibid.).

#### 4.5. Vietnam

In June 2019, the Vietnamese government issued a tax administration regulation numbered 38/2019/QH14 to be effective on 1 July 2020 (Ernst & Young [EY], 2020). This Law regulates a new mechanism to collect tax from international e-commerce sellers and digital service providers. Foreign electronic commerce traders and digital service providers without a PE in the country are obliged by the Vietnamese tax authority to register for tax declaration and payment (ibid.).

As KPMG (2020b) reported, the effective date of this regulation has been delayed for six months, and accordingly, it will be effective as of 1 January 2021.<sup>9</sup> Payments to non-resident e-commerce business will be subject to new withholding tax and will be collected by financial intermediaries, e.g., banks. This mechanism applies to both B2B (business to business) and B2C (business to consumers). This withholding tax consists of VAT and Corporate Income Tax (CIT) with varying rates of 2%-5% of VAT and 1%-10% of CIT.

#### 4.6. Indonesia

The Indonesian government enacted a Law Number 2 year 2020 (Law 2/2020)<sup>i</sup> on Stipulation of Government Regulation in Lieu of Law number 1 year 2020 on finances and financial system stability into Law. This particular regulation is not merely on digital tax policy but a set of policies to save the national economy after the COVID-19 pandemic.

The Indonesian government has defined digital good and digital services through its regulations, namely Government Regulation number 80/2019 (PP 80/2019)<sup>ii</sup>, Finance Minister Regulation number 48/PMK.03/2020 (PMK 48/PMK.03/2020)<sup>iii</sup>, and Director General of Taxes Regulation number 12/PJ./2020 (PER 12/PJ./2020)<sup>iv</sup>. In those regulations, digital good “shall be any intangible good in the form of electronic or digital information, covering all goods that have been converted or transformed or those that are electronic in its origin, including but not limited to software, multimedia, and/or electronic data”. Likewise, digital service “shall be any service delivered through internet or electronic network, whose nature is automatic or with little human interference, and impossible to be confirmed without information technology, including but not limited to software-based service”.

According to Law 2/2020, the 10% VAT on digital goods and services from the outside custom area is collected, remitted, and reported by foreign traders, foreign service providers, foreign online platforms, and/or domestic online platforms that are appointed by the Finance Minister. If these foreign companies meet the significant economic presence requirement, they will be deemed as PEs even though they have no physical presence in Indonesia and will be levied CIT accordingly. The concept of “significant economic presence” for digital PE adopted by the Indonesian government includes:

- Sales of the consolidated group up to a certain amount;
- Sales in Indonesia up to a certain amount; and
- Digital active users in Indonesia up to a certain number.

However, if because of tax treaties between Indonesia and other jurisdictions, those foreign parties could not be deemed as PE, they will be charged electronic transaction tax. This particular tax is levied towards sales of digital products and services from non-resident to Indonesian consumers. The regulations on the threshold for

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<sup>9</sup> The following sentences in the paragraph are cited from the same source (KPMG, 2020b) unless otherwise stated.

digital PE, the tariff, as well as the tax base of income tax and electronic transaction tax, are not yet released.

The Indonesian government has issued more detailed explanation about the VAT policy through PMK 48/PMK.03/2020 that is effective as of 1 July 2020 (Diela & Potkin, 2020). One of the regulations implies that the customers have to pay an additional 10% VAT for digital products such as music and movie streaming subscription (ibid.). Hitherto, the Indonesian tax authority has appointed some foreign digital companies as VAT collector, such as Amazon Web Services Inc, Google LLC, Netflix International BV, Spotify AB, Facebook Payments International Ltd, Alexa Internet, and Audible Ltd. (Fauzia, 2020).

## 5. Analysis and discussion

Based on the explanations above, the digital tax policies of six countries in Southeast Asia can be summarised as follows.

Table 1. Summary of digital taxes in six Southeast Asian countries

No	Country	Regulation/ Motives	Type of tax and tariff	Threshold	Coverage	Status/ Effective
1	Malaysia	- Get a fair share of tax; and - Level playing field.	Digital Service Tax (6%)	Annual turnover in Malaysia: RM 500,000 (USD 120,000)	Digital services	Implemented 1 January 2020
2	Singapore	Overseas Vendor Registration (OVR) Regime To create a level playing field by protecting local retailers.	Goods and Service Tax (7%)	- annual global turnover of more than S\$1 million (US\$ 738,000) - sales more than S\$100,000 (US\$ 73,800) to Singaporean customers within 12 months period	Digital services include digital content, software programs, and electronic data management	Implemented 1 January 2020
3	The Philippines	House Bill 6765 or Digital Economy Taxation Act To gain additional revenues.	Value-Added Tax (12%)	(the information is not available)	Digital services cover the provision of digital content, online advertisements, and online courses.	Proposed
4	Thailand	To gain more tax revenues.	Value-Added Tax (7%)	Earn more than 1.8 billion Baht (US\$ 57,434.59) per annum from providing services in Thailand	Digital goods and digital services	Proposed
5	Vietnam	38/2019/QH14 To collect taxes from international e-commerce.	VAT (2%-5%) CIT (1%-10%)	(the information is not available)	Goods and services via electronic commerce	Announced Effective 1 January 2021

6	Indonesia	Law 2/2020 PMK 48/PMK.03/2020 PER 12/PJ/2020 To gain more tax revenues due to COVID-19	VAT  CIT (unregulated)  Digital electronic tax (unregulated)	Only for VAT:  - the annual transaction consumers in Indonesia are exceeding IDR 600 million or IDR 50 million/month.  - The number of traffics or users in Indonesia exceeding 12,000 in a year or 1,000 per month.  The threshold for CIT and digital electronic tax has not been regulated.	Digital goods and digital services	Implemented  1 July 2020  Announced   Announced
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Source: summarised from many sources.

Of eleven states in the Southeast Asia region, only half have dealt with digital tax policies. The six states mentioned above are the countries with the largest economies in the area. According to a study conducted by Google, Temasek, and Bain & Company (2019), the internet economy growth of Singapore, Malaysia, Thailand, and the Philippines were between 20 and 30 per cent annually. Even surprisingly, in Indonesia and Vietnam, growth rates average exceeds 40 per cent per annum (*ibid.*). Therefore, taxing the digital economy has become a political agenda for the policymakers of those states. Besides, all countries except the Philippines are the member states of the OECD/G20 Inclusive Framework on BEPS, where more than 135 countries have been collaborating on the implementation of the BEPS Actions, including addressing tax challenges arising from digitalisation (OECD, n.d).

Following the digital tax types developed by Bunn, Asen, and Enache (2020), the digital taxes in Southeast Asia consist of consumption taxes, DST, and virtual PE rules. The imposition of consumption tax (VAT or GST) and DST becomes the digital tax policy trend in Southeast Asia. Consumption tax in this context is levied in Singapore and Indonesia and will soon be imposed in Vietnam. Meanwhile, the Philippines and Thailand governments have proposed bills to charge VAT on digital goods and services (Arcangel, 2020; Tanakasempipat & Thepgumpanat, 2020). The DST has been established in Malaysia and will soon be implemented in Indonesia through PMK 48/PMK.03/2020 (Kuek, 2020; Medina, 2020a). From the data collected (see Table 1. above), only Indonesia has introduced the modified PE definition in its national law (Article 6 paragraph 6 and 7 Law 2/2020). The digital taxes coverage in Southeast Asia is mainly on digital goods and digital services, which means goods and services that are digitally ordered and delivered. Except in Vietnam, the government regulates goods and services traded through electronic commerce, meaning products can be digital and non-digital.

Those tax policies are meant to gain additional tax revenue derived from the growing digital economy, get a fair share of tax revenues, and rebalance tax inequality between digital and traditional business as well as between local and international companies. At least the principles of digital taxes, namely neutrality and fairness, could be seen from the last purpose. Tax should be neutral to all businesses, despite being local or trans-national, conventional or digital, small or large; they should bear a similar tax burden. Aligned, the imposition of destination-based consumption taxes on cross-border electronic commerce is to avoid the unintentional double non-taxation. The United Kingdom's principles for taxation of e-commerce are quite similar to those of the OECD - namely neutrality, certainty and transparency, effectiveness, and efficiency (Saxby, 2000, p.128). To see whether each digital tax policy in Southeast Asia is also following the other digital tax principles, a thorough examination must be conducted.



Most of the countries also have set the threshold for companies to be subject to VAT and DST. For the VAT, the threshold is ranging from US\$41,000 (Indonesia) to US\$73,800 (Singapore). It may reflect that the Indonesian government would enlarge the VAT base and improve tax administration by maximising foreign service providers' role as VAT collectors (Damayanti, 2020). This VAT also creates a level playing field between local and foreign businesses (ibid.). Previously, only local companies imposed VAT on their digital products, whereas digital products from outside the country were free of VAT. The price of local digital products was, therefore, relatively higher than of foreign digital products.

Another trend is that the governments in Southeast Asia appoint foreign service providers and electronic commerce platforms to collect and remit the consumption taxes. Even the Vietnamese government will oblige financial intermediaries to withhold income tax and VAT. The OECD (2019) has released a framework of guidelines on the role of online platforms in the collection of VAT/GST. It considers regimes that impose liability on digital platforms – in this context, foreign service providers and electronic commerce platforms – for VAT/GST due on the online sales that these platforms facilitate (ibid.). By implication, the digital platforms are liable for assessing, collecting, and remitting the VAT/GST.

According to a recent study by Scarcella (2020), the involvement of third party in the collection of VAT or GST has been implemented by states even before the OECD framework of guidelines on digital platforms' role was released. The study highlights the advantages and disadvantages of the new provisions using platforms in collecting VAT/GST by looking into the different regulations adopted in the UK, Germany, Australia, and EU VAT Package (ibid.). The main benefit that has been identified is it is possible to use platforms to collect VAT/GST through them as they have full access to relevant information about the sales transaction (ibid.). Even though still far from perfect, these new provisions represent a phase to reach higher level of VAT/GST compliance and secure the tax revenues (ibid.). Nevertheless, the limit is because these regimes increase the bureaucratic burdens and costs on the platform (ibid.). If the administrative costs are deemed too high, added by the complexity of the regulations in each country where the platforms do businesses, it could lead to non-compliant behavior.

A recent study by Geringer (2020) examining the digital tax policies in the EU (European Union) categorises national legislation on digital tax as DST, digital advertising tax (DAT), and unilateral adjustments to PE definitions in the national income tax law. The French government has implemented DST and grasped wide international attention for the “trade war” issue against the U.S. government. The United Kingdom, Italy, Spain, and the Czech Republic have proposed DST (ibid., p.5-6). In contrast to DST, DAT solely targets online advertising services, and up till now, only Austria and Hungary have implemented national DATs (ibid., p.5). Lastly, only one EU country, Slovakia, has unilaterally redefined the PE in its domestic income tax code (ibid.).

Like the EU countries, direct tax in the form of corporate income tax has generally not yet been addressed by the Southeast Asian governments. However, Indonesia has tried to regulate it by including the modified definition of PE using “significant economic presence” into its law. The threshold for a non-resident business to be stated as a digital PE (i.e., taxable by the government) remains unclear due to the absence of international consensus on taxing rights allocation over multinational digital firms' profits. It seems that the Indonesian government, like many other governments, is still waiting for the global agreement.

## **6. Conclusion and implication for future research**

The digital tax policies are meant to capture tax revenue potential derived from the country's digital economy, get a fair allocation of tax revenues, and diminish tax inequality between online and off-line business activities and between domestic and foreign companies. Six jurisdictions in Southeast Asia have either proposed, announced, or implemented digital taxes mainly in the form of consumption tax (VAT or GST) and DST. Cross border consumption tax on digital goods and services has been proposed in the Philippines and Thailand and constituted in Singapore, Vietnam, and Indonesia. Meanwhile, DST has been announced in Indonesia and implemented in Malaysia. Such movement is a form of conforming to the global trend to impose destination-based consumption taxes on digital goods or services traded through electronic commerce. The policymakers

in the region, however, have not established any measures of direct tax due to the absence of global consensus on taxing rights allocation over the profits of multinational digital companies.

Since digital taxes research is dynamically evolving along with the advancement of technology and digitalisation, future research can discuss topics such as critical analysis on challenges and opportunities of digital tax policy and possible approaches to address challenges in taxing the digital economy. Such research could also investigate the political economy of digital tax policy in a country, socio-economic impacts of digital tax policies, and formulation of digital tax policies that could be applied subject to the specific country's conditions.

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## Macro Economics on Stock Returns Portfolio LQ45 at Indonesia Stock Exchange (An Approach of APT) An Extended Abstract

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### Abstract

This study aims to testing Arbitrage Pricing Theory (APT) model to predict the effect of macro economy variables such as Interest rate, Purchasing Manager Index (PMI), Inflation rate, Gold price, Crude Palm oil price, Exchange rate, Indonesia Trade balance, LQ45 index and DJIA index as risks factors on Indonesian exchange rate. This study uses secondary data in a period of 67 months from January 2015 to July 2020 and analysis method uses time series regression by using Eviews software. The result of this study shows PMI, Gold price, DJIA index, affect positively significant on stock returns portfolio and Crude Palm Oil price and Exchange rate affect negatively significant on stock return portfolio LQ 45.

### 1. Introduction

The principle in the price balance model in the APT model actually lies in how the same two assets can experience price errors so that it will open up opportunities for arbitration to the profits obtained by investors without any risk to be faced, this is due to the activity of buying and selling securities in a manner simultaneously to get profit from the price differences that occur (Bodie & Kane, 2014). The APT model was introduced by Ross (1976) as an elegant model in explaining the relationship between return and risk, APT model developed as a single period model in which every investor believes that the stochastic return on a security from an asset price is consistent with a factor structure.

The purpose of this study is to conduct empirical testing of APT in predicting asset returns using a number of macroeconomic variables. This study include variables to represent the APT factor and can either be considered to represent beta multi CAPM due to its flexibility in assumption criteria. Several findings are relevant and present evidence that APT using macroeconomic variables can lead to slightly better estimates of the risk and expected returns from CAPM and other capital market equilibrium models such as the 3-Factor model (Fama and French, 1992; Baghdadabad & Glabadanidis, 2014).

Cagnetti (2002) who uses 25 macroeconomic variables in conducting tests on the Italian capital market shows that macroeconomic and industrial variables are very important to explain asset returns. Flannery and Protopapadakis (2002) concluded that the industrial product index and the consumer price index have a significant effect on portfolio returns that are formed at a certain level. Al-Khazali and Pyun (2004) examined the relationship of inflation rates in the Asia-Pacific region such as Australia, Hong Kong, Japan, South Korea, Indonesia, Malaysia, the Philippines, Singapore and Thailand in the period 1980 to 2001 and concluded that there was a negative relationship with short-term stock price. This study was conducted to investigate the suitability of the APT model as a capital market price balance model in predicting and describing the relationship between return and risk on stocks that are members of LQ45 (Rjoub et al., 2009). How well do the APT model able to explain the relationship between returns and macroeconomic factors on the Indonesian capital market from 2015 to 2020?

### 2. Research Methods

APT model not mentioned risk factors name and researchers can choose and use macro economics factors including market risk (Gul & Khan, 2013). This study use 9 variable macroeconomics which chosen randomly

including LQ45 index as market risks (Market Risk Factor).

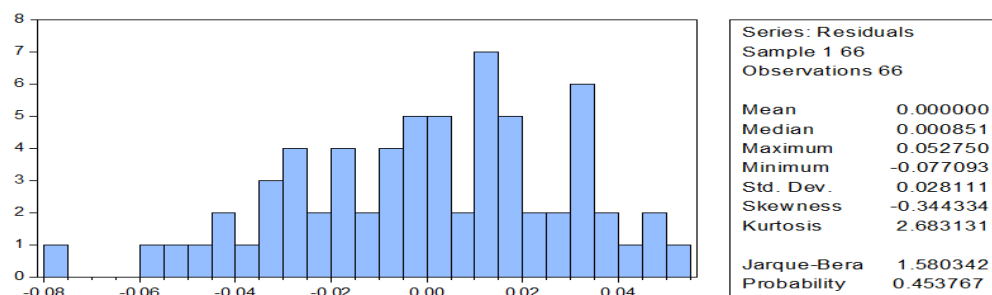
The period of this study from January 2015 until July 2020 as total there are 67 months period of time series data. The research population IDX stocks that are contained within the LQ 45 index during the study period and there will be several stocks that will be eliminated because they do not meet the research criteria. The sampling technique used purposive random sampling by ranking LQ45 stocks based on beta size. After obtaining several stocks that meet the criteria, this study forms a stock portfolio where 1 portfolio consists of all stocks that remain active as LQ45 members during the observation period . Therefore, the portfolio model consists of 22 stocks namely :BBCA,BBNI,BBRI,BBTN,ADRO,AKRA,UNVR,ASII,BMRI,GGRM,TLKM,KLBF,INDE,ICBP,INCO,INTP,PGAS,PTBA,SMGR,MNCN,UNTR,JSMR which were consecutively members of LQ 45 during the observation period. In this study, the independent variables to be included are the LQ45 index, DJIA, PMI, Nikkei Indonesia Exchange rate, BI repo rate, inflation rate, Crude oil price, Gold price, Indonesia balance of trade. So there are 9 macroeconomic variables.

### 3. Results and Discussion

The portfolio model is weighted using weighted average that portion is equal for every stock chosen.

Regression characteristic of this study is Original Least Square (OLS) based on Gauss Macoff's criteria (Gozali, 2018), so the regression must be Best Linear Unbias Estimation (BLUE) and must meet the classical assumption rules. The result of classical assumption testing as follows :

Table 1. Normality residual testing



The results show that the Jarque-Bera value is smaller than JB table, which is 1.58 or the residual probability value is smaller than alpha 0.05 or 5%, so that  $H_0$  is accepted and  $H_1$  is rejected, which leads to the conclusion that all data has normal distribution.

The next step is to conduct a multicollinearity test which aims to determine whether the independent variables, namely the selected macroeconomic variables, are interrelated or related one to another.

Table 2. Multicollinearity testing

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
R_LQ45	0.009591	1.472961	1.471395
R_DJIA	0.028408	2.864667	2.768679
R_PMI	0.004776	1.969329	1.967048
R_EXCHANGE	0.077013	2.446767	2.414134
R_REPO	0.012203	1.266942	1.191621
R_INFLATION	0.001644	1.217602	1.181921
R_CPO	0.002092	2.690604	2.684637
R_GOLD	0.020905	1.557630	1.485905
R_IBT	5.96E-07	1.159969	1.154345
C	1.88E-05	1.350901	NA

The results from table 2 show that the Variance Inflation Factor (VIF) value is still at  $1 < VIF < 10$  which accepts

H0 and rejects H1, and concludes that all independent variables, namely macroeconomic variables in the study, are free from multicollinearity symptoms. Then it can be continued to the next process.

The next step is to conduct a heteroscedasticity test which aims to determine whether there is a residual effect on the variability of portfolio returns, where the residual variant should not have an effect on data variability on the dependent variable. Researchers used the Glejser method in testing heteroscedasticity symptoms by using the absolute value of the residuals (Gozali, 2018).

Table 3. Heterocedasticity testing

Dependent Variable: ABS_RES				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
R_CPO	-0.005007	0.025285	-0.198015	0.8438
R_DJIA	-0.147063	0.093183	-1.578228	0.1201
R_EXCHANGE	-0.267584	0.153424	-1.744080	0.0866
R_GOLD	-0.082597	0.079934	-1.033313	0.3059
R_IBT	0.000121	0.000427	0.282989	0.7782
R_INFLATION	-0.012412	0.022418	-0.553641	0.5820
R_LQ45	0.066928	0.054144	1.236107	0.2216
R_PMI	0.000723	0.038207	0.018929	0.9850
R_REPO	0.007054	0.061074	0.115507	0.9085
C	0.024831	0.002396	10.36566	0.0000

The table 3 above shows that using the Glejser method it is partially obtained that the probability value of each variable is above alpha 0.05 or 5%, so H0 is accepted and rejects H1, and concludes that all research data is free from heteroscedasticity symptoms. Therefore, it can proceed to testing the strength of the model and testing the hypothesis of the APT model.

Table 4. Model APT Testing

Dependent Variable: RETURN_PORTOFOLIO Method: Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
R_REPO	-0.026527	0.110469	-0.240130	0.8111
R_PMI	0.147947*	0.069108	2.140812	0.0367
R_LQ45	0.150251	0.097935	1.534185	0.1306
R_INFLATION	-0.003589	0.040549	-0.088512	0.9298
R_IBT	-5.78E-05	0.000772	-0.074844	0.9406
R_GOLD	0.307096*	0.144584	2.123993	0.0381
R_EXCHANGE	-0.833286*	0.277512	-3.002707	0.0040
R_DJIA	0.644241*	0.168548	3.822307	0.0003
R_CPO	-0.111505*	0.045735	-2.438046	0.0180
C	-0.003746	0.004333	-0.864543	0.3910
R-squared	0.669738	Mean dependent var		0.000549
Adjusted R-squared	0.616661	S.D. dependent var		0.048916
S.E. of regression	0.030286	Akaike info criterion		-4.017522
Sum squared resid	0.051366	Schwarz criterion		-3.685756
Log likelihood	142.5782	Hannan-Quinn criter.		-3.886426
F-statistic	12.61806	Durbin-Watson stat		1.975567
Prob(F-statistic)	0.000000			

From the table 4 above, it is explained that the APT model built by this study using 10 randomly selected macroeconomic variables is able to explain 66.97 percent of the variability of the stock portfolio returns formed during the observation period January 2015 to July 2020. From the 9 macroeconomic variables included in this APT model, only 5 macroeconomic variables have a statistically significant effect, as follows : PMI with Prob. 0,0367 < alpha 0,05 ; Gold Price with Prob. 0,0381 < alpha 0,05 ; Exchange rate with Prob. 0,0040 < alpha 0,05 ; DJIA with Prob. 0,0003 < alpha 0,05 ; and CPO with Prob. 0,0180 < alpha 0,05.

Hypotheses		Results
<b>Hypothesis 1</b>	BI rate repo has positive effect on stock return portfolio	negative/not supported
<b>Hypothesis 2</b>	PMI Indonesia has positive effect on stock return portfolio	positive/supported
<b>Hypothesis 3</b>	LQ45 index has positive effect on stock return portfolio	positive/not supported
<b>Hypothesis 4</b>	Inflation rate has negative effect on stock return portfolio	negative/not supported
<b>Hypothesis 5</b>	Indonesia Balance of Trade has positive effect on stock return portfolio	negative/not supported
<b>Hypothesis 6</b>	Gold Price has positive effect on stock return portfolio	positive/supported
<b>Hypothesis 7</b>	Exchange rate USD-IDR has negative effect on stock return portfolio	negative/supported
<b>Hypothesis 8</b>	DJIA index has positive effect on stock return portfolio	positive/supported
<b>Hypothesis 9</b>	CPO Price has positive effect on stock return portfolio	negative/supported

Furthermore, from testing of the simultaneously model obtained an F-statistic of 12.618 which is greater than the F table, where the probability is less than alpha 0.05 or 5%, which concludes that simultaneously all macroeconomic variables of this study APT model have an influence on variability stock return portfolio.

The testing of the capital market equilibrium model, the APT model works well in the Indonesian capital market, especially the stocks that are included in the LQ45 index, this can be seen from the significance of each macroeconomic variable included in the study, partially, it is able to explain the relationship between risk and return average stock portfolio, thus indicating evidence of acceptance of the APT model. In addition, the APT model shows that some of the economic factors selected and included in the study show a linear relationship with the average portfolio returns, therefore, the findings in this study are consistent with the APT model hypothesis and show strong evidence of accepting the APT model. The findings of this study are in line with previous study such as Ross (1976), Amtiran et al. (2017), Utomo et al. (2019), Dayioğlu & Aydın (2019), Olokoyo et al. (2020) Assagaf et al. (2019) and Shahzad et al. (2020).

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## Determinants of Rice Production in Asian Countries

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### Abstract

Rice as the main source of calories for more than 59% of the world's population. The researcher wants to contribute to the development of rice production in Asia for food security. This research aims to determine the effect of credit, quality of human resources, area harvested, and fertilization consumption on rice production in Asia between 1990 and 2019 with the Fixed Effect estimation technique. The secondary data is collected from FAO, the World Bank, and UNESCO. The results of the study showed that credit for agriculture, area harvested, and fertilization consumption had a positive and significant impact on rice production. Meanwhile, the quality of human resources has a positive, but not significant impact on rice production. Integrated support between the government and the private sector with farmers is needed through policies and programs to increase the affordability and quality of the components of rice production factors.

**Keyword:** credit, human capital, land area, fertilization consumption, agriculture, Asia

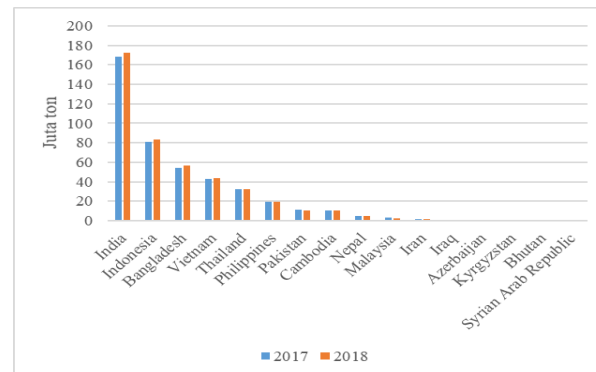
### 1. Introduction

Food security is one of the important goals contained in the Sustainable Development Goals (SDGs), that is the 2nd goal of the 17 goals to be achieved by UN members. Rice is a staple food in Asian countries. The availability of rice is an indicator of food security in Asian countries, as much as 75% of the daily calories of the Asian population come from rice. More than 59% of the world's population, the main source of calories is rice (Childs (2004) in Khakim et al. (2013)).

The Covid-19 pandemic, causing nearly 900 million people in the world do not have access to adequate and sufficient food (Luiselli, 2020). Besides, a breakdown in marketing, logistics, and trade systems could render food unavailable in some locations for some time ahead, leading to increased hunger and malnutrition (FAO, 2020b). The key to food security is sustainable and systematic access to adequate food in quantity and quality. So that food security is not disturbed, the food chain must be maintained, both in terms of production inputs, plants, and food that is ready for consumption (Luiselli, 2020).

The production function is the relationship between how much output can be made from various combinations of some production factor inputs (Mankiw, 2012). Production factors consist of (i) natural production factors such as land, water, sunlight, and air, (ii) labor production factors, (iii) capital production factors, and (iv) expertise production factors such as farmer skills, technology, and others (Alam, 2007).





Data Resource : (FAO, 2020a)

Figure 1. Rice Production Capacity of Asian Countries 2017-2018

Each country has a different production capacity according to the number of inputs (factors of production) and the efficiency and effectiveness of the production process. In Figure 1. it can be seen that most Asian countries have increased production, such as India, which has the largest rice production capacity among the sixteen countries in Asia, in 2017 of 168.5 million tons of rice, increasing in 2018 to 172.6 million tons of rice. Indonesia is the second largest of sixteen other countries in Asia with 81.1 million tonnes of rice in 2017 and increased to 83 million tonnes in 2018, however, several countries have experienced a decline, such as Thailand, which experienced a decline in rice production although not much, in 2017 Rice production of 32.7 million tons decreased in 2018 to 32.2 million tons.

In farming activities, there are several problems in each country in Asia, one of which is the low capital owned by farmers to develop their agricultural production. The terms for agricultural credit, which often make it difficult for farmers, because there is no certain guarantee, such as companies, make farmers reluctant to borrow funds. The average amount of agricultural credit provided by banks in Asian countries was 46,218 million dollars (FAO, 2019), while the average portion for private credit was 222,479 million dollars ((World Bank, 2020a);(World Bank, 2020d)). Thus, in this era of industrialization, the industrial sector will be superior and victorious, while the agricultural sector will continue to decline, even though the source of food and human life is found in agricultural products. Agricultural credit is very important because it can increase agricultural production by 27% (Chandio et al., 2019).

Most of the farmers have a low level of education, which is graduates from basic education or even only non-formal education. In Igboji Chidi et al (2015) research, farmers (41.7%) did not have formal education and only 12.5% had received higher education. When human resources in agriculture are of high quality, farmers can take advantage of technology to help streamline the time and energy spent by farmers, so that rice production can increase with less input. If there is no more advanced technology, then agriculture will experience stagnation (stagnation) at a certain level, this is not good for economic development because it can cause economic and political instability which is the impact of reducing the amount of food (Alexandratos (1995) in (Muta'ali, 2019)). The research by (Yu & Fan, 2011)) in Cambodia found that fertilizers as technology contributed the second largest contributions in helping increase rice production in Cambodia.

Possible loss of agricultural land due to the conversion of agricultural land or land-use change for housing, business (malls, play areas, etc.), and so on. So that it can support the decline in rice production. Even though the area of agricultural land can increase rice production by up to 80% (Chandio et al., 2019).

According to USDA and Goldman Sachs Commodities Research (2014) in the 2015-2019 Food Outlook Analysis (Kemendag, 2014), agricultural products are not only needed for food and feed needs but also used for energy, and world rice production is less than the consumption of rice since 2000 (Nguyen, 2004). According to United Nations (UN) estimates with a moderate fertility model, the global population is expected to increase to around 7.5 billion by 2020 (IFPRI (1997, 1999) in Roy et al. (2006)). In 2018, more than 820 million people in the world were still hunger. Moreover, 80 percent of world rice production and 75 percent of global consumption

come from Asia (FAO, 2017 in Sekhar, 2018). This research wants to contribute to the development of rice products in Asian countries by using a combination of production factors for better food security. The impact of increased agricultural productivity is a more prosperous standard of living for farmers, reduced poverty, increased absorption of the domestic market for industrial products, and simultaneous balancing of trade activities (Lewis, 2000 in (Muta'ali, 2019)).

Based on the above problems and opportunities, researchers are encouraged to conduct research on the effect of agricultural credit, the quality of human resources as measured by the population who graduated from high school, land area, and fertilizer consumption on rice production in Asian countries.

## 2. Theoretical Basis

The relationship between the number of inputs (factors of production) used to be processed into goods (output) with a certain amount is a production function (Mankiw, 2012). Cobb-Douglas who showed that the production function is as follows (Salvatore, 2005):

$$F(C, L) = A C^{\alpha} L^{1-\alpha}$$

A is a parameter greater than zero which measures the productivity of the technology used in the production process. C is a function of capital used and L is a function of labor employed. The Cobb-Douglas production function has constant returns to scale (if capital and labor increase in the same proportion, then the output will increase in accordance with the proportion of the increase in capital and labor).

### 2.1 Production Factors

Production factors can be classified into two types (Sudarman, 2011) as follows:

#### a. Fixed Production Factors (Fixed Input)

The production factor remains the number of production factors used in the production process that cannot be changed quickly, either reduced to minimize losses or added if there is an increase in demand for the amount of output (in fact, there are no production factors that are absolutely fixed). Examples of fixed factors of production are as follows:

##### 1) Land

The area of land planted, the physical condition of the soil, the fragmentation of the land, the geographical location of the land, the location of the land from the center of the economy, and the status of land ownership are the factors of land that affect the production of agricultural products. The more land is used for the production process, so the higher the amount of output (Suratijah, 2015).

##### 2) Technology (Fertilizer)

Technology is the development of knowledge or techniques used in production (input and output) that arise from the changing and advancing times. A technological change in the production function can result in more output being produced with the same or even less quantity of inputs. Sources of technological change come from learning by using (learning taken when the practice is based on science), research and development from both the government and the private sector, and technology imports (Haryanto et al, 2009).

The total production curve will shift upward if technology adoption in the form of higher quality fertilizer input is applied, where all production inputs other than fertilizer are considered constant. The various combinations of input factors for production that will produce a certain output called the Isoquant curve. The use of advanced technology will produce the same output with less input so that the isoquant curve shifts closer to the origin point.

#### b. Variable Production Factors (Variable Input)

The variable production factor is a production factor where the amount can change in a relatively short period of time according to the amount of output produced. Examples of variable production factors are as follows:

### 1) Labor and Human Capital

Labor is a person who works in a certain job in exchange for a wage that is calculated based on the time and energy that has been expended. The marginal product of labor for the Cobb-Douglas function is as follows (Salvatore, 2005):

$$\begin{aligned} \text{MPL} &= (1 - \alpha) AC^\alpha L^{-\alpha} \\ \text{MPL} &= \alpha AC^{\alpha-1} L^{1-\alpha} \end{aligned}$$

From the above equation, if there is an increase in the amount of capital, it will increase the MPL (Marginal Product of Labor) and reduce the MPC (Marginal Product of Capital). Likewise, an increase in the number of workers increases the MPC and reduces the MPL. This happens because the coefficient  $\alpha$  is between zero and one. Technological development (parameter A) makes the marginal products of the two factors of production increase proportionally. The increase in output is also followed by the addition of one production factor input which is called marginal product (Mankiw, 2012).

Labor is also closely related to quality which is human capital. Human capital appeared in 1776 in the era of classical economics which is a scientific theory concept (Fitzsimons, 1999 in Cummins et al., 2009). Human capital measurement can be based on a person's education. Education and training will add value to a human being. Because the higher a person's education level or the more training he participates, the higher his abilities and skills will be (Todaro, 2000).

### 2) Credit

Credit is the transfer of money, goods, or services from credit provider to credit recipient, on the basis of trust with an agreement to be able to pay on a mutually agreed date (Rivai in Andrianto, 2020). Credit sources can be borrowed through trade creditors (shop traders/agricultural dealers), agricultural banks, commercial banks, agricultural cooperatives, contract farming, informal money lenders, pawnshops, or even family (Haryanto et al, 2009).

The enactment of the Return Marginal Decrease causes the MVP to be depicted as decreasing, if there is a continuous addition of input to a maximum point, then there will be a decrease in output because the input is no longer maximally used because of too many (Mankiw, 2012). Additional capital plus interest payable  $(1 + i)$ , where  $i$  is the interest rate is the marginal input cost. The principle of profit maximization ( $\text{MVP} = \text{MIC}$ ) is used to determine the amount of capital required in the production process. In the borrowed capital, the MIC will increase gradually if the capital that can be borrowed from one source for a specific purpose at an interest rate of  $i$ , the rest can be obtained from other sources with a higher interest rate.

The differences in interest rates are contained in the concepts with personal capital and borrowed capital. There will be no interest to be paid, but still have an opportunity cost equal to the returns from alternative uses outside of farming if using private capital. In this case,  $i$  should be considered as the opportunity cost, and the capital owned must be invested in farming, but only when the additional returns  $>$  opportunity cost. Conversely,  $i$  is the interest rate on credit, and the additional funds will still get profitable as long as the  $\text{MVP} > (1 + i)$  if using loan capital.

The hypothesis in this study are as follows:

H1: It is assumed that agricultural credit has a positive effect on rice production in Asian countries during the period 1990 and 2019.

H2: It is assumed that the quality of human resources has a positive effect on rice production in Asian countries during the period 1990 and 2019.

H3: It is assumed that the land area has a positive effect on rice production in Asian countries during the period 1990 and 2019.

H4: It is assumed that fertilizer consumption has a positive effect on rice production in Asian countries during the period 1990 and 2019.

### 3. Literature Review

Research conducted by Chandio et al., (2019) found that credit, agricultural land size, and fertilizer affect rice productivity in Sindh, Pakistan, respectively increasing rice production by 27%, 80%, and 22%. The research study from Yu & Fan (2011) show the comparison of the production function for wet and dry rice fields reveals that (i) The area coefficient is significant (0.69 for wet season rice fields and 0.63 for dry season rice fields) (ii) Fertilizer, which contributed 0.10% and 0.20% for wet season and dry season rice, respectively. (iii) Education also contribute to output growth. Investments education drive higher returns by providing better infrastructure. In total, it is clear that infrastructure and public services are important for the growing season, but investment priorities differ by zone.

In contrast to previous research in Kajenthini & Thayaparan's (2017) study, it was shown that the use of fertilizers had a negative effect on rice production, this was possible because initially, fertilizers had increased production and then reached the maximum level, so after that, the use of fertilizers caused a decrease in rice production. However, other variables still have a positive effect, such as the standard coefficient of microfinance that 45% of microfinance loans contribute to rice production in Jaffna district and all results are statistically significant at the 1% level. Then, when the farm size increases by one percent, the rice yield will increase by 19 percent with other factors held constant. The area of land cultivated and payments for labor have a significant effect on production.

Pudasaini's (1983) study show that the impact of education on output is also statistically significant, suggesting that education has a significantly higher value in multi-product agriculture, where the allocation options are much greater than in single-output farms. Education contributes more to agricultural production by increasing the allocative capacity of farmers than increasing direct output or technical efficiency for the change from traditional to modern agriculture. In a varied agricultural system, education allows farmers to select and introduce better technological inputs. It also increases their capacity to allocating something new efficiently and existing resources among previous competitors. In traditional agriculture, increasing their capacity is the main thing to better allocate existing resources. Because education can interact with a larger number of other inputs in a changing region, the overall economic impact is also stronger in environments such as lowland (modern agriculture) than in traditional agriculture (hill areas). Fertilizers also made a significant positive contribution to lowland yield but not in hilly areas. Agricultural producers in lowland may make the use of fertilizers more effective because they have also introduced other innovations such as HYV (High Yielding Variety), tractors, irrigation, and pumps. Hill farmers have not been able to present such a technology package.

In the study of Chidi et al (2015) found that educational qualification of rice farmers has a positive coefficient and is not statistically significant. The positive relationship shows that the higher the education level of the farmers, the higher rice production. Better education and more farming experience increase awareness of potential benefits and willingness to participate in local natural resource management and conservation activities.

### 4. Research Data And Methods

#### 4.1 The Scope of Research

The scope of the location to be studied is only 16 ASIA countries (Azerbaijan, Bangladesh, Bhutan, Cambodia, India, Indonesia, Iran, Iraq, Kyrgyzstan, Malaysia, Nepal, Pakistan, Philippines, Syrian Arab Republic, Thailand, and Vietnam). With a time period from 1990 to 2019 (30 years). Because there is missing data that is not planned, the researcher uses the mean imputation technique, which is to fill in the missing data with the average (mean) value of the sample group studied (Harlan, 2016).

#### 4.2 Research Approach

This study uses a quantitative approach with secondary data. The analysis technique used is a fixed effect from panel data regression. The research design uses a causal design which is a research design to analyze the cause-

and-effect relationship of one variable with another (independent variables that affect the dependent variable) or how the relationship between one variable and another can influence each other (Sugiyono, 2016).

#### 4.3 Operational Definition of Research Variables

The operational definition in this study includes the dependent variable and the independent variable. Rice production as a variable which is the total amount of agricultural land processing results, especially in a country in tonnes taken in the 1990 and 2019 time period in sixteen Asian countries (FAO, 2020).

As for the independent variables, it includes (i) Agricultural credit (Credit) is the total nominal amount of agricultural sector credit from banking financial institutions in the size of US \$ 1990 and 2019 in sixteen Asian countries (FAO, 2019). (ii) The quality of human resources as measured by the number of people who have graduated from senior secondary education (SMA/SMK) (Education) is defined as the proportion of people in a country with a history of high school education. Usually associated with a successful education program and certified by lawyers. This second variable uses a period of years for 30 years, which is in 1990 and 2019 with the research locations of 16 countries in Asia (UNESCO, n.d.). (iii) Land area (Land) is the total area of agricultural land planted with rice in a country with units of hectares (ha) in sixteen Asian countries in 1990 and 2019 (FAO, 2020). And (iv) Fertilizer consumption (Fertilizer) is the total consumption of fertilizers or plant nutrients in a country used for agriculture in kilograms per hectare (kg/ha) of fertile agricultural land in 16 Asian countries in 1990 and 2019. Fertilizer products in this scope include nitrogen, potassium, and phosphate fertilizers (including bedrock phosphate). Traditional plant nutrients such as animal and plant waste are excluded (FAO, in World Bank, 2020b).

#### 4.4 Research Model

In this study states that the Cobb - Douglas Production Function is as follows:

$$\text{Production}_{it} = \beta_0 + \beta_1 \text{Credit}_{it} + \beta_2 \text{Education}_{it} + \beta_3 \text{Land}_{it} + \beta_4 \text{Fertilizer}_{it} + \epsilon_{it}$$

Note:

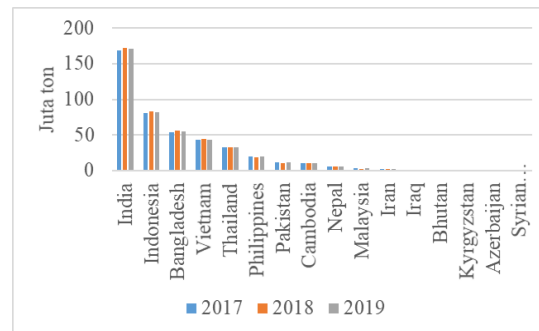
- i = Asian Countries
- t = Year (1990 and 2019)
- $\beta_{0-4}$  = Coefficient
- e = *error term*

## 5. Result and Discussion

### 5.1 Overview of Research Objects

The Asian region is an area that produces agricultural products such as rice, grains, tubers, vegetables, etc which are adapted to the environmental and climatic conditions of each region. This is because the Asian region is located at 76<sup>0</sup> North Latitude - 11<sup>0</sup> South Latitude and 26<sup>0</sup> East Longitude - 169<sup>0</sup> East Longitude, so it has a tropical to moderate climate, making it suitable for farming. Because the sunlight has been shining on the Asian continent for a long time, plants can develop and grow because sunlight can help in the process of photosynthesis.

## 5.2 Rice Production

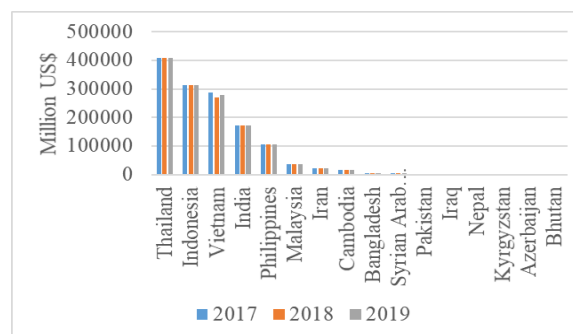


Data Resource : (FAO, 2020a)

Figure 2. Total Rice Production in 2017 and 2019 in Asian Countries

The comparison of rice production among Asian countries from figure 2. is quite high and far. The gap is caused by differences in the input of production factors such as superior seeds, fertilizers, irrigation, etc and other supports such as technology, education, research, government support, etc in each country in Asia, especially the object of this research, which is adjusted accordingly with the capabilities of each country also in terms of regulations, finance (subsidies), research for agricultural development, and so on.

## 5.3 Agriculture Credit

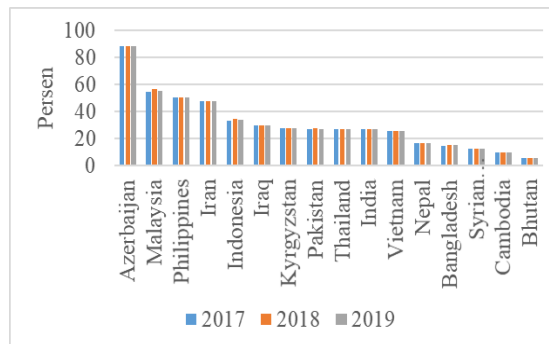


Data Resource : (FAO, 2019)

Figure 3. Amount of Agricultural Credit in 2017 and 2019 in Asian countries

It can be seen from Figure 3. above that the highest agricultural credit is in Thailand where rice production is quite large in the fifth place, so that agricultural credit is good enough to help farmers' capital. Meanwhile, India has lower agricultural credit than Thailand, but is able to produce more rice than Thailand and is the largest rice-producing country in Asia. So it can be concluded that each country has different conditions of income or farmer capital, it could be possible that farmers in India have sufficient personal capital to meet the needs of their production processes, or perhaps India has a better ability to manage or increase production costs than Thailand. Likewise with most other Asian countries. However, this does not mean that agricultural credit is unnecessary, because each region has different capabilities so that government policies must also be adapted to the situation and conditions in each region.

#### 5.4 Quality of Human Resources

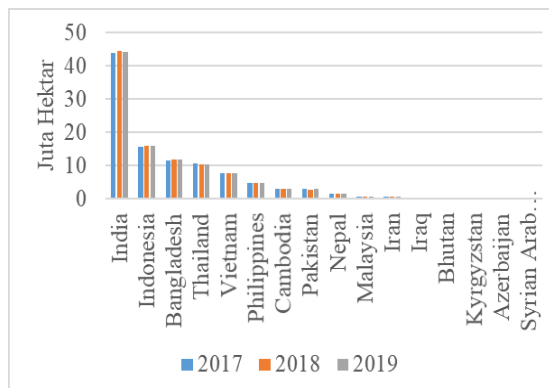


Data Resource : (UNESCO, n.d.)

Figure 4. Number of Population Graduating Senior Secondary Education (SMA / SMK) in 2017 and 2019 in Asian Countries

In this research, it can be seen in Figure 5.4.1 that Azerbaijan is the thirteenth rice-producing country out of sixteen other Asian countries, it can be said that it is quite backward, even though Azerbaijan has the highest number of high school graduates (SMA / SMK), this is possible not all high school graduates (SMA / SMK) is involved in the agricultural sector, it could be that they prefer to work in the industrial sector, or it may be because the education system is still bad so students cannot properly absorb and practice the knowledge that has been taught. Unlike the Philippines, which has a second high school graduate, is able to produce rice in sixth place based on production developments in 2017 and 2019. So it can be concluded that the education system will affect the quality of educational output, that are to produce a generation who is educated, understands science broadly, and is able to put the knowledge they get into good practice.

#### 5.5 Land Area



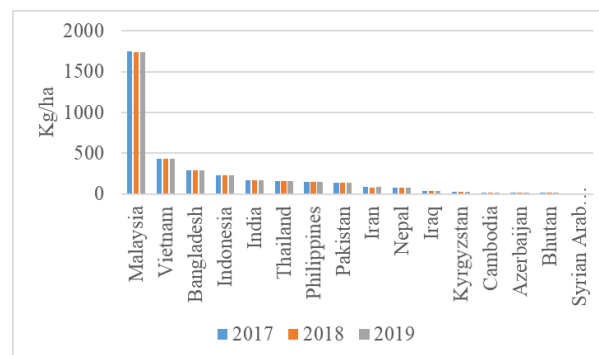
Data Resource : (FAO, 2020a)

Figure 5. Area of land planted with rice in 2017 and 2019 in Asian Countries

From the data in Figure 5. it is clear that land area greatly affects the amount of rice production, as India is ranked first out of the other sixteen Asian countries in terms of land area and total rice production. The wider the land to be planted with rice, the more rice seeds will be sown, and in the end, it can provide a lot of rice output.



## 5.6 Fertilizer Consumption



Data Resource : (FAO dalam World Bank, 2020b)

Figure 6. Fertilizer Consumption in 2017 and 2019 in Asian countries

From the sixteen countries, India is the most efficient country in maximizing the use of fertilizers for optimal production. India only uses fertilizer in an average of 30 years of 148.5 kg/ha, which can produce the largest rice production among the fifteen other Asian countries in the scope of this study. So that using too much fertilizer may not give optimal results. The right calculation in the use of fertilizers that can maximize rice production. As well as the use of organic fertilizers which are more environmentally friendly and maintain soil fertility can be an option to increase better rice production because the soil used is not easily damaged.

## 5.7 Descriptive Analysis

Table 1. Descriptive Statistics

	Product ion (million ton)	Credit (million US\$, current prices)	Educatio n (percent)	Land (million acres)	Fertilizer (kg/ha)
Mean	21.1	50,717.2	28	6	189.8
Standard Deviation	35.5	96,193.6	19.7	10.5	365.3
Minimal	100	0.5	3	0.00017	1.4
Maximum	17.3	424,286.8	88.7	45.5	2,183

Source : Processed Stata 13

From Table 5.7.1 the descriptive statistics above it is known that during the period 1990 and 2019 it was explained that:

1. Rice production (production) with a maximum value was achieved by India of 17.3 million tons in 2017. Meanwhile, rice production with a minimum value of 100 was found in the Syrian Arab Republic in 1996.
2. Agricultural credit (credit) with a maximum value achieved by Thailand of 424,286.8 million US \$ in 2008. Meanwhile, agricultural credit with a minimum value of 0.5 million US \$ was found in Kyrgyzstan in 1997.
3. Azerbaijan's population who passed senior secondary education (education) with a maximum score was 88.7 percent in 2013. Meanwhile, the number of residents who graduated from high school with a minimum score of 3 percent was Cambodia in 2008.

4. The total area of agricultural land (land) with the maximum value reached by India was 6 million hectares in 2008. Meanwhile, the agricultural land area with a minimum value of 0.00017 million hectares was found in the Syrian Arab Republic in 1991 and 1994.
5. Fertilizer consumption (fertilizer) with a maximum value achieved by Malaysia was 2.183 kg/ha in 2010. While the consumption of fertilizer with a minimum value of 1.4 kg/ha was found in Nepal in 2008.

## 5.8 Model Selection

### 5.8.1 Chow test

The chow test is used to select the model to be used, whether the Ordinary Least Square Pooled or Fixed Effects Model. From the calculation results show that the value of Prob> F is 0.0000 < 0.05, so that H<sub>0</sub> is rejected, the Fixed Effects Model is better to use. However, it is not certain that the Fixed Effects model will be used, you have to do a Hausman test first to get the final model to be used.

### 5.8.2 Breusch and Pagan Lagrange Multiplier Test

The Breusch and Pagan Lagrange Multiplier Test is used to test between the Ordinary Least Square Pooled or Random Effects Model which is best used. From the results of the Breusch and Pagan Lagrange Multiplier Test, the value Prob> chi2 is less than 0.05, which is 0.0000, meaning that the Random Effects Model is better used for estimation. However, this is not the final result because there is still one more test, namely the Hausman test.

### 5.8.3 Hausman Test

The Hausman test is a model determination test whether the Random Effects model or the Fixed Effects model is best used in this study. From the results of the Hausman test above, it can be seen that the Chi-Square Probability value shows a value of 0.0000 less than 0.05, so H<sub>0</sub> is rejected, so the best model used in this study is the Fixed Effects Model. In this study, using the Fixed Effects Within-Group estimator.

## 5.9 Regression Analysis

### 5.9.1 The Effect of Agricultural Credit on Rice Production

Agricultural credit (Credit) variable has a significant effect on the real level in five percent (5%) on rice production with a probability value of 0.000. And the coefficient of credit is 0.0875105 (inelastic). The results is in accordance with the hypothesis. This is in accordance with previous research conducted by Kajenthini & Thayaparan (2017) that credit by microfinance, 45% of the contribution to rice production in Jaffna district.

Thailand can be used as a model for other countries in providing banking credit for agriculture, that having established 1,257 branches to remote villages, providing credit loans with low-interest rates (1% per month), and also encouraging farmers to save, provide financial literacy mentoring and training by establishing 84 Learning Centers (LCs) in each province and 300 LCs at the district level (Das, 2016). India also provides a good example in its cooperative institutions, nearly 75% of farmers are involved in cooperative membership. The products of Indian cooperatives, such as credit disbursement, distribution of agricultural inputs, namely quality seeds, fertilizers, and agrochemicals at affordable prices, and arranging storage, processing, and marketing of agricultural products. So that from input to output, farmer production activities can be assisted by cooperatives, the welfare of farmers is more secure (ICAR, 2010 in Pattanayak, 2016).

### 5.9.2 The Effect of Quality of Human Resources as measured by Population Graduating High School on Rice Production

Quality of human resources variable as measured by the number of people who have graduated from high school (Education) has a significant effect on the real level (5%) on rice production with a probability value of 0.173. And the coefficient of the education variable is 0.0044236 (inelastic). That it is not in accordance with the hypothesis, because it is not significant. Although not significant, the relationship is positive, meaning that the higher the education, the greater the effect on increasing rice production.

This is contrast to the results of research Yu & Fan (2011) which states that education is included in the three main factors for increasing rice production. Farmers who have a formal education of 9.2 years are efficient farmers, while inefficient farmers have a history of formal education of 3.9 years. Meanwhile, research from Phanhpakit (2009) shows that education has a strong positive effect on agricultural efficiency. Education in the highlands can increase 4.62% of rice production and education in the lowlands can increase 3.85% of rice production at the 1% level of significance. For the highlands, the effect of primary education on agricultural efficiency was 33% and junior secondary education was 47%. Whereas for the lowlands, the impact of basic education on agricultural efficiency was 22%, and senior secondary education was 30%.

Philippines which provides free schools from elementary to secondary level as regulated in the Republic Act 6655 or the Free Secondary Education Act (UNESCO, 2010). Thailand, which established the School Agricultural Learning Center to promote organic farming and tips on becoming smart farmers (Saduak et al., 2019). Iraq which implements the Iraq Agricultural Extension Revitalization (IAER) program to create quality extension workers to drive changes in agricultural systems (Abbas, 2017). Bhutan implements the School Agriculture Program (SAP) to educate young people to uphold the dignity of agricultural workers and the importance of agriculture for food security (RGOB, 2013 in Pelzom & Katel, 2017).

#### 5.9.3 Effect of Land Area on Rice Production

Land variable has a significant effect at the real level (5%) of rice production with a probability value of 0.000. And the coefficient of land produced is 1.261035 (elastic). That is in accordance with the hypothesis and are very significant. This result is the same as previous research conducted by Khakim et al. (2013) which shows that the variable land area has significant effect on rice production with the coefficient value is 1.075. In addition, another study by Yu & Fan (2011) shows that the coefficient of the land area is always significant (0.69 for wet season rice fields and 0.63 for dry season rice fields).

India create an integrated land registration system, namely Computerization of Land Records or CLR, to protect farmers from exploitation and land use, and provide certification to provide legal certainty to farmers' agricultural land (ICAR, 2007). Indonesia with Government Regulation (PP) Number 65 of 2019 can expand agricultural land by converting unused government land, and abandoned land that has the potential to become agricultural land (BAPPENAS, 2015). Bangladesh uses zoning based on agro-ecology to provide zoning information for plants that are adjusted to land conditions so that it can provide maximum agricultural crop production (LANDac, 2018).

#### 5.9.4 Effect of Fertilizer Consumption on Rice Production

Fertilizer variable has significant effect at the real level, namely five percent (5%) on Rice Production with a probability value of 0.003. And the resulting coefficient of fertilizer is 0.0787238 (inelastic). That is in accordance with the hypothesis. This is the same as what was done by Yu & Fan (2011) that in the rainy season fertilizer has contributed 0.10% to the increase in rice production and in the dry season fertilizer contributes up to 0.20% more increase in rice production. In addition, the results of other studies conducted by Fan & Pardey (1997) showed that fertilizers contributed about 46% of the increase in rice production with the use of manure, and the use of chemical fertilizers contributed 22% to the growth of rice production.

India which introduced a Soil Health Card (SHC) Scheme to provide information to farmers about the nutrient status of their soil along with recommendations on the proper nutrient dosage (Pattanayak, 2016). The same thing was done by Bangladesh which made the Online Fertilizer Recommendation System (CRI, 2018). Indonesia also launched a Location-Specific Nutrient Fertilization (PHSL) technology program, which provides nutrient information according to land conditions in a location (Zaini, 2013).

## 6. Conclusion

### 6.1 Conclusion

1. All independent variables, namely agricultural credit (credit), the quality of resources seen from the number of people who graduate from high school (education), the area of agricultural land (land), and the consumption of fertilizer (fertilizer) simultaneously (together) have a significant effect on the variable dependent, namely rice production (Production).
2. The agricultural credit (credit) variable has a significant and positive effect on rice production in Asian Countries.
3. The variable quality of resources seen from the number of people who graduated from high school (education) is proven to have no significant effect and positively related to the dependent variable, namely rice production in Asian Countries.
4. Variable land area (land) which has a significant and positive effect on production in Asian countries.
5. The variable of fertilizer consumption (fertilizer) has a significant effect and is positively related to the proven variables of production in Asian Countries.

### 6.2 Suggestion

1. An incentive from the government is needed to ease the requirements and interest rates on bank credit funds to farmers. Losses in providing credit to farmers are borne not only by banks but also to the government so that banks are easy to provide credit to farmers. Expansion of banking branches to remote villages or expanding access to credit with the use of technology is also needed to be able to reach out to provide credit to farmers in remote areas. In addition, providing assistance and training on literacy in the proper use of finance for the production process, so that it can provide effective and efficient cost production is also very important as applied in Thailand. Cooperatives can also be developed again with better institutions so that they can provide welfare for their members as in India. Apart from that, non-governmental organizations, the private sector, and other financial institutions are also encouraged to participate in providing credit facilities for farmers.
2. Increasing the human resources of farmers can be done by providing free schools for farmer children to be able to continue their parent's agricultural production activities, such as in the Philippines. Establishment of special education or training in agriculture so as to be able to produce a new generation of quality and attract young people in agriculture so that they are more able to innovate or transform agriculture like in Bhutan. And forming quality extension workers so that they are able to provide knowledge transfer, practice, and provide innovation for older farmers in improving their better agricultural systems in order to produce optimal results like in Iraq.
3. Provide integrated land registration systematically using technology so as to protect farmers' land from exploitation such as in India. Expanding agricultural land such as in Indonesia by utilizing unused government land and abandoned land. Utilizing zoning based on agro-ecology to provide zoning information on plants that are adjusted to land conditions so that they can provide maximum agricultural crop production, such as in Bangladesh.
4. Implement a balanced fertilizer application system such as that of India, Bangladesh, and Indonesia by providing information to farmers about soil nutrient status and providing recommendations on the right nutritional dose, so as to provide maximum production output and minimize crop failure and/or damage soil.

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## Political Economy Impact in Syariah Stock Exchange Market Growth

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### Abstract

This paper describes the growth and gaps in the Islamic capital market and the conventional capital market in the political economy of Indonesia. Indonesia, as a country with the largest Muslim population in the growth of its Islamic capital market, has not yet got a right place in Muslim society. The gap between those interested in Islamic capital markets and conventional capital markets is still very high. This study uses a qualitative methodology by explaining the dominant factors to the existing gaps in terms of capital, technology, socialization and the role of political and economic institutions in Indonesia. Secondary data used to analyze existing problems. Market share and Islamic stock business players are still tiny, socialization is still not evenly distributed among Muslim academics and also business people. Currently, there is still little research related to Islamic stocks in the study of Indonesian political economy. The literature that discusses this study is only a few writings. The conclusions of this study are: Regional and national political stability which is the control of the government needs to endeavor so that shock to the capital market can be eliminated, and political relations between countries and capital market cooperation need to be improved. A Sharia Capital Market Law is required, the synergy of Sharia Capital Market policymakers needs to be reformulated to anticipate current problems so as not to get caught up in the issue of global capitalism, and classification of investors is necessary to simplify development strategies. The comfortable and systematic Syariah Capital Market curriculum needs to be socialized more massively and programmed with clear targets. The results of this paper are expected to be used as material for analysis by policymakers to formulate action plans for the growth of the Islamic stock market in Indonesia.

**Keywords:** Capital Market, Political Economy, Isomorphism, Indonesia

### 1. Introduction

Political economy is a phrase that is embedded in socio-economic analysis. This term gives new nuances to economic development around the world. In international trade, political economy is a growing and increasingly complex analytical tool (Caporaso & Levine, 2015). The product of the international political economy is the driving force that this science develops and is significant for discussing the development and socio-economic problems. The joining of developed countries such as Germany, France, Australia in the *Asian Infrastructure Investment Bank* (AIIB) pioneered by China is proof that political economy plays a role in international trade.

Other world institutions such as WTO (World Trade Organization), GATT (General Agreement on Tariff and Trade), MNC (Multi National Corporation), AFTA (Asian Free Trade Area), APEC (Asia Pacific Economic Cooperation), CAFTA (China-ASEAN Free Trade Area), and others are political economy integration agreed upon by member countries and contain rules and boundaries of relations between countries.



Political economy is a study that discusses the interaction, interplay, interrelated, interrelationship, interrelationship between political and economic factors. Basic concepts of political economy is the exchange (exchange) as financial representation and authority ( authority ) as political representation. How the state and market interact with each other affects the distribution of wealth in the socio-economic process is political Economy (Bakry, 2019).

The Islamic capital market is one part of international trade-related to political economy issues. National and international political economy problems strongly influence its growth and development. Market forces ( market power ) is the interaction that takes place freely without government interference, but the market is influenced by the movement of national and international transactions, especially in the stock market. The existence of the Islamic stock market in America affects the Indonesian Sharia Stock Index and vice versa (Pasaribu & Kowanda, 2017). The relationship between international political economy and the development of Islamic and conventional capital markets is assumed to affect the growth of the capital market itself, and systemic linkages to financial-based issues have a broad impact on the economy of a country (Adityara, 2015).

Besides discussing the history of the emergence of political economy since classical times, political economy theories that have developed from the Mercantilist, Liberal, Radical, and Reformist schools will be used as a basis for thinking in analyzing the growth of the Islamic capital market in Indonesia (Masóed, 2014).

## **2. History of Indonesian Sharia Capital Market**

The laboratory for the history of the development of the Islamic capital market in Indonesia and the world has significant similarities. For example, in terms of time, the time gap between world capital markets and Indonesia is relatively short and close together. The difference lies in the response of Sharia capital market activists, including the factors and actors. This gap appears significant in that Indonesia is always late in responding and harmonizing every development of the world capital market.

When compared to neighbouring Malaysia, the development of the capital market in Indonesia starts from the *grass root* in the form of market demand first. Then the government provides support by issuing regulations and matters related to it. Meanwhile, in Malaysia, the development of the Islamic capital market was created by the government and the market was encouraged to issue investment products.

Law No. 8 of 1995 concerning the Capital Market is the first milestone that underlies the development of the capital market in Indonesia, including the Sharia Securities which became the initial basis for the development of the Islamic capital market. 1997 was the beginning of a sharia investment product, but a supporting fatwa appeared in 2002 and the Bapepam-LK (now OJK) regulation on the capital market was published in 2006 (Abdallah, 2018). From this point of view, it can be seen that inaction does occur in the Islamic capital market.

In 2016 the concession to roll out the proposed sharia capital market law was initiated by sharia capital market business players, although the reality is still not being enjoyed until now. The historical results of the institution in the development of Islamic stocks can be seen in table 1 below.

Table. 1 Achievement of Sharia Shares in Time Trails

Year	Result	Institutional
1997	Issuance of the first Islamic mutual fund.	Mutual Fund Investments Management (DIM)
1999	Establishment of the National Sharia Council (DSN).	Council of Ulama Indonesia (MUI)
2000	Jakarta Islamic Index (JII), which is the first Islamic stock index with the 30 most liquid Islamic stocks.	Jakarta Stock Exchange (BEJ) in collaboration with DIM
2001	Fatwa No. 20 of 2001 concerning Investment Implementation Guidelines for Sharia Mutual Funds.	DSN - MUI
2002	The first Islamic bond issuance, with the <i>mudharabah</i> agreement as the underwriter of this product, is Andalan Artha Advisindo Sekuritas.	PT. Indosat and Mainstay Artha Advisindo Sekuritas
	Fatwa No. 32 of 2002 concerning Sharia Bonds.	DSN - MUI
	Fatwa No. 33 of 2002 concerning <i>Mudharabah</i> Sharia Bonds.	DSN - MUI
2003	Fatwa No. 40 of 2003 concerning the Capital Market and General Guidelines for the Application of Sharia Principles in the Capital Market.	DSN - MUI
2004	<i>The first Islamic Ijarah Bonds</i>	PT. Matahari Putra Prima (MPP)
	Fatwa No. 41 of 2004 concerning <i>Ijarah Syariah Bonds</i>	DSN - MUI
2006	<p>The first Islamic Capital Market Regulation, which consists of</p> <ul style="list-style-type: none"> <li>• Regulation No. IX.A.13 concerning the issuance of the Sharia Efex</li> <li>• Regulation No. IX.A.14 concerning contracts used in the issuance of Sharia Securities in the capital market</li> </ul> <p>This regulation is the basis for the change of Sharia Bonds to Sukuk.</p>	Bapepam-LK

2007	Regulation II.K.1 concerning the criteria and issuance of the Sharia Securities List (DES) in 2007. This regulation regulates that sharia shares that enter JII are no longer selected by DIM but follow DES issued by OJK every six months.	Bapepam - LK
2008	UU no. 19 of 2008 concerning State Sharia Securities (SBSN) which later became known as State Sukuk.	Indonesian government
	Fatwa No.69 on SBSN	DSN MUI
	Fatwa No.70 regarding the method of issuing SBSN	
	Fatwa No.71 on <i>sale and leaseback</i>	
	Fatwa No. 72 concerning SBSN <i>ijarah sale and leaseback</i>	
2010	The first Islamic capital market education with the term Islamic Capital Market School (SPMS) in 2010. This activity was held through two institutions, namely the IDX and the Islamic Economic Community (MES)	BEI & MES
	Fatwa a No. 76 of 2010 concerning SBSN <i>ijarah asset to be leased</i> as the basis for conformity to Islamic principles for issuance of SBSN with an <i>investment to be leased ijarah</i> agreement	DSN - MUI
2011	Issuance of the Indonesian Sharia Stock Index (ISSI) in May 2011. ISSI is a composite index of all Islamic stocks listed on the IDX.	IDX
	Introducing the first <i>Sharia Online Trading System (SOTS)</i> business model in September 2011	
2011	PT Indo Premier Sekuritas developed the first SOTS to provide stock transaction services following Islamic principles	PT Indo Premier Sekuritas
2013	The establishment of the first RDN bank by Bank Mandiri Syariah, related to the DSN-MUI Fatwa No. 80 which requires transactions in accordance with sharia principles.	Bank Syariah Mandiri (BSM)
	PT Indo Premier Sekuritas issues the first sharia <i>Exchange Traded Funds (ETF)</i> product, in which case this EFT uses JII as the base index for its issuance ( <i>underlying index</i> ).	PT Indo Premier Sekuritas

2014	Panin Syariah Bank is the first Islamic issuer listed on the IDX.	Panin Syariah Bank
	Fatwa No. 95 regarding the SBSN <i>wakalah</i> as the basis for conformity to Islamic principles	DSN-MUI
	Fatwa No. 94 concerning Repo of Sharia Securities (SBS) Based on Sharia Principles	
2015	The first Islamic Investment Gallery was established at the Islamic University Indonesia (UII) Yogyakarta, in collaboration with BEI and Phintraco Sekuritas	Islamic University of Indonesia (UII)
	<p>Issuance of New Regulations from OJK</p> <ul style="list-style-type: none"> <li>• OJK Regulation No.15 / POJK.04 / 2015 concerning Application of Capital Market Principles</li> <li>• OJK Regulation No.16 / POJK.04 / 2015 concerning Capital Market Sharia Experts</li> <li>• OJK Regulation No.17 / POJK.04 / 2015 concerning the issuance and requirements of Sharia Securities in the form of shares by sharia issuers or sharia public companies</li> <li>• OJK Regulation No.18 / POJK.04 / 2015 concerning Issuance and Sukuk Requirements</li> <li>• OJK Regulation No.19 / POJK.04 / 2015 on Sharia Mutual Fund issuance and requirements</li> <li>• OJK Regulation No.20 / POJK.04 / 2015 concerning Issuance and requirements for Sharia Asset-Backed Securities</li> </ul> <p>Fatwa No. 96 concerning Sharia Hedging Transactions (al-Tahawwuth al-Islami / Islamic Hedging) on Exchange Rates</p>	<p>OJK</p> <p>DSN-MUI</p>
2016	Received an award as <i>The Best Supporting Institution of the year 2016 from the Global Islamic Finance Award (GIFA)</i> . The IDX is recognized as an institution that actively encourages the growth of the Islamic capital market.	IDX

	<p>Issuance of Regulations by OJK</p> <ul style="list-style-type: none"> <li>• OJK Regulation No. 30 / POJK.04 / 2016 concerning Islamic Real Estate Investment Funds in the form of KIK.</li> <li>• OJK Regulation No.61 / POJK.04 / 2016 concerning Sharia Principles in the Capital Market for Investment Managers</li> </ul>	OJK
2017	The first share zakat was produced at the initiation of the National Amil Zakat Agency (baznas) and Henan Putihrai Sekuritas, this product is a combination of Islamic philanthropy with investment in the Islamic capital market, in which shares are the object of infaq, alms and zakat.	Baznas

### 3. Literature Review

#### 3.1 Political Economy

The interaction of power with economic phenomena is the focus of the political economy. The most widely adopted and easily understood concept of power is that power is the ability to achieve goals. Power is a form of expressing the idea that to achieve goals, the actors of power must influence and change the views of the people around them. In this study, political economy will also be seen from the side of its emergence and political economy theories.

The term political economy was first used by classical economic thinkers in the XVII and XIX centuries. However, the classical period is difficult to identify; many scientists agree that the political economy of this period began with the publication of Adam Smith's book *"The Wealth of Nation"* in 1776 until the emergence of John Stuart Mill's book *"The Principles of Political Economy"*. This flow discusses two critical parts of political economy, namely the argument about markets and their relationship with the state, in the second part about the theory of value and distribution (Caporaso & Levine, 2015).

Political Economy provides a great impetus to the issue of power towards an understanding of ethical factors from a non-civilized society to a civilized society. This process is stated by Adam Smith as a process of historical change caused by capitalism, where civilization is formed by the accident of various consequences by many parties solely for the fulfillment of their respective personal interests.

Classical views with the dimensions of the market, civil society, private interests and public interests, state and society, value and distribution, have been in the spotlight for subsequent schools such as Marxian, Neo-Classical, Keynesian, and economic-based approaches of power have their ways of applying the economy Politic. Modern classical thinkers use the classical framework to erode the separation between economy and politics. Each of these schools or approaches views that the separation and amalgamation of economy and politics have their characteristics.

Marxians have various points of view for analyzing the political economy. The term political economy used by Marxian refers to a way of thinking about the economy which is based on classical thought patterns, especially those of Adam Smith and Davi Ricardo, the idea of a labor market economy is emphasized on the principles that reproduce and expand the system of material interdependence between individuals.

The concept of class as one of the basic Marxian concepts, at first individuals in the economy saw themselves narrowly, namely independent agents and for their own interests. The more individuals realize that there are similarities in conditions and interests, the individual interests turn into class interests. This change is implicitly

reflected in the interests of the individual and becomes the connecting link between economics and politics. Marxian argues that the relationship between economy and politics is based on the idea of economic interests and the role of political interests.

The Marxist approach states that interests arise because of the production structure, individual interests will be seen from which class the individual belongs, and each class interest is different from one another; class interests formed in the production system will become political interests which in the end these interests are used. to fight for state power. The sequence of processes does not always take place mechanically but runs dynamically according to the interests and the formation of classes in the economy. The Marxian class is the people who have an equal interest in the production process.

To fulfil class consciousness, Marxian requires two essential things, namely: first, individuals in the class must see themselves as part of a broader context and understand the relationship between their conditions and the situations experienced by other people in the same class. Second, the class that has been formed then translates the personal economic interests of each of its members into a political agenda. This means that there is a political agenda that will be developed, and there are political agents fighting for it. The two classes at the forefront of Marxians are the working class and the capitalist class.

More than 200 years, since the emergence of the *Inquiry into the Nature and Causes of the Wealth of Nation* 1776 which inspired the birth of the neoclassical view, it continues to use some of Smith's thoughts, the neoclassical school which is thought to have been born in 1870 coincided with the rise of marginalist currents in economics. The natural and non-drastic shift of thought from classical economic thought such as growth, distribution and the theory of the value of labor changes to the first: the marginalist school proposes a value theory based on the intensity of subjective feeling ( *subjective utility theory* ), the second marginalist school develops the marginal calculus as methodological, conceptual means (Caporaso & Levine, 2015). The development of these two ideas gave rise to neoclassical for up to 4 decades which succeeded in shifting the theory of labour value.

The main idea of neo-classical is the concept of " *constrained choice* ". A notion that views individuals as actors who make choices from several available choices based on their imagination. Neoclassical economists are educating in the tradition that all individuals will always try to achieve their level of satisfaction, to achieve the level of happiness ( *happiness* ). To achieve the best choice, the individual makes comparisons according to their level of joy so that the order of preference appears. The decisions made in the highest rank become the rational choice of the individual.

The welfare of the group will be fulfilled if the consumption action taken by an individual will have an impact on other individuals who do not take the same activity. Another condition for group welfare will be fulfilled if one individual provides opportunities for other individuals to improve their welfare. The usefulness (profit) obtained by an individual will have an impact on other individuals both positively and negatively, which this school calls "externalities".

The economy in the neoclassical view is a process where people try to maximize the fulfilment of needs based on existing resources, and this process occurs in economic institutions and political institutions. Individuals or groups of people trying to make ends meet as much as possible. Two types of neoclassical political agendas are first: political agendas that seek to secure a system of property rights so that transactions can occur voluntarily. Second: a political agenda related to parties who are not involved but are affected by the existence of a social contract.

The next Neoclassical also applies the basic logic of economics which is divided into two meanings. First, the economy means *economizing* because of the limited options available. The second meaning is to use the market mechanism as a way to increase the fulfilment of life's needs. The focus of the neoclassical school in political economy is the efficiency of exchange in the market.

In contrast to the Neoclassical approach, Keynesian focuses on the instability of the reproductive process and growth in a capitalist economy. The Keynesian course is aimed at issues that are central to the political economy, namely nature, social objectives and boundaries of the *property system*. In Keynesian theory, ownership is the transfer of a problem to another place and not a solution in its true sense—the difficulty of ownership shifts to

the area of financial circulation. A large part of Keynesian thought explores how solving the dilemma of ownership of the means of production needed by society can lead to instability in the accumulation process.

The dilemma of ownership is explained through the differences in long-term and short-term ownership. The short-term perspective for market players is directed at liquid ownership so that it does not require certain production activities. The long term perspective is to invest. The conspicuous decisions in investing according to the Keynesians are the magnitude of the uncertainty of the knowledge used to predict the returns that can be obtained on an investment. The choice of investment is in the form of production, while the second option is to add financial assets, namely individual stocks or *bonds* that can be changed at any time.

The characteristic feature of Keynesian that is easy to understand compared to the Neoclassical approach is that the investment decision is influenced more by the forecast of future demand than the cost of production that has already occurred. This view has important implications for the instability of self-regulating markets. At the heart of instability in Keynesian political Economy is the labour market. The first argument states that the labour market is a mechanism by which individuals in a capitalist economy earn a living for their living. The second is the wage contract linking product demand with wages and labour absorption. The narratives about the labour market and investment suggest that Keynesian theory has far-reaching implications for political economy.

### 3.2 Sharia Capital Market

Based on Law number 8 of 1995 concerning Capital Market (UUPM), the capital market is defined as activities related to Public Offerings and Securities trading, Public Companies related to the Securities they issue, as well as institutions and professions related to Securities.

Securities in this case, are securities that are valuable and can be traded and can be categorized as bonds or Sukuk and equity (shares). Referring to this definition, Islamic Capital Market activities in the capital market as described in the Capital Market Law do not contradict sharia principles.

The Koran and Sunnah as the primary source of Islamic sharia law are the *arguments of* the scholars to decide matters relating to the life of the people, especially *muamalah* issues. The scholars then carried out an analogy and interpretation so that the rules of *fiqh* emerged. Concerning the capital market, a popular rule that can be used as a basis is: 'All forms of muamalah are allowed unless there are arguments that prohibit or forbid it'. On this basis, the DSN - MUI carries out its duties to make fatwas related to sharia economics, and one of the popular fatwas on the Islamic capital market is fatwa number 80 of 2011 which states that the equity trading mechanism in the stock market is following sharia principles. The important dictums in this fatwa are: first, stock transactions are considered following sharia if only sharia shares are bought and sold. Second, claims that have been purchased may be transacted even though the new *settlement* is implemented at T + 2 or two days after the transaction. This is following the *Qabdh Hukmi*.

DSN-MUI believes that the *bai'al-musawamah* contract on the Indonesia Stock Exchange is following the continuous auction. This mechanism is a sale and purchase at an agreed price through a bargaining process. This contract is stated as a sale and purchase contract based on price determination contract is based on an agreement on the price of goods.

The product of the Islamic Capital Market is sharia securities, namely effects that do not conflict with sharia principles. Investment instruments that are used as a reference for investors, namely: first, Islamic securities in the form of shares. Shares are defined as equity participation with the right to share the results of the business. Shares are proof of investors' equity participation in the company, and investors will get dividends in the form of dividends.

Second, Sukuk. Sukuk are sharia securities in the form of certificates or proof of ownership of the same value and represent an integral or undivided part of the *underlying assets*. Third, Sharia Mutual Funds. Sharia Mutual Funds are a collective investor forum managed by investment managers by investing their managed funds in Islamic securities in the form of Islamic stocks, Sukuk, or other Islamic instruments. Fourth, Sharia Asset-Backed Securities (EBA Syariah). Securities Asset-Backed Sharia is a contract between the Investment Manager



and Custodian Bank that binds Islamic Asset-Backed Securities holders. The Investment Manager is given the authority to manage collective investment portfolios, and the Custodian Bank is given the power to carry out joint custody, the implementation of which does not conflict with the Sharia Principles in the Capital Market.

The last one is the Sharia Real Estate Investment Fund (DIRE Syariah). Sharia REITs are containers used to raise funds from the investor community to further invest in *real estate* assets, and/or cash and cash equivalents that do not conflict with sharia principles in the capital market.

In the industrial sector, stocks on the Indonesia Stock Exchange are classified into nine categories, namely: the agricultural industry, the mining sector, the basic industrial sector and chemicals, the various industries sector, the consumer goods industry sector, the property sector, real estate and building construction, the sector.

Infrastructure, utilities and transportation, the financial sector. This classification is commonly called JASICA (Jakarta Stock Industrial Classification)

In the Indonesian Capital Market, Islamic stocks were first launched on the Indonesian capital market at

July 3, 2000, is the Jakarta Islamic Index (JII). JII has 30 constituents which are often known as JII 30, and this means that 30 preferred stocks are the most liquid, then there is JII 70, which was launched on May 17 2018. JII 70 constituents, only 70 listed Islamic stocks and the most liquid. The composite stock index launched on May 12, 2011, is the Indonesian Sharia Stock Index (ISSI). ISSI is an indicator of the performance of the Indonesian Islamic stock market. ISSI constituents are all Islamic shares listed on the IDX and included in the List of Sharia Securities (DES) issued by the OJK.

### 3.3 Economic Growth

Growth of Gross Domestic Product (GDP), Growth of Gross National Product (GNI), GDP per capita and income per capita are often used as representations of economic growth.

Growth is an increase, development and increase in a country's income. Economic growth is an indicator that is often used to measure the performance of a country's economy. Ideally, every time economic growth increases, there will be an increase in employment and employment opportunities.

The real sector is often used as a proxy for economic growth, especially in the measurement of an index that measures how much-increased production occurs in a country which has an impact on industrial development and job creation. This index is called the *Industrial Production Index (IPI)*. There is also a measurement that uses the level of human welfare which is often referred to as the Human Development Index (HDI) or the *Human Development Index (HDI)*. This measurement uses three main categories, namely education, health and food availability.

The discourse between economic growth and income distribution on the premise of conventional economics often creates economic paradoxes. In the Islamic Economy, the paradigm of the gap between economic growth and distribution is changed to empowering economic growth and its distribution by creating instruments and mechanisms capable of producing stable economic growth. In the concept of Islamic sharia, it is reflected in three sectors, namely the real sector, the Islamic financial sector and the Ziswaf sector (Zakat, infaq, almsgiving, and waqf). The balance of the three in the Islamic Economy is very fundamental. Economic growth relies on the real sector, which is supported by Islamic finance.

Meanwhile, distribution and equity are highly dependent on ZISWAF. Here the role of the government in the political economy is very much needed so that just economic growth can be realized. The government is expected to recognize *Maqashid Sharia*; namely, the goal of Islamic economics that protects religion, life, property, descent and reason, based on an orientation towards the protection of the poor and this is in line with the 45 Constitution which states that the poor and neglected children are cared for by the state.

Economic growth in an Islamic perspective is not only related to increasing the volume of goods and services but also related to aspects of morality and moral quality as well as the balance between the world and the hereafter. Economic growth is not only seen from mere material gain but also concerns religious issues and

social life. In the Islamic Economy, there are three factors that affect economic growth, namely: investable resources, human resources, technology and innovation (Beik & Arsyianti, 2016).

The existence of economic growth is expected to improve the welfare of the community. In the Islamic concept, four indicators can be seen, namely: the Islamic value system that is implemented, the existence of economic strength, the fulfilment of basic needs and the distribution system, the last is security and social order. The first indicator explains that welfare will occur when Islamic ethical values become the basis for the economy of a nation. Then the next three hands will run smoothly. Other supports for Islamic economic instruments are aspects of economic sovereignty and aspects of economic governance with the principles of transparency, professionalism and accountability (*amanah and masuliyah*).

In the context of Indonesia, this accountability was proclaimed by the term *waskat* or attached supervision. The aspect of accountability is closely related to administrative and ethical issues. In the language of management referred to as operational performance, administrative performance and financial performance. Administrative performance guarantees that this instrument monitors every rupiah issued in line with economic objectives without being contaminated with corruption and abuse of power. At the same time, the ethics side is the fairness side in the economy. When operational and administrative as well as finance can be accounted for administratively, it is not necessarily accountable ethically, therefore ethics becomes urgent in the concept of economic growth.

#### 4. Findings and Discussion

The Islamic capital market is a capital market which in its activities is under sharia laws—based on the DSN-MUI fatwas as long as the fatwa does not conflict with the regulations of the Financial Services Authority (OJK). This means that these two institutions cannot be separated in the structure of the article on Indonesian Islamic capital. The adaptation process from the conventional capital market concept to sharia was developed and reviewed in depth by the DSN-MUI. Politically, the DSN-MUI is the determining institution for product policies and management.

The state, as a regulator and carries out the function of the legislator; is fully responsible for capital market activities, while the DSN-MUI is preparing its sharia law draft, considering that the Sharia Capital Market Law is still being discussed politically. The regulator of the Indonesian capital market is OJK. In the Indonesian capital market, there are three management institutions, namely: the Indonesia Stock Exchange (IDX) as a place for transactions or Securities organizers. The Indonesian Clearing and Guarantee Corporation (KPEI) as a place for clearing of Securities transactions and the Indonesian Central Securities Depository (KSEI) as a place for securities depository and Securities transaction book-entry.

Since the inception of the Islamic capital market until the last five years, the growth of the Sharia Stock Index has shown significant growth despite a decline in the 2017-2018 period due to the world monetary crisis. Sharia Stock Index and All Stock Index growth data can be seen in table 1 below.

Table 1. Growth of Sharia Stock Index and All Stock Index

Information		2015	2016	2017	2018	2019	2015-2019
	JII 30	603.5	694.7	795.07	685.2	689.09	15.70%
Sharia Index	JII 70 *				227.55	233.38	2.56%
	ISSI	145.6	172.08	189.86	184	187.73	29.42%

\* JII 70 data starting May 2018

Source: OJK 2015 - 2019

This growth shows a graph that continues to increase, except in 2017-2018 where the world has a monetary crisis that began in 1997 in Thailand and continues to spread throughout the world. This condition proves that the world political economy and regional political economy affect the growth rate of Islamic stocks. The world political economy and the development of the terrorist problem that occurred in the 2000-2006 period had a significant effect on the overall capital market situation (Afriani, Cynthia; Lina, 2012) had a negative impact.

In the growth of Islamic stocks, it is necessary to research the actors, whether the change of Islamic stocks affects the growth of the number of actors or only the capitalization grows while the actors are actually decreasing, future research is needed to find out who and in which segmentation the players of Islamic stocks are dominant (Koesrindartoto, Aaron, Yusgiantoro, Dharma, & Arroisi, 2020), whether the general public, wealthy business people, academics, or even the most are millennials. Classification of Islamic capital market players is essential to do so that marketing strategies for actors and segmentation development can be carried out appropriately and according to targets.

The Indonesian capital market and the world capital market are closely related to macroeconomic issues (Suciningtias & Khoiroh, 2015), even in a special study the world financial dimension is known as macroprudential. This system allows the world financial industry to be linked and interdependent on one another so that the problem of the world capital market is also a problem with the Indonesian capital market.

In line with the above growth, it is also necessary to observe the growth in Islamic stock capitalization on the Indonesia Stock Exchange. There were two shocks in the 2000 to 2020 period. The crisis wave between 2007 to 2009 and the Covid 19 pandemic wave in 2020. The crisis wave in 1997 repeated after ten years then 2007 to 2009 did it also recur latently and periodically for ten years? from 2017 to 2019. The dynamics of changes in world stock markets and their influence on the growth of the Indonesian capital market also have a sizeable macroeconomic effect (Pasaribu & Kowanda, 2017) at least in the Indonesian composite stock index experiencing a shock. To be able to analyze it, here is the growth of Islamic stock capitalization on the Indonesia Stock Exchange.

Table.2 Indonesian Stock Exchange Market Capitalization  
(Rp. Billion)

Year		Jakarta Islamic Index 30	Stock Index Indonesian Sharia (ISSI)	Jakarta Islamic Index 70
2000		74,268.94	-	-
2001		87,731.59	-	-
2002		92,070.49	-	-
2003		177,781.89	-	-
2004		263,863.34	-	-
2005		395,649.84	-	-
2006		620,165.31	-	-
2007		1,105,897.25	-	-
2008		428,525.74	-	-
2009		937,919.08	-	-

2010		1,134,632.00	-	-
2011		1,414,983.81	1,968,091.37	-
2012		1,671,004.23	2,451,334.37	-
2013		1,672,099.91	2,557,846.77	-
2014		1,944,531.70	2,946,892.79	-
2015		1,737,290.98	2,600,850.72	-
2016		2,035,189.92	3,170,056.08	-
2017		2,288,015.67	3,704,543.09	-
2018		2,239,507.78	3,666,688.31	2,715,851.74
2019		2,318,565.69	3,744,816.32	2,800,001.49
2020	January	2,134,960.15	3,464,489.36	2,574,301.02
	February	1,876,573.15	3,139,077.45	2,283,779.96
	March	1,582,238.00	2,688,657.92	1,899,060.82
	April	1,801,847.35	2,899,524.38	2,144,078.28
	May	1,756,903.74	2,878,401.33	2,111,550.72
	June	1,777,933.29	2,905,765.81	2,144,434.95
	July	1,852,320.46	3,013,152.02	2,244,900.44

Source: OJK Portal.

The capitalization of Islamic stocks on the Indonesia Stock Exchange shows encouraging growth, three main indices are developing globally, in and out of issuers every year and then according to OJK regulations. Two decades of development of the Islamic financial system in Indonesia cannot be separated from the influence of developing Islamic stocks. The Indonesian Economic System and the new direction of the Islamic Economic System in Indonesia are both fighting for economic prosperity, both material and spiritual.

The data above shows that Indonesia as one of the countries with the largest Muslim population in the world, Islamic countries are a large potential world market (Adityara, 2015), around 1.6 billion people in the world are Muslims who are estimated to continue to grow and develop into their own economic power. The case in Indonesia is like Islamic banking. However, politically it already has the Sharia Banking Law, it turns out that its market share is still in the range of 5 to 7% of the population of 260 million Indonesians. What about Islamic stocks that can be politically owned by anyone, whether foreign or local investors (Koesrindartoto et al., 2020).

Concern over the capitalist trap appears to be a cover for the development of the Islamic economic system. Didin Damanhuri (2014) stated that there are three opinions that Islamic countries have left behind in their economic development. The first opinion, says that the decline and stagnation of economic development and its operations are not carried out consequently according to the identity of the nation and Islamic countries or the country with the largest Muslim population has not fully used Islamic morals and ethics in its economic development such as anti-poverty and anti-backwardness (Damanhuri, 2014). Even though Indonesia is not an Islamic country, it is predicted that it will become a new world economic power that will play an essential role in the global economy.

The Indonesian economy is a populist economy based on the 1945 Constitution, the lofty aspirations for the welfare of the nation through the process of educating the nation's life need to be reviewed, related to the non-formal education Islamic capital market as has been done by OJK, MUI, the Indonesian Capital Market, or other institutions, can be used as a model for developing the business of its residents, considering that currently, with a capital of one hundred thousand rupiahs, investment in the Islamic capital market can be made by the public. The government needs to provide positive encouragement for the development of Islamic capital market education so that a capital market-based social economy can be developed.

The role of the government is significant to regulate and stabilize Indonesia's macro economy, and this happens because stocks are an instrument in the capital market that is very sensitive to various kinds of events, both from internal company events and macroeconomic conditions (Rachmawati, Martien; Laila, 2015). The stock price will experience changes from various kinds of information on the market, both positive and negative information. Information that has a positive impact will make stock prices increase; on the other hand, information that has a negative impact will cause stock prices to fall.

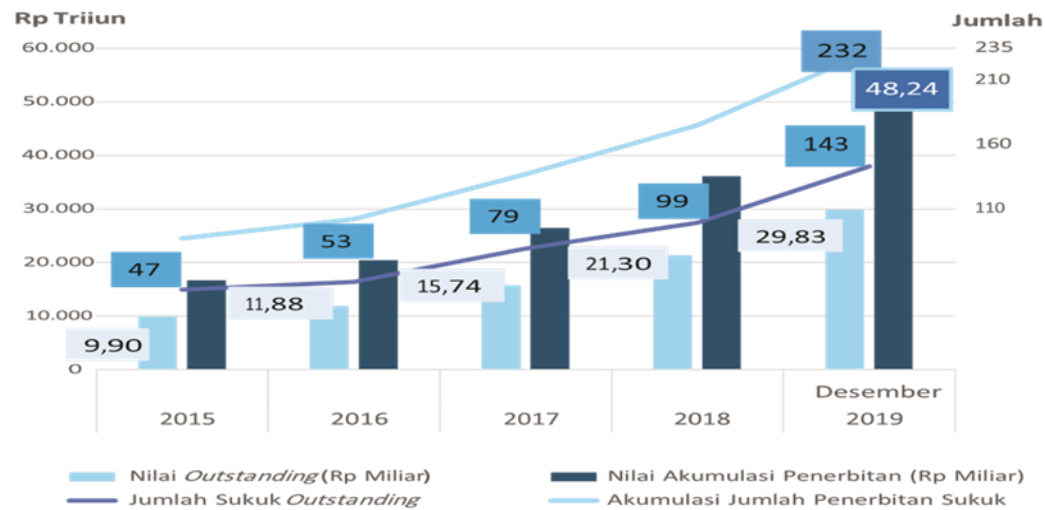
Every economic and political upheaval will generate negative or positive sentiment in the stock market. One of the macroeconomic events that can have an impact on stock price changes is the announcement of the appointment of the governor of DKI Jakarta in 2017 (Sukmaningrum, Madyan, & Hendratmi, 2019). Candidates for governor in the election were Governor Petahana Basuki Tjahaja Purnama (Ahok) with Anies Baswedan. At that time, Ahok was experiencing a case of religious blasphemy where there were parties who thought that there was a Sara issue in the DKI gubernatorial election (BBC Indonesia, 2017).

According to Reza Priyambada, the world of the Indonesian capital market appears a phenomenon where every time there is an election of a state or regional leader, and the market is affected, the 2017 DKI Jakarta Regional Head Election is not like the Jokowi Effect which makes the JCI to react.

The results of the DKI Pilkada have the potential to move certain shares. The main reason is that the two pairs of candidates have a relationship with certain issuers (Mifrahi, 2013).

Throughout the 2015-2019 Sharia Capital Market period, corporate sukuk continued to experience growth and had successfully passed the *five percent trap* with a *market share of the* value of sukuk to the bond and sukuk market of 6.53% at the end of 2019. Based on the chart below, until the end of the year In 2019, the total number of corporate sukuk issued in Indonesia is 232 series with a nominal value of IDR 48.24 trillion. Meanwhile, the number of *outstanding* corporate sukuk at the end of 2019 was 143 series, an increase of 204.26% from 2015 with a nominal value of Rp29.83 trillion as seen in the graph below: (OJK 2019)

Figure 1. Graph of Sukuk development



Sumber: OJK 2019

In line with the development of Islamic indices, stocks and Sukuk, Islamic mutual funds also experienced encouraging growth. As of the end of December 2019, the number of Islamic mutual funds in circulation was 265. This number has increased by 184.95% over the last five years. Meanwhile, in terms of net asset value (NAV), until the end of 2019, the NAV of Islamic mutual funds reached IDR 53.74 trillion, an increase of 387.66% during the 2015-2019 Islamic capital market roadmap period. The proportion of the number and NAV of Islamic mutual funds to The total mutual fund's industry by the end of 2019 respectively reached 12.13% of a total of 2,184 mutual funds and 9.91% of the total mutual fund NAV of IDR542.20 trillion. (OJK 2019)

The proportion of the development of the Islamic capital market from the roadmap for the Islamic capital market that has been planned and realized by the OJK from 2015-2019 appears to have been evaluated and developed so that the 2020-2024 roadmap was formed. OJK as a political product seems serious about developing the Sharia Economy, the sustainability of the program is seen in the 2015-2019 roadmap and the 2020-2024 roadmap, the following is an overview of the 2015-2019 and 2020-2024 roadmaps

Table. 3 Overview of the Sharia Capital Market Roadmap

2015-2019 Sharia Capital Market Roadmap	Islamic Capital Market Roadmap 2020-2024
The direction I, Strengthening Regulations for Products, Institutions and Professions Related to the Sharia Capital Market	The direction I, Capital Market Product Development Sharia
Direction II, Increasing Supply and Demand of Sharia Capital Market Products	Direction II, Improvement and Development Sharia Capital Market Infrastructure
Direction III, Development of Human Resources	Direction III, Increasing Literacy and Inclusion of



and Information Technology of the Islamic Capital Market	Sharia Capital Market
Direction IV, Promotion and Education of the Sharia Capital Market	Direction IV, Strengthening Synergy with Stakeholders
Direction V, Coordination with the Government and Related Regulators in the Framework of Creating Policy Synergy for Sharia Capital Market Development	

The description of the 2015-2019 roadmap is explained with 16 action plans, covering legal tools, incentives, the role of Islamic capital market players, product development, expanding the investor base (Shi, Ausloos, & Zhu, 2020), infrastructure development, improving human resources and technology, promotion, education and outreach, collaboration and cooperation with universities and related institutions as well as coordination with the government in the framework of institutional synergy. Meanwhile, the 2020-2024 roadmap is developing a waqf-based Islamic capital market, integrating ESG values in stocks, developing environmentally sound investment products, increasing the variety of Islamic capital market investment products, strengthening regulations related to the Islamic capital market, utilizing financial technology, utilizing *crowdfunding*. As a means of issuing Sukuk, facilitating the role of sharia banking in the Islamic capital market, strengthening governance, assisting prospective securities issuers, increasing Islamic competence, preparing Islamic capital market modules in universities, collaborating on the implementation of *Training of Trainers* and clarity of cooperation between related institutions with Islamic capital market policies. As well as encouraging the financing of the Halal Industry through Islamic capital market instruments.

The serious involvement of all the institutions mentioned by the OJK has the power to accelerate the socialization and massiveization process of the Islamic capital market to the public. Investor data originating from population decomposition needs to be presented so that the target and strategy for developing investor recruitment among people other than universities can be more developed. One of the challenges faced in the development of the Islamic capital market is the low level of public literacy in Islamic capital market products and services. Besides, industry players' understanding of the Islamic capital market is still not optimal. The role of industry players is very strategic because they are at the forefront of direct interaction in the market, both with securities issuers and with the investor community. On this basis, the 2020-2024 Islamic Capital Market Roadmap provides a direction that focuses on the quality of human resources through increasing public literacy and inclusion about the Islamic capital market and increasing competence in the sharia aspects of market players (OJK 2019).

The issue of planning and realization must be the concentration of OJK and policy makers if the Islamic Economy as a new direction for the Indonesian economy will genuinely be implemented towards equitable development. Development ethics based on Pancasila and the 1945 Constitution as the direction of community-based Indonesian development will be realized when education, socialization and literacy of the Islamic capital market is booming, this means that most Indonesians own shares in companies that are listed on the Islamic capital market. This reality will be reversed when the plan is not following the actions taken by the Islamic capital market players and the institutions involved in it.

Preparation of regulations, laws and sharia foundations as planned, should be a particular agenda for realizing the Sharia Capital Market Law, as in the Sharia Banking Law. Law is an essential foundation for the development of Islamic Economics so that its movements and operational steps can be more coordinated and focused. The strategy for developing Sharia Economic growth, in this case, the Sharia Capital Market, must be segmented to the broader community from all developing industrial sectors, especially industrial sectors that have been classified on the Indonesia Stock Exchange.



## 5. Conclusion

Based on the analysis in this paper, we can conclude several important points, namely:

1. Regional and national political stability which is the control of the government needs efforts so that shocks to the capital market can be eliminated, and political relations between countries and capital market cooperation need to be improved.
2. The Sharia Capital Market Law is needed so that the functional movement and foundation of the sharia law, as well as positive law in Indonesia, can increase the growth of the Islamic capital market more significantly, this is to answer the challenge of doubts by some Muslims to invest in the Islamic capital market.
3. The synergy between policy stakeholders needs to be reformulated with current conditions, and evaluation is often carried out as DES evaluates sharia stocks.
4. The Islamic Capital Market curriculum in the form of a module that is easy to understand needs to be socialized.
5. Market segmentation to increase the growth of Islamic capital market players needs to prepare data and strategies so that the marketing of Islamic capital market products can be improved.
6. Policymakers need to fund more research related to the development of the Islamic capital market, especially those that are relevant to the segmentation of capital market players in order not to get caught in the entanglement of global capitalism.

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# Audit Partner Gender, Audit Quality, Audit Report, Net Income, Book Value of Equity and Value Relevance

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## Abstract

The main purpose of the research to determine the effect of audit partner gender, audit quality, audit report, net income, and book value of equity on value relevance. It involved 56 manufacturing companies listed on Indonesia Stock Exchange. The sampling technique used panel data by searching for samples uses purposive sampling method. The analysis used linear data panel regression on E-Views version 9. The results show that the net iBina ncome and book value of equity have an influence on value relevance, while audit partner gender, audit quality, and audit report do not have an effect on value relevance.

**Keywords:** Audit Partner Gender, Investment, Value Relevance, Indonesia, Manufacturing Company

## 1. Introduction

In 2012, Indonesia made a commitment to convergence with IFRS, (Indonesian Institute of Accountants, 2017) which is expected to enrich the transparency and relevance of the value of financial information. The higher quality of accounting information will increase investor confidence in financial reporting because the report conveys information about the value of the company to investors (Mironiuc, Carp, and Chersan, 2015). In developing countries like Indonesia, investor protection and law enforcement are weak. This requires Indonesia to adopt IFRS as a tool to increase the confidence of investors and other users in financial reporting (Juniarti et al, 2018). Juniarti et al (2018) discussed the value relevance of IFRS adoption in Indonesia, proving that value relevance increased after IFRS adoption.

The reliability of accounting information is represented by value relevance. If there is no significant relationship between accounting information and the market value of a company, then the company's financial statements do not meet one of the basic objectives of financial reporting. According to Dowlatabadi and Filsaraei (2016), the concept of value relevance can produce financial numbers that are used as reporting to produce investor decisions in investing in a company. The decreasing stock price will make stockholders impatient and sell their shares. Increase and decrease of stock prices are an important factor that needs to be considered by company management.

Value relevance refers to the ability of company's accounting information to reflect the value of the company, so that investors can make investment decisions. Accounting information that has value relevance for investors can be seen from the book value and stated earnings (Bepari, 2015). According to Kwon (2018), the relevance of value in decision making can be seen from a company's cash flow. The accounting information that is not related to finance such as audit reports and audit quality can have value relevance from the company as shown by Robu and Robu's research (2016).

Barth, Li, and McClure's (2017) research on the relevance of the value of accounting information showed that the relationship between equity prices and accounting information has evolved and increased over time. According to Outa et al (2017), improvement of IFRS-based accounting standards can increase the relevance of the value of accounting information. The results of Dewi and Kristanto's (2018) research related to the application of IFRS convergence in Indonesia to manufacturing companies listed on the Indonesia Stock Exchange (BEI) prove that the book value of equity and earnings is an important element in financial statements that can influence investors in making investment decisions. According to Al-Dhamari and Chandren (2018), in addition to financial reports, investors also look at a company's financial audit reports to obtain reliable and quality financial information. Audit evidence is collected by the audit team to form an opinion on the results of

high-quality company financial statements that add value to the use of accounting information.

Not only related to numbers in financial statements, getting the relevance of a company's value can be seen from Gender Auditor Partner. The Independent Auditor's Report in a company's financial statements results in an auditor's opinion being signed by the auditor. Audit reports add value to the use of accounting information in financial statements for investors. The audit partner must consist of auditors with good ability and experience. Men and women have different social experiences and ways of interpreting information in presenting different information to investors (Srinidhi, Yang, and Zang, 2017). So, there is an assumption that the information conveyed by men could be different from that conveyed by women. Ramadhayanti (2014) said that both men and women produce quality work abilities and responsibilities as auditors regardless of their gender. According to Al-Dhamari and Chandren (2018), auditors for signing women do not increase the relevance of accounting information value.

Investors rely on high-quality audit reports, so that an auditor's opinion in the audit report is digested by investors as relevant to the value of the company. If the audit report is of high quality, the usefulness of the value relevance of company information will increase (Al-Dhamari and Chandren, 2018). According to Baffa and Yero (2017), investors see that financial statements which have been audited by highly reputable audit companies, such as Big-4, can be a determining factor in investor decision making. Investors value the quality of audit services provided and the resulting reports have relevant values compared to non-Big-4 auditors. The market views auditors with established reputation (Big-4) as having more value compared to non-big-4 audit companies. According to Robu and Robu (2015), caution of companies audited by Big-4 in reporting financial statements is seen from value that is much lower than the variables analyzed, both at the level of stock prices and at the level of the book value of equity and net results.

An auditor produces an opinion on the company's financial statements under study. The results of this auditor's opinion are considered by investors in determining decisions. According to Robu and Robu (2015), financial information regarding net results, with unqualified audit opinion (regardless of the auditor's affiliation to Big 4) has a significant and positive influence on investor decisions, with a direct impact on the stock prices of listed companies.

An auditor's independent report and a company's financial statements are interrelated. An auditor needs financial statements in making their audit reports. Besides auditors, shareholders and investors are concerned about the details of financial statement components. The net income of the financial statements is a reflection of the company's performance. Net income also determines the valuation of a company's stock in a certain period. In addition to net income, the book value of equity can also be one of the factors that influences the value relevance of a company. In the company's books, the book value of equity can provide information related to the description of the equity per share outstanding owned by shareholders. (Judge, 2016). The book value of equity per share is one type of information that investors see in investing. The better the book value of a company's equity, investors become more interested in investing in the company.

## 2. Literature Review and Hypotheses Development

According to Godfrey et al, (2010), information signals are given by managers to investors to help investors make decisions. The managers provide information needed by investors in the form of financial statements that show the value of the company. The managers ensure that the signal given to investors is a credible signal. One way is to distribute dividends in cash to investors, making investors confident with the signals given by managers. If the managers convey a signal of accounting information to investors and the investors believe in making decisions, then it can increase the company's stock price.

Value relevance can be defined as an accounting ability that is summarized into information that can affect a company's value (Puspa, 2017). This summary of accounting information is relevant if used by investors when making decisions. According to Permana (2015), value relevance is used to measure how stock prices and stock returns in financial statements affect the capital market. Value relevance will produce a company's accounting information that is useful in decision making (Junaidi and Nurdiono, 2016). The relevance of accounting information is seen from the results of a company's financial statements. If the company produces a positive

value that is reflected in stock prices, then the information is relevant and can affect investor reactions. The company's changing stock prices affect investors' decisions. Investors see the book value of equity and earnings per share in the company's financial statement information as the basis for making an investment decision. In addition, company profits are considered by investors because earnings are the result of company performance within a period.

The auditor is a third party between shareholders and management of a company to check the financial statements carried out by the accounting department whether or not they are in accordance with applicable accounting standards before being submitted to shareholders or investors (Boynton and Johnson, 2006). Public Accountant Firm is a service business entity that offers a variety of services, including auditing of corporate financial statements or auditing. Examination services on financial statements are carried out by a person or a group of people consisting of men or women who have expertise in their fields. Men and women have different past experiences, obtain different types of information from different sources, participate in different social settings, and are raised to cultivate different social values (Post and Byron, 2015). Women and men have different ethical behavior, preparation and level of trust. Women tend to spend more time gathering evidence to avoid loss and reduce control and risk of detection. (Al-dhamari and Chandren, 2018).

An auditor must have integrity in reporting the results of financial statement audits, because the auditor provides an opinion on the company's financial statements that affects investors' decision making. An auditor must have professional skepticism. If there are unfair things in the financial statements, the auditor can ask for an explanation from the company manager and ask for evidence of the manager's explanation (Boynton and Johnson, 2006). Public Accounting Firms recognized to have a high level of integrity in the world are PriceWaterhouseCoopers (PwC), Ernst & Young (E&Y), Deloitte, and KPMG. They are called Big-4. To become an auditor in a Big-4 company, individuals must go through a very tight process and strong competition. (Surya, Ananto, and Rissi, 2018).

The purpose of financial statement auditing is to obtain an independent audit report containing the auditor's opinion on the company's financial statements. Audit reports are needed by every company to detect and prevent fraud. Audit reports produce one of 5 (five) audit opinions, according to Boynton and Johnson (2006), namely Unqualified opinion, Unqualified opinion with explanatory paragraph, Qualified opinion, Adverse opinion, and Disclaimer opinion. Audit opinion presented in an audit report expressed by an independent auditor from a Public Accountant Firm is an important aspect that becomes a consideration whether the financial statements prepared are in accordance with established reporting procedures and standards.

Net income is the profit received by a company in the specified period. The value of net income is a summary of a company's activities within a period (Hery, 2015). The book value of the company's equity is one aspect that is seen by the shareholders of the company. From the book value of the equity, shareholders can see how much share assets they are currently having in a company. The book value of equity can be seen from the calculation of the company's total equity divided by the number of outstanding shares (Azis, Mintarti, & Nadir, 2015).

Al-dhamari and Chandren (2018) conducted a study to analyze whether audit reports signed by female auditors could increase the value relevance of accounting information in Malaysian companies. In this study showed that female auditors did not increase the value relevance of company information. In addition, financial statements signed by female auditors from Big-4 companies increase the reliability and relevance of the company's revenue value because investors trust the results of audit reports signed by female auditors from auditing companies that have good performance.

Surya, Ananto, and Rissi (2018) conducted a study to see whether audit quality affected the relevance of the value of accounting information, which was examined based on secondary data from annual reports of companies listed on the Indonesia Stock Exchange. The results of this study revealed that public accounting firms classified as Big-4 produced more quality audit reports, because auditors from Big-4 companies have high skills.

Robu and Robu (2016) conducted a study to analyze, with IFRS adoption, if an auditor's collaboration with Big 4 and the audit opinion were relevant values for investors and had a significant impact on stock prices. The study used a sample of 118 companies listed on the Bucharest Stock Exchange (BSE) in 2012-2013. The results indicated that if the audit opinion issued is an Unqualified Opinion, then it has a significant and positive

influence on stock prices. Robu and Robu (2015) conducted research to analyze the effect of audit reports through auditor opinion and audit quality in Big-4 companies on investor decisions. With a sample of 59 companies listed on the Bucharest Stock Exchange in 2012, trading companies whose assets are accepted for trading in regulated markets must describe financial statements in accordance with IFRS. If the auditor's opinion in the company's audit report is an Unqualified Opinion, it will have a positive effect on investors. Thus, auditors in Big-4 companies are more considered by investors than auditors with Non-Big 4 membership.

Mgbame, Izedonmi, and Enofe (2016) conducted a study to investigate whether the gender of auditors made a difference in the ability to solve problems and determined audit quality. The study used primary data with a sample of 150 auditors from audit firms in Nigeria. The results of this study indicated that men have higher problem solving skills than women because, according to research, men have better mathematical abilities. However, men have a higher rate of misstatement than women, because women avoid risk more than men.

Ghasemi, Nazari, and Far (2017) conducted a study to investigate the effect of audit reports on the relevance of accounting information. The test was carried out using cross-sectional data from 105 companies listed on the Tehran Stock Exchange in 2011-2015. The results showed that there is a significant relationship between audit firms, asset efficiency, and financial independence ratios and efficiency levels. The audit opinion affects the relevance of accounting information to the company. An audit report with an Unqualified opinion will affect the company's stock price compared to a Qualified opinion. Fitri, Aisjah, and Djazuli (2016) conducted a study to analyze the effect of accounting earnings, book value of equity, and total cash flow on stock prices. By using a research object of manufacturing companies listed on the Indonesia Stock Exchange in 2006-2012, a total sample of 52 companies was obtained. The results of the study showed that accounting profit and total cash flow have a positive effect on stock prices and investors can make accounting profit and total cash flow as a consideration for investing. Meanwhile, the book value of equity has a negative effect on prices.

### 2.1. The Effect of Audit Partner Gender on Value Relevance

Males and females have different ways of thinking, according to Taniguchi and Tuwo (2014). Men tend to have a higher level of education with specialist fields of study related to their careers. Women tend to have lower levels of education or training and also have relatively lower work experience due to family considerations. According to Al-Dhamari and Chandren (2018), the results of his research cannot prove that gender will affect the relevance of the value of company information. However, according to Fahlevi (2017), women have a higher level of attention and memory than men. In producing relevant information, the auditor must have knowledge, experience and a high level of accuracy because the results of the audit report are used as a basis for investors' decision making. Regarding signal theory, audited financial statements must provide signals in the form of good information for investors. Therefore, companies audited by male or female auditors must produce positive information for investor decisions.

*H1: Audit Partner Gender has a positive effect on the relevance of company values.*

### 2.2. The Effect of Audit Quality on Value Relevance

Before investing, investors look for company-related information from financial statements. Independent auditor's report is one of the considerations of investors in assessing a company because investors want to see who audits the company, whether a high-quality audit firm (Big-4) or a non-big-4 audit company. According to Al-Dhamari and Chandren (2018), audit quality by Big-4 companies has a relatively higher level of trust. According to Surya, et al. (2016), Big-4 companies will produce quality audit reports with more sophisticated technology. On the other hand, Susanti (2017) stated that public accounting firms Big 4 does not necessarily provide an accurate opinion of companies' financial statements. Non-Big 4 public accounting firms can have good audit quality and produce independent audit reports with appropriate standards. Signals given by company management in audited financial statements must be conveyed as well as possible to investors. Trusted audit reports by Big-4 companies attracts more investors.

*H2: Audit Quality has a positive effect on the relevance of company values.*

### 2.3 The Effect of Audit Report on Value Relevance

Relevant and reliable accounting information is important for investors. This is the reason why investors treat audit reports as a basis for assessing the relevance and reliability of company financial information. From the



audit report that has been made by the auditor, the audit opinion is directly seen by investors, whether the company is given a reasonable opinion without exception or a reasonable opinion with an exception. This is the investor's consideration. Robu and Robu (2015) asserted that investors in investing consider audit reports with Unqualified Opinion opinion. In addition, Ghasemi, Nazari, and Far (2017) found that the type of audit report did not have a significant impact on the company's financial function and position. It can be said that the results of audit in the form of opinions in the audit report affect the relevance of accounting information to the company.

*H3: Audit Report has a positive effect on the value relevance of company.*

#### 2.4 The Effect of Net Income on Value Relevance

Net profit is the first thing that is seen by investors in assessing a company's performance. According to Fitri, Aisjah, and Djazuli (2016), net income has a significant effect on the value relevance delivered in the form of stock prices. Increased profits will have a positive effect on stock prices so that investors will respond well to investing. Because a good net profit value will produce a good stock return too. This is a consideration of investors in making investment decisions. Hakim (2016) found that stock prices are used as a value to see the value relevance. Net income affects the relevance of value because earnings have a positive effect on stock prices. The company's net profit becomes information that investors see and gives a good signal to investors if the results of the net profit are good or positive. Because stock returns obtained by shareholders will increase. However, Masril (2017) showed that earnings have no effect on stock prices. In his research, the object of research used was companies listed on the IDX in the construction and building sector in 2011-2015.

*H4: Net Income has a positive effect on the value relevance of company.*

#### 2.5 The Effect of Book Value of Equity on Value Relevance

Shareholders will maintain that their shares will not suffer losses. This can be seen from the share price and is influenced by the book value of the equity contained in the company's financial statements. If the book value of the company's equity experiences an increase, then the price of shares on the Indonesia Stock Exchange can be affected and provide the desired results by shareholders or investors. According to Mirza, Malek, and Abdulhamid (2019), the book value of equity (BVE) is a factor influencing value relevance. This makes investors trust BVE. Hakim (2016) stated that the book value of equity has an influence on stock prices, but is less dominant than the effect of earnings and cash flow on stock prices. On the other hand, Fitri, Aisjah, and Djazuli (2016) showed that the book value of equity has a negative effect on stock prices. This happens if companies that obtain profits have a low equity book value. Information generated from the book value of equity can be a signal for investors in decision making.

*H5: Book Value of Equity has a positive effect on the value relevance of company.*

Based on the description above, here is a model for research in Indonesia:



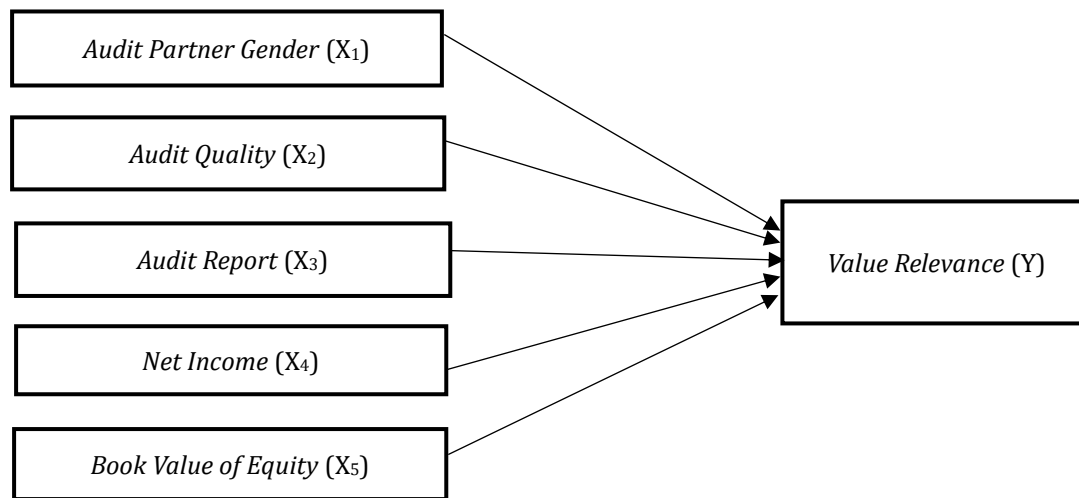


Figure 1. Research Model in Indonesia

Source: data processed

### 3. Research Method

The population used in this study included all manufacturing companies listed on the Indonesia Stock Exchange (IDX) within the period of 2014 to 2018. The manufacturing sector listed on the IDX consists of 3 industrial groups, namely basic industries and chemicals, other industries, and consumer goods industries. The secondary data used in the form of financial statements were obtained from the website of the Indonesia Stock Exchange. Data collected from the Indonesia Stock Exchange were filtered to determine the appropriate sample with several criteria:

- Manufacturing companies listed on the Indonesia Stock Exchange in 2014-2018
- Manufacturing companies that report annual financial reports in a row from 2014 to 2018
- Manufacturing companies with annual financial statements that end on December 31
- Manufacturing companies that present Rupiah currency reports
- Manufacturing companies that have a positive net profit
- Manufacturing companies that have been audited and submitted successive independent auditor reports from 2014 to 2018.

The study used Econometric Views (Eviews) version 9, which was used to process statistical data; it was assisted with Microsoft Excel 2016. The analysis used in research used descriptive statistical data analysis, classic assumption tests, hypothesis testing, and panel data regression analysis. Before conducting research, it is necessary to determine which previous research models are better for this study. There are 3 research models, namely: common effect model, fixed effect model, and random effect model. To determine which model will be used, model selection test was conducted, namely the Chow test, the Hausman test, and the Lagrange test.

The model used can be written as follows:

$$HS = \alpha + \beta_1 \text{ GENDER} + \beta_2 \text{ QUALITY} + \beta_3 \text{ REPORT} + \beta_4 \text{ LABA} + \beta_5 \text{ BVE} + \varepsilon$$

Where:

HS : Value relevance in Indonesia

$\alpha$  : Constants

$\beta_1$  : Audit Partner Gender Coefficient

GENDER : *Audit Partner Gender* manufacturing company in Indonesia

$\beta_2$  : *Audit Quality Coefficient*

QUALITY : *Audit Quality* manufacturing company in Indonesia

$\beta_3$  : *Audit Report Coefficient*

REPORT : *Audit Report* manufacturing company in Indonesia

$\beta_4$  : Net Income Coefficient

LABA : Net income manufacturing company in Indonesia

$\beta_5$  : Book Value of Equity Coefficient

BVE : Book Value of Equity manufacturing company in Indonesia

$\varepsilon$  : *error*

### 3.1 Operationalization of Variables

#### 3.1.1 Dependent Variable

The dependent variable used is the value relevance of manufacturing companies listed on the IDX. Value relevance in research uses the natural logarithm (Ln) of the closing stock price of the company at the end of December in the company's financial statements.

$$HS = \ln(\text{Stock Price})$$

#### 3.1.2 Independent Variables

##### 1. *Audit partner gender*

The variable of audit gender partners used dummy values by looking at the gender of women or men who signed independent auditor's reports. In the measurement of the audit variable, the gender partner gives a value of 1 for the audit partner with the name of the signatory being female, and a value of 0 for the audit partner with the name signed by the male auditors.

##### 2. *Audit quality*

Audit quality in this independent variable used dummy values, with measurements giving a value of 1 for companies audited by Big-4 public accounting firms and giving a value of 0 for companies audited by public accounting firms not in the Big-4 (non-Big-4).

##### 3. *Audit report*

The audit report variable used the opinion that has been given by an auditor in the independent auditor's report and this independent variable used a dummy, with measurements giving a value of 1 for audit reports with the results of an Unqualified Opinion opinion, and a value of 0 for audit reports with the results of opinions other than the Unqualified Opinion.

##### 4. *Net Income*

Net income in the study used Natural Logarithms, because the net profit value of each company listed on the Indonesia Stock Exchange has diverse. Net profit is taken only profit that has a positive value because the value

of negative earnings has no value if natural logarithms are used. The above calculation can be formulated as follows:

$$\text{Net Income} = \text{Earning Before Tax} - \text{Tax Expenses (Income)}$$

$$\text{Laba} = \text{Ln (Net Income)}$$

(Soemohadiwidjojo, 2015)

#### 5. Book Value of Equity (BVE)

Book value is the value or the actual stock price of a company measured by the total equity. By dividing the company's total equity by the number of outstanding shares, the book value of equity will be obtained. It is formulated as follows:

$$\text{Book Value of Equity} = \frac{\text{Total Equity}}{\text{Number of outstanding shares}}$$

(Azis et al., 2015)

## 4. Results and Discussion

Table 1. Sample Criteria

No	Sample Selection Criteria	Amount
1	Manufacturing companies listed on the Indonesia Stock Exchange in 2014-2018	162
2	Manufacturing companies that do not have consecutive annual financial statements during 2014 - 2018	35
3	Manufacturing companies with annual financial statements ending in December 31 <sup>st</sup>	3
4	Manufacturing companies that do not present reports in Rupiah	26
5	Manufacturing companies that have negative net income	34
6	Manufacturing companies that do not have data to complete the research variable figures	8
Number of Research Sample Companies		56
Research period of 2014-2018		5
Total observation data during the study period		280

Source: data processed

#### 4.1 Descriptive Statistics

The results of descriptive statistical tests show manufacturing companies listed on the Indonesia Stock Exchange which can be seen from the average, maximum, minimum, and standard deviation values.

Table 2. Descriptive Statistics Test Results

	Mean	Max	Min	Std. Dev.
<b>HS</b>	6.974	10.93	3.91	1.56
<b>GENDER</b>	0.189	1	0	0.39
<b>QUALITY</b>	0.378	1	0	0.48
<b>REPORT</b>	0.911	1	0	0.28
<b>LABA</b>	25.42	30.24	18.97	2.22
<b>BVE</b>	1,419.02	14,158.48	2.10	2,275.71

Source: Data processed with *Eviews 9*

Based on the test results of the descriptive statistics in table 2, it was concluded that at the stock price (HS), an average value of 6,974 was obtained with a maximum value of 10.93 owned by PT. Unilever Indonesia Tbk. (UNVR) and a minimum value of 3.91 which is owned by PT. Indo Acidatama Tbk. (SRSN) and PT. Star Petrochem Tbk. (STAR), having a standard deviation of 1.56. In the gender partner audit variable (GENDER), the average value is 0.189 with a maximum value of 1 and a minimum value of 0 which is a dummy variable. The standard deviation owned is 0.39.

For the audit quality variable (QUALITY), the average value is 0.378 with a maximum value of 1 and a minimum value of 0 which is a dummy variable. The standard deviation is 0.48. For the audit report variable (REPORT), the average value is 0.911 with a maximum value of 1 and a minimum value of 0 which is a dummy variable. The standard deviation is 0.28. In the net profit variable (LABA), the average value is 25.42 with a maximum value of 30.24 owned by PT. HM Sampoerna Tbk. (HMSP) and a minimum value of 18.97 owned by PT. Star Petrochem Tbk. (STAR), having a standard deviation of 2,217. In the equity book value variable (BVE), the average value is 1,419.02 with a maximum value of 14,158.48 owned by PT. Supreme Cable Manufacturing & Commerce Tbk. (SCCO) and a minimum value of 2.10 which is owned by PT. Astra Otoparts Tbk. (AUTO), having a standard deviation of 2,275.71.

#### 4.2 Model Selection

Based on the results of the Chow test and the Hausman test, the right model to use is the fixed effect. In the Lagrange test, the right model to use is the random effect. The 3 models selection tests produced 2 tests indicating that the fixed effect model is the right model in the study. Thus, the model used as a panel data regression in this study is the fixed effect.

#### 4.3 Classic Assumption Test Results

##### 4.3.1 Normality test

Table 3. Normality Test Results

Probability	0.052057
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Source: Data processed with *Eviews 9*

The results of the normality test in Table 3 state that the probability value produced is 0.052057 and the probability value is > 0.05. So, the data used in this study are normally distributed data.

#### 4.3.2 Multicollinearity Test

Table 4. Multicollinearity Test Results

Variable	Centered VIF
GENDER	1.041137
QUALITY	1.379152
REPORT	1.024001
LABA	1.362812
BVE	1.111096

Source: Data processed with Eviews 9

From the 5 independent variables tested for multicollinearity, there are no variables that have values > 10. So, it can be concluded that H<sub>0</sub> is accepted and there is no multicollinearity in the data used.

#### 4.3.3 Autocorrelation Test

Using the Breusch-Godfrey Serial Correlation LM test method, the following results were obtained after processing the data:

Table 5. Autocorrelation Test Results

<i>Prob. Chi-Square (2)</i>	0.0000
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Source: Data processed with Eviews 9

As presented in table 5, the Chi-Square probability of 0.0000 < 0.05. Thus, it can be concluded that the sample used autocorrelation occurred. According to Basuki and Yuliadi (2015), the use of panel data regression does not require testing of classical assumptions. According to Basuki and Yuliadi, (2015), in research using panel data regression, autocorrelation testing will occur autocorrelation with the data used, because autocorrelation only occurs in time series data only, not in cross section data. Then there is no need to do an autocorrelation test or it is not necessary to carry out an outlier test to avoid autocorrelation.

#### 4.3.4 Heteroscedasticity Test

Table 6. Heteroscedasticity Test Results

<i>Prob. Chi-Square (5)</i>	0.0502
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Source: Data processed with Eviews 9

As shown in table 6, the heteroscedasticity test used the Harvey test, which generated a chi-square probability value of 0.4052. Based on the results, it can be concluded that the value > 0.05. Then, H<sub>0</sub> is accepted and homoscedasticity occurs or there is no heteroscedasticity in the sample data used.

#### 4.4. Hypothesis Test Results

##### 4.4.1 T-Test Results

Table 7. T Test Results

Variable	Prob.
GENDER	0.9720
QUALITY	0.3394
REPORT	0.5531

LABA	0.0000
BVE	0.0000

Source: Data processed with Eviews 9

The results of the statistical t test in table 7 show that from the five independent variables, there are only two independent variables that have an influence on the dependent variable.

#### 4.4.2 F Test Results

F test results are seen from the value of Prob (F-statistic); the value of 0.000000 which can be concluded that Prob (F-statistic) < 0.05. Then, the independent variables simultaneously influence the dependent variable in the study.

#### 4.4.3 Coefficient of Determination (R<sup>2</sup>)

The value of the Adjusted R-squared is 0.921293 or 92.13%. It can be concluded that the value of 92.13% of value relevance can be explained in the independent variables, namely gender partner audit, audit quality, audit report, net income and book value of equity. Meanwhile, the remaining 7.87% (1- 92.13%) is influenced by other variables not included in the study.

Table 8. Panel Data Regression Test Results

Variable	Coefficient
C	1.646833
GENDER	0.003042
QUALITY	0.223533
REPORT	-0.071740
LABA	0.201307
BE	0.000133

Source: Data processed with Eviews 9

Based on the results of the regression test in the table above, the regression model equation obtained is as follows:

$$HS = 1.65 + 0.003 \text{ GENDER} + 0.223 \text{ QUALITY} - 0.071 \text{ REPORT} + 0.201 \text{ LABA} + 0.0001 \text{ BVE} + e$$

#### 4.5 Discussion

##### 4.5.1 The Effect of Audit Partner Gender on Value Relevance

The significance test shows that the gender of partner audit does not have a positive effect on the value relevance of manufacturing companies in Indonesia. The results of this study are similar to those of Al-Dhamari and Chandren (2018), showing that partner gender cannot determine whether the relevance of good corporate value depends on the gender, namely women or men. The results of the research show that female gender did not have an influence on the relevance of company value. So, it can be concluded that the gender of the external auditors does not become a benchmark for investors in their investment considerations. However, Fahlevi's study (2017) indicated that women have a better level of caution and memory than men. It can be interpreted that women can produce information that can be trusted and used by investors as information to see the performance of a company. There is still very little research related to the influence of the gender on value relevance as investor information for investment decisions. The gender of partner audit or it can be said with the gender of the external auditor in the company cannot be taken into consideration by an investor and also shareholders in evaluating the company's performance and cannot be used to assess the increase in the company's stock price because it does not give a good signal.

#### 4.5.2 The Effect of Quality Audit on Value Relevance

The significance test shows that audit quality does not have a positive influence on the value relevance of manufacturing companies in Indonesia. This is different from the results of research by Al-Dhamari and Chandren (2018), Surya, et al (2016) and Ghasemi, Nazari, and Far (2017) which found that audit quality has an influence on the relevance of firm value. Companies that cooperate with Big-4 public accounting firms will produce audit reports with higher quality and attract investors because the audit quality already has a higher level of trust, compared to companies that work with non-big-4 public accounting firms. This research is in line with the research of Kurniawati (2016) which states that investors do not consider audit quality in Big 4 or non-Big 4 companies, but investors consider other factors. According to Susanti (2017), companies do not consider the big 4 firms in conducting audits; the companies are more focused on showing the results of good financial statements that can attract investors to invest.

The results of this study indicate that the audit quality does not affect the signal to be received by investors. Because both companies collaborate with non-big-4 and big-4 public accounting firms such as Pwc, KPM, E&Y and Deloitte, they cannot attract investors to make investment decisions. The signal given by a company in Indonesia on its audit report does not guarantee that the company has a high share price.

#### 4.5.3 The Effect of Audit Report on Value Relevance

The significance test shows that the audit report has no positive effect on the relevance of the value of manufacturing companies in Indonesia. The results of this study are similar to those of Nugrahani and Ruhayat (2018), that audit opinion has no influence on the company's stock price. In making investments, investors do not make audit opinions as materials for consideration in decision making. This is in contrast to the research of Robu and Robu (2015), which showed that the opinions presented in the audit report affect the relevance of accounting information to the company. A good auditor's opinion will be able to provide information to investors indicating that the company has a good performance and attract investors to invest in the company. This is similar to Chandra and Arisman's research (2017) which shows that audit opinion has a positive effect on stock prices positively. If a company has an unqualified opinion, it can affect the increase in share prices.

In this study, audit opinion cannot provide a signal as information for investors assessing a company. Both companies have an unqualified opinion or other than the unqualified opinion given by the auditor on the independent auditor's report. So, it does not affect an investor in making decisions. Opinions on the independent auditor's report cannot determine whether or not Unqualified Opinion makes value relevance information better.

#### 4.5.4 The Effect of Net Income on Value Relevance

Based on the results of the test calculation, it is concluded that net income has a significant positive effect on the relevance of the value of manufacturing companies in Indonesia. The results of this study are in line with the research of Putu, Hiltari, and Rahayu (2015) which showed that net income has a significant effect on the company's stock price. If the value of net income increases, the stock price will also increase. Increased profits become a picture of a good company performance, and can benefit investors. So, it can attract investors in investing. Hakim's research (2016) also indicated that net income has a significant effect on stock prices. Stock price is used as a value to see the relevance of the value of a company. It can be concluded that in his research, net income affects the value relevance. Net income which is part of financial statements is seen by investors. The net profit can be reflected in the financial performance of a company which is seen by investors as a consideration in investing, whether the company has a good profit and can increase investor wealth.

Different from Masril's (2017) research in the construction and building sector and Wahyuningsih, Adel, and Ruwanti's (2016) research in the manufacturing sector, the results of this study show that net income has no effect on stock prices. The study indicates that net income is not a value relevance to companies in the manufacturing sector. For investors, in making investment decisions in the manufacturing sector, net income cannot be taken into account because net income cannot provide good information on company performance in the manufacturing sector.



#### 4.5.5 The Effect of Book Value of Equity on Value Relevance

The results of the test indicates that the book value of equity has a positive effect on the value relevance of manufacturing companies in Indonesia. The results of this study are the same as those of Mirza, Malek, and Abdul-hamid (2019). Hakim's research (2016) also showed that the book value of equity affects the stock price and it can be said that the book value of equity has a value relevance. Investors or shareholders who can benefit the value of the shares, it can be controlled by looking at the book value of equity which describes the net assets owned by the company. If the book value of the company's equity experiences an increase, the share price increases. This is different from the research of Fitri, Aisjah, and Djazuli (2016) which showed that the book value of equity has a negative influence on stock prices. If the book value of equity increases, the company's share price will decrease. It can be concluded that the book value of equity can be used as information on the performance of a company that can help investors to consider investing in the company.

### 5. Conclusions and Suggestions

The variable of independent audit partner gender does not have a positive effect on the relevance of company values. The auditor's gender is not taken into consideration by an investor when investing in a company because an auditor must have a professional attitude in doing a job. This research is in line with research conducted by Al-Dhamari and Chandren (2018), suggesting that the gender of audit partner does not affect the company's stock price. Variable independent audit quality does not have a positive effect on the relevance of company values. It states that the Big 4 Public Accounting Firms do not influence investors in investing, which can make an increase in stock prices. There are Non-Big 4 firms that have good audit quality. This study is in line with research conducted by Susanti (2017) and Kurniawati (2016), suggesting that audit quality does not affect the company's stock price.

The independent audit report variable does not have a positive effect on the relevance of company value. This research suggest that audit opinion does not affect investors in investing and cannot increase the company's stock price. This research is in line with research conducted by Nugrahani and Ruhayat (2018), that the audit report has no effect on the company's stock price. The independent variable of net income has a positive effect on the relevance of company value. Net income is one of the aspects seen by investors in making investment decisions, because net income is a value that reflects the performance of a company in one period. This study is in line with research conducted by Putu, Hiltari, and Rahayu (2015) and Hakim (2016), indicating that net income has a significant effect on the company's stock price.

The independent variable of book value of equity has a significant positive effect on the relevance of company value. The book value of equity is the asset value of a shareholder per share. The book value of equity is seen by investors and is taken into consideration in investment decisions. This research is in line with that conducted by Mirza, Malek, and Abdul-hamid (2019) and Hakim (2016), suggesting that the book value of equity affects the company's stock price.

Future researchers are expected to add other variables or to include other variables such as operating cash flow, earnings per share (EPS), and others. Then, research using objects of all companies listed on the IDX can be conducted. Research on companies outside Indonesia such as other Asian countries or Europe can also be conducted.

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# Earnings Persistence, Systematic Risk, Audit Quality, and Earnings Response Coefficient

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## Abstract

This study aimed to determine the influence of earnings persistence, systematic risk, and audit quality on earnings response coefficient. The samples of this study were from plantation sub-sector companies. The samples were taken from publicly listed plantation companies on the Indonesia Stock Exchange and Bursa Malaysia in 2013–2017. This research used a panel data regression method. The data used in this research were secondary data. This study shows that earnings persistence, systematic risk, and audit quality on the IDX do not have any significant effect on earnings response coefficient. Meanwhile, on Bursa Malaysia, earnings persistence, systematic risk, and audit quality have significant effects on earnings response coefficient.

**Keywords:** earnings response coefficient, earnings persistence, systematic risk, audit quality, plantation companies

## 1. Introduction

Stock prices generally move every time a company announces changes in its earnings ahead of the release of its financial statements. The size of the response of stock prices on the capital market to the size of the announced earnings is referred to as earnings response coefficient. Earnings response coefficient is important for a company to know the response of investors or shareholders to its reported earnings conditions. The strong impact of earnings announcements on stock prices can give investors confidence in the company's financial statements (Al-Baidhani et al., 2017). This is due to the fact that the main consequence of the shareholders' reaction to the information shared, especially related to company profits, is the change in share prices (Mashayekhi and Aghel, 2016).

Indonesia is a developing country with a large agricultural sector. One of the strong agricultural sub-sectors is the plantation sub-sector. In the plantation sub-sector, the country is an exporter of palm oil and rubber. According to the statistical data published by Palm Oil Analytics (POA) in 2017, Indonesia is a country that produces 58% of the world's total palm oil, making the country the number one palm oil producer in the world. In addition, based on the data from the Palm Oil Plantation Fund Management Agency (BPDPKS), the plantation sub-sector contributed IDR 429 trillion to Indonesia's GDP in 2016, IDR 260 trillion of which came from the palm oil sub-sector alone. This fact shows the strength of Indonesia's agricultural sector, suggesting its undoubted growth potential.

Perched in the second position, according to POA's statistical data, is Malaysia. Malaysia recorded production of 29% of the world's palm oil in 2016. According to the data from the The Palm Oil project that was initiated by the Malaysian Palm Oil Council (MPOC), 40% of all oil palm plantations in Malaysia are owned or planted by small farmers. There are more than 300,000 small farmers who manage plantations, measuring between 4 to 40 hectares. The industry employs more than 570,000 people and contributes to Malaysian exports of US\$21.09 billion. Listed on Bursa Malaysia, up to 2017, were 44 companies engaged in the plantation sub-sector. Even in the classification of the stock sector, Bursa Malaysia assigns the plantation sub-sector into one separate group. In November 2007, Greenpeace, an international non-profit environmental organization, published an article entitled How the Palm Oil Industry is Cooking the Climate. Greenpeace has openly campaigned for its opposition to palm oil, even pressuring buyers to stop buying palm oil from Indonesia which is considered dangerous to

the environment. The organization also accused the Indonesian palm oil industry as a cause of global warming. Palm oil exports to Europe became unstable with the establishment of regulations regarding renewable energy in European countries (Sasmi, 2018). This is related to the target of using biodiesel fuel at the 10% level in 2020, which is targeted by 27 countries joining the EU. In addition, the reputation of Indonesia's palm oil tends to decline because it is associated with the issue of deforestation, the effects of greenhouse gases, climate change, and threats to orangutan habitat.

Indonesia and Malaysia are not silent about this situation. The Ministry of Agriculture of the Republic of Indonesia then issued regulations on the Indonesian Sustainable Palm Oil Certification System as outlined in Minister of Agriculture Regulation No. 11/Permentan/OT.140/3/2015. Meanwhile, Malaysia has been actively undertaking projects dedicated to promoting the benefits of palm oil. One of them was executed through the The Palm Oil project created by the MPOC.

According to Mashayeki and Aghel (2016), when profits do not grow but tend to be persistent, company management may be trying to make an increase in company performance. This tends to have an impact on the reaction of shareholders to the capital market. Investors will try to see how the profits have been made by the company over the past few years. In addition, earnings persistence can also help forecast the condition of the industry and profits in the future as a material for decision-making of both investors and the government as a regulator.

In running its business, a company definitely needs capital. One way to get additional capital is to do an initial public offering (IPO). Companies that go public obtain additional capital from capital market investors. But in investing, the investors also cannot be separated from risk. Systematic risk is one form of investment risk, with a risk of deviation between expected earnings and actual profits (Delvira and Nelvirita, 2013).

Every company that has been in the form of a legal entity generally issues financial reports annually. A number of companies, especially middle and upper companies, will conduct audits of their financial statements. According to the American Institute of Certified Public Accountants (AICPA), one of the key aspects of auditing is to aim at providing a high level of comfort to the accuracy of financial statements for creditors, investors, and other parties outside the company. External auditors are considered responsible for stakeholders to maintain the health of accounting records and financial reporting transparency that has been done by the company. The public auditor offices included in the Big 4 category are considered as the four largest accounting firms throughout the world. The four accounting firms are Deloitte, Ernest & Young, KPMG, and Pricewaterhouse Coopers, which have experience and networks in hundreds of countries in the world. Certainly not only the name, these external auditors have also professional work standards and experts who have gone through qualifications and standardized training. These reasons create confidence in the quality of the Big 4 audits that are considered very reliable and professional.

Research related to earnings response coefficient is of interest because it has been found that research on this topic is still rare. In addition, as the plantation sub-sector in Indonesia and Malaysia is closely associated with palm-oil-free campaigns, there is some uniqueness to the preparation of this research.

## **2. Literature review and hypothesis development**

Agency theory is a new branch of economics that focuses on the role of information and incentives when individuals cooperate with respect to resource utilization. In agency relations, one party (principal) delegates tasks or activities to another party (agent). Agency theory openly addresses the contractual arrangement of the relationship between principal and agent operating most efficiently (Delbufalo, 2018). Post contractual problems arise after the principal and the agent are bound in a relationship. The main problem that occurs at this stage is the ability of the definition of incentive structures to motivate the agent to behave consistently according to the principal's objectives as well as the definition of principal information strategies that are important for evaluating and rewarding agent performance.

According to Sunarto (2009), companies that separate management and ownership functions will be vulnerable to agency conflicts. The management is motivated by opportunistic behavior and signaling. Under opportunistic motivation, the management tends to present higher profits than actual profits so as to lead to earnings opacity.



Under signaling motivation, on the other hand, the management tends to present earnings reports that contain earnings persistence to improve informativeness. Opportunistic motivation is related to the compensation to be received by the management, while signaling motivation is related to the prosperity of the shareholders. Earnings response coefficient is an estimate of the relationship between stock profits and unexpected company profits (Zakaria and Daud, 2013). The profits reported by the company have the ability to respond (Soei, Nangoi, and Kalalo, 2018). Market response to earnings information can be seen from the earnings response coefficient. Earnings response coefficient can see the information content in earnings by identifying market responses to company earnings announcements (Scott, 2009). According to Scott (2009), earnings response coefficient is used to measure unnatural earnings in a security in response to unexpected profits reported by a company. If the earnings response coefficient is low, then the earnings are less informative for investors in making economic decisions. Announcements containing information will make the market react at the time of the announcement. The reaction is shown by changes in the prices of the company's related shares.

Nofianti (2014) states that the use of earnings response coefficients in measuring earnings quality indirectly criticizes the effectiveness of the presentation of the company's financial statements where the report is expected to provide more benefits to its users. This argument is based on the use of earnings response coefficient, with reported earnings being compared with the expectations of community valuation.

Net income in the income statement is a very influential component on shares because shares are influenced by the financial performance of an issuer (Soei, Nangoi, and Kalalo, 2018). According to Basuki, Nahar, and Ridho (2017), earnings are important information in financial statements. This is because profits are the basis of tax calculations and the calculations of dividends to be held and distributed by the company provide the basis of investment policies and decision-making and serve as a reference for forecasting profits and future economic problems (Suwardjono, 2013). In general, companies try to gain profits and cash flow in their operations. To this end, they must manage the financial resources needed. Managerial efficiency can be seen from the use of available resources, and earnings persistence shows that efficiency (Atashband, Moienadin, and Tabatabaenasab, 2014). Creating a relationship between corporate strategy and earnings persistence is relevant to potential returns on the capital market (Martinez and Bassetti, 2016).

Systematic risk is a deviation between expected earnings and actual earnings (Delvira and Nelvirita, 2013). It is generally referred to as market risk which becomes a proxy using beta proxy with a single index model (Utami, 2015). Beta is a measure of the coefficient number that shows the sensitivity or trend of stock reactions to the market (Basuki, Nahar, and Ridho, 2017). Risk means the difference between realized profits and expected profits which is one thing that can harm investors when investing in a company (Darmawan and Purnawati, 2015).

Delvira and Nelvirita (2013) concluded that systematic risk is a risk that can affect all company shares and cannot be eliminated by diversification because risk is influenced by macrofactors that affect the market. Investors will reduce the level of risk acceptance by considering company specific risks in their investment decisions (Basuki, Nahar, and Ridho, 2017). They will assess the latest earnings to predict future profits and returns so that when future earnings have high risks, the reaction to expectations of investor acceptance will be low (Darwanis and Andina, 2013).

Audit quality is important to ensure the reliability of the company's financial statements and going concern opinion. Audit quality is displayed to ensure verification of conformity with reporting standards through examination of objective evidence (Zakaria and Daud, 2013). An important role of audit quality is to maintain the company's standards and operational performance. Audit quality is measured using several factors such as the use of the Big 4 auditors (Deloitte, Ernest and Young, KPMG, and Pricewaterhouse Coopers) which are already acknowledged for their professionalism and quality standards. In addition, the Big 4 firms usually offer to provide services from teams specializing in the industries in which clients are engaged; in other words, the audit work is carried out by auditors who have basic knowledge and experience about the clients' industries. Francis and Yu (2009) argue that the Big 4 accounting firms have better experts compared to smaller firms. They show that the audits conducted by larger public accounting firms will more easily detect material problems in the company's financial statements, ultimately resulting in higher audit quality.

Agency theory openly addresses the contractual arrangement of the relationship between principal and agent

operating most efficiently (Delbufalo, 2018). Earnings persistence shows the efficiency carried out by the management in the use of available resources. A study on company size, earnings growth, and earnings persistence as variables that moderated earnings response coefficients was conducted by Mashayekhi and Aghel in 2016. No evidence was found of a relationship between earnings persistence and earnings response coefficients, and it was concluded that persistence earnings have no effect on earnings response coefficient.

In 2014, Basuki conducted research to study the effects of accounting conservatism, earnings persistence, and systematic risk on earnings response coefficients by taking data from companies included on the LQ45 index. He also concluded that earnings persistence did not affect earnings response coefficient because the regression slope that had companies listed on the LQ45 index was companies with a value of more than 1, so investors did not respond sufficiently to companies with high but fluctuating incomes each period.

Basuki, Nahar, and Ridho in 2017 conducted research on the effects of accounting conservatism, earnings persistence, and systematic risk on the earnings response coefficients of the companies included on the LQ45 index in the period 2011 to 2015. They concluded that earnings persistence did not affect response coefficient because the inflated earnings fluctuated during the study period, suggesting that earnings were not the main information on which investors' investment decisions were based. Based on previous research, the hypotheses taken are as follows:

*H1.1: Earnings persistence has a positive effect on the earnings response coefficients of the plantation sub-sector companies listed on the Indonesia Stock Exchange from 2013 through 2017.*

*H2.1: Earnings persistence has a positive effect on the earnings response coefficient of the plantation sub-sector companies listed on the Bursa Malaysia from 2013 through 2017.*

Agency conflict is caused by differences of opinions between shareholders as principals and company management as agents out of opposing interests. According to Sunarto (2009), companies that separate management and ownership functions are vulnerable to agency conflicts. The management is motivated by opportunistic behavior and signaling. Risks of profit deviation can occur due to differences in interests of the agents due to opportunistic motivation.

According to Darwanis and Andina (2013), investors assess current earnings to predict future profits and returns; hence, when future profits pose a high risk, the reaction of investors acceptance expectations will be lower. Basuki, Nahar, and Ridho in 2017 conducted research on the effects of accounting conservatism, earnings persistence, and systematic risk on earnings response coefficients of companies included on the LQ45 index in the period 2011 to 2015. They concluded that systematic risk does not affect coefficient response because Indonesian investors tend to be risk-neutral. Based on previous research, the hypotheses taken are as follows:

*H1.2: Systematic risk has a negative effect on the profit response coefficients of the plantation sub-sector companies listed on the Indonesia Stock Exchange from 2013 through 2017.*

*H2.2: Systematic risk has a negative effect on the profit response coefficients of the plantation sector companies listed on the Bursa Malaysia from 2013 through 2017.*

Opportunistic motivation makes the management tend to present higher profits than the actual profits, leading to earnings opacity. An audit conducted by an external independent party can help carry out checks on the company's financial statements, thus providing certainty of the truth of the financial statements presented to shareholders as principals. Zakaria and Daud in 2013 wrote a journal that discussed the impact of audit quality on earnings response coefficient by taking evidence from Malaysia. They then concluded that audit quality has a positive and significant effect on earnings response coefficient. The higher the quality of the audit, the more it reduces uncertainty and gives investors confidence. In the end, the increase in corporate profits can occur and affect earnings response coefficient.

In 2018, Wahyuni and Herawaty examined the influence of audit quality on earnings response coefficients. They then argued that every time there is an increase in auditor quality with a debt policy intermediary variable by one point, the company's earnings response coefficient will increase. In 2018, Zhang, Ge, and Su conducted research that discussed audit quality, investor sentiment, and earnings response, finding that the relationship



between audit quality and its impact on capital market sentiment on earnings publications was not significant. Based on previous research, the hypotheses taken are as follows:

*H1.3: Audit quality has a positive effect on the earnings response coefficients of the plantation sub-sector companies listed on the Indonesia Stock Exchange from 2013 through 2017.*

*H2.3: Audit quality has a positive effect on the profit response coefficients of the plantation sub-sector companies listed on the Bursa Malaysia from 2013 through 2017.*

### 3. Research methods

The study was conducted with a population of companies listed on the Indonesia Stock Exchange and the Bursa Malaysia engaged in the plantation sub-sector from 2013 through 2017, from which samples were taken with the purposive sampling technique. The research samples were collected by the documentation method involving the audited financial statements of the plantation companies. The sample selection criteria were as follows:

1. The companies were listed on the Indonesia Stock Exchange and Bursa Malaysia in 2011–2017.
2. The companies issued audited financial statements during the period 2011–2017 consecutively.
3. The companies used the rupiah currency unit for the Indonesia Stock Exchange data sample and the ringgit currency unit for the Bursa Malaysia data sample.
4. The companies' financial reporting period was January 1–December 31.
5. The companies provided complete data.

This research is a quantitative study. Regression analysis is used in situations where an independent variable is hypothesized to have an influence on a dependent variable (Sekaran and Bougie, 2014). The data analysis method chosen was the panel data regression method, aided by the data processing software EViews.

The formulation of multiple linear equations for this research is as follows:

$$Y_{Ind} = \alpha + \beta X_{1\_EP} + \beta X_{2\_SR} + \beta X_{3\_AQ} + e$$

$$Y_{Mal} = \alpha + \beta X_{4\_EP} + \beta X_{5\_SR} + \beta X_{6\_AQ} + e$$

Where:

$Y_{Ind}$  = Indonesia Stock Exchange Earnings Response Coefficient

$Y_{Mal}$  = Bursa Malaysia Earnings Response Coefficient

$\alpha$  = Constant

$\beta$  = Coefficient

$X_{1\_EP}$  = Earnings Persistence of the Indonesia Stock Exchange

$X_{2\_SR}$  = Systematic Risk of the Indonesia Stock Exchange

$X_{3\_AQ}$  = Audit Quality of the Indonesia Stock Exchange

$X_{4\_EP}$  = Earnings Persistence of the Bursa Malaysia

$X_{5\_SR}$  = Systematic Risk of the Bursa Malaysia

$X_{6\_AQ}$  = Audit Quality of the Bursa Malaysia

$e$  = Error

#### 3.1 Earnings Response Coefficient

The profits reported by a company have the ability to respond (Soei, Nangoi, and Kalalo, 2018). Market response to earnings information can be seen from the earnings response coefficient. According to Zakaria and Daud (2013), earnings response coefficient is an estimate of the relationship between stock returns and unexpected company profits. News of unexpected earnings can result in purchasing panic, and a decrease in

unexpected profits can result in selling panic of shares (Mashayekhi and Aghel, 2016). Abnormal returns on the announcement date are weak indicators of the overall impact of earnings announcements (Bodie, Kane and Marcus, 2009). A better indicator is cumulative abnormal return, which is the amount of abnormal return around the announcement period. Syarifulloh and Wahyudin (2016) define earnings response coefficient as the sensitivity of income to returns as seen from the high or low slope coefficient of the earnings regression model. Earnings response coefficient is obtained from cumulative abnormal return and unexpected earnings, which are formulated as follows:

$$CAR_t = \alpha + \beta UE_t + e$$

$$UE_t = \frac{EPS_t - EPS_{t-1}}{EPS_{t-1}}$$

$$AR_t = R_t - R_{mt}$$

(Delvira and Nelvirita, 2013)

Where:

CAR = Cumulative Abnormal Return

$\beta$  = Earnings Response Coefficient

UE = Unexpected Earning

EPS<sub>t</sub> = Earnings per Share in Year t

EPS<sub>t-1</sub> = Earnings per Share in Year t - 1

AR = Abnormal Return

R<sub>t</sub> = Daily Stock Return

R<sub>mt</sub> = Daily Market Return

e = Error

### 3.2 Earnings Persistence

Managerial efficiency can be seen from the use of available resources, and earnings persistence shows that efficiency (Atashband, Moienadin, and Tabatabaenasab, 2014). Creating a relationship between corporate strategy and earnings persistence is relevant to potential returns on the capital market (Martinez and Bassetti, 2016). According to Delvira and Nelvirita (2013), earnings persistence is the expected ability of current earnings to explain earnings in the future. Earnings persistence can be seen from the overall financial statements and measurements based on the components of the financial statements. If earnings tend to be persistent or fluctuating, the earnings prediction power to predict the company's cash flow in the future will decrease (Delvira and Nelvirita, 2013). Earnings persistence can be formulated as follows:

$$X_t = \alpha + \beta X_{t-1} + e$$

(Delvira and Nelvirita, 2013)

Where:

X<sub>t</sub> = Net income of company i in year t

X<sub>t-1</sub> = Net income of company i in year t - 1

$\beta$  = Regression coefficient (earnings persistence)

### 3.3 Systematic Risks

Systematic risk is generally referred to as market risk which becomes a proxy using beta proxy with a single index model (Utami, 2015). Beta is a measure of the coefficient number that shows the sensitivity or trend of stock reactions to the market (Basuki, Nahar, and Ridho, 2017). Risk means the difference between realized profits and expected profits which is one thing that can harm investors when investing in a company (Darmawan and Purnawati, 2015). According to Bodie, Kane, and Marcus (2009), systematic risk is risk that

persists even after diversification of related sources of risk throughout the market. Systematic risk is well estimated by regression in beta calculations (Bodie, Kane, and Marcus, 2009). Beta coefficients are obtained from stock returns regression with market returns which are formulated as follows:

$$R = \alpha + \beta R_m + e$$

Where:

R = Stock return

$\beta$  = Stock Beta (systematic risk indicator)

R<sub>m</sub> = Market return

e = error

$$R = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

Where:

R = Stock return of company i in year t

P<sub>it</sub> = Closing price of stock i in year t

P<sub>it-1</sub> = Closing price of stock i in year t - 1

$$R_{mt} = \frac{IHSG_t - IHSG_{t-1}}{IHSG_{t-1}}$$

Where:

R<sub>mt</sub> = Daily market return

IHSG<sub>t</sub> = Composite Stock Price Index at the close of the year t

IHSG<sub>t-1</sub> = Composite Stock Price Index at the close of the year t - 1

### 3.4 Audit Quality

Francis and Yu (2009) argue that Big 4 accounting firms have better experts compared to smaller firms. They show that the audits conducted by larger public accounting firms will more easily detect material problems in the company's financial statements so that they can ultimately result in higher audit quality. This variable will be measured with a dummy, where the value of 1 (one) is assigned if the company is audited by either of the Big 4 public accounting firms, and the value of 0 (zero) if the company is audited by other public accounting firms.

## 4. Results and Discussion

The type of data used in conducting research is panel data. Data were obtained by using the purposive sampling technique from the study population by setting certain criteria. The population in this study was plantation sub-sector companies listed on the Indonesia Stock Exchange and the Bursa Malaysia.

Table 1. Sample Selection in Indonesia Stock Exchange and Bursa Malaysia

No	Criteria	Indonesia	Malaysia
1	Number of plantation companies listed on Indonesia Stock Exchange / Bursa Malaysia year 2018	20	44
2	Companies that did not publish consecutive audited financial statements from 2011-2017	-11	-3

3	Financial statements using foreign currencies (not Rupiah / Ringgit)	0	0
4	Period of financial statement outside date 1 January – 31 December	0	-17
5	The company did not provide complete data	0	-1
	Sample companies	9	23
	Research period	5	5
	<b>Total observation data</b>	<b>45</b>	<b>115</b>

Source: Processed Data

Based on the results of the selection of data in table 1, there were 45 data for the Indonesia Stock Exchange research and 115 data for the Bursa Malaysia research.

#### 4.1 Descriptive Statistics

Table 2. Descriptive Statistics

Indonesia Stock Exchange				
	Y1_ERC	X1_EP	X2_SR	X3_AQ
<b>Mean</b>	0.001644	-0.075467	0.715556	0.511111
<b>Maximum</b>	0.824	3.355	3.244	1
<b>Minimum</b>	-0.31	-3.738	-2.237	0
<b>Std. Dev.</b>	0.155823	1.16045	1.531977	0.505525
Bursa Malaysia				
	Y2_ERC	X4_EP	X5_SR	X6_AQ
<b>Mean</b>	-0.004695	-0.20836	1.470324	0.643478
<b>Maximum</b>	0.179986	4.613219	24.99762	1.000000
<b>Minimum</b>	-0.247731	-8.699986	-8.91253	0.000000
<b>Std. Dev.</b>	0.050416	1.256925	4.098124	0.481068

Source: Data processing results using Eviews

Based on the results of the descriptive statistics above, the Indonesia Stock Exchange data can be described as follows. The maximum earnings response coefficient was 0.824, scored by PT BISI International Tbk in 2013. Meanwhile, the minimum was -0.31, scored by PT Astra Agro Lestari Tbk in 2013. The maximum value of earnings persistence was 3.355, scored by PT Gozco Plantation Tbk in 2013, while the minimum was -3.738, scored by PT Bakrie Sumatera Plantations Tbk in 2017. The maximum value of systematic risk of 3.244 was obtained by PT Tunas Baru Lampung Tbk in 2016, while the minimum value of -2.237 by PT Eagle High Plantations Tbk in 2014. Audit quality was a dummy variable with a standard deviation of 0.505525.

Descriptive statistical tests were also carried out on 115 Bursa Malaysia data with EViews. Based on the results of the descriptive statistics above, the Bursa Malaysian data can be described as follows. The maximum earnings response coefficient was 0.179986, scored by MHC Plantation Berhad in 2013. Meanwhile, the minimum was -

0.247731, scored by United Plantation Berhad in 2017. The maximum value of earnings persistence was 4.613219, scored by Rapid Insight Group Berhad in 2015, while the minimum was -8.699986, scored by Harn Len Corporation Berhad in 2013. The maximum value of systematic risk of 24.99762 was scored by Innoprise Plantation Berhad in 2016, while the minimum value of -8.91253 by TSH Resources Berhad in 2016. Audit quality variable was a dummy variable with a standard deviation of 0.481068.

#### 4.2. Panel Data Testing Model Selection

A Chow test was carried out to determine the best model between the common effect and the fixed effect. Based on the Chow test results, for the Indonesia Stock Exchange data, the value of the cross-sectional Chi-square was 0.2598, greater than 0.05. It can be concluded, then, that the model chosen for the Indonesia Stock Exchange data was the common effect. As for the Bursa Malaysia data, the cross-sectional Chi-square value was 0, smaller than 0.05. It can be concluded that the model chosen for the Bursa Malaysia data was the fixed effect.

A Hausman test was then performed to determine the best model between the fixed effect and the random effect. Based on the Hausman test results, for the Indonesia Stock Exchange data, the chi-square probability value was 0.0834, greater than 0.05, so it can be concluded that the model chosen for the Indonesia Stock Exchange data was the random effect. As for the Bursa Malaysia data, the chi-square probability value was 0.613, greater than 0.05, too, so it can be concluded that the model chosen for the Bursa Malaysia data was the random effect.

A Lagrange multiplier test was performed to determine the best model between the common effect and the random effect.

Table 3. Lagrange Multiplier Test

Indonesia Stock Exchange			
	Cross-section	Time	Both
Breusch-Pagan	0.214232	0.000524	0.214756
	(0.6435)	(0.9817)	(0.6431)
Bursa Malaysia			
	Cross-section	Time	Both
Breusch-Pagan	28.17550	0.028717	28.20422
	0	-0.8654	0

Source: Data processing results using Eviews

Based on the test results in table 3, for the Indonesia Stock Exchange data, the probability value of the Breuch Pagan was 0.6431, greater than 0.05, so it can be concluded that the model chosen for the Indonesia Stock Exchange data was the common effect. As for the Bursa Malaysia data, the Breuch Pagan probability value was 0, smaller than 0.05, so it can be concluded that the model chosen for the Bursa Malaysia data was the random effect.

#### 4.3 Hypothesis testing

##### 4.3.1 Indonesia stock exchange

Based on the coefficient of determination, for the Indonesia Stock Exchange data, the adjusted R-squared value obtained by the common effect model was 0.035873, meaning that earnings persistence, systematic risk, and audit quality explained earnings response coefficient at 3.56%, while the other 94.34% was explained by

variables not examined in this study. Based on the results of the Simultaneous Significance test for the Indonesian Stock Exchange data using the common effect model, the F-statistic value was 0.217187, greater than the significance value of 0.1. This means that earnings persistence, systematic risk, and audit quality together or simultaneously did not influence earnings response coefficient on the Indonesia Stock Exchange. Significance testing helps to find out whether each independent variable influences the dependent variable. Individual significance tests focus on the effect of each independent variable. The level of significance specified in the study was 10% or 0.1.

Table 4. Individual Significance test–Indonesia Stock Exchange

Variable	Coefficient	Std. Error	Prob.
C	-0.007871	0.035243	0.8244
X1_EP	0.017853	0.020027	0.3779
X2_SR	0.028983	0.015107	0.062
X3_AQ	-0.019324	0.046104	0.6773

Source: Data processing results using Eviews

Based on table 4, the regression equation is obtained as follows:

$$\text{ERC} = -0.007871 + 0.017853 \text{ X1\_EP} + 0.028983 \text{ X2\_SR} - 0.019324 \text{ X3\_AQ} + e$$

#### 4.3.2 Malaysia Stock Exchange

Based on the coefficient of determinant for the Bursa Malaysia data obtained using the common effect model, the adjusted R-squared value was 0.041575, meaning that earnings persistence, systematic risk, and audit quality explained earnings response coefficient at 4.16%, while the other 95.84% was explained by variables not examined in this study. Based on the results of the Simultaneous Significance test for the Bursa Malaysia data using the random effect model, the F-statistic value was 0.052450, smaller than the significance value of 0.1. This means that earnings persistence, systematic risk, and audit quality together or simultaneously had an effect on the earnings response coefficient on the Bursa Malaysia.

Table 5. Individual Significance Test – Bursa Malaysia

Variable	Coefficient	Std. Error	Prob.
C	-0.009496	0.011932	0.4278
X4_EP	-0.007041	0.003295	0.0348
X5_SR	-0.001733	0.000988	0.0823
X6_AQ	0.009139	0.014303	0.5241

Source: Data processing results using Eviews

Based on table 5, the regression equation is obtained as follows:

$$\text{ERC} = -0.009496 - 0.007041 \text{ X4\_EP} - 0.001733 \text{ X5\_SR} + 0.009139 \text{ X6\_AQ} + e$$

#### 4.5 Discussion

Hypothesis 1.1 states that earnings persistence has a positive effect on the earnings response coefficients of the plantation sub-sector companies listed on the Indonesia Stock Exchange. Based on the test results, the probability value of X1 was 0.3779, greater than 0.1. It can be concluded that earnings persistence has no influence on earnings response coefficients. From these results it was concluded that H01.1 was rejected and Ha1.1 was accepted. Agency theory openly addresses the contractual arrangement of the relationship between principal and agent operating most efficiently (Delbufalo, 2018). Earnings persistence shows the efficiency of the management in using available resources. Cost efficiency can certainly show investors the attractiveness of investing. The results of this study are consistent with the research conducted by Mashayekhi and Aghel in 2016, who found no evidence of a relationship between earnings persistence and earnings response coefficients. Their research concluded that earnings persistence has no effect on earnings response coefficient. Basuki, Nahar, and Ridho in their research in 2016 concluded that earnings persistence has no effect on earnings response coefficient. They argued that during the observation period of the study, fluctuating earnings were informed so that earnings did not become information for decision making for investors. It was found in this study that earnings tended to fluctuate. One of the factors that might have an effect was the crude palm oil (CPO) commodity price, which tended to decrease during the study years.

Hypothesis 1.2 states that systematic risk positively influences the earnings response coefficients of the plantation sub-sector companies listed on the Indonesia Stock Exchange. Based on the test results, the probability value of X2 was 0.062, smaller than 0.1. It can be interpreted that systematic risk has an influence on earnings response coefficient. From these results it was concluded that H01.2 was accepted and Ha1.2 was rejected. Motivation of signaling is related to the prosperity of the shareholders. Investors see the level of risk as a signal step or investment decision to reduce the impact of investment risk. The results of this study were likely to occur because of the downward trend in crude palm oil (CPO) commodity prices which tends to cause a decline in profits for plantation companies. Thus, for investors in Indonesia, despite a decline in corporate profits and the higher risk resulted, because it is still one of the country's export commodities, investors still see potential growth for the companies, especially with the biofuel policy the government has started to discuss.

Hypothesis 1.3 states that audit quality has a positive effect on the earnings response coefficients of the plantation sub-sector companies listed on the Indonesia Stock Exchange. Based on the test results, the probability value of X3 was 0.6773, greater than 0.1. From the results of these tests, it can be seen that audit quality has no effect on earnings response coefficient. From these results it was concluded that H01.3 was rejected and Ha1.3 was accepted. These results are consistent with the research conducted by Zhang, Ge, and Su in 2018. Zhang, Ge, Su found that the capital market sentiment toward audit quality was not significant.

Hypothesis 2.1 states that earnings persistence has a positive effect on the earnings response coefficients of the plantation sub-sector companies listed on the Bursa Malaysia. Based on the test results, the probability value of X4 was -0.0348, smaller than 0.1. It can be interpreted that the persistence of earnings has an influence on earnings response coefficient. From these results it was concluded that H02.1 was rejected and Ha2.1 was accepted. Agency theory openly addresses the contractual arrangement of the relationship between principal and agent operating most efficiently (Delbufalo, 2018). Earnings persistence shows the efficiency of the management in using available resources. Cost efficiency can certainly show investors the attractiveness of investing. The results of this study could be caused by the many companies that were experiencing losses from the palm-oil-free campaign. Investors expected an increase in corporate profits amid the losses faced.

Hypothesis 2.2 states that systematic risk negatively affects the earnings response coefficients of the plantation sub-sector companies listed on the Bursa Malaysia. Based on the test results, the probability value of X2 was 0.0823, smaller than 0.1. It can be interpreted that systematic risk has an influence on earnings response coefficient. From these results it was concluded that H02.2 was accepted and Ha2.2 was rejected. The results of this study are in line with the study of Darwanis and Andina in 2013, which stated that investors assess current earnings to predict future profits and returns, so that when future profits pose a high risk, the reaction of investor acceptance expectations is lower. According to Sunarto (2009), companies that separate management and ownership functions are vulnerable to agency conflicts. The management is motivated by opportunistic



behavior and signaling. The risk of profit deviation can occur due to differences in interests by agents because of the opportunist motivation.

Hypothesis 2.3 states that audit quality has a positive effect on the earnings response coefficients of the plantation sub-sector companies listed on the Bursa Malaysia. Based on the test results, the probability value of X3 was 0.6773, greater than 0.1. It can be concluded that audit quality has no effect on earnings response coefficient. From these results it was concluded that H02.3 was rejected and Ha2.3 was accepted. These results are consistent with the research conducted by Zhang, Ge, and Su in 2018. Zhang, Ge, Su found that capital market sentiment toward audit quality was not significant.

## 5. Conclusions

Earnings persistence has no influence on the earnings response coefficients of the plantation sub-sector companies listed on the Indonesia Stock Exchange. Systematic risk has a positive effect on the earnings response coefficients of the plantation sub-sector companies listed on the Indonesia Stock Exchange. Audit quality has no influence on the earnings response coefficients of the plantation sub-sector companies listed on the Indonesia Stock Exchange.

Earnings persistence has a negative influence on the earnings response coefficients of the plantation sub-sector companies listed on the Bursa Malaysia. Systematic risk has a negative influence on the earnings response coefficients of the plantation sub-sector companies listed on the Bursa Malaysia. Audit quality has no effect on the earnings response coefficients of the plantation sub-sector companies listed on the Bursa Malaysia.

Research results in Indonesia and Malaysia show different results for earnings persistence and audit quality variables. Earnings persistence has no influence for investors in Indonesia but influences investors in Malaysia. In addition, although systematic risks have effects on investors in Indonesia and Malaysia, the effects are the opposite, that is, a positive influence on the plantation companies in Indonesia and a negative effect on the plantation companies in Malaysia. The audit quality variable has the same result, that is, no influence on investors in Indonesia and Malaysia.

In conducting this research, some limitations arose. For instance, the scope of the sector investigated was too small, with only one sub-sector examined on each of the Indonesia Stock Exchange and the Bursa Malaysia. In addition, the plantation sub-sector companies' profits were volatile, both in Indonesia and Malaysia. One of the culprits was the palm-oil-free campaign which wants to reduce the use of palm oil commodities, harming the positions of Indonesia and Malaysia as the number one and two producers and exporters of palm oil in the world. For academics it is recommended to use other variables in the study of earnings response coefficients because the variables examined in this study have an insignificant simultaneous effect. In addition, it is also recommended to also examine a wider market scope of Indonesia and Malaysia or other objects besides plantation companies.

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# Econometric Modeling of the Factors Determining the Consumption of Natural Gas by Households in Indonesia

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## Abstract

One of the objectives of the energy transition is to redefine our current mode of production and consumption by relying on a new model: sustainable, concerned with respect for the environment, economics and avoiding the exhaustion of natural resources. This study, using an empirical study seek to estimate the response of natural gas consumption by households to variations in its elasticity, is a contribution to the on-going debate on natural gas consumption by households over whether what determines its use, although Indonesia is at the top of among users of this energy source in the World; attention has been paid to the features of the consumption and population. Therefore, this study involves past independent variables throughout 1970-2018, which explain the consumption of natural gas by households in the future. The results indicate that there is an imbalance in the use of this energy source due to income inequality thus a short-run equilibrium relationship. The study finds also evidence of unidirectional causality between the gas production and population as well as bidirectional causality between Gross National Income and population to the consumption of natural gas. The ultimate of the study is the need for meeting the global demand in the coming decades either by changing the current energy system consumption, particularly as a result of population pressure.

**Keywords:** Energy consumption, natural gas, population, income, households.

## 1. Introduction

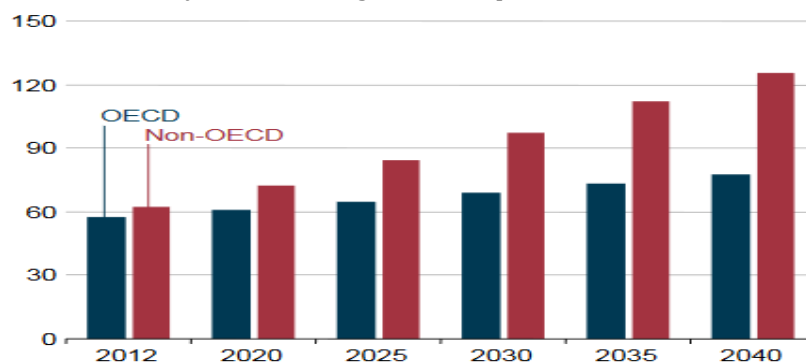
Since the industrial revolution in the 19th century, the use of energy has grown, and the exploitation of new forms of energy has become a necessity to ensure the current standard of living of humanity.

In 2016, a large part of the world's population does not have access to modern and clean energy, especially the rural poor in sub-Saharan Africa and Asia. Indeed, globally, more than 95% of people without access to energy services live in these areas, including 84% in rural areas (IEA 2012). In other parts of the world, such as some countries in Latin America and the Caribbean, around 28 million people are still without electric power and several more million do not yet have access to modern fuels for cooking, despite the high urbanization rates of most of these countries (CEPAL 2009; CAF 2013). In Central America, nearly seven million people have little or no access to electricity services (Dolezal A. et al., 2013)

According to the International Energy Agency, about one in seven people on the planet, or 1.1 billion people, has no access to energy for cooking, and nearly 3 billion continue to use fuels pollutants for cooking (kerosene, wood, charcoal, animal excrement, etc.). When available, it can be expensive: in many countries in sub-Saharan Africa, consumers pay expensive prices. These populations thus accumulate inequalities. Not only do they not have access to the network or comfort due to nonexistent or deficient infrastructure, but they also use polluting alternative resources that threaten their health.

In developing countries, research highlights the need to have at its disposal new energy sources making it possible to put an end to external dependence, whether for energy needs or the field of technology required for imported energies (Nesimioğlu 2016). The discourse closer to concrete situations, particularly in developing countries, is based on a conception of energy that favors production and use (Jany-Catrice and Kampelmann 2007). This approach helped to understand that given the insufficient resources for the production of energy, new technologies are to be set up to find substitutes such as the adaptation of the energy mix.

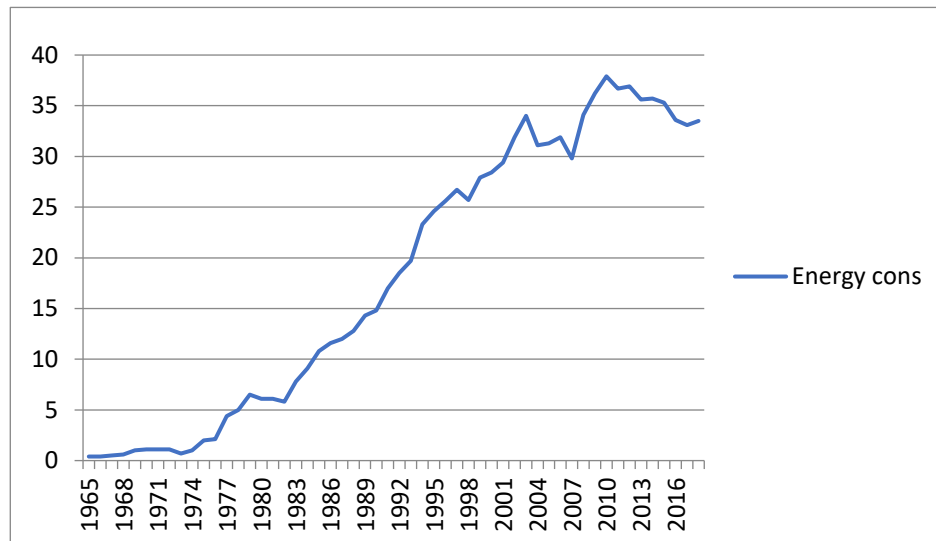
The consumption factor is very important, hence the interest in the growth of domestic needs and individualized transport (Ackah 2014). Concerning the production and use of energy in a market economy, the problem is most often located in the overall logic of a market economy for western companies whose economic referent favors production. In other words, the same criteria as those which control the production of other goods, namely the maximization of profits and the minimization of production costs must be applied to energy. According to the International Energy Agency (2015a), natural gas represented 21.4% of global primary supply of energy, below coal (28.9%) and oil (31.1%). In that same year, natural gas accounted for 15.1% of global energy final consumption. The international natural gas trade continues to grow, it accounts for almost half of the world's primary energy consumption in 2018 and it is expected to increase by more than 10% over the next five years to 4.3 trillion cubic meters (tcm) in 2024 to satisfy the demands. Asian economies will drive growth in global demand over the next five years, according to a new report from the International Energy Agency (IEA).



**Figure 1:** World natural gas consumption 2012-40, trillions cubic feet

(Source: International energy outlook 2016)

Energy consumption was greater in Asia than in any other region in 2018, and the consumption will almost double between 2018 and 2050, making Asia both the largest and fastest-growing region in the world for energy consumption. The non-OECD region's consumption grows by an average of 2.5%/year from 2012 to 2040, compared with 1.1%/year in the OECD countries. As a result, Asian countries account for 76% of the total world increment in natural gas consumption, and their share of world natural gas use grows from 52% in 2012 to 62% in 2040. This long-term trend of Asian energy consumption to support growing economies strongly influences therefore, the extraction, refining, and transport of oil, natural gas, and other fuels.



**Figure 2:** Indonesia natural gas Consumption evolution

(Source: Made by the author using data from British Petroleum)

In addition to being the most populous country in Southeast Asia, Indonesia is also the region's largest energy consumer, accounting for 36% of the region's total primary consumption.

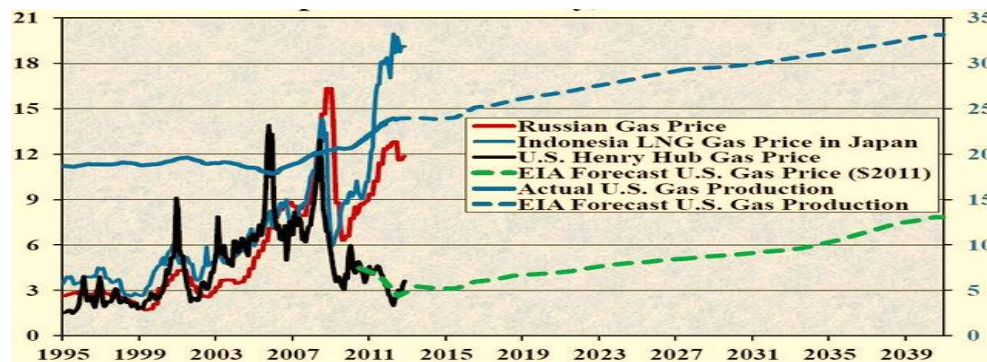
Indonesia's total primary energy consumption grew by 43% between 2003 and 2013, according to the Indonesian government. The country's petroleum share, although decreasing, continues to account for the highest portion of Indonesia's energy mix at 38% in 2013 (Figure 1). In the past decade, coal consumption more than doubled, surpassing natural gas consumption and becoming the second most consumed fossil fuel as Indonesia turned to less expensive sources of indigenous fuels.<sup>2</sup> Indonesia intends to reduce its reliance on petroleum in its energy consumption portfolio to a 25% maximum share while raising the coal and natural gas portions to at least 30% and 22%, respectively, by 2025.

In 2011, domestic demand for natural gas in the country started at a low level but continued to increase, consumption having doubled between 2005 and 2013 (Fig. 1), making the question of natural gas exports a question increasingly political and social.

Concerning the production and use of energy in a planned economy, it is the use of energy extended to several consumers for basic needs, which is preferred. In this situation, the minimization of costs relates to usage. This means that the cheaper sources of energy, and also the intervene in prices are the solutions key, while trying to curb consumption, industrial or private, which risks becoming quickly exaggerated when the energy product is inexpensive. The government is trying to redirect companies from export markets to better meet domestic demand. He also took charge of the construction of new LNG reception terminals and gas transmission pipelines, Perusahaan Gas Negara<sup>10</sup> had planned to develop distribution pipe in several cities in Indonesia to accelerate the gas sale. However, since natural gas is an important source of income for the country, the government is finding a balance between exports and domestic demand.

<sup>10</sup> Taking investors inside Indonesia's economy





**Figure 4.** Historical evolution of gas prices

Source: Patrick Brocorens (July 2014)

The fall in world crude oil prices from mid-2014 to early 2016 had an impact on the decline in Indonesian gas prices. During 2015-2016, domestic gas prices fell more than 30 percent per year. The price of gas for exports in the form of Liquefied Natural Gas (LNG) felt the most while domestic gas prices through the pipeline felt the lowest.

To better understand the theoretical advantages of our theme, we may then conduct a bibliographic research by reading various works and articles related to the identification of the same theme.

## 2. Literature review

The scarcity of fossil fuels (Chauvin et al., n.d.) and global warming (Shahzad 2015) are the two limits facing the current energy system. By energy system, we must understand the original combination of various converter channels which are characterized by the use of specific energy sources and by their interdependence (Kramer et al. 2008). Questions about the sustainability of the energy system arise following the rise in global energy demand, due to population growth and the development of emerging and southern countries, the maintenance of high energy consumption in northern countries, the scarcity of fossil fuels and global warming ((Balaye et al. 2018); IEA, 2014). The various studies on the accessibility of energy and the choice between different energies by households have analyzed the determinants of its demand, that is to say the factors which favor or limit its consumption (Yuni et al. 2017), (Pachauri et al., n.d.), (Issaka 2014), and (Issaka 2014), (Abdul-Wakeel Karakara and Dasmani 2019), and (Ouedraogo 2006). These studies were carried out in connection with the concepts of poverty, energy security and convenience.

Some authors have analyzed demand using the “cooking energy scale” hypothesis while others have analyzed the concept of multiple fuel use. A simple linear progression of households in their energy consumption behavior has been observed in developing countries in general. In fact, households which initially used inefficient sources of energy and equipment (households) adopt more efficient sources of energy and households as their incomes and the degree of urbanization increase (Farsi, Filippini, and Pachauri 2007). A central role of income in the choice of the energy source to be adopted has been attributed in some theories. Poor households mainly consume biomass-based fuels, in particular fuel wood (Muller and Yan 2018). Firewood remains the preferred source of energy for the poor because it has no market price (especially in rural areas) since it is freely collected from the surrounding forest. The cost of the cooking stove (three-stone hearth)



using firewood is also negligible (Pachauri and Spreng, n.d.). In other words, because of their high initial costs, the poor often cannot afford improved stoves and opt for traditional stoves at low cost, due to their lack of capital (Clancy and Skutsch, n.d.).

The consequences for the poor are that their low income (which is very precious for them) is used to buy poor quality, polluting, inefficient fuels, thus reducing their capacity to accumulate financial resources necessary to finance households likely to improve their living conditions (karekezi, n.d.).

Finally, wealthy households consume clean (modern) fuels such as butane gas and electricity (Goozee, n.d.). Indeed, wealthy households can make a number of choices in terms of energy and many opt for more efficient modern energy sources such as electricity or gas. These high-income households can also afford the equipment that uses these types of modern energy. Even though these wealthy households use biomass-based energies, they can buy more fuel-efficient stoves<sup>11</sup> (Clancy et al., 2006). In this way, they save a lot of money per unit of energy consumed. A threshold income level at which households change energy sources exists then and this differs widely from one country to another because it depends on the specific characteristics of urban households, and on government policies (Yuni et al. 2017).

A study conducted by Eltony (1996) concluded on the demand of the natural gas in Kuwait using two econometrics models: Partial Adjustment Model (PAM) and Error Correction Model ECM. The demand for natural gas was inelastic with respect to both price and income for both the short and long run.

According to Barnes and Qian, in developing countries, policies to promote butane gas for households with income per capita less than US \$ 25 per month are doomed to failure (Muller and Yan 2018). Thus, they estimate that from an income level higher than US \$ 25 per person per month, households can change their fuel consumption and use natural gas. Still according to these same authors, the minimum income level necessary to access electricity is much lower (US \$ 5 to 10 per capita per month). As for (Ouedraogo 2006) shows that the inertia of preferences for household cooking energy in Burkina Faso is due to poverty factors such as low income, poor households' access to electricity for primary and secondary energy, the size of the household, the high frequency of cooking certain meals using wood fuel as cooking energy. Djézou's study (2009), which he carried out in Côte d'Ivoire, shows that in addition to income, the relative price of gas / coal, the availability of butane gas, the level of education, the possession of "a gas fireplace are the key elements of an energy transition policy.

Studies above summarize different elasticity of demand for natural gas. In fact, no effort has been made to capture the energy saving efficiency or the effect of other exogenous studies on the demand for natural gas in the residential sector. This study attempts then to model the effect of income, final (available) production of natural gas, and exportation by the government and exogenous factors on demand for natural gas in Indonesia.

### **3. Data source and methodologies framework**

The economic theories adopted provide ideas on the processes that determine the economic magnitudes on the consumption of natural gas by households. We carry out then an empirical analysis of the variables that we considered explanatory of the consumption of natural gas by households in Indonesia. We have chosen the best explanatory variables covering the period 1970-2018, which are directly correlated with the consumption of

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<sup>11</sup> Clean and improved cooking energy in sub-Saharan Africa, 2014-2<sup>nd</sup> edition

natural gas (by households) in Indonesia under the constraint of the availability of data from various reviews available on British Petroleum Council and World Bank.

#### 4. Econometric model Specification approach

The empirical application of our analysis carried out under the Eviews software follows a linear econometric model, on which we associate an additive stochastic which will lead our variables to a random process or random function, to represent an evolution, discrete or continuous time.

$$\ln NGC = \ln PROD + \ln GDPC + \ln GNIC + \ln POP + \varepsilon \quad (1)$$

Where:

<b>NGC</b>	: Natural Gas Consumption
<b>PROD</b>	: Gas production
<b>GDPC</b>	: Growth Domestic per Capita
<b>GNIC per capita</b>	: the dollar value of a country's final income in a year, divided by its population
<b>POP</b>	: Population

The econometric structure of this equation expresses the variability of household consumption of natural gas as a function of gas production (availability of gas), growth domestic per capita, per capita income evolution, and population. In others sense, any decrease or increase in the use of natural gas must be from to an equivalent change in at least one of the explicative factors.

#### 6. Empirical studies approach

Working on time series, we first adopt tests to highlight their stationary. Thus, a time series is stationary if it contains neither trend nor seasonality, more generally, no factor changing over time. We say that a variable is integrated of order p if its difference of order p is stationary. We conclude therefore that its difference of order p is of zero increase. In this case, it is a question of seeing the empirical application on the economic series, of the various methods which make it possible to recognize the nature of the non-stationary of a chronological series, and to see if they admit a representation of type TS (trend stationary) or a DS (different stationary) representation, in other words, if the non-stationary which characterizes them is deterministic or stochastic in the sense large. We will therefore implement the Dickey-Fuller stationary test (DF and ADF) completed by Phillips-Perron (PP) tests and the Kwiatkowski, Phillips, Schmidt and Shin (KPSS) test.

Otherwise, application of the unit root tests requires testing based on the estimation by OLS, under the alternative hypothesis, of three first-order autoregressive models whose errors are identically and independently distributed: the model without constant, the model with constant and the model with constant and trend.

Models to follow are:

$$\begin{aligned} \text{Model(1): } \Delta Y_t &= \pi y_{t-1} + \sum_{j=2}^p \phi_j \Delta y_{t-j+1} + u_t, \text{ no intercept, and no trend} \\ \text{Model(2): } \Delta Y_t &= c + \pi y_{t-1} + \sum_{j=2}^p \phi_j \Delta y_{t-j+1} + u_t, \text{ intercept only} \\ \text{Model(3): } \Delta Y_t &= c + bt + \pi y_{t-1} + \sum_{j=2}^p \phi_j \Delta y_{t-j+1} + u_t, \text{ Trend and intercept} \end{aligned} \quad (2)$$

It will first be necessary to select the maximum number of delays so as to whiten the residues of the regression. The test procedure is based on the estimation by OLS, under the alternative hypothesis, of those three models autoregressive of order p obtained by subtracting  $y_{t-1}$  from two members of Dickey and Fuller models (1), (2) and (3) and adding p-1 delays in first differences.

In practice, we start with the application of the test on the general model which includes all the cases, which takes into account all the properties likely to characterize a series; it is the model (3). Indeed, if the model is not the "right", the thresholds used for the unit root test are invalid. There is then a risk of making a diagnostic error regarding the stationary of the series. In this case, the unit root test should be repeated in another, more constrained model. And so on, until we find the "right" model, the "good" thresholds and of course the good result.

We will then envisage individual tests as below:

$$H_0: \rho = 1 \quad \text{Vs} \quad H_1: \rho < 1$$

We then compare the realization of the Student statistics at thresholds tabulated by Dickey and Fuller or McKinnon. If the achievement is greater than threshold, we accept the null hypothesis of no stationary.

To see how much of the variables are self-determining, a study of the short- or long-term causality between the consumption of natural gas and its explanatory variables is done by the autoregressive vector or error correction vector method by decomposing the variance. The calculation of the impulse functions of a model VAR amounts to analyzing how the variation at date t of the innovation of a variable of interest will affect all of the variables for the periods t, t + 1, t + 2,

We are interested in the study of co-integration between the four variables (NGC, G. PROD, GDPC, GNIC, and POP) according to the co-integration test procedure of Johansen (1988). Johansen and Juselius propose that the multivariate co-integration methodology can be defined as:

$$\ln NGC = \ln p(\text{PROD}, \text{GDPC}, \text{GNIC}, \text{POP})$$

Which is a vector of P=4 elements. Considering the following autoregressive representation:

$$Y_t = \pi_0 + \sum_{i=1}^k \pi_i Y_{t-i} + \mu_t$$

The null hypothesis for the trace test is that the number of co-integration vectors is  $r = r^* < k$ , vs. the alternative that  $r = k$ . Testing proceeds sequentially for  $r^* = 1, 2$ , etc. and the first non-rejection of the null is taken as an estimate of  $r$ .

The co-integration Johansen test is more effective than the two-step strategy of Engle and Granger (1987) when the sample is small and the number of variables high (Johansen 2000). We will then close the analysis by

applying the so-called sequential Granger test causality between the variables of the model.

## 7. Empirical results

Table 1: Results of stationery and co-integration tests

Variables	Level			1rst difference			
	ADF	PP	KPSS	ADF	PP	KPSS	Decision
LnNGC	-1.043	-1.03	0.231	-5.506**	-7.343**	0.037**	I(1)
LnPROD	-4.339**	-1.276	0.216	-2.942	-5.733**	0.062**	I(1)
LnGDPC	-2.248	-2.314	0.113	-6.134**	-6.136**	0.095**	I(1)
LnGNIC	-3.560**	-2.251	0.095	3.569**	-3.555**	0.098**	I(1)
LnPOP	-3.907**	0.816	0.241	-1.033	2.417	0.138**	I(1)

**Note:** \*\* denotes the rejection of null hypothesis of no stationary at the 5% level

**Source:** author's calculations

The results obtained for the level variables indicate that the NGC, PROD, GDPC, GNIC and POP series are not stationary at the 5% threshold. Indeed for these series, the test statistics ADF, PP and KPSS have probabilities greater than 5% and therefore authorize not to reject the null hypothesis of unit root (non -stationary) and on the other hand the PROD series on the ADF test, GDPC on the KPSS test, POP on the test of ADF accept the assumption of stationary. However, considering the results of the PP test, we cannot reject the null hypothesis of unit root for these variables. The test carried out on the first difference series rejects the null hypothesis of non-stationary for all series at the 5% threshold. However for the POP series, the KPSS test rejects the null hypothesis of non -stationary while the PP test accepts the hypothesis of the presence of unit root (non-stationary).

Considering the results of the ADF and KPSS tests, we cannot reject the null hypothesis of no unit root for this variable.

Table 2: Johansen-Juselius co-integration test results

Number of co-integration relationship	Eigen value	Trace stat.	Adjusted trace statist <sup>a</sup> .	Critical value 5%	Adjusted Critical value 5%
r=0	0.819047	177.6880*	76.92834*	69.81889	33.87687
r≤1	0.658044	100.7597*	48.28831*	47.85613	27.58434
r≤2	0.600559	52.47134*	41.29606*	29.79707	21.13162
r≤3	0.171133	11.17528	8.446312	15.49471	14.26460
r≤4	0.058842	2.728970	2.728970	3.841466	3.841466

**Note:** a /The values of the statistics are adjusted according to the correction by Reinsel and Ahn (1992).

b / The asymptotic critical values are corrected according to Cheung and Lai (1993).

r indicates the number of co-integration relationships. The AIC and SC criteria were used to determine the number of optimal delays.

\* indicates rejection of the non-co-integration null hypothesis at the 5% critical value.

Source: author's calculations

Considering these corrections, the null hypothesis states that there is no co-integration relation between the four variables; ( $r \leq 2$ ) is rejected at the 5% threshold by the trace statistics. On the other hand, the hypothesis of at most three co-integration vectors ( $r \leq 3$ ) cannot be rejected because the test statistic reports a value lower than the critical value. The test statistic therefore leads to retain a long run and co-integration relation between our variables.

By estimating the VECM model, the results presented in the below equation mark out which are the trends exist between series in the long run.

$$ECT_{t-1} = 1.000 \ln NGC_{t-1} + 8.946 \ln PROD_{t-1} + 30.227 \ln GDPC_{t-1} - 42.272 \ln GNIC_{t-1} + 39.235 \ln POP_{t-1} - 685.7032$$

The various econometric tests carried out show that our model is well specified, that there is absence of autocorrelation and homoscedasticity of the errors, that the distribution is normal and that the model is structurally and conjecturally stable. The explanatory power of each equation is high, we can therefore, move on the result of our economic estimation.

$$\begin{aligned} D(NGC) &= 0.001206(NGC(-1) + 8.946792(PROD(-1) + 30.22705(GDPC(-1) - \\ &42.27284GNIC(-1) + 39.23528POP(-1) - 685.7032) - 0.143080DNGC(-1)- \\ &0.115329DPROD(-1) - 0.117675DGDPC(-1) - 0.175719DGNIC(-1) + \\ &13.71356DPOP(-1) - 0142851 \end{aligned}$$

The co-integration relation which reflects the long-term relation between the variables has significant coefficients and coherent signs. The constant represents the incompressible consumption; it is the level below which the consumption of households cannot fall.

The equation above shows that the error correction term is characterized by a return to the long-term target (towards equilibrium). On the other hand, we note that in the short term the consumption of natural gas depends on its past variations and the past variations of gas production, gross domestic product, and population which is consistent with economic reality. Indeed, all explanatory variables have a positive influence on the consumption of natural gas by households, unlike gross national Income per capita which influences it negatively due to the reflects people's access uniformly to this variable.

Table 3: Presentation of the Granger Causality

Dependent variables	Independent variables				
	$\Delta \ln(\text{NGC})_t$	$\Delta \ln(\text{PROD})_t$	$\Delta \ln(\text{GDPC})_t$	$\Delta \ln(\text{GNIC})_t$	$\Delta \ln(\text{POP})_t$
$\Delta \ln(\text{NGC})_t$		6.46135 (0.0012) **	1.30483 (0.2865)	0.44531 (0.7220)	<b>4.44101</b> <b>(0.0089) **</b>
$\Delta \ln(\text{PROD})_t$	1.30756 (0.2857)		0.67506 (0.5726)	0.91240 (0.4438)	1.41486 (0.2530)
$\Delta \ln(\text{GDPC})_t$	0.31538 (0.8141)	0.025886 (0.9943)		<b>71.1865</b> <b>(0.0007) **</b>	1.21572 (0.3168)
$\Delta \ln(\text{GNIC})_t$	0.59241 (0.6237)	0.37940 (0.7684)	2.28269 (0.0942)		<b>4.98336</b> <b>(0.0051) **</b>
$\Delta \ln(\text{POP})_t$	0.95458 (0.4238)	2.18170 (0.1056)	<b>4.98667</b> <b>(0.0050) **</b>	<b>3.45229</b> <b>(0.0256) **</b>	

Notes: \*\* = significance at 5%. The numbers in parentheses are refer to p-values. The selection of k=3 is based on AIC and SC criteria.

The existence of co-integration implies carrying out causality tests, according to the sequential approach, from an error-correcting vector model. The results of these tests reported above highlight short-term bidirectional causality between GNI per capita and population. Traditionally, the key measures of economic performance in macroeconomics which include income inequality (GNI coefficient) show that an increase in income inequality is an economic problem. This result shows that people are left behind by the standard of living and therefore uneven use of natural gas. This founding shows also an evidence of a unidirectional causality between production, population and natural gas consumption at court term. According to these results, this causality goes hand in hand with population growth and production towards the consumption of natural gas by households, meanwhile the population growth causes a relative consumption of natural gas in the households according to its availability (production).

## 8. Conclusion

Gas is a non-renewable natural resource and cannot be drawn endlessly; the unlimited growth in demand is incompatible with its limited availability. As a result, we saw that in the last decade, local consumption has increased sharply. This prompted us to carry out this modest work, in order to finally be able to report an answer to our problem which is based on the determination of the variability in the consumption of natural gas by households depending particularly on gas production and population, knowing that natural gas is valued between local consumption and exports. The results support plausible hypotheses among different variables; the conservative hypothesis that shows a unidirectional causality running from explanatories variables (production and population) to natural gas consumption. The growth hypothesis which shows the existence of

bidirectional causality between population and global national income per capita (inequality); different people with different income has unequal access to the use of naturel gas. The population growth poses challenges to the consumption of gas in households in terms of a potential increase in the economic cost of production. It is in this global context that we involve in this study the strategic choices that rationalize and enhance the Indonesian natural gas evoking the two main strategies, namely the development of the national use, and the response to its demand by resorting to the mixed energy project (e.g. shale gas).

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## Efforts to create sustainability in family companies during the post transition period of PT Cahaya Perdana Transalam Batam

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### Abstract

The multigenerational survival rates for family-owned businesses are not good enough. Lack of preparation and readiness for the next generation to lead in the next period, so there is a need for professional leadership outside the family to lead in the post-transition period. However, it is important to prepare the next generation of leadership succession procession that will lead the family company so that the sustainability of the company can be created. Transformational leadership in responding to changes in family companies. The readiness to change in addressing leadership differences is one of the factors that influence the sustainability of a family company. Likewise, the ability to adapt to leadership changes and adapt to these changes. Despite these generally held principles, quantitative research explores the relationship between these five factors. The research sample is the same as the population, namely 100 employees who work in family companies. The sampling technique used is the census sampling technique. This research is a quantitative research, with statistical analysis using multiple linear regression method with SPSS version 20 software. Based on the results of data analysis through SPSS, the Anova test results can be concluded that leadership succession, transformational leadership, readiness to change, change adaptability have a significant effect on sustainability of PT Cahaya Perdana Transalam Batam.

**Keywords:** Sustainability, Leadership Succession, Transformational Leadership, Readiness to change, Change Adaptability

### 1. Introduction

Family business gives contribution to the economic global over 80%, and more than 49% from Gross Domestic Product (GDP) in U.S, and 75% mostly in the other countries. They employee 80% of U.S workforce and over 75% of the working population globally, and created 86% of all new jobs in the U.S over the past decade. Regardless of its importance, only 30% of family businesses survive from the first to the second generation of family ownership, only 12% survive from the second to third generations, and only 4% survive from the third to the fourth generation (Poza, 2013). A survey of family business owners conducted by Remiasa (2014) found that a lack of successful implementation of family firm leadership and weak future generation leadership are two of the top three threats to the long-term sustainability of family enterprises. Now, PT Cahaya Perdana Transalam Batam is a family company engaged in sea transportation, currently making a leadership transition from family member to professionals.

This research will analyze the effort PT Cahaya Perdana Transalam to be sustainability in business in variable influence of leadership succession, transformational leadership, readiness to change, change adaptability on the sustainability in family business.

#### 1.1 Research Purpose :

1. To analyze the effect of leadership succession on sustainability.

2. To analyze the effect of transformational leadership on sustainability.
3. To analyze the effect of readiness to change on sustainability.
4. To analyze the effect of change adaptability on sustainability.
5. To analyze the effect of leadership succession, transformational leadership, readiness to change, change adaptability simultaneously on sustainability.

## 2. Literature review

### 2.1 Sustainability

Sustainable is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Herawati,2016).

### 2.2 Leadership Succession

Leadership succession is the entire business process to prepare for the transfer of power and control from generation to generation (Iestari, 2018).

### 2.3 Transformational Leadership

Transformational leadership is a leader who controls situation with a clear vision of group goals, is passionate about work and ability to make group members feel recharged and energized (Sagala, 2018).

### 2.4 Readiness to change

Readiness to change is employee attitudes toward the acceptance of planned organizational change could be determined by examining their readiness for change (Ratnawati, 2018)

### 2.5 Change Adaptability

The ability of individuals to change or adjust themselves from one behavior to another (Wainaina.2014)

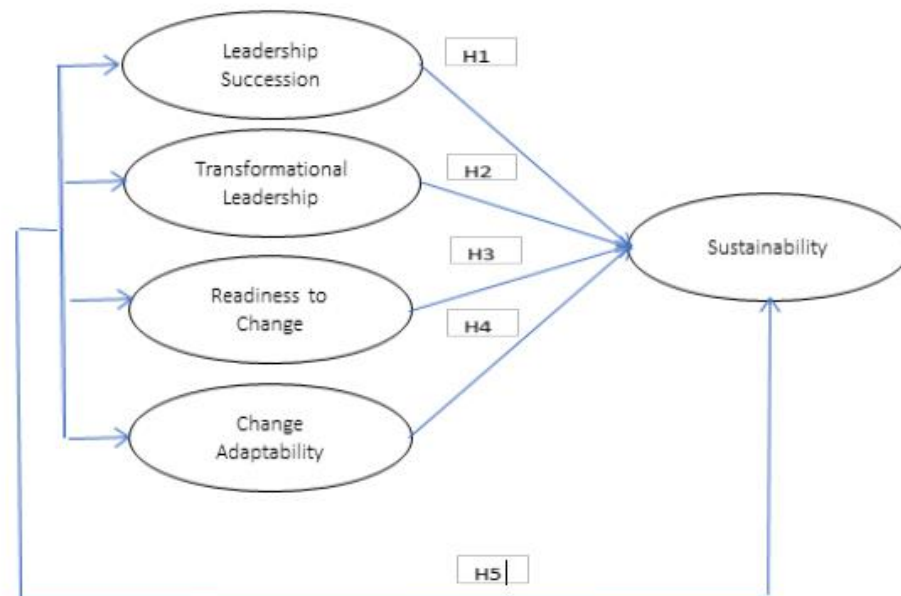


Figure 1 Conceptual Framework

## 2.6 Research Hypothesis

1. There is an influence of Leadership Succession on sustainability.
2. There is an influence of transformational leadership on sustainability.
3. There is an influence of readiness to change on sustainability.
4. There is an influence of change adaptability on sustainability.
5. There are influences of leadership succession, transformational leadership, readiness to change, change adaptability simultaneously on sustainability.

## 3. Methodology

This research is quantitative research, which is designed to find and explain causal relationships between variables through hypothesis testing (explanatory research).

This type of research used in this research is quantitative research with a descriptive approach. The quantitative research method is one type of research whose specifications are systematic, well-planned, and clearly structured from the start to the making of the research design (Sugiyono, 2013)

Hypothesis testing is research that aims to test hypotheses in general is a study that describes the phenomenon in the form of relationships between variables obtained based on data and facts that exist related to variables leadership succession, transformational leadership, readiness to change, change adaptability also their effects on sustainability at PT. Cahaya Perdana Transalam Batam, with initial collection techniques namely initial observation, library research, and field research by distributing research instruments in the forms of questionnaires with Likert scale to a sample of 100 employees using SPSS Versi 20 software.

## 4. Results

Table 1: t-test results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.921	1.397		2.091	.038		
1 X1	.553	.048	.501	11.543	.000	.425	2.354
X2	.257	.041	.236	6.283	.000	.566	1.768
X3	.175	.040	.166	4.412	.000	.562	1.779
X4	.175	.035	.182	4.977	.000	.595	1.681

Table 2: F-test results

### ANOVA<sup>a</sup>

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	828.841	4	207.210	264.033	.000 <sup>b</sup>
Residual	153.034	95	.785		
Total	981.875	99			

Table 3: R Square results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.919 <sup>a</sup>	.844	.841	.886

## 5. Discussion

Results of this research that all independent variables (leadership succession, transformational leadership, readiness to change, change adaptability) had an influence on sustainability.

The following is a description of the analysis of research based on variables.

1. From the calculation, the significance value for the leadership succession is 0.000 and the t value of 11.543 > t-table 1.98. Thus the conclusion of the leadership succession variable has influential to sustainability variable.
2. The significance value for the variable transformational leadership is 0.000 and t-count 6.283 > t-table 1.98. Thus the conclusions of the transformational leadership variables are influential significant to sustainability variable.
3. The significance value for the readiness for change variable is 0.000 and t-count 4.412 > t-table 1.98. Thus the conclusion of the readiness for change variable is influential significant to the sustainability variable.
4. The significance value for change adaptability variable is 0.000 and t-count 4.977 > t-table 1.98. Thus the conclusion of change adaptability influential on sustainability variable.
5. From the ANOVA test or F-test, the F count is 264.033 and with a probability of 0,000. Probability is much smaller (<) than 0.05, so regression models can be used to predict. The SPSS output also shows p-value 0,000 < 0,05 and F-count of 264.033 > F-table 2.48, which means it is significant. Thus it concluded that the variables of leadership succession, transformational leadership, readiness for change and change adaptability simultaneous influence on sustainability.

## 6. Conclusion

1. Partially leadership succession on sustainability at PT. Cahaya Perdana Transalam. This finding is in line with the findings Mathova (2017), Halim (2013), Meyliana (2012).
2. Transformational leadership has effect on sustainability at PT. Cahaya Perdana Transalam. This result is in line with Kiptiyah (2015) and Kharis. (2015).
3. Readiness for change has effect on sustainability at PT. Cahaya Perdana Transalam. This finding in line with Rafferty (2013).

4. Change adaptability has an influence on sustainability at PT. Cahaya Perdana Transalam. This finding is in line with Wainaina (2014).
5. Simultaneously the influence is given by the four independent variables are positive. This finding is in Ratnawati (2018).

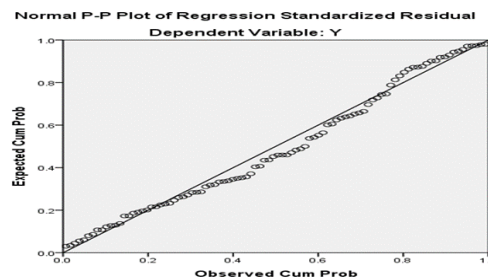
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**Notes:**

Figure 2,Normality test





## Post Coronavirus Pandemic, New Normal, and Tourism in Indonesia

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### Abstract

The purpose of this paper is to understand the process that leads to the revisit intentions of domestic tourists to Surakarta for its tourism products based on the ABC model of attitudes. Data were collected online from 237 domestic tourists via a purposive sampling method and analyzed using SmartPLS 3 used to empirically test the model. This study also explained the result in a causal relationship. The results showed five positive and significant relationship interactions between variables, where gender and visit frequency moderation can strengthen the relationships. This research can provide information to practitioners to improve the positive attitude of tourists that have an impact to revisit intention because of the tourism products. It was revealed that in addition to the satisfaction variable, the higher positive eWOM quantity of the female consumers would influence attitudes and could be used as the basis for determining the product marketing strategy. The research also contributes to providing information in knowing the intention of domestic tourists to revisit Surakarta after the COVID-19 pandemic in Indonesia, which has a profound impact on the economic sector, especially the local revenue (PAD) of Surakarta.

**Keywords:** Epistemic Value, Satisfaction, eWOM, Behavioural Intention, Revisit Intention.

### 1. Introduction

Indonesia is the only country in the world that has the title Emerald of the Equator or equatorial emerald which means beautiful nature (Ramly, 2007). Indonesia also has a tropical climate that is suitable for diverse flora and fauna life. In addition to natural beauty, Indonesia is rich in multi-ethnic culture that arises from the existence of various tribes in Indonesia. The major tribes available in SP2010 are 633 groups (BPS, 2010). The number of tribes will affect the number of cultural differences. The ethnic group in Indonesia has produced hundreds of new cultures. This natural and cultural wealth is still being promoted to become an attractive tourist destination.

Attractive tourist destinations will bring tourists to visit. It has become an important factor in driving the pace of national economic growth. Growth can be seen based on the country's foreign exchange and income of each region. In Indonesia, foreign exchange earnings in the tourism sector generated 16 billion in 2018 and the value is constantly increasing from year to year (Kemenbudpar, 2018). Whereas the visit of domestic tourists will support national growth by increasing local revenue (PAD). This is following Law number 32 of 2004 concerning regional income sources, one of which comes from the results of the management of regional wealth.

Efforts to develop tourist destinations by the local government can be done through improvement through three aspects, namely access, amenities, and attractions (3A). The attraction is considered to be one of the most important components of tourism. The attraction is a major factor in generating the intention of tourists to visit. Therefore, Indonesia's wealth in nature, art, and culture can be a potential attraction that is unique to be developed. Also, the potential possessed can be the focus of improvement amid the currently unhealthy condition of the tourism sector as a result of the COVID-19 pandemic. This can be realized through various segments, one of them is in the culinary field.

The demand for culinary tourism in Asia is increasing by tourists, especially street food destinations. Street food is associated with tourism and is considered as one of the main motivators of tourists to visit Southeast Asian countries such as Malaysia, Singapore, and Thailand (Torres Chavarria & Phakdee-auxorn, 2017). In all three countries generally offer a variety of regional specialties or called heritage food. Referring to the evoked phenomenon, Indonesia also has the same potential because it is supported by the wealth of Indonesian heritage food that was born from the diversity of existing cultures. This can be used as an opportunity to become a tourist destination as do other countries in Southeast Asia. Research on tourism products, namely heritage food, was previously conducted using the dependent variable intention to revisit by Yeap et al. (2019). Referring to the research, the researcher adopted the model by adjusting the conditions of tourism in Indonesia.

The city of Surakarta is one of the regions in Indonesia which is supported by the diversity of arts and culture. In accordance with the slogan of the region "Solo City of Culture". The multi-ethnic culture in the city is dominated by Javanese, Chinese, and Arabic races. This cultural value is a competitive advantage to be highlighted in each of the tourist destinations. This value has an impact on the characteristics of local tourism products produced. Products include heritage food, heritage products, also art, and heritage events.

The independent variables included in the study refer to several model theories consisting of epistemic values, satisfaction, and eWOM. This is what drives the author to investigate these variables on the intention to revisit.

## 2. Literature Review

The main issue in this study was the intention to revisit. The basis for selecting the issue refers to the journal Marinkovic et al. (2014) and Song et al. (2012) which states that in the tourism literature, the relationship between economic profitability and tourist flow through increased positive tourist attitudes and repeat visits. In theory, consumer behavior, the dependent variable intention to revisit leads to behavior after purchase. The intention to re-visit is the result of an evaluation of a product or service so that consumers give a positive response to making repeat purchases. Based on these definitions, it can be concluded that consumers can exhibit certain behaviors in responding to a product.

In the theory of consumer behavior, the behavior after purchase becomes one of the outputs based on a model developed by researchers through a process that consists of several stages. Kotler and Armstrong (2012) formulate the process of consumer decision making through 5 stages are as follows :

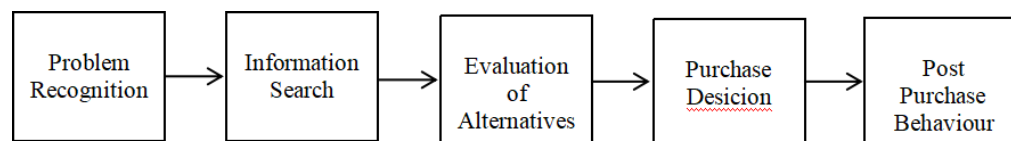


Figure 1. The Five Stages of the Product Purchase Process by Consumers

Source: Kotler & Armstrong, 2012.

Kotler & Armstrong (2012) formulate a consumer decision-making process through 5 stages, namely: introduction, information search, evaluation of alternatives, purchase decisions, and post-purchase behavior. Figure 1 shows that consumers experience several stages in determining the purchase of a product. In the process, consumers can swap or go through several stages.

### 2.1. Attitude

The theory of ABC is a basic theory that is considered comprehensive in assessing attitudes that is consistent with the explanation in the journal Yeap et al. (2019). In this case, the ABC Attitude Model is one comprehensive theory of attitude consisting of three components: affective (A), behavioral (B), and cognitive (C). The affective

component involves a person's feelings or emotions about an object. The behavioral component shows how a person acts or behaves towards an object, referring to the intention to take any action or response. The cognitive component involves a person's thoughts, beliefs, or knowledge about objects.

The three components of ABC Theory are interrelated and are assumed to be positively correlated with each other. As an illustration, a person can develop a belief in the object of attitude (cognitive); then shape how the person feels about the object (affective) which results in the way the person behaves towards an object. From the ABC theory emerged an independent variable, namely epistemic value. These variables will form a certain attitude which can then have a relationship with the intention of visiting again. In addition to the epistemic value variable, the research also examined satisfaction and e-WOM communication motives as other independent variables.

## 2.2. Satisfaction

The theory underlying this satisfaction variable is a journal by Oliver R. L. (1980) who developed a theory to test customer satisfaction. The main idea is based on expectations and confirmation or disconfirmation of respondents. This theory includes two factors that independently affect customer satisfaction. First, service expectations before buying. And second, the perception of service quality after use. In this study, referring to the quality of service after consumption that will affect attitudes.

In tourism, revisit of tourists is a positive indicator of satisfaction. This repetitive positive attitude increases their chances of visiting again (Alegre & Juaneda, 2006; Hossain et al., 2015). Therefore, the higher the value of satisfaction will affect the attitude of tourists to make a return visit. From the explanation of the above theory, the hypotheses formulated are:

*H1 = satisfaction has a positive relationship with attitude*

*H2 = Satisfaction has a positive relationship with the intention to revisit.*

## 2.3. Epistemic Value

Epistemic value is the motive of behavior to searching for and exploring that has been found to significantly influence tourist attitudes towards travel activities, including consuming local food (Ji et al., 2016). Epistemic value can be obtained by tourists to buy or consume authentic tourism products. Enjoying tourist products is something new for tourists. This can satisfy their curiosity and new knowledge about the product.

When tourists enjoy a product, they will indirectly explore their history and cultural heritage (Madaleno et al., 2018). If tourists think of it as something new and feelings emerge happy with information about culture related to it, it can be said that it is an epistemic value. This value will positively influence the attitude of tourists towards tourism products (Kim & Choe, 2017).

Consuming tourism products from the city of Surakarta brings epistemic value for tourists. This happens because they can search for various recommended products in various locations so that they can satisfy their curiosity about these products. Therefore, high curiosity has an important role in influencing tourist attitudes. From the explanation of the theory above, the next hypothesis formulated is:

*H3 = epistemic value has a positive relationship with attitude.*

## 2.4. e-WOM Communication Motives (eWOM)

Specifically, this model focuses on the perception of usefulness and ease of use in the attitude to use technology. Attitude is the user's judgment of technology (Davis, 1989). In this research, TAM (Technology Acceptance Model) is used as the basic model. TAM is the use of social networks as a powerful tool for the choice of travel destinations. This model is often used to predict the adoption of new technology by users. Nowadays, it is mostly used to predict user intention in accepting new technology in several sectors, such as for information technology, for learning, for shopping, and tourism. This research develops a model about TAM by adding eWOM communication motives as an independent variable.

Jeong and Jang (2011) revealed that the review of various intangible tourism product information requires consumers to gain experience first. Consumers cannot be evaluated before trying it themselves. In this study, tourism products in the form of art and heritage events are included as intangible products. Thus, reviews have an important role in convincing consumers to try a product.

Through social media access; virtual community; blog; and others, consumers are asked to use social media in search of information about possible tourist destinations. They can visualize images, get access to information from previous tourist experiences, also get adequate elements in determining the best destination (Sicilia & Ruiz, 2010). Therefore, the key factor for the development of an efficient tourist destination as a marketing strategy is understanding how potential tourists are influenced by interactions with other tourists is a. The hypotheses that emerge are as follows:

*H4 = eWOM has a positive relationship with attitude.*

#### 2.5. Revisit Intention

The intention to revisit was adapted from behavioral intention theory (Milad et al., 2018). The theory has attracted attention especially in the field of tourism. In this study, the variable in the question is the willingness of tourists to revisit a particular destination that was previously visited because of tourism products. The intention to revisit the dependent variable can be investigated further.

In addition to epistemic values, satisfaction, and eWOM are related to attitude variables. Filo et al. (2011) revealed the willingness of tourists to revisit a destination shows a significant attitude. This is under the construct of the research model to be carried out in which attitude mediating variables have a positive and significant effect on the intention to revisit. Thus, the hypotheses that emerge are as follows:

*H5 = Attitude has a positive relationship with the intention to revisit.*

#### 2.6. Gender

Two factors that cause differences in behavior between genders appear biologically, psychologically, and socially (Lucia & Hailin, 2011). Biological factors influenced different hormones and different brain structures. The social-psychological factors are shown through the different social roles and status of women and men (Saucier & Elias, 2001). Research also shows that the way of thinking and behaving between men and women is different. Men tend to focus on the main or the core of services, while women focus on elements related to emotional and relational quality (Mittal, 2001).

Receiving information from WOM sources also varies between men and women. Wang et al. (2017) found that consumers of the same sex or the same characteristics can influence each other's decision making. Besides, women tend to rely more on information from WOM sources than men (Kempf & Palan, 2006). Therefore, the hypotheses that emerge are as follows:

*H6 = Gender moderates the positive relationship between eWOM and attitude.*

#### 2.7. Visit Frequency

The frequency of visits is closely related to the satisfaction variable. According to Woo et al. (2004) found that the influence of service quality on satisfaction was stronger for the first visit than the next visit. Previous experience and satisfaction influence the intention to revisit (Wang, 2004). This is supported by the fact that tourists who visit for the first time with repeat visitors have different ratings. It shows from a different perspective of ideas, images, expectations, and information on a common goal. Therefore, the assumption made in this study is that the frequency of visits has a role as moderation, as stated in the following hypothesis:

*H7 = Frequency of visits moderates the positive relationship between satisfaction to revisit.*

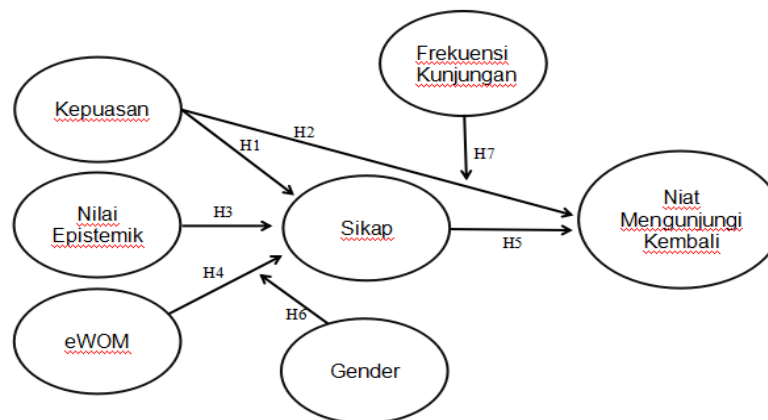


Figure 2. Construction of the Research Model

Source: Researcher Construction Results, 2020.

### 3. Methods

#### 3.1 Research Design

The research is included in applied research. Problems that arise from observations of the research setting in the field of tourism, especially tourism products. Researchers raised the issue of the intention to revisit in the city of Surakarta.

This study is a cross-sectional study, one that only researches at a certain time (Sekaran & Bougie, 2017). The study consisted of independent and dependent variables. This study explains the causal relationship (causal study) because it will independently influence the dependent on a phenomenon. Also, this research is quantitative in that it involves statistical calculations, so it requires data from respondents. Therefore, researchers used a survey approach with an online questionnaire as a primary data collection tool.

#### 3.2. Samples

Samples were taken as many as 200 respondents. This number is expected to be able to meet the minimum standard in using the Structural Equation Modeling (SEM) statistical test equipment. Young tourists are also one of the fastest-growing tourism groups in the world (Han et al., 2017). Therefore, a large number of respondents focus on age <25 years, although data obtained from generation X and Baby Boomers are still included in the analysis.

This research using non-probability technique sampling. This technique does not take respondents' data randomly, but rather by specifying special features called the purposive sampling method. The method requires the respondent to meet the specified requirements are as follows : (1) Respondents are Indonesian citizens (WNI) who have traveled to Surakarta City. This aims to obtain accurate data by the object of research, namely the variable of intention to visit again; (2) Respondents have already consumed or bought tourism products in Surakarta City. Tourism products in this study are determined by the researcher, consisting of heritage food (culinary products), heritage products (in the form of souvenirs), and art and heritage events (art and cultural events).

#### 3.3. Research instruments

The instrument in this study was a questionnaire. The questionnaire was used to measure five variables namely epistemic value, satisfaction, eWOM, attitude, and intention to revisit. In this study, in compiling the questionnaire the researcher refers to a journal by Yeap et al. (2019) for epistemic value variables; attitude; and the intention to revisit. Measured using a Likert scale with seven points of feeling level ie value (1) to strongly disagree to value (7) strongly agree. Then for the satisfaction variable refers to journals by Hasan et al. (2019), measured using a Likert scale with seven feeling level points. And a journal by Pietro et al. (2011) for the eWOM

variable measured also using a Likert scale with seven feeling level points. The method of collecting respondent data is obtained online via Google Form to collect data quickly and on target. In addition, the current COVID-19 pandemic condition requires everyone to carry out physical distancing so that support the method through online questionnaire data collection.

### 3.4. Respondent Profile

This study was attended by 237 respondents who met the questionnaire criteria. A total of 81 respondents (34.60%) were male and 155 respondents (65.40%) were female. Data of domestic tourist respondents with the most dominating age in this study were less than 25 years or 74.26%, which is the age group of the post-millennial generation. Then by 19.41% aged 25-40 years, and respondents aged over 40 years (6.33%). Central Java Province dominates the residence of the respondents, which is 147 or 62.03%. Respondents also reside in West Java Province (8.86%), East Java (7.17%), Yogyakarta (8.44%), and outside Java and DIY (13.50%).

## 4. Result

This research uses PLS-SEM to analyze data. According to Henseler and Sarstedt, (2013), PLS has strong statistical techniques to determine the estimation of structural models in very complex situations.

### 4.1. Measurement Model Analysis

#### 4.1.1. Validity and Reliability

In PLS-SEM, checking validity and reliability is the first criterion for assessing reflective measurement models. Table 1. Outer Loading results show the results of the measurement model assessment where the results of the analysis of the indicators for each item are higher than those recommended, which is 0.70 (Hair, 2017).

Table 1. Outer Loading Result

Indicator	attitude	epistemic	revisit	satisfaction	eWOM	Information
EP1		0.873				Valid
EP2		0.875				Valid
ATT2	0.904					Valid
ATT3	0.895					Valid
ATT4	0.867					Valid
ATT5	0.858					Valid
ACC1					0.776	Valid
ACC2					0.778	Valid
KOMP1					0.815	Valid
KOMP2					0.822	Valid
KOMP3					0.828	Valid
KRED1					0.798	Valid
KRED2					0.888	Valid
KRED3					0.865	Valid
KUAN1					0.760	Valid

KUAN2					0.794	Valid
KUAN3					0.834	Valid
RELV1					0.825	Valid
RELV2					0.800	Valid
RELV3					0.764	Valid
revisit1			0.855			Valid
revisit2			0.738			Valid
revisit3			0.897			Valid
revisit4			0.817			Valid
revisit5			0.800			Valid
SAT1				0.787		Valid
SAT2				0.734		Valid
SAT3				0.753		Valid
SAT4				0.797		Valid
SAT5				0.808		Valid
SAT6				0.855		Valid

Source: Primary data that has been processed, 2020.

Table 2. Reliability Result

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
attitude	0.932	0.933	0.948	0.786
epistemic	0.692	0.692	0.867	0.765
revisit	0.881	0.895	0.913	0.678
satisfaction	0.879	0.885	0.908	0.624
eWOM	0.960	0.962	0.964	0.658

Source: Primary data that has been processed, 2020.

Table 2. Reliability Test Results of satisfaction, eWOM, attitude, and intention to revisit are good because the value of Cronbach's alpha > 0.80. For epistemic value variables, the smallest reliability value is in the range of 0.60 - 0.79 but still acceptable (acceptable).



#### 4.1.2.Uji Discriminant Validity (HTMT)

Table 4. Discriminant Validity (HTMT) Result

	attitude	epistemic	<i>revisit</i>	satisfaction	HTMT confidence interval does not include 1 (bootstrap N=5000)
epistemic	0.552				Accepted
<i>revisit</i>	0.739	0.647			Accepted
satisfaction	0.786	0.695	0.744		Accepted
eWOM	0.558	0.648	0.717	0.660	Accepted

Source: Primary data that has been processed, 2020.

Discriminant validity is the extent to which a construct is completely different from another construct (Hair et al., 2010). The epistemic value variable and attitude produce a value of 0.552. As for the satisfaction and attitude, variables produce a value of 0.786. And the value of the relationship between other variables is in between. But overall, researchers consider the correlation between these variables as an acceptable value because the results show that the number less than one ( $<1$ ). In other words, all the results of this discriminant validity are supported.

#### 4.2. Structural Model Analysis

##### 4.2.1. Goodness of Fit

In this study, the GoF value will still be revealed by looking at the results of the root mean square residual (SRMR) and Normed Fit Index (NFI). SRMR was introduced as a goodness of fit measure for PLS-SEM which can be used to avoid model specification errors (Henseler & Sarstedt, 2013). Besides, calculations will also be carried out regarding the AVE and R square. This is still done to show that the proposed research model is measured with good results. Following are the results of the Model Fit test:

Table 3. The goodness of Fit Result with Consistent PLS Algorithm

	Saturated Model	Estimated Model
SRMR	0.049	0.049
d_ULS	1.168	1.177
d_G	1.205	1.207
Chi-Square	1,312.456	1,314.350
NFI	0.802	0.801

Source: Primary data that has been processed, 2020.

The final result from the calculation of the structural model obtained an SRMR value of 0.049 ( $<0.08$ ) which means good. This value is in accordance with that expressed by Hu and Bentler (1999), namely that an SRMR value of less than 0.10 or 0.08 is considered good. For the NFI value is 0.802 ( $> 0.8$ ) which means good because the value is closer to one (1.00) the better. Both values are declared to have met the criteria.

In addition, testing the goodness of fit model is carried out using the formula proposed by Tenenhaus et al., (2005). This formula uses the results of the AVE and R square, measurement of the suitability of the model in

PLS can be seen through the value of the Goodness of Fit (GoF) calculation with the formula. The GoF value obtained in the above calculation is 0.63, worth the cut-off for a large category of  $R^2$ , so it can be concluded that this model has a good value and have the ability to explain empirical data.

#### 4.2.2. Hypothesis Result and Discussion

Satisfaction was found to be the most salient determinant of the domestic travelers' attitude towards Surakarta tourism product which is in line with other researchers' results such as Choi & Choo (2016). Using bootstrapping technique, the causality relation can be seen in table 5.

Table 5. Direct Effect, Indirect Effect, dan Total Effect

Relationship Between Variables	Direct Effect		Indirect Effect		Total Effect		Evidence for Mediation
	P Values	T Statistics	P Values	T Statistics	P Values	T Statistics	
attitude -> revisit	0.000***	4.640			0.000***	3.611	
epistemic -> attitude	0.512	0.655			0.864	0.171	
satisfaction -> attitude	0.000***	10.782			0.000***	8.546	
satisfaction -> revisit	0.010**	2.577			0.000***	6.172	
satisfaction -> attitude -> revisit			0.001***	3.360			Partial
eWOM -> attitude	0.012**	2.516			0.314	1.007	
eWOM -> revisit	0.000***	5.858			0.000***	4.947	
eWOM -> attitude -> revisit			0.326	0.981			Total

Source: Primary data that has been processed, 2020.

The results of the structural model analysis for the satisfaction variable (H1: p-value = 0,000; t statistic = 10.782; original sample = positive 0.609) so that, hypothesis 1 is accepted that satisfaction relationship has a significant positive effect on attitude. This relationship is in accordance with that expressed by Choi & Choo (2016) that a higher level of satisfaction leads to a positive customer attitude. For hypothesis 2 (H2: p-value = 0.010; t statistic = 2.577; original sample = positive at 0.189) so hypothesis 2 is accepted. In tourism, repeated tourists visit is a positive indicator of satisfaction. Repeated positive attitudes will increase the likelihood of them visiting again (Alegre & Juaneda, 2006; Hossain et al., 2015).

The epistemic value (H3: p-value = 0.512; t statistic = 0.655) concluded that hypothesis 3 was not accepted because it was less than the recommended value (<0.05). Hoffstede (2010) revealed that culture in Indonesia through the lens of the dimensions of individualism (14) and indulgence (38) has scores that are low in the range of 1-100. Indonesian society tends to be very collective. Communities with this culture do not like the challenge so that epistemic values that are significant in research in Malaysia are not relevant to Indonesia.

The eWOM variable (H4: p-value = 0.012; t statistic = 2.516; original sample = positive at 0.138) so that hypothesis 4 is accepted. In the cultural index revealed by Hoffstede (2010) that Indonesia has a dominant collective culture, resulting in the community will tend to seek opinions and be more easily influenced by groups that influence. So that social media platforms become very powerful in increasing the use of social networks to connect tourists in sharing knowledge and information (Cheng, 2010). This shows that positive reviews from tourists online will be a recommendation for other potential tourists very easily.

Attitude (H5: p-value = 0,000; t statistic = 4,640; original sample = positive at 0.338) so hypothesis 5 is accepted. According to Filo et al. (2011), the willingness of tourists to re-visit a destination shows the attributes of a significant attitude. Attitude as a mediating variable here is influenced by several independent variables that have a positive impact, namely satisfaction and eWOM, so the results of the analysis obtained by attitude variables are positive and significant. The more positive attitude relationship, the intention to revisit is also higher.

New findings as hypothesis 8 (p-value = 0,000; t statistics = 5.858; original sample = positive at 0.369) can be concluded that the eWOM relationship has a significant positive effect on the intention to revisit because of its tourism products so that hypothesis 8 is accepted. According to (Milad, 2018), the intention to revisit is also influenced by WOM (word of mouth) from positive reviews from previous consumers. Therefore, it can be concluded that there is a relationship between WOM and the intention to revisit.

The results of indirect effect analysis reveal satisfaction has a significant to the intention to revisit through attitude variables. Significant is determined from the p-value of 0.001 (<0.05). Whereas, for eWOM has an insignificant indirect effect with the intention to revisit through attitude variables. This can be seen from p value > 0.05. Direct and indirect effect test results are summarized in the following table:

Table 6. *Evidence for Mediation*

Relationship Between Variables	Information
satisfaction -> attitude -> <i>revisit</i>	<i>Partially Mediation</i>
eWOM -> attitude -> <i>revisit</i>	<i>Total Mediation</i>

Source: Primary data that has been processed, 2020.

The researcher also analyses the moderation effect of gender and visit frequency. As for the results of the moderation test using Multi-Group Analysis, there are differences between women and men as well as differences in the frequency of high and low visits to domestic tourists. This is seen from the p-value <0.05. When seen the path coefficient value of the relationship between eWOM with attitudes towards women shows a value of 0.242 while men are -0.069. It can be concluded that the attitudes of female tourists are influenced by electronic WOM (eWOM) higher than men. This is consistent with previous research by Wang et al. (2017), gender can moderate the relationship between eWOM Communication Motives and attitude.

While the relationship of satisfaction to visit again, for high visit frequency of 0.142 and low visit frequency of 0.446. This means that the intention to revisit respondents who visit less frequently is considered to be higher influenced by satisfaction than those who visit more often. Thus, the frequency of visits can moderate the relationship between satisfaction to visit again. The effect of service quality on satisfaction is stronger for the first visit than the later visit (Woo et al., 2004).

## 5. Conclusion

By the objectives of the research, to determine the process that leads to the intention to revisit Surakarta is based on the ABC model theory. The study was conducted with a sufficient number of samples (237) with data processing using PLS-SEM. The findings prove that attitude influences the intention to revisit Surakarta City because of its tourist products. The results that have been carried out both on the instrument and the hypothesis obtained five positive and significant relationship interactions between variables, consisting: (1) satisfaction with attitude, (2) satisfaction to revisit, (3) eWOM with attitude, (4) attitude with the intention of visiting again, (5) eWOM with the intention of visiting again. A positive and significant relationship indicates a causal relationship between variables and has a positive influence. While the interaction of insignificant relationships is between the epistemic value variable with attitude is rejected.

Based on the analysis of the mediator, which is an attitude, the results show that the partially mediation relationship occurs in the variable satisfaction with the intention to revisit. The relationship is derived from the significant relationship between direct and indirect effects. While the total mediation relationship occurs in the eWOM variable with the intention to revisit. The study also revealed two moderating variables namely gender and frequency of visits. Gender variables (women) can strengthen the relationship between eWOM and attitude. Meanwhile, the frequency of visits (low frequency) can strengthen the relationship between satisfaction to revisit.

Research has limitations in obtaining tourist respondent data due to conditions due to the COVID-19 pandemic. Researchers are only able to complete the domestic tourist data in accordance with the minimum standard number of samples using PLS-SEM. Besides, the object of research does not yet refer to a single brand of tourism products. But the entire tourism sector both culinary products, souvenirs, as well as arts and cultural events included in it. Thus, research has not been able to measure the positive attitude on one brand specifically.

Based on the results of the analysis, it is known that the satisfaction and quantity of eWOM on female consumers which is getting higher will affect the positive attitude of consumers in making revisit intentions and increasing sales. The research also contributes to providing information in knowing the high intention to visit the community after the co-19 pandemic in Indonesia. This incident greatly impacted the economic sector, especially the local revenue (PAD) of Surakarta City. The following suggestions are proposed by researchers:

The development of research needs to do in different target respondents. Researchers provide suggestions for further research with data from foreign tourist respondents. This can be supplemented by results that are empirically tested using quantitative and qualitative methods. Thus, the level of research validity can be further strengthened. The study has limitations in obtaining tourist respondent data due to conditions due to the Covid-19 pandemic. Researchers are only able to complete data on domestic tourists according to the minimum standard for the number of samples using PLS-SEM.

Researchers provide advice to uncover the positive attitude of consumers in a specific brand of tourism products in the city of Surakarta. The data presented can be used practically. This also allows the discovery of new factors that have not been revealed in previous studies.

Based on the results, it shows the high interest of domestic tourists visiting the city of Surakarta. It can be one indicator of opportunities in improving PAD in the tourism sector. This can be done by taking into account health protocols in providing services to the community. Suggestions from researchers are to require tourists to show a healthy certificate or document as proof of free COVID-19. Giving a good service and following the central government's appeal procedures, this will certainly provide a sense of security for consumers to be willing to revisit Surakarta. Especially when the coronavirus outbreak as it is today, these efforts become new indicators in the assessment of consumer satisfaction. The better the services provided, the level of customer satisfaction will increase and have a positive impact on attitude.

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# Exploration of the accounting treatment for crypto assets: is it eligible to be recognized as an asset? An Extended Abstract

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## Abstract

Crypto Asset is based on Supervisory Board Commodity Futures Trading No. 5 in 2019 is a Commodity intangible form of digital assets. It uses cryptography, the peer-to-peer, and ledger distributed, to regulate the creation of new units, verify transactions, and secure transactions without interference from other parties. This regulation's existence as a derivative regulation of the Minister of Trade Regulation Number 99 of 2018 concerning the general policy of crypto-asset commodity futures trading indicates the legality of trading crypto assets in Indonesia as a commodity or alternative investment. This research aims to determine how the proper accounting treatment of crypto assets for the asset (holders) in Indonesia. The research method used is descriptive analysis. The analysis results concluded that crypto assets could be recognized as inventory under Indonesian Financial Accounting Standard (IFAS) 14 Inventories for crypto assets held for resale. Also, crypto assets held for safekeeping can be identified as intangible assets following IFAS 19 Intangible Assets. To be appropriately implemented, the related IFAS needs to be adjusted by adding Crypto into the definition or scope stipulated in IFAS 14 and IFAS 19. A new IFAS can also be prepared to explicitly regulate crypto assets and recognize them as investments in non-financial assets.

**Keywords:** Crypto Assets, Accounting, IFAS 14, IFAS 19

## 1. Introduction

The rapid development of technology brings major changes in various fields, including the financial system. In every previous transaction, we used banknotes/coins as a means of payment. However, in line with technological developments, money in physical form has been replaced by electronic money (*e-money*). According to Veithzal (2001), electronic money (*e-money*) is an electronic payment instrument obtained by first depositing a sum of money to the issuer, either directly or through issuing agents, or by debiting an account at a bank. The value of the money is entered into the value of money in the electronic money media, which is stated in Rupiah, which is used to make payment transactions by directly reducing the value of money in the electronic money media.

The latest development in financial technology is Bitcoin's emergence, which began to be transacted in 2009. Bitcoin is a Crypto-asset *Cryptocurrency* introduced by Satoshi Nakamoto (pseudonym) in 2008 in a paper entitled *Bitcoin: A Peer-to-Peer Electronic Cash System*. Bitcoin is a decentralized digital currency that allows direct payments to anyone, anywhere in the world. Bitcoin uses technology *peer-to-peer*, making it possible to operate without a central authority such as transaction management and money issuers (central bank). Everything is done collectively by the network.<sup>12</sup> There is no authority in the Bitcoin system that distinguishes it from electronic money (*e-money*).

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<sup>12</sup> [https://en.bitcoin.it/wiki/Main\\_Page](https://en.bitcoin.it/wiki/Main_Page)



Since then, *Cryptographic Asset* has continued to grow; apart from Bitcoin, other names such as *Ethereum*, *XRP*, *Tether*, *Bitcoin Cash*, *Lite Coin*, and more than 6,260 *Cryptocurrencies* other with the highest market capitalization value reaching USD 829,193,650,176 on January 7, 2018.<sup>13</sup> There is no legal or generally accepted definition regarding the definition of Crypto Assets. According to PwC, Crypto Assets are transferable digital representations designed to prevent duplication and copying. The technologies facilitate the transfer of Crypto assets known as *Blockchain* or technology *ledger* distributed. *Blockchain* is a *ledger* decentralized that keeps records of all transactions over the *peer-to-peer network* and allows encrypting (encoding) information.<sup>14</sup>

Meanwhile, according to the *European Financial Reporting Advisory Group* (EFRAG), Crypto-Assets are defined as representations of digital value or contractual rights created, transferred, and stored in various types of technology networks *ledger* distributed (DLT) and authenticated through cryptography.<sup>15</sup>

Crypto assets are an alternative investment besides investing in stocks or other commodities. However, the absence of a governing authority has raised a debate on whether Crypto Assets are a safe place for investors. Various countries have allowed Crypto Asset transactions by providing legal certainty through regulations, both as an investment and a means of payment. In Indonesia, crypto assets have received a legal umbrella through the Minister of Trade Regulation Number 99 of 2018 concerning the General Policy for the Implementation of Crypto Asset Futures Trading (*Crypto Asset*). In this regulation, Crypto Assets are designated as Commodities that can be used as Futures Contract Subjects traded on the Futures Exchange. Further rules regarding Crypto Assets are stipulated by the Commodity Futures Trading Supervisory Agency (Bappebti).

Based on Law Number 10 of 2011 concerning Commodity Futures Trading, Futures Trading is related to the sale and purchase of commodities with margin withdrawals. A later settlement is based on futures contracts, sharia derivative contracts, and other derivative contracts. Meanwhile, the Futures Exchange is a business entity that organizes and provides a system and means of buying and selling commodities based on futures contracts, sharia derivative contracts, and other derivative contracts.

Supervisory Board Commodity Futures Trading issues The Rule No. 5 of 2019 (amend to Rule Bappebti No. 3 of 2020 as the second amendment of the Regulation Bappebti No. 5 of 2019) on Technical Requirements Implementation of the Physical Markets *Crypto Asset* on the Futures Exchange. The regulation regulates Crypto Asset trading's technical implementation starting from the requirements for tradable Crypto Assets, requirements for parties involved in trading, trading mechanisms to sanctions, and dispute resolution.

In Bappebti Regulation Number 5 of 2019, Crypto Assets are intangible Commodities in the form of digital assets, using cryptography, *peer-to-peer networks*, and distributed ledgers to regulate the creation of new units, verify transactions, and secure transactions without interference from other parties. Crypto assets could be traded if they meet the following requirements:

- a. based on distributed ledger technology;
- b. in the form of utility crypto or Crypto Backed Asset;
- c. the market capitalization value (market cap) is included in the 500 (five hundred) asset market capitalization (ranking of the crypto-coin market) for utility assets;
- d. entered in the largest Crypto Asset exchange transactions in the world;
- e. has economic benefits, such as taxation, growing the informatics industry and the competence of experts in the field of informatics (*digital talent*); and

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<sup>13</sup> <https://coinmarketcap.com/charts/>

<sup>14</sup> PricewaterhouseCoopers, 2019, *Cryptographic Assets and Related Transaction: accounting consideration under IFRS, In-Depth: A look at current financial reporting issues*, No.2019-05

<sup>15</sup> European Financial Reporting Advisory Group, 2020, *Accounting for Crypto-Assets (Liabilities): Holder and issuer Perspective, Discussion Paper: July 2020*

- f. a risk assessment has been carried out, including the risks of money laundering and terrorism financing, and the proliferation of weapons of mass destruction.

The regulations regarding crypto assets indicate crypto assets' legality as commodities or investment objectives, not as a medium of exchange/payment. The existence of these regulations strengthens the legitimacy of crypto asset transactions in Indonesia so that investors/buyers of crypto assets are guaranteed security and legal certainty for ownership of crypto assets. This legality will increase the number of buyers/holders of crypto assets, individual buyers and companies, and other entities. Crypto assets in the future can be an alternative for companies as commodities that can be purchased for corporate investment purposes both in the short and long term.

Seeing the potential for crypto assets as alternate commodities that can be purchased or owned by companies for investment purposes, it is necessary to have accounting standards governing the recording and disclosure of crypto assets in financial statements. There are no accounting rules or standards that regulate crypto assets related to recording and reporting and disclosure obligations in financial reports, both in IFRS (*international financial reporting standards*) and in the IAI IFAS.

The Financial Accounting Standards Board (FASB), through the IFRS Interpretations Committee (IC), has conducted various discussions that discuss crypto assets, especially *cryptocurrencies*. On 21 June 2019, IFRS IC published the results of a debate about how IFRS standards are applied to ownership *cryptocurrency*. In the IFRS IC *Decision's Agenda*, *cryptocurrency* has a characteristic:

- a. a digital or virtual currency that is recorded on a *ledger* distributed that uses cryptography for security.
- b. Jurisdictional authorities or other parties do not issue it.
- c. It does not give rise to a contract between the holder and other parties.

In the document, the Committee concluded that IAS 2 on Inventory could be applied to *cryptocurrencies* when they are held for resale in the ordinary course of business. If IAS 2 is not applicable, an entity can apply IAS 38 on Intangible Assets to holdings *cryptocurrency*.

Apart from the IFRS IC, various other institutions have tried to formulate or study how crypto assets' accounting treatment is. Pricewaterhouse Coopers (PwC) published a study entitled *Cryptographic Assets and Related Transactions: accounting considerations under IFRS* in December 2019, which contains how accounting is treated and the application of accounting standards for Crypto Assets. Ernst & Young published the *paper IFRS (#) Accounting for crypto assets* in 2018. Also, the most recent European Financial Reporting Advisory Group (EFRAG) published a *Discussion Paper* entitled *Accounting for Crypto-Assets (Liabilities): Holder and Issuer Perspective*, in July 2020. The paper explains how the accounting treatment of crypto assets, both in terms of the asset (*holder*) and issuer (*issuer*) of crypto assets.

With no regulations issued by standard-setting bodies internationally and in Indonesia regarding crypto-asset accounting, it is essential to know how the accounting treatment of crypto assets in Indonesia is a commodity traded on a futures exchange. Based on these institutions' study results, the authors analyzed the appropriate accounting treatment used by Crypto Asset holders/buyers in Indonesia. The analysis is carried out by looking at the currently applicable IFAS applied to crypto asset accounting and seeing its suitability with crypto assets' nature and condition.

## 2. Literature

### 2.1 Inventory

Under paragraph 6 of IFAS 14 concerning Inventories, Inventories are assets that are available for sale, in the ordinary course of business, in the production process for sale, or assets in the form of materials or equipment for use in the production process or rendering services. In paragraph 9, it is stated that inventories are measured at the lower of cost and net realizable value.

## 2.2 Intangible Assets

According to paragraph 8 of IFAS 19 concerning Intangible Assets, Intangible Assets are identifiable non-monetary assets without a physical form.

According to paragraph 12, an asset is identified as identifiable if it is separable: that

- a. is separable, that is, it can be separated or distinguished from the entity and sold, transferred, licensed, leased, or exchanged, either individually or in conjunction with a related contract, identifiable asset or identifiable liability, regardless of whether the entity intends to do so; or
- b. arise from other contractual or legal rights, irrespective of whether those rights are transferable or segregated from the entity or other rights and obligations.

In paragraph 21, it is stated that an intangible asset can be recognized if only it is probable that the entity will obtain future economic benefits from the asset. The cost of the asset can be measured reliably. Furthermore, paragraph 22 states that in assessing the possibility of future economic benefits, the entity uses rational and reliable assumptions that represent management's best estimate or economic conditions that prevail over the asset's useful life.

An intangible asset's cost consists of the purchase price, including non-refundable import duties and purchase taxes, after deducting discounts and rebates, and all costs that are directly attributable in preparing the asset for its intended use (par 27, IFAS 19).

After initial recognition, intangible assets are carried at cost less accumulated amortization and accumulated impairment losses (par 74, IFAS 19) or the so-called cost model. After initial recognition, intangible assets can also be recorded at the revaluation amount, namely the fair value at the revaluation date less accumulated amortization and accumulated impairment losses after the revaluation date. For the revaluation, fair value is measured by reference to an active market. Revaluation is carried out regularly so that the intangible asset's carrying amount does not have a material difference from its fair value (par 75, IFAS 19).

## 2.3 Financial Instruments

Under IFAS 50 Financial Instruments: For presentation in paragraph 11, financial assets are assets in the form of cash, equity instruments issued by another entity, contractual rights (to receive cash or other financial assets, or, to exchange financial assets or liabilities with other entities. in conditions that are potentially favorable to the entity), or contracts that will or may be settled using equity instruments issued by the entity.

## 3. Research Method

The research method used is descriptive analysis. The analysis is carried out on studies or publications issued by the IFRS *Interpretations Committee* and the European Financial Reporting Advisory Group (EFRAG) regarding crypto-assets' accounting treatment. Based on both institutions' study, the authors analyze the proper accounting treatment for crypto-assets for the holder of crypto-assets traded as a commodity futures exchange in Indonesia.

The research was conducted to see how crypto assets' accounting treatment approached the existing Financial Accounting Standards Statement (IFAS). The analysis is carried out to determine which IFAS can be applied and the suitability of these IFASs with the nature and conditions of crypto assets for the asset (*holders*) in Indonesia.

## 4. Results & Discussion

### 4.1 IFRS *Interpretations Committee* (IC)

In June 2019, IFRS *Interpretations Committee Interpretation Committee* () published a *Decision Agenda* on how IFRS standards are applied to accounting for holdings *cryptocurrency*. The Committee sees that the scope of crypto assets is extensive, so the discussion is directed at *cryptocurrencies*, which are part of *crypto assets*.

According to the IFRS IC, *cryptocurrency* has the following characteristics:

- a. a digital or virtual currency that is recorded on a *ledger* distributed that uses cryptography for security.
- b. Jurisdictional authorities or other parties do not issue it.
- c. It does not give rise to a contract between the holder and other parties.

The Committee concluded that IAS 2 on inventory could be applied to accounting for *cryptocurrencies* when held for sale in the ordinary business course. If only to be owned/held, an entity can apply IAS 38 regarding intangible assets.

IAS 2 in paragraph 6 defines inventories as assets:

- a. held for sale in the ordinary course of business
- b. in the production process for sales; or
- c. in the form of materials / raw materials or supplies used in the production process or providing services.

The Committee views that the entity may have *cryptocurrency* to sell in the ordinary course of business. Due to the intent, the *cryptocurrency* is owned as stock for the entity. Because IAS 2 applied to *cryptocurrency* ownership.

IAS 38 is applied in accounting for all intangible assets, except:

- a. those that are within the scope of other standards;
- b. financial assets, as described in IAS 32 Financial Instruments: Presentation of
- c. recognition and measurement of exploration and evaluation assets; and
- d. expenditure on the development and extraction of minerals, oil, natural gas, and other non-renewable resources.

In determining whether a *cryptocurrency* be considered an intangible asset, the holders apply IAS 38. The Committee determines whether the *cryptocurrency* meets the definition of a financial asset in IAS 32 or falls within the scope of other standards. The Committee concluded that *cryptocurrency* is not a financial asset. It is because *cryptocurrency* does not meet the definition of a financial asset in IAS 32. *Cryptocurrency* is not cash and is not an equity instrument in other entities. Besides, *cryptocurrency* does not create contractual rights for the *holder* and is not a contract that will or may be completed in the holder's equity instrument.

#### 4.2 European Financial Reporting Advisory Group (EFRAG)

European Financial Reporting Advisory Group (EFRAG) in July 2020 published a *Discussion Paper on Accounting for Crypto-Assets (Liabilities): Holder and Issuer Perspective*. EFRAG published the paper to influence future standard-setting by attracting European constituents' attention and providing useful and timely input to the IASB's work's early stages.

EFRAG compiles assumptions of the accounting treatment for the asset (*holders*) based on the type or classification of crypto assets based on the analysis results from studies or crypto-asset accounting approaches from other institutions such as the IFRS IC *Agenda Decision*, *NSS guidance*, and other accounting institutions. The analysis shows in the following table 1.

Table 1 Crypto Asset Accounting Treatment

<b>Holding (Crypto Asset)</b>	<b>Economic characteristics and rights of holders</b>	<b>IFRS accounting assumptions that can be applied</b>
<i>Token-cryptocurrency payments</i> without claims to issuers	• No claims to issuers and	• Following IFRS IC <i>Decision Agenda</i> : IAS 2 Inventory or IAS

	<ul style="list-style-type: none"> <li>● Implicit rights to exchange goods and services equivalent to partners receiving</li> </ul>	38 Intangible assets depending on the holder's intention.
<i>E-money tokens-Crypto-assets</i> with claims to issuers <i>Payment token-stable coins</i> including CBDCs Fungibility	<ul style="list-style-type: none"> <li>● , tradability, &amp; transferability.</li> <li>● Claims to issuers</li> <li>● Implied rights to exchange for goods and services equivalent to counterparties receiving</li> </ul>	<ul style="list-style-type: none"> <li>● Accounting as Financial Assets.</li> <li>● Measurement using FVPL (<i>fair value through profit or loss</i>)</li> </ul>
<i>Security and asset tokens</i>	<ul style="list-style-type: none"> <li>● The fungibility, tradability, &amp; transferability.</li> <li>● Contractual rights or interests of ownership or control over the issuer of the token</li> <li>● Claim to the issuer or the issuer delegates.</li> </ul>	<ul style="list-style-type: none"> <li>● Accounting as a financial asset or investment in non-financial assets.</li> <li>● Measurement depending on the period of ownership: FVPL or FVOCI</li> </ul>
<i>Utility tokens</i>	<ul style="list-style-type: none"> <li>● Fungibility, tradability, &amp; transferability.</li> <li>● May include <i>non-fungible</i></li> <li>● Claims to the publisher or the publisher's delegated party.</li> </ul>	<ul style="list-style-type: none"> <li>● Accounting depends on the business objectives <i>holders</i> and the nature of the utility token:               <ul style="list-style-type: none"> <li>- <i>Prepayment Asset</i></li> <li>- Intangible assets</li> <li>- Inventory</li> <li>- Financial assets</li> <li>- Investment in non-financial assets</li> </ul> </li> <li>● Measurement depends on the business objectives <i>holders</i>:               <ul style="list-style-type: none"> <li>- <i>Cost with impairment</i> (for <i>prepayment assets</i>)</li> <li>- <i>Cost or Revaluation model</i> (for intangible assets)</li> <li>- LCNRV or FVPL (for inventory)</li> <li>- FVPL or FVOCI (for financial assets)</li> </ul> </li> </ul>
<i>Hybrid tokens</i> including several <i>stable coins</i>	<ul style="list-style-type: none"> <li>● Combination of <i>utility, security, or payment token features</i></li> </ul>	Accounting depending on:

	<ul style="list-style-type: none"> <li>• Claims to issuers or delegates of issuers</li> </ul>	<ul style="list-style-type: none"> <li>- The primary nature of the <i>underlying rights</i> and business objectives <i>holder</i>; or</li> <li>- Branching <i>underlying rights</i> of different</li> </ul>
<i>Pre-functional tokens</i>	Will be converted to tokens (usually - but not always - to <i>utility tokens</i> )	<ul style="list-style-type: none"> <li>• Accounting depends on the business purpose of the <i>holder</i> and the nature of the <i>Pre-functional token</i>: <ul style="list-style-type: none"> <li>- <i>Prepayment Asset</i></li> <li>- Intangible assets</li> <li>- Inventory</li> <li>- Financial assets</li> <li>- Investments in non-assets financial</li> </ul> </li> <li>• Measurement depends on the business objectives <i>holders</i>: <ul style="list-style-type: none"> <li>- <i>Cost with impairment</i> (for <i>prepayment assets</i>)</li> <li>- <i>Cost or Revaluation model</i> (for intangible assets)</li> <li>- LCNRV or FVPL (for inventories) FVPL or FVOCI (for financial assets)</li> </ul> </li> </ul>
SAFT is generally issued with <i>pre-functional tokens</i>	Rights to <i>futures tokens</i> and recognized as <i>securities</i> .	<ul style="list-style-type: none"> <li>• Accounting as financial assets</li> <li>• Measurement: FVPL</li> </ul>

Also, in its conclusion, EFRAG provides a possible approach for clarifying or developing provisions in IFRS for crypto assets, namely:

- a. No amendments to IFRS provisions are required. It means that no change in the current standard is needed. *Financial preparers* report or can use existing IFRS standards, including developing their accounting policies.
- b. Amend and clarify existing IFRS standards. It accomplished through:
  - i. Providing clarification of specific provisions or facts;
  - ii. Exclusion changes within a specific scope; or
  - iii. Change the provisions of IFRS.
- c. The creating a new IFRS standard on crypto **assets**.

#### 4.3 Crypto Asset Accounting Analysis in Indonesia



According to the Commodity Futures Trading Supervisory Agency Regulation, to determine the proper accounting treatment for crypto assets in Indonesia, the types of crypto assets that qualify as commodities traded on the Futures Exchange. In Bappebti Regulation No. 5 of 2019, one of the crypto terms tradable assets in the form of asset crypto utility (*utility crypto*) or crypto mortgage-backed assets. By legalizing crypto assets as commodities on the futures exchange, making it an investment alternative for investors. It also confirms that Indonesia's crypto assets are only legal as investment commodities but are still prohibited as a means of payment or exchange transactions.

*Utility crypto* or *utility token* is a digital token based on technology *blockchain* that gives users access to products or services and derives value from these rights. *Utility tokens* do not provide *holders* ownership in the platform or the assets of the issuing company. Still, they can be traded between *holders*, and *utility tokens* are not used as a means of payment. Its intrinsic value comes from the *demand* for goods or services from the publisher. *Crypto-backed assets* or *asset-backed tokens* are digital tokens based on technology *blockchain*. It shows and derives their value from something that is not on the *blockchain*—instead of representing ownership of physical assets (for example, natural resources such as gold or oil). The value is based on the *underlying asset* (PwC, 2019).

Based on the IFRS IC *Agenda Decision* and *Discussion Paper* from EFRAG and taking into account the types and conditions of crypto assets traded in Indonesia, the authors analyzed the accounting treatment of crypto assets in Indonesia, recognize and measure them.

#### Utilities Crypto Assets (*utility crypto*)

In the IFRS IC *Decision Agenda*, *cryptocurrency* can be recognized as an inventory if it is held for sale in ordinary business activities. It also applies to *crypto utilities* sold on futures exchanges. Utility crypto-assets is recognized as inventory, commodity traders-traders under paragraph 3 (b) and paragraph 5 of IAS 14 Inventories.

Inventory in a commodity broker-dealer is more appropriate because of the volatile and uncertain nature of crypto assets. So that most likely, the holder (*holder*) has crypto assets with the aim of being sold shortly to take advantage of price fluctuations. Utility crypto assets measured at fair value fewer costs to selling. Fair value is seen based on selling value in an active market. The fair value of utility crypto assets is certain to be available because one of the requirements for crypto assets sold in Indonesia is that it is included in the largest crypto asset exchange globally. Its market capitalization value is included in the top 500 world market capitalization values. Meanwhile, the cost to sell is following the selling cost determined by each physical crypto asset trader.

If held not for sale in the ordinary course of business, in the IFRS IC *Decision Agenda*, *cryptocurrency* can be treated as an intangible asset because it meets the definition of an intangible asset and is not a monetary asset. But whether this also applies to utility crypto assets, it is necessary to see if crypto assets are utilities is an economic (financial) asset or a non-monetary asset.

Monetary assets or financial assets are cash held and assets to be received in cash, which is a definite or determinable amount. To determine whether crypto assets, especially utility crypto assets, refer to the definition of financial assets in IFAS 50 Financial Instruments: The presentation is described in the following table 2.

Table 2 Definitions of Financial Assets

Financial assets are:	Utility assets <i>crypto</i> .
a. Cash	is not a cash and does not meet the definition of cash or cash-equivalent.
b. Equity instruments issued by other entities	Are not equity instruments for either physical traders or crypto-asset issuers.



<p>c. Contractual rights:</p> <p>(i) To receive cash or other financial assets from another entity; or</p> <p>(ii) To exchange financial assets or financial liabilities with another entity in conditions that are potentially favorable to that entity; or</p>	<p>There is no contractual right to receive cash or other financial assets. Also, there are no contractual rights to exchange financial assets or financial liabilities with other entities.</p>
<p>d. Contracts that will or may be settled using equity instruments issued by the entity.</p>	<p>The issuer or physical trader of crypto assets does not issue equity instruments.</p>

Based on the table, asset crypto utility (*utility crypto*) does not meet a financial asset's definition by IAS 50. It is in line with the IFRS IC *Agenda Decision*, which states that *cryptocurrency*, not a financial asset. In contrast to the *EFRAG discussion paper*, a *crypto utility* or *utility token* is recognized as assets to the *issuer* or *issuer utility token*.

The valuation of utility crypto assets as financial assets does not meet a financial asset's definition under IFAS 50, even though it carries almost the same risks as financial assets or financial instruments. Utility crypto assets as a form of investment are subject to risk from price fluctuations in an active market.

If a financial asset's definition is not fulfilled, then the utility crypto assets held not for sale in ordinary business activities can be recognized as intangible assets. Utility crypto assets meet the definition of intangible assets in IFAS 19, namely non-monetary assets that are identifiable without a physical form. Utility crypto assets as intangible assets at the time of acquisition are measured at the purchase price plus attributable costs, such as the cost of selling from a physical trader of crypto assets. In the following period, utility crypto assets are measured using the revaluation model, where the value of utility crypto assets is adjusted based on fair value in an active market. Utility crypto assets as intangible assets have an unlimited useful life, so they are not amortized.

Based on the previous explanations, crypto assets could be recognized as an inventory under IFAS 14 Inventory when the crypto utility assets are held for sale in the ordinary business course. It is also recognized as intangible assets following IFAS 19 Intangible Assets when utility crypto assets are held for storage or not held for sale.

The recognition of crypto assets as supplies (commodity broker-dealer) is not yet strong enough regarding 'held for sale in ordinary business activities.' If utility crypto assets are recognized as inventory, then the asset (*holder*) must be an entity with the main business as a seller of crypto assets. Whereas in Bappebti Regulation Number 5 of 2019, crypto-asset sales are facilitated by physical crypto asset traders who must meet specific requirements. The crypto asset physical trader only acts as a facilitator in the crypto asset transaction, and the crypto asset being sold does not belong to him. Crypto asset physical traders earn income from *fees* or fees charged on sales and withdrawal transactions of Rupiah deposits/balances. Based on this, it is doubtful that a *holder* has ordinary business activities or the main business as a seller of crypto assets and recognizes the crypto assets he owns as inventory.

Utility crypto assets held not for sale meet the definition as intangible assets under IFAS 19. However, there are differences between utility crypto assets and intangible assets recognized under IFAS 19. Intangible assets that are regulated in IFAS 19 are intangible assets obtained either through transactions. Internal purchases or developments are used in the entity's primary activity to generate profits or result from a business combination

transaction (*goodwill*). While utility crypto assets meet the definition as intangible assets, utility crypto assets are a form of investment made by entities.

Based on these considerations, the use of IFAS 14 or IFAS 19 for the accounting of utility crypto-assets might be justified by making adjustments or changes by adding crypto assets to the definition or scope stipulated in IFAS 14 and IFAS 19. By looking at the nature of crypto assets Like financial assets, there are changes in IFAS 50 by incorporating crypto-assets into the definition of financial assets so that crypto-assets can meet the criteria financial assets using IFAS 50 and IFAS related to other financial instruments.

Another alternative is to issue a new IFAS on crypto assets so that there are no errors in the interpretation and use of IFAS 14 or IFAS 19 for crypto assets. Crypto assets in the new IFAS can be recognized as investments in non-financial assets. It is to accommodate the characteristics of crypto assets similar to financial assets but do not meet the definition of financial assets in IFAS 50. Crypto assets are recognized as investments in non-financial assets that are measured at fair value. Adjustments to fair value, differentiated by the purpose of the holder holding the crypto asset. Crypto assets held for re-trading are subject to fair value adjustments through profit or loss (*Fair Value through Profit or Loss* / FVPL). Meanwhile, crypto assets that are held for long-term safekeeping are adjusted for fair value through equity (*Fair Value through Equity* / FVOCI).

#### Crypto Assets Asset-Backed Securities (*crypto-backed assets*)

Asset-Backed Crypto has differences with the crypto utility assets in terms of their physical assets as *underlying* assets. However, in the sale of crypto assets on a futures exchange, there is no distinction between asset-backed crypto assets or utility crypto assets. It means that in a futures exchange or a physical crypto asset trader, the sale is carried out as a unit as a crypto asset; there is no difference between the two types of crypto assets. Based on observations on the physical crypto-asset sales site registered with the Commodity Futures Trading Supervisory Agency (Bappebti). Based on this, the accounting treatment for asset-backed crypto assets sold on the futures exchange for asset holders is the same as the accounting treatment for utility crypto assets discussed earlier.

## 5. Conclusion

Accounting standards for crypto assets, both internationally and in Indonesia, have not yet been prepared. However, it has become a concern for both standard setters and accounting institutions or companies about how accounting is treated for crypto assets. The IFRS *Interpretations Committee* in June 2019 published a *Decision Agenda* on how IFRS standards are applied to accounting for ownership *cryptocurrency*. They concluded that accounting *cryptocurrency* could apply IAS 2 regarding inventory. It is required when *cryptocurrencies* are held for sale in the ordinary business course. If only to be owned/held, an entity can apply IAS 38 regarding intangible assets.

Another institution, the European Financial Reporting Advisory Group (EFRAG), in July 2020, published a Discussion Paper on Accounting for Crypto-Assets (Liabilities): Holder and Issuer Perspective. EFRAG Arranges the possibility of the accounting treatment for holder crypto assets based on each crypto asset's type, characteristics, and rights. Payment Token-cryptocurrency without claims to issuers can be recognized using IAS 2 Inventory or IAS 38 Intangible assets depending on the holder's intention. E-money tokens-Crypto-assets with claims to issuers and Payment token-stable coins, including CBDCs, use financial asset accounting, measured based on FVPL. Security and asset tokens use accounting for financial assets or investment in non-financial assets measured based on FVPL or FVOCI. Utility tokens, the accounting treatment depends on the business objectives holder's and the nature of the utility tokens to be recognized as prepayment assets, intangible assets, inventories, financial assets, and investments in non-financial assets. Hybrid tokens include several stable coins; the accounting treatment depends on the main nature of the underlying rights and the holder's business objectives or different branches of underlying rights. Pre-functional tokens, the accounting treatment depends on the business objectives holders and nature. They can be recognized as prepayment assets, intangible assets, inventories, financial assets, or investments in non-financial assets. And the last type

of SAFT is generally issued with pre-functional tokens, using financial asset accounting that is measured based on FVPL.

Based on the Commodity Futures Trading Supervisory Agency Regulation Number 5 of 2019, one of the requirements for tradable crypto assets is in the form of utility crypto and crypto-backed assets. The accounting treatment of both for the asset (holders) is no different as crypto assets because trading carried out on the Futures Exchange by Physical Crypto Asset Traders is not classified or other in the sales treatment of the two. Both types of crypto assets are the only requirements for crypto assets that can be traded in Indonesia.

Accounting for crypto assets for holders of assets (holders) obtained from purchases on the futures market/exchange can be recognized as inventory (commodity traders) based on IFAS 14 Inventory for crypto assets held for sale. Meanwhile, critical assets held for safekeeping can be identified as intangible assets based on IFAS 19 Intangible Assets. This application can be made by adding crypto assets to the definition and scope regulated in IFAS 14 and IFAS 19.

Crypto asset accounting can also be recognized as an investment in non-financial assets by using a new IFAS that deals with crypto assets. Crypto assets that are traded as commodities on a futures exchange are more accurately defined as investments. However, crypto assets do not meet the definition of financial assets in IFAS 50. They cannot be recognized using IFAS 50 or other IFAS related to financial instruments (IFAS 55, IFAS 60, or IFAS 71).

Another alternative is to make changes to IFAS 50 by incorporating crypto assets into the definition of financial assets. The accounting treatment for crypto assets can use IFAS 50 and other IFAS related to financial instruments.

Based on this, there are three alternatives to using IFAS for crypto-asset accounting as follows:

- 1) Accounting for crypto assets as inventory under IFAS 14 for crypto assets held for sale, while crypto assets are stored following IFAS 19. Both IFAS need to be done customization by adding crypto assets to the regulated definition or scope;
- 2) Accounting for crypto assets as investment in non-financial assets by issuing a new IFAS that specifically regulates crypto assets; or
- 3) the accounting for crypto assets as investment in financial assets under IFAS 50 (and other IFAS concerning financial instruments), by adjusting IFAS 50 by adding crypto assets to the definition of financial assets.

The IAI Financial Accounting Standards Board in preparing standards or provisions related to the accounting treatment of crypto assets, it is necessary to define crypto assets clearly, and by crypto-asset transactions prevailing in Indonesia. It is due to the absence of a standard definition regarding crypto assets and its ongoing development. The accounting treatment of crypto assets must be adjusted to Indonesia's prevailing transactions where crypto assets are commodities traded on the Commodity Futures Market or the Futures Exchange. Crypto assets in Indonesia are prohibited as a means of payment or medium of exchange. Of course, it will be different from other countries that establish crypto assets as a means of payment.

This paper only discusses the accounting for crypto assets for the asset (holders) obtained from futures exchanges or physical crypto asset traders. There are some opportunities to investigate crypto-asset accounting research in Indonesia, which has only become legal in 2019 by trading on the futures exchange. It is necessary to learn more about the relationship between physical crypto asset traders and crypto-asset buyers, and crypto-asset issuers. Many areas can also be discussed, such as accounting for crypto assets for issuers, accounting for crypto assets obtained through mining, or accounting for crypto-assets and their relationship with taxation and money laundering practices.

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# Private Health Insurance Markets – A Spatial Assessment of Influences and Effects in Europe

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## Abstract

The private health insurance sector has a very diverse level of development in Europe, due to the different social and political background of the European countries. This research assesses spatial (neighbourhood) effects and arrangements, along with the influence of social and macroeconomic determinants. We have chosen to encompass the later in a single index, the HDI, and assess its influence upon the development of the health insurance sector from a spatial point of view. Results emphasize a clear clusterization process on the East-West direction, with Eastern European countries having a less developed private health insurance sector. No contagion or diffusion were validated on the analyzed sample.

**Keywords:** private health insurance, spatial econometrics, clusterization, spatial effects

## 1. Introduction

There are significant differences in the type of healthcare systems worldwide, thing that led to different levels of development of the private health insurance systems. There is the very famous, entirely private, American system, in opposition to the communist or socialist countries, which are fully public. Consequently, the level of development of the private health insurance market varies significantly.

Additionally, there is an interesting gap in the field's literature, in the sense that insurance products are, usually, divided into **life** and **non-life**, on one hand, and most of the literature assesses the issue of private health insurance at microeconomic, individual level, on the other.

Considering all these, we have analyzed the private health insurance market from a macroeconomic perspective. Additionally, due to the fact that we are dealing with countries, neighbourhood and other spatial interaction effects may appear, such as clusterization, polarization, contagion, diffusion, etc, present in the insurance sector literature for other types of products and contracts (see, for example, Mare et al, 2016; 2019a; 2019b). But all these spatial processes are conditioned by macroeconomic factors. A very good review of the determinants of price elasticity in health insurance is to be found in the work of Pendzialek, Simic and Stock (2016). Most of the studied literature emphasizes a direct relationship between the income level and health insurance (Enz, 2000; Tavares, 2020, etc).

## 2. Working Hypothesis, Data and Methodology

*The working hypothesis* of the present research is related to the findings in the field's literature. As emphasized above, most of the studies point out a direct relationship between income and private health insurance market. At macroeconomic level, income can be proxied by a series of variables, among which, the most common is the

GDP. But there are also other aspects that support or hinder the evolution of the private health insurance market. We have joined all these aspects through the use of the Human Development Index (HDI) as a conditioning factor. Consequently, we have constructed the following working hypothesis:

*There is a clusterization process on the European Private Health Insurance Market, conditioned by the level of human development, along with contagion and diffusion processes.*

The clusterization process is expected due to its existence on the economic level/ development in Europe. The diffusion and contagion processes are expected to manifest as Europe, due to the European Union, is characterized by a significant movement of people, capital and information, thing that fosters education in the field, so, consequently, induces contagion and diffusion from one country to another. But all these are conditioned by specific internal conditions of each country, which we gathered in the HDI.

Data consists in the values of the available information related to private health insurance, proxied by the Insurance Density (DENS) available for 30 European countries and provided by Insurance Europe for 2018. But due to the high heterogeneity of the sample, the dependent variable is not normally distributed. That is why, in the analysis, we have transformed it in the logarithmic form. Consequently, the dependent variable will be LN\_DENS. For these countries, we have employed as factor the HDI developed and computed by the United Nations Development Programme – Human Development Reports.

The methodology employed belongs to the family of spatial econometrics. When clear and significant clusterization processes manifest, the variables related to latitude and longitude are significant in an OLS spatial model. These variables consist in the geographical points specific to the centroids of each country in the sample. Clusterization and polarization are easily visually assessed based on maps. In this research we start from the quartile maps based on the values of the dependent variable LN\_DENS and the raw rate between the LN\_DENS and HDI. The second map shows if the spatial arrangement process is conditioned/ influenced by the exogenous variable. Afterwards, we model the regression presented in eq. 1:

$$\text{LN\_DENS} = \alpha + \beta * \text{longitude} + \gamma * \text{latitude} + \varepsilon \quad \text{eq. (1)}$$

In order to test the contagion and diffusion effects stated in the working hypothesis, we have, first, constructed the spatial weights matrix necessary for the introduction of the neighbourhood effects in the spatial regression model. The following spatial OLS model was constructed:

$$\text{LN\_DENS} = \alpha + \text{HDI} \beta + \varepsilon \quad \text{eq. (2)}$$

If contagion and diffusion processes exist, the classical spatial OLS model is rejected by the spatial diagnostic tests and the need for respecification is emphasized in the form of spatial autoregressive model or spatial error correction model. There are 6 spatial diagnostic tests (see table 1, LM tests and the Moran I), which evaluate the persistence of spatial effects in the model. Their null hypothesis is that the OLS model is suitable for the relation between the variables and no spatial effects appear. When the null is rejected, contagion and diffusion processes are validated.

Analyses were conducted in GeoDa 1.14.0.

### 3. Results

The first part of the analysis focuses on the descriptive, visual evaluation of data based on maps. The quartile map presented in figure 1 validates the first part of our working hypothesis. A clear clusterization process on longitude is emphasized. As expected, former communist countries from the Eastern part of Europe have a much lower level of the private health insurance density. This may be explained by their communist past, characterized by public health systems.



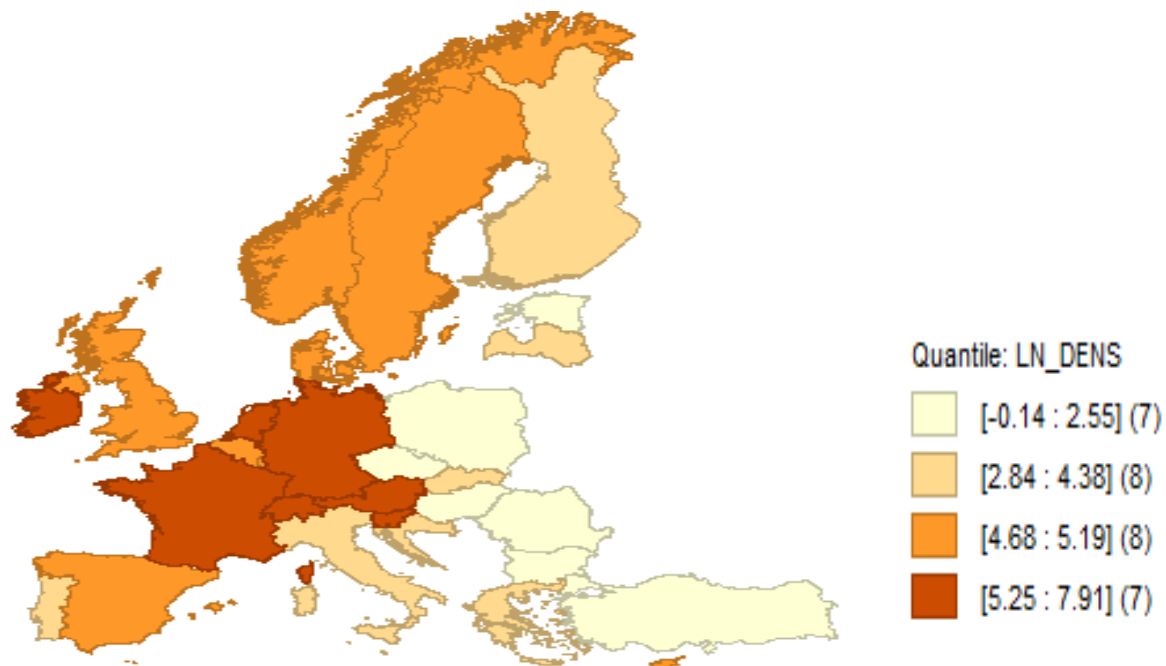


Figure 1. Quartile map of the *LN\_DENS* variable

Source: own construction in GeoDa 1.14.0

In order to evaluate if the clusterization process is conditioned by the level of human development, we have also constructed the raw rate quartile map between LN\_DENS and HDI (figure 2). The introduction of HDI into the analysis does not change the distribution of the considered European countries. Additionally, this spatial arrangement is also suggesting that some contagion and diffusion may appear in the sample.



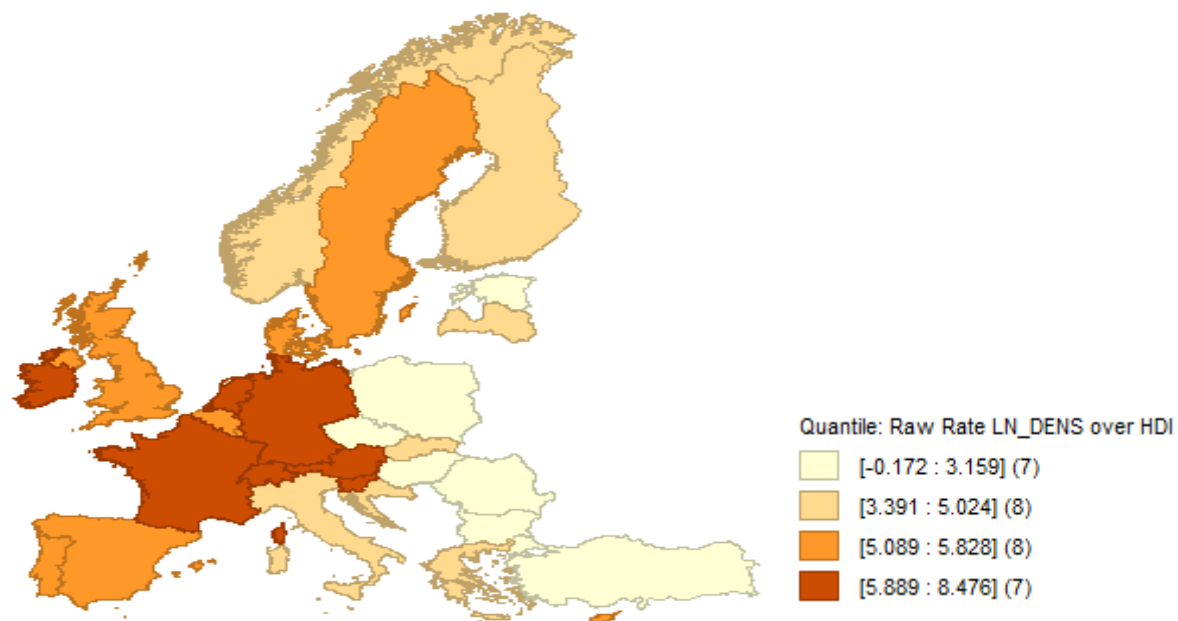


Figure 2. Quartile map of the Raw Rate *LN\_DENS* over HDI

Source: own construction in GeoDa 1.14.0

Table 1. Assessment of spatial effects – regression results

	Eq. (1) coef. (p-value)	Eq. (2) coef. (p-value)
<i>Latitude</i>	1.64e-7 (0.407)	-
<i>Longitude</i>	***-7.64e-7 (0.002)	-
<i>HDI</i>	-	***32.44 (0.000)
constant	***4.268 (0.003)	***-24.72 (0.000)
R <sup>2</sup>	0.312	0.574
Moran's I error (p-value)	-	0.419
LM lag (p-value)	-	0.143
Robust LM lag (p-value)	-	0.110
LM error (p-value)	-	0.618
Robust LM error (p-value)	-	0.419
LM SARMA (p-value)		0.247

Source: own calculations in GeoDa 1.14.0

As a last part of the spatial arrangement assessment, we have estimated regressions attached to eq. 1 and 2. Results are presented in table 1. The coefficient of longitude is significant (table 1, eq. (1)), while the one of latitude is not. This finally validates the first part of our working hypothesis – significant clusterization process appears on the private health insurance sector expressed through the health insurance density in Europe. This

clusterization process takes place on the East-West direction. With the former communist block having much lower development level of this market. The direction of the clusterization process is confirmed by the sign of the coefficient – minus. This shows that starting from Longitude 0, if you go towards Eastern Europe, the value of the private health insurance density decreases.

The second part of the working hypothesis is evaluated with the use of eq. (2). As emphasized by figure 2, the HDI is conditioning the development of the national private health insurance markets. This is confirmed by the regression results. The coefficient of HDI is highly significant (at the 1% critical level) and positive. A more developed country will have a higher private health insurance density.

But the spatial diagnostic tests all have p-values much higher even than 10%. Consequently, the presence of spatial effects in the model is rejected, invalidating the second part of our working hypothesis – there are no contagion and diffusion effects on the European health insurance market, when the health insurance density is taken into account.

#### 4. Conclusions

The present research evaluates the development of the private health insurance sector in European countries from a spatial perspective. Results of our research demonstrate that there is a clear clusterization based on the health insurance density on the East-West direction, conditioned by the level of human development. Consequently, policy makers interested to foster health insurance market should search for intervention instruments in the level of development or instruments that can compensate this. There is a high potential of future development in Eastern Europe. Additionally, no significant contagion and diffusion process was found, result that points out a lack of transmission channels and may be indicative of local specificities that should be taken into account, like education in the financial field or the type of health services provided by the state.

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