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FACTORS AFFECTING INDONESIA’S CURRENT ACCOUNT, 1985-2016

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ABSTRACT
This study aims to test the three hypotheses include the government budget gap, and savings-investment gap that will impact on the current account balance. The government budget deficit will have a significant impact on the current account balance. Similarly, the deficit in savings-investment will have an impact on the current account deficit. Another variable that may affect the current account balance is the exchange rate of the currency. Depreciation of the domestic currency, for example, will be able to affect export volume increase and import volume decrease. The opposite effect on export and import volume will occur if the currency of a country appreciates. The purpose of this research is to know the effect of government budget gap, saving-investment gap, and rupiah exchange rate on current account balance in Indonesia, using annual data from period 1985-2016. This research applies the multiple linear regression approach. The results of this study, both of test (F-test) and partially (t-test), show that the government budget gap, saving-investment gap, and rupiah exchange rate had a positive and significant impact on Indonesia’s current account balance during the period 1985-2016.

KEY WORDS
Government budget gap, saving-investment gap, exchange rate, current account balance.

International economic relations will have an effect on the domestic economy. International economic relations occurs because a country has limitation in fulfilling its needs in the form of goods, services and capital. International relations, especially economic relations will be recorded in the balance of payments (BOP). It can be defined as a systematic summary that records the economic transactions of a country that relate to other countries within a certain period of time. Therefore, the BOP of a country basically also shows the performance of international economic relations of a country, which will certainly have an impact on the domestic economy.

International economic relations are of such importance, since today most of the world’s economy is an open economy, they export goods and services abroad, import goods and services from abroad, and borrow and lend to world capital markets (Mankiw: 2003: 110). Although a country has been able to produce its own goods and services it needs, it is possible to import from another country, when the price of imported goods is cheaper rather than produce in the home country. Therefore, the performance of Indonesia’s BOP, especially on the current account balance (CAB) during the period of 1985-2016 is presented in Appendix 5.

During the period of 1985-2016, the current account developments fluctuated, experiencing a deficit of 2,205 billion rupiahs in 1985 to 46,509 billion rupiahs in 1997, then a surplus in 1988 amounted to 65,757 billion rupiahs and tended to decline to 15,289 billion rupiahs in 2011, then deficit back from 236,132 billion rupiahs in 2012 to 219,638 billion rupiahs in 2016.
The 1985-1997 period, the current account deficit caused by a surplus in the trade balance (exports and imports of goods) cannot offset the deficit in the balance of services and the balance of income. The service account deficit shows an increasing trend of 1,942 billion rupiahs in 1985 to 70,099 billion rupiahs in 1997. Similarly, the deficit in the income balance, which is the sum of the primary income account and the secondary income account, also showed an increasing trend even though relatively fluctuated from 6,848 billion rupiahs in 1985 to 23,255 billion rupiahs in 1997.

However, the 1985-1997 periods which showed negative performance, during the period of 1998-2011, the current account showed positive performance, although relatively fluctuated from the surplus of 65,757 billion rupiahs in 1998 and tended to decrease to 15,289 billion rupiahs in 2011. Surplus the current account balance, which was affected by a surplus on a relatively large trade balance in all years of observation, was also attributed to a surplus in the income balance in almost all years of observation. In the period of 1998-2011, the income balance experienced only a deficit in 2006-2011 from 80,612 billion rupiahs in 2006 to 203,713 billion rupiahs in 2011.

After experiencing positive performance during the period of 1998-2011, in the next 5 years period (2012-2016) Indonesia's current account balance again showed deficit with fluctuating from 236,132 billion rupiahs in 2012 to 219,638 billion rupiahs in 2016.

During the period of 1985-2016, although Indonesia's current account balance deficit tended to increase but if measured its proportion to Gross Domestic Product (GDP), showed a declining trend, although relatively fluctuated ie from 2.3 percent in 1985 to 1.8 percent on year 2016.

In the future, the trade balance’s role is predicted to remain dominant as the main source of improvement in the current account balance, given the role of the balance of services and the balance of income that show more negative performance. The negative performance on the service balance is due to the greater payments of services abroad than the payment of services obtained by Indonesia from abroad. Similarly, the negative performance on the income balance is due to the greater interest payments on foreign loans plus the wages of foreign workers transferred abroad than the interest payments from abroad obtained by Indonesia plus the wages of Indonesian labor transferred from abroad.

Taking into account the trend of annual average growth over the period 1985-2016, where the growth in the service balance, and the income balance larger of the trade balance, ie 13.1 percent for the balance of services; 13.4 percent for the income balance; and 11.8 percent for the trade balance, in the following years the nominal value of Indonesia's current account deficit is predicted to increase.

Based on the background that has been described above, this article entitled "Factors affecting Indonesia, s current account".

LITERATURE REVIEW AND HYPOTHESES

The current account balance records the flow of trade in goods, services, and unilateral transfers (Salvatore: 1994; Nafziger: 1997). The flow of goods trade includes the export and import of goods. Service trade transactions are transactions for travel and transportation services. Meanwhile, unilateral transfers, among others, include net interest payments on foreign borrowings, and personal transfers in the form of remittances of foreign workers.

Current account performance, whether there will be a deficit or surplus, can be affected by several factors. The following describes several factors that may affect the current account balance.

National Income and Domestic Absorption. National Income is the value of all goods and services produced by a country's population within a certain period. The national income for a mathematically open economy can be written as follows (Batiz: 1994: 266-267):

\[ YN = CN + IN + GN + RN = MN \]  

(1)
Where: \( YN = \) Gross national product (GNP), \( CN = \) Private consumption expenditure, \( IN = \) Private investment, \( GN = \) Government expenditure, \( XN = \) Export of goods and services, \( MN = \) Import of goods and services.

Since \( CN + IN + GN\) is the production of domestic products (domestic absorption-AN), where MN is included, equation (2) becomes:

\[
YN = (AN - MN) + XN = \text{AN} + XN - MN
\]

Where \( XN - MN \) is the value of exports of goods and services minus imports of goods and services (net exports).

As indicated above, total domestic spending consists of private consumption (CN), private investment (IN), and government expenditure (GN):

\[
AN = CN + IN + GN
\]

If imports are excluded from domestic expenditures, the remainder is only an expenditure of the population on domestic production:

\[
AN - MN = CN + IN + GN - MN
\]

Then equation (3) is substituted into equation (2), so as to recover the national income identity equation:

\[
YN = CN + IN + GN + XN - MN
\]

Equation (5) can be rearranged to produce:

\[
XN - MN = YN - AN
\]

Equation (6) shows the balance of exports of goods and services as a gap between national income and domestic expenditure. This gap is usually referred to as current account balance (CAB):

\[
CAB = YN - AN
\]

Where: \( CAB < 0 \) means CAB is in a deficit, because \( YN < AN \) and \( XN < MN \); \( CAB > 0 \) means CAB is in surplus, because \( YN > AN \) and \( XN > MN \); \( CAB = 0 \) means CAB is in balance, because \( YN = AN \) and \( XN = MN \).

**Savings and Investments.** In the national income identity, government expenditure variables (GN) have included investment and consumption expenditures (Batiz: 1994: 268-269), thus:

\[
GN = CNG + ING
\]

Where CNG is the government's consumption expenditure, and ING is the government's investment expenditure.

Substituting equation (8) into equation (5), is obtained:

\[
CAB = YN - (CN + IN + CNG + ING) = (YN - CN - CNG) - (IN + ING) = \text{gross national savings} - \text{gross national investment}
\]

\[
CAB = GNS - GNI
\]

Where gross national savings is equal to the difference between GNP and total consumption (government consumption and private consumption), whereas gross national investment equals domestic investment spending, both private and government.
In a closed economy, savings and investment should ideally be the same. But in an open economy, savings and investments may not be the same, so national savings can be written:

\[ SN = YN - CN - CNG \]  

(10)

While:

\[ CAB = XN - MN \]  

(11)

So that equation (9) can be modified to:

\[ GNS = GNI + CAB \]  

(12)

Equation (12) reveals a very important difference between an open and closed economy. In an open economy, saving can be done either by piling up capital reserves or by creating wealth abroad. Whereas in a closed economy savings can be created only by piling up capital reserves.

To correspond with equation (9), equation (12) can be written:

\[ CAB = GNS - GNI \]  

(13)

Equation (13) states that the current account balance will have a deficit if the gross national investment exceeds the gross national savings, and vice versa will be a surplus if the gross national investment is less than the gross national savings.

**Government Budget Gap and Private Sector Gap.** The role of the government sector in the calculation of the current account balance deficit or surplus can be seen through the modification of the right-hand side of equation (2.9), ie by entering corporate taxes and transfer payments. Thus obtained (Batiz: 1994: 274):

\[ CAB = (YN + TRN - TXN - CN - IN) + (TXN - TRN - GN) \]  

(14)

Where \( SN = YN + TRN - TXN - CN \) indicates the magnitude of private savings, namely the excess of disposable income \( YN + TRN - TXN \) on private consumption \( CN \). While \( TXN - TRN - GN \) shows the excess/lack of government revenue (in this case tax revenues) on government payments (transfers to individuals, and government expenditures).

Equation (14) also states that the current account balance can be related to the gap between private saving and private investment (saving-investment gap), and/or the gap between domestic tax receipts and transfer payments and government spending (government budget gap), or:

\[ CAB = (SN - IN) + (TXN - TRN - GN) \]  

(15)

In the gap of the government sector, there will be a budget surplus if positive \((TXN > GN + TRN)\) and a budget deficit if negative \((TXN < GN + TRN)\).

The interpretation of equation (2.15), begins in the event of a private saving and private investment gap and a balance of government revenue and government spending \((TXN = GN + TRN)\). In this case, if the economy faces a current account surplus then the domestic savings will exceed domestic investment with a current account surplus value. This suggests that the excess of domestic savings on domestic investment is invested overseas and shows the net accumulation of assets abroad. The accumulated assets abroad are related to the surplus in CAB. Similar to the above if there is a balance in the government sector, the CAB deficit occurs when there is a relative shortfall in domestic savings compared to domestic investment. To finance the excess investment in savings, the domestic
population increases the debt to foreign parties in the form of net borrowing or reducing assets abroad.

The next possibility on CAB in equation (2.15) is the government budget deficit, which indicates a shortfall in tax revenues (TXN) on government spending (GN + TRN). If in economy a large private savings equals private investment, CAB will deficit, indicating a deficit in the government budget (TXN<GN + TRN). In this case the government sector borrows abroad to finance the excess of its expenditure on revenues (taxes).

From the above description of the relationship between the government sector finances with the current account balance can be concluded that the deficit government finances (TXN <GN + TRN) will tend to cause deficit in current account. The current account deficit can be caused by the revenue transferred abroad greater than the income of Indonesia received from abroad. One of the revenue that is transferred abroad is in the form of interest on foreign government loans. The government's foreign borrowing interest is also recorded in the State Budget (APBN) and is one of the contributors to the budget deficit. Thus it can be stated that the current account and the APBN have inseparable linkages.

Currency exchange rate. The foreign exchange rate is the price of one currency measured in another currency (Jamli: 1993). Demand for foreign currency arises from the need to pay for goods and services and assets originating from abroad. Demand and supply of foreign currencies will determine the exchange rate. Increased demand or decreased foreign exchange offerings result in a stronger/appreciated exchange rate that will increase the value of the currency. Conversely, declining demand and increased foreign exchange offerings will result in weakening/depreciating exchange rates that will reduce the value of the currency.

Changes in the currency value of a country can also affect the volume of exports and imports due to fluctuation in demand and supply. Depreciation of the domestic currency, for example, will be able to affect export volume increase and import volume decrease. Increased export volume can occur because the price of exported goods (in foreign currency) will become cheaper so that will encourage exports. Meanwhile, the volume of imports will be decreased due to the rise in prices of imported goods (prices in domestic currency). The opposite effect on export and import volume will occur if the currency of a country appreciates.

Previous Research. Merza (2012) has tested the twin deficit hypothesis for Kuwait (1993:4 - 2010:4). The twin deficit hypothesis states an increase in the budget deficit will lead to an increase in current account deficits.

By using the causality test the results show that the direction of causality moves from the current account balance to the balanced budget balance. In this study found a negative long-term relationship between the current account balance with the government's budget balance that is increasing the current account causing a decrease in government budget surplus or an increase in budget deficit.

The findings are in line with Kuwait's economy, as an increase in current account driven mainly by an increase in the trade balance makes central government spend more than it receives in revenues that ultimately leads to a decrease in government budget surplus or an increase in government budget deficits. Therefore, this study concludes that the twin deficit hypothesis is not found for the Kuwaiti case, ie the improved current account balance is not followed by the improved government budget. The government budget becomes a deficit precisely when there is an improvement in the current account balance.

Cavallo (2005) examines the effect of government spending on final goods on the current account balance. The results of the study show that government spending on final goods affects the current account balance more than expected.

The testing of the twin deficit hypothesis has been done also by Tang (2013), using US annual data from 1970 to 2011 period. The result of the study shows that there has been cointegration between balanced budget, current account balance, real income, and interest rate. In addition, the income and the interest rate have a positive and significant impact on the current account.
Vamvoukas (2015) evaluates the effect of the deficit budget on the current account balance in the Economic and Monetary Union (EMU) countries. This study focuses on testing the validity of twin deficits hypothesis, using data from the period 1970-2008, which is divided into the period 1970-1991 (pre-Maastricht) and 1992-2008 (post-Maastricht). The results show that the impact of the deficit budget on the current account balance in the EMU countries is stronger in the post-Maastricht period than in the pre-Maastricht period. The post-Maastricht period of EMU member states becomes more integrated and has an institution, so that after the Maastricht agreement the government deficit is the main determinant of the current account balance.

Abbassi (2015), conducted a study of the effect of the budget deficit on the current account deficit in Iran from 1981-2012, by arguing the twin deficit hypothesis argument. The results of the study obtained a coefficient of budget deficit of 0.09 indicating that an increase of one unit of budget deficit caused a decrease of 0.09 units in the current account balance. In other words an increase in the budget deficit will lead to an increase in current account deficit.

Akbas (2016) conducted a study to determine the validity of the triple deficit hypothesis, namely: the savings gap, the gap in the budget deficit effect on the current account deficit, using data G7 countries period 1994- 2011. Findings show that budget deficits and savings gap have an important role in current account deficits in G7 countries.

Namrouty (2015), conducted a study of the effect of public budget deficit on the current account balance in the Palestinian Territories (1996 - 2012). This study aims to determine the exact economic instances that can be used to reduce the current account deficit. The study findings show that there is a positive relationship between the public budget deficit and the current account balance in the Palestinian Territories. It appears that an increase in the public budget deficit of one million US $ will increase the current account deficit by 3.08 million $.

Puah (2012) examines the twin deficits in developing the economy, using Malaysian economic data, budget deficit data, and current account deficit data, from 1970-2005. The empirical result shows that there is causality in the direction of the current account to the budget deficit variable, ie the worsening of current account deficit can worsen the position of the budget deficit.

Gale (2003), conducts a study of the effects of fiscal policy on related economic variables. The results of the study show: First, the budget deficit will reduce national savings and future national income. Second, fiscal damages have a significant impact on future declines in national income. Third, the expected budget deficit in the future tends to have a significant impact on the expected deficit on long-term bond yields.

Coban (2016) conducted a study on triple deficit theory that is the interaction of government budget deficit, saving-investment deficit, and current account deficit. Using the 24-country transition data for the 2002-2013 period, the results show no evidence of interactions between current account deficits and investment savings deficits, where the investment savings deficit does not lead to current account deficits, current account deficits are caused by factors other than investment saving deficits.

There is an inverse relationship between the fiscal deficit and the current account deficit, ie the improvement of the current account deficit will adversely affect the fiscal deficit. This is because indirect taxes from imports have a high contribution to overall tax revenues. When a decline in imports will have an impact on improving current account deficit. However, current account improvements due to the decline in imports will lower the indirect tax revenues from imports and will lower overall tax revenues that will ultimately have an impact on increasing the government budget deficit. Therefore, the decline in imports will have a positive impact on the decrease in current account deficit but on the other hand the decline in imports will have a negative impact on the budget deficit or an increase in government budget deficit.

Palampanga (2017), conducts a study of the domestic resource gap and current account balance in Indonesia, the 2010-2015 period. The results show that private sector gaps, and the government sector, result in deficits in current accounts.
Iyeli (2017) conducted a study on the budget deficit and current account balance in Nigeria, to investigate the effect of the budget deficit on the current account balance. The study finds that in addition to the inflationary variables that affect the current account balance, the budget deficit, foreign private investment and exchange rate variables have a positive and significant impact on the current account balance.

Erdogan (2014), conducts a fiscal deficit review study with a current account deficit on the Turkish economy. The relationship between the budget deficit and the current account deficit was analyzed for the period 2001Q2-2012Q2. The results show that the budget deficit has a negative and significant effect on the current account balance. On the other hand, the budget deficit has a negative effect on the current account balance in the short run. The review of deficit budgetary relationships with current account deficits centered on the validity of Keynesian views and the Ricardian Equity hypothesis. According to Keynes's view budget deficits will negatively affect the current account balance. In other words the causality relationship of the deficit budget leads to the current account deficit. In contrast to Keynes's view, Ricardian Equality theory supports the idea that in this case there is no relationship between deficit budget and current account deficit.

There are many studies that analyze the interaction between budget deficits and current account deficits. Some studies support the views of Keynes and other studies supporting the theory of Ricardian equality (Erdogan: 2014: 81).

Idil (2010) examines the main determinants of the current account balance in Turkey. This study focuses on the impact of exchange rates, private savings, and government savings on the current account. The exchange rate has a strong impact on the current account. The results of this study also support the twin deficit theory in Turkey.

Odili (2014), examines the impact of the exchange rate on the balance of payments in Nigeria, using the annual data, 1971-2012. The results provide evidence that supports positive and statistically significant relationships in the long run as well as positive but statistically insignificant in the short term between the balance of payments and the exchange rate. The results of further studies reveal that depreciation/devaluation increases the balance of payments. This study recommends policies that will prevent excessive importation and promote export promotion programs based on incentives.

Romelli (2013) examines the impact of trade openness on the relationship between real exchange rates and current account balance, using data from developed and emerging countries from 1970 to 2011. The results show that the improvement in the current account balance is accompanied by a relatively small depreciation of the real exchange rate in a more open economy.

Based on the research question that has been put forward is "How the influence of government budget gap, saving-investment gap, and exchange rate of rupiah against current account balance in Indonesia period 1985-2016" then formulated research hypothesis and statistical hypothesis respectively as follows:

1. The government budget gap has a significant effect on current account, with the statistical hypothesis:
   - H0: β = 0, ie the government budget gap has no significant effect on the current account;
   - H1: β # 0, ie the government budget gap has a significant effect on the current account

2. Saving-investment gap has a significant effect on current account, with statistical hypotheses:
   - H0: β = 0, ie the saving-investment gap has no significant effect on the current account;
   - H1: β # 0, the saving-investment gap has a significant effect on the current account

3. Exchange rates have significant effect on current account, with statistical hypotheses:
   - H0: β = 0, ie the exchange rate has no significant effect on the current account;
   - H1: β # 0, ie the exchange rate has a significant effect on the current account.
METHODS OF RESEARCH

Data Types. The writing of this article is based on annual economic data of Indonesia period 1985-2016. The data used are: 1) Current account balance, 2) Government budget gap: which is the difference between total government expenditure and total government revenue (excluding debt receipts), 3) Saving-investment gap: which is the difference between gross national savings with gross national investment. and 4) Rupiah exchange rate (Rupiah/$ US). The data are sourced from: 1) Statistic YearBook of Indonesia, Indonesian Central Bureau of Statistics, various editions, and 2) Indonesia Balance of Payments Report, Bank Indonesia, various editions.

Multiple Linear Regression. To answer the problems that have been formulated used multiple linear regression analysis method as follows:

\[ \text{CAB} = b_0 + b_1 \text{GBG} + b_2 \text{SIG} + b_3 \text{ERC} \]

Where: \( \text{CAB} = \) Current account balance (billion rupiah), \( \text{GBG} = \) Government budget gap (billion rupiah), \( \text{SIG} = \) Saving-investment gap (billion rupiah), \( \text{ERC} = \) Exchange rate currency (Rupiah/$).

The linear regression model has some basic assumptions that must be met to produce a good estimate otherwise known as BLUE (Best Linear Unbiased Estimator). These assumptions include no-multicollinearity, homoscedastic, and no-autocorrelation.

Multicollinearity Test. One of several assumptions on multiple regression models is that there is no definite linear relationship between the independent variables in the model. If there is a definite linear relationship between independent variables then it is stated that the fellow independent variables have occurred collinearity. Multicollinearity mean the existence of a perfect or definitive linear relationship, among some or all of the variables describing the regression model (Ajija: 2011: 35, Pindyck: 1998: 95-96). The presence or absence of multicollinearity can be known or seen from the correlation coefficient of each independent variable. If the correlation coefficient between each independent variable is greater than 0.8 then multicollinearity occurs.

Heteroscedasticity Test. Heteroscedasticity is a state in which all the disorders that appear in the population regression function do not have the same variance. Heteroskedasticity test can be done by considering the residual pattern from regression estimation result. If the residual moves constant there is no heteroscedasticity. However, if the residual forms a particular pattern, then it indicates the presence of heteroscedasticity.

Another approach that can be used to identify whether or not heteroscedasticity is comparing p-value Obs*R-Square in heteroscedasticity test with \( \alpha \) magnitude. If the p-value is greater than \( \alpha \) then there is no heteroscedasticity (Ajija: 2011: 39).

Autocorrelation Test. Autocorrelation indicates the correlation among members of a series of observations that are sequenced according to time and space (Ajija: 2011: 40). So autocorrelation is a correlation between the variables themselves, on different observations of time or individuals. Generally cases of autocorrelation occurs in time series data. Autocorrelation symptoms may indicate a cycle or linear line showing the relationship between ui (residue) as the dependent variable and time as the independent variable (Nachrowi: 2002: 140). According to Ajija (2011: 40) the autocorrelation symptoms can be determined by comparing the values of F and Obs*R-Squared, where if the probability value of Obs*R-Squared exceeds the level of trust, then H0 is accepted, meaning there is no autocorrelation problem.

RESULTS AND DISCUSSION

As described in the analysis method, if the correlation coefficient between each independent variable is greater than 0.8 then multicollinearity occurs.

The correlation values between the independent variables (government budget gaps and saving-investment gaps, government budget gaps and exchange rate, saving-investment
gaps and exchange rate) as shown in Appendix 1 all show smaller than 0.8 this means that between those independent variables does not occur multicolinearity. Heteroskedasticity test can be done through hypothesis with the following steps (Ajija: 2011: 39):

1. H0: no heteroscedasticity;
2. H1: there is heteroscedasticity;
3. If P Value OBS * square <α then H0 is rejected (H1 accepted).

Based on Appendix 2 the result of P Value OBS * square is 0.0844 greater than 0.01 or 0.05, then H0 is accepted (H1 is rejected), thus there is no heteroscedasticity in the regression model.

To detect the presence of autocorrelation can be done by testing the autocorrelation hypothesis as follows (Ajija: 2011: 41):

1. H0: there is no serial correlation (serial correlations);
2. H1: there is a serial correlation (serial correlations);
3. If p-value Obs * R-Square <α, then H0 is rejected (H1 accepted).

Based on Appendix 3 the result of P Value OBS * square is 0.3142 greater than 0.01 or 0.05, then H0 is accepted, thus there is no autocorrelation in the research regression model.

Based on the results of multiple regression regarding the factors that affect the current account balance as shown in Appendix 4 then obtained the following regression equation:

\[ \text{CAB} = -11,750.83 + 1.42 \text{GBG} + 0.37 \text{SIG} + 17.00 \text{ERC} \]

From equation (4.1) shows a constant value of -11,750.83. The value of these constants can be stated that when the government budget gap (GBG), saving-investment gap (SIG) and exchange rate currency (ERC) have zero value, the current account deficit is 11,750.83 billion rupiahs.

The current account deficit shows the greater the value of imports of goods and services than the value of exports. There are still other factors that may affect the current account condition, so even if the GBG, SIG, and ERC values have a zero, the value of the current account may be negative as the regression equation (4.1).

Furthermore, based on the value of each coefficient of independent variables in equation (4.1) can be explained as follows:

Government budget gap variable (GBG) has a regression coefficient value of 1.42 means that if the government budget gap increases by 1 billion rupiahs then the current account balance will increase by 1.42 billion rupiahs. Saving-investment gap variable (SIG) has a regression coefficient value of 0.37 means that if the saving-investment gap value increases by 1 billion rupiahs then the current account balance will increase by 0.37 billion rupiahs. Rupiah exchange rate variable (ERC) has the value of regression coefficient of 17.00 means if the rupiah exchange rate increases (depreciation) of 1 rupiah then the current account balance will increase by 17.00 billion rupiahs. Based on Appendix 4 which presents the results of multiple regression testing on the factors that affect the current account balance can be explained as follows:

The test of the coefficient of the variable estimator or independent variable is t-test. The independent variable coefficients need to be different from zero significantly or p-value is very small. The test can be done by comparing the value of t-test results statistics on the results of regression with t-table. If the value of t Statistics > t-table, H0 is rejected and H1 accepted. In other words there is a significant partial influence of independent variables to dependent variables. Conversely, if the value of t Statistic < t-table H0 is accepted and H1 is rejected. In other words partially there is no significant influence of independent variables to dependent variables.

In addition, testing hypothesis can also be done with the concept of p-value. This concept is done by comparing α with p-value. If the p-value is less than α then H0 is rejected. In this multiple regression analysis using 95% (α 5%) confidence level, 1985-2016 observation period (32 years observation number), and there are three independent
variables (number of parameters, k = 4) then obtained free degree = 28 so that the t number of two sides is 2.048.

The results of multiple regression analysis is shown by the level of significance of the influence of each independent variable as follows:

Variable of government budget gap (GBG), at 95% confidence level (α 5%), from calculation result obtained t value counted 11.555. Thus the t value of 11.555 is greater than t table (11.555> 2.048), so H0 is rejected (Ha accepted). With the receipt of Ha means the government budget gap has a significant effect on the current account balance.

The significant influence of the government budget gap on the current account balance in line with Vamvoukas (2015) which examines the validity of twin deficits hypothesis using EMU countries data from 1970-2008, divided into 1970-1991 (pre Maastrict) and 1992-2008 (post Maastrict). The results show that the impact of the fiscal deficit on the current account balance is stronger in the post-Maastrict period than the pre-Maastrict period.

Similarly Abbasi (2015) using Iranian economic data from 1981-2012, found that an increase in the budget deficit led to an increase in current account deficits. Akbas (2016) conducted a study to determine the validity of triple deficits hypothesis using the data of G7 countries from the period 1994-2011. The results show that the budget deficit, the savings gap, has an important role in the current account deficit. A similar conclusion was generated by Namrouty (2015), using the Palestinian economic data, 1966-2012 period, the result of the study indicates a positive relationship between the public budget deficit and the current account balance. Similarly, iyeli (2017) includes several other independent variables, the budget deficit variable has a positive and significant impact on the current account in Nigeria.

The relationship between the government budget gap and Indonesia's current account balance during the period 1985-2016 can be observed in Appendix 6. Despite the fluctuating developments, the current account deficit during the period of 1985-2016 tended to increase, from the deficit of 2,205 billion rupiahs in 1985, increased to a deficit of 219,638 billion rupiahs in 2016. The level of deficit in the current account was accompanied by an increase in the deficit in the government budget from the deficit of 3,548 billion rupiahs in 1985 to a deficit of 308,340 billion rupiahs in 2016.

As described in the literature review, current account deficits may be caused by income transferred abroad greater than Indonesian income received from abroad. One of the income that is transferred abroad is in the form of interest on foreign government loans. The government’s foreign borrowing interest is also recorded in the state budget of revenues and expenditures (APBN). Thus it can be stated that between the current account balance and the state budget has a closely related.

Variable of saving-investment gap (SIG), at 95% confidence level (α 5%), from calculation result obtained t value count equal to 6.744. Thus the t value of 6.744 is greater than t table (6.744> 2.048), so H0 is rejected (Ha accepted). With the receipt of Ha means the saving-investment gap has a significant effect on the current account balance.

The significant effect of saving-investment gap on current account balance in line with Akbas (2016) which examines the validity of triple deficits hypothesis by using G7 countries data from 1994 to 2011 period. Government budget gap variables, saving-investment gaps have an important role in the current account deficit.

However, coban (2016) using data from 24 transition countries for the period 2002-2013, the results show no evidence of an interaction between current account deficits and saving-investment deficits, where the saving-investment deficit does not cause current account deficits, current account deficits caused by factors other than the deficit of investment savings.

The positive relationship between saving-investment gap and current account deficit on the results of this study is also supported by Batiz (1994: 268-269), through the concept of triple deficits hypothesis as mentioned in the literature review. In addition to being influenced by the government budget deficit, on the concept of triple deficits hypothesis the current account deficit is also caused by the saving-investment gap.

The impact of saving-investment gaps on current account deficits can occur, when a country has an investment requirement greater than the savings that can be provided so that
the country needs capital flows from abroad. Capital entering a country whether in the form of loan, foreign direct investment (FDI), or portfolio investment will give birth to income that will be transferred abroad. The income is whether the interest of the loan, or the profit from the investment activity will be recorded on the current account of the country. Thus it is clear that the saving-investment deficit will have a negative impact on the current account balance.

The relationship between the saving-investment gap and Indonesia's current account balance during the period 1985-2016 can be observed in Appendix 6. During the period 1985-2016 the saving-investment gap showed an increasing trend although relatively fluctuating ie from the deficit of 13,169 billion rupiahs in 1985 and peaked to a deficit of 648,128 billion rupiahs in 2013, then decreased again to 1,439 billion rupiahs in 2016. During that period the deficit also increased in the current account balance from the deficit of 2,205 billion rupiahs in 1985 and peaked to a deficit of 354,883 billion rupiahs in 2013 and continues to decline to a deficit of 219,638 billion rupiahs in 2016.

The flow of capital into a country that will cover the saving-investment gap has been discussed by Chenery (Jhingan, 2013) with the concept of two gap model in economic development. The rationale is that the gap between saving and investment on the one hand, and the foreign exchange gap on the other hand, becomes an obstacle for non-developed countries in implementing development. Chenery sees foreign aid as a way to close both gaps in achieving targeted economic growth.

Nafziger (1997: 432) states that developing countries derive inflows of capital from abroad when various institutions and individuals from abroad provide assistance or loans or make direct investments to pay for deficits in goods and services on a current account. In 1991, Ghana, for example, received large inflows of capital to pay for trade deficits, service deficits, and reduced liabilities.

Incoming capital from abroad also allows a country to spend more than its production capability, overcome the import export gap, and saving-investment gap. Thus foreign capital will fill the gaps in development activities. Regarding the role of foreign capital in the total investment of developing countries, the World Bank (Nafziger 1997: 433) estimates the role of foreign capital by 10 percent in the 1960s and 20 percent in the 1970s. But the role of foreign capital declined to 8 percent in the 1980s and 12 percent of the 1990s.

According to Strout (cited in Nafziger, 1997), in a model based on the experience of 50 developing countries in 1957-1962, there are three things that limit economic development, 1) skill limitations, 2) saving-investment gaps, 3) disparities the foreign sector (export-import). Skill constraints can be overcome with technology and expertise from abroad. Then for investment and savings constraints, as well as export and import constraints are overcome with the help of foreign capital that can reduce the gap to accelerate growth.

The next discussion for exchange rate variables (ERC), at 95% confidence level (α 5%), from the calculation results obtained t value counted 6.889. Thus the t value of 6.889 is greater than t table (6.889> 2.048), so H0 is rejected (Ha accepted). With the acceptance of Ha (along with the positive coefficient of the exchange rate in the regression equation) means that the rupiah exchange rate has a significant and positive effect on the current account balance. The relationship between the rupiah and the current account in the period of 1985-2016 can be seen in Appendix 6.

The significant effect of the rupiah exchange rate (ERC) on the current account balance in line with Idil (2010) which examines the main determinants of the current account balance in Turkey. The exchange rate has a strong impact on the current account.

Similarly Odili (2014), using Nigeria's economic data, the results show that in the long run the exchange rate has a positive and significant impact on the balance of payments. In this study also confirmed that the depreciation will increase the balance of payments.

The effect of the exchange rate on current account balance is reviewed by Romeli (2013). Using the real exchange rate, the results show that, with a relatively small currency depreciation, it will have an impact on improving the current account balance.

F test or model test as a whole is done to see if all the regression coefficients are simultaneously different from zero or accepted model. F test can be done by comparing the test result value (F statistic) on the regression result with F Table. If the value of F Statistics>
F Table then H0 is rejected (H1 accepted). In other words, there is a significant relationship between independent variables and dependent variable. Conversely, if the F value of Statistic ≤ F Table H0 is accepted (H1 is rejected). It means that there is no significant influence of independent variables to the dependent variable.

Then, the comparison between the value of F Statistics and F Table hypothesis testing can also be done with the concept of p-value. This concept is done by comparing α with p-value. If the p-value is less than α then H0 is rejected.

In the multiple regression of factors affecting the current account balance there are 3 (three) independent variables, with the number of observations 32 (Year 1985-2016), with a confidence level of 95% (α 5%) then obtained F Table of 2.95.

Based on Appendix 4 obtained F value of Statistics 86.706 which is greater than F Table of 2.95 so that H0 is rejected (accept H1). Thus together all the independent variables are: government budget gap, saving-investment gap, and rupiah exchange rate (ERC) significantly affect the current account balance. Rejection of H0 (H1 receipt) is also indicated by the value of Prob (F-Statistic) of 0.000 lower than the α value of 5%.

The next test is the coefficient of determination test (R2). The coefficient of determination shows the ability of the regression line to explain the variation of the dependent variable, namely the variation of the dependent variable which can be explained by the independent variable. The value of R2 ranges from 0 to 1. The value of R2 is closer to 1 the better the ability of the independent variable to explain the variation of the dependent variable (Aijja: 2011: 34). Similarly Nachrowi (2002: 22), the value of R2 reflects how much variation of the dependent variable can be explained by the independent variable. When R2 = 0, it means that the variation of the dependent variable can not at all be explained by the independent variable. Meanwhile when R2 = 1, meaning the variation of the dependent variable, 100 percent can be explained by the independent variable. The value of R2 is close to one indicates that there are other variables that influence the dependent variable outside the independent variable already in the model.

The value of R2 also shows how well the regression line describes its data (goodness of fit). This means whether the regression lines are formed according to the data. If all the data lies on the regression line or in other words all residual values are zero then it has obtained a perfect regression line, however the perfect regression line is rare (Widarjono: 2009: 24). In line with the above definitions, Gujarati (2004: 239), states that the value of R2 will indicate how much the proportion of variation in the dependent variable can be explained by the independent variables simultaneously.

Based on Appendix 4 the value of R2 of 0.902 indicates that the variation in the dependent variable (current account), 90.2 percent can be explained by the independent variables contained in the equation, namely: government budget gap, saving-investment gap, and rupiah exchange rate. Given the relatively large value of R2, this indicates also that the role of other variables outside the independent variables already contained in the regression equation model has a relatively small effect on the current account balance variations.

CONCLUSION AND RECOMMENDATIONS

Government budget gap variables (GBG) have positive and significant impact on current account balance. This is indicated by the coefficients of government budget gap variables of 1.42; t count value of 11.56; and T table value of 2.048. The variable of saving-investment gap (SIG) has a positive and significant effect on the current account balance. This is indicated by the saving-investment gap variable of 0.37; t value of 6.74; and T table value of 2.048. The exchange rate variable (ERC) has a positive and significant effect on the current account balance. This is indicated by the rupiah exchange rate variable coefficient of 17.00; t value of 6.89; and T table value of 2.048. Variables of government budget gap, saving-investment gap, and exchange rate of rupiah, together significantly affect the current account balance. This is shown by the value of F Statistics of 86.706 which is greater than F Table of 2.95. The coefficient of determination shown by the value of R2 that is equal to 0.902. This means that 90.2 percent of the variation in the dependent variable can be
explained by the independent variables contained in the equation, namely: government budget gap variables, saving-investment gap variables, and exchange rate variables. Given the relatively high value of R2 then this indicates also that the role of other variables outside the independent variables already contained in the regression equation model has a relatively small effect on the variation of the current account balance variable.

Government budget gaps need to be controlled, among others, by optimizing tax revenue, so it is expected to improve the current account balance position. Saving-investment gaps need to be reduced by controlling the level of public consumption so that it will have a positive impact on national savings, which in turn is expected to improve the current account position. Decrease/depreciation of the rupiah exchange rate should be controlled at a relatively small level, so that it can have a positive impact on the improvement of current account position.

APPENDIXES

Appendix 1 – Multicollinearity Test on the Current Account Balance Regression Equation

<table>
<thead>
<tr>
<th></th>
<th>CAB</th>
<th>GBG</th>
<th>SIG</th>
<th>ERC</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAB</td>
<td>1</td>
<td>0.796</td>
<td>0.661</td>
<td>-0.347</td>
</tr>
<tr>
<td>GBG</td>
<td>0.796</td>
<td>1</td>
<td>0.472</td>
<td>-0.725</td>
</tr>
<tr>
<td>SIG</td>
<td>0.661</td>
<td>0.472</td>
<td>1</td>
<td>-0.462</td>
</tr>
<tr>
<td>ERC</td>
<td>-0.347</td>
<td>-0.725</td>
<td>-0.462</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Appendix 6 (reprocessed).

Appendix 2 – Heteroscedasticity Test on the Current Account Balance Regression Equation

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>88206525</td>
<td>6.1E+08</td>
<td>0.143735</td>
<td>0.8867</td>
</tr>
<tr>
<td>GBG^2</td>
<td>-0.041138</td>
<td>0.023495</td>
<td>-1.750915</td>
<td>0.0909</td>
</tr>
<tr>
<td>SIG^2</td>
<td>-0.002981</td>
<td>0.004682</td>
<td>-0.636716</td>
<td>0.5295</td>
</tr>
<tr>
<td>ERC^2</td>
<td>27.97614</td>
<td>10.38003</td>
<td>2.695188</td>
<td>0.0118</td>
</tr>
</tbody>
</table>

R-squared 0.207410
Adjusted R-squared 0.122490
S.E. of regression 2.14E+09
Sum squared resid 1.04E+10
Log likelihood -730.8002
F-statistic 2.442405
Prob(F-statistic) 0.085016

Source: Appendix 6 (reprocessed).

Appendix 3 – Autocorrelation Test on the Current Transaction Balance Regression Equation

Breusch-Godfrey Serial Correlation LM Test:

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.207410</td>
<td>Mean dep. var</td>
<td>1.32E+09</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.122490</td>
<td>S.D. dep. var</td>
<td>2.29E+09</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>2.14E+09</td>
<td>Akaike info crit</td>
<td>45.92501</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>1.29E+20</td>
<td>Schwarz crit</td>
<td>46.10823</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-730.8002</td>
<td>Hannan-Quinn crit</td>
<td>45.98574</td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>2.442405</td>
<td>Durbin-Watson stat</td>
<td>2.724482</td>
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<tr>
<td>Prob(F-statistic)</td>
<td>0.085016</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Appendix 6 (reprocessed).
Appendix 3 Continue
Method: Least Squares
Date: 06/20/18 Time: 08:44
Sample: 1985 2016
Included observations: 32
Presample missing value lagged residuals set to zero.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>2947.301</td>
<td>14210.39</td>
<td>0.207405</td>
<td>0.8373</td>
</tr>
<tr>
<td>GBG</td>
<td>-0.050916</td>
<td>0.128331</td>
<td>-0.396753</td>
<td>0.6948</td>
</tr>
<tr>
<td>SIG</td>
<td>0.052262</td>
<td>0.067104</td>
<td>0.778921</td>
<td>0.4431</td>
</tr>
<tr>
<td>ERC</td>
<td>-0.041946</td>
<td>2.472197</td>
<td>-0.016967</td>
<td>0.9866</td>
</tr>
<tr>
<td>RESID(-1)</td>
<td>0.256664</td>
<td>0.211125</td>
<td>1.215697</td>
<td>0.2350</td>
</tr>
<tr>
<td>RESID(-2)</td>
<td>0.154688</td>
<td>0.213109</td>
<td>0.725865</td>
<td>0.4744</td>
</tr>
</tbody>
</table>

R-squared 0.072362
Adjusted R-squared -0.106030
S.E. of regression 38869.55
Akaike info criterion 24.14117
Sum squared resid 3.93E+10
Schwarz criterion 24.41600
Log likelihood -380.2587
Hannan-Quinn criter. 24.23227
F-statistic 0.405636
Prob(F-statistic) 0.840427

Source: Appendix 6 (reprocessed).

Appendix 4 – Result of Current Account Balance Regression

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-11705.83</td>
<td>14064.74</td>
<td>-0.832282</td>
<td>0.4123</td>
</tr>
<tr>
<td>GBG</td>
<td>1.424488</td>
<td>0.123276</td>
<td>11.55528</td>
<td>0.0000</td>
</tr>
<tr>
<td>SIG</td>
<td>0.371658</td>
<td>0.055109</td>
<td>6.744004</td>
<td>0.0000</td>
</tr>
<tr>
<td>ERC</td>
<td>16.99595</td>
<td>2.466979</td>
<td>6.889377</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

R-squared 0.902818
Adjusted R-squared 0.892405
S.E. of regression 38889.11
Akaike info criterion 24.09128
Sum squared resid 4.23E+10
Schwarz criterion 24.27450
Log likelihood -381.4606
Hannan-Quinn criter. 24.23227
F-statistic 86.70820
Prob(F-statistic) 0.000000

Source: Appendix 6 (reprocessed).
RJOAS, 10(82), October 2018

Appendix 5 – Indonesia Current Account Balance 1985-2006

Number

1
2
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Year

1985
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2014
2015
2016

Trade
Balance
(TB)
(Billion
Rupiah)

Services
Balance
(SB)
(Billion
Rupiah)

Income
Balance
(IB)
(Billion
Rupiah)

6.585
4.068
7.427
9.817
11.956
10.174
9.564
14.479
17.367
17.382
15.078
14.174
46.844
147.893
146.551
240.268
236.028
210.197
207.926
200.218
227.781
267.533
311.609
255.234
283.382
279.557
315.412
83.336
71.098
85.861
193.806
206.780

(1.942)
(2.406)
(1.845)
(1.869)
(14.339)
(16.333)
(18.312)
(20.917)
(22.216)
(23.894)
(30.680)
(32.764)
(70.099)
(115.014)
(105.499)
(163.595)
(164.268)
(140.269)
(139.300)
(171.345)
(204.838)
(89.190)
(104.579)
(146.007)
(90.945)
(85.334)
(96.411)
(99.901)
(147.146)
(131.018)
(119.975)
(87.146)

(6.848)
(8.445)
(9.560)
(10.632)
(2.383)
(6.159)
(8.749)
(6.438)
(4.849)
(6.512)
(15.602)
(18.590)
(23.255)
32.878
41.052
76.674
71.760
69.929
68.626
28.873
22.943
(80.612)
(103.345)
(106.116)
(96.623)
(137.634)
(203.713)
(219.567)
(278.848)
(281.169)
(315.505)
(339.272)

Current
Account
Balance
(CAB)
(Billion
Rupiah)
(2.205)
(6.784)
(3.978)
(2.683)
(4.765)
(12.318)
(17.498)
(12.875)
(9.698)
(13.024)
(31.204)
(37.180)
(46.509)
65.757
82.104
153.347
143.520
139.857
137.252
57.747
45.886
97.732
103.684
3.110
95.814
56.589
15.289
(236.132)
(354.895)
(326.326)
(241.675)
(219.638)

TB/CAB
(percent)

SB/CAB(percent)

IB/CAB
(Percent)

Growth of Trade
Balance
(Percent)
Annual

(298,6)
(60,0)
(186,7)
(365,9)
(250,9)
(82,6)
(54,7)
(112,5)
(179,1)
(133,5)
(48,3)
(38,1)
(100,7)
224,9
178,5
156,7
164,5
150,3
151,5
346,7
496,4
273,7
300,5
8.207,4
295,8
494,0
2.063,0
(35,3)
(20,0)
(26,3)
(80,2)
(94,1)

88,1
35,5
46,4
69,7
300,9
132,6
104,7
162,5
229,1
183,5
98,3
88,1
150,7
(174,9)
(128,5)
(106,7)
(114,5)
(100,3)
(101,5)
(296,7)
(446,4)
(91,3)
(100,9)
(4.695,1)
(94,9)
(150,8)
(630,6)
42,3
41,5
40,1
49,6
39,7

310,5
124,5
240,3
396,2
50,0
50,0
50,0
50,0
50,0
50,0
50,0
50,0
50,0
50,0
50,0
50,0
50,0
50,0
50,0
50,0
50,0
(82,5)
(99,7)
(3.412,3)
(100,8)
(243,2)
(1.332,4)
93,0
78,6
86,2
130,5
154,5

7,2
(38,2)
82,6
32,2
21,8
(14,9)
(6,0)
51,4
19,9
0,1
(13,3)
(6,0)
230,5
215,7
(0,9)
63,9
(1,8)
(10,9)
(1,1)
(3,7)
13,8
17,5
16,5
(18,1)
11,0
(1,3)
12,8
(73,6)
(14,7)
20,8
125,7
6,7

Growth ofServices
Balance
(Percent)

average
yearly

Annual

11,8

(10,4)
23,9
(23,3)
1,3
667,2
13,9
12,1
14,2
6,2
7,6
28,4
6,8
114,0
64,1
(8,3)
55,1
0,4
(14,6)
(0,7)
23,0
19,5
(56,5)
17,3
39,6
(37,7)
(6,2)
13,0
3,6
47,3
(11,0)
(8,4)
(27,4)

Growth ofIncome
Balance
(percent)

average
yearly

Annual

average
yearly

13,1

12,4
23,3
13,2
11,2
(77,6)
158,5
42,0
(26,4)
(24,7)
34,3
139,6
19,1
25,1
(241,4)
24,9
86,8
(6,4)
(2,6)
(1,9)
(57,9)
(20,5)
(451,4)
28,2
2,7
(8,9)
42,4
48,0
7,8
27,0
0,8
12,2
7,5

13,4

Source: 1) Statistic Year Book of Indonesia, Indonesian Central Bureau of Statistics, various editions (reprocessed); 2) Indonesia Balance of Payments Report, Bank Indonesia, various editions (reprocessed).

17



<table>
<thead>
<tr>
<th>Year</th>
<th>CAB (Billion Rupiah)</th>
<th>GBG (Billion Rupiah)</th>
<th>SIG (Billion Rupiah)</th>
<th>ERC (Rupiah/$)</th>
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</thead>
<tbody>
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<td>1985</td>
<td>(2,205)</td>
<td>(3,548)</td>
<td>(13,169)</td>
<td>1,131</td>
</tr>
<tr>
<td>1986</td>
<td>(6,784)</td>
<td>(5,206)</td>
<td>(14,551)</td>
<td>1,655</td>
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<tr>
<td>1987</td>
<td>(4,077)</td>
<td>(6,054)</td>
<td>(17,989)</td>
<td>1,652</td>
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<tr>
<td>1988</td>
<td>(2,663)</td>
<td>(9,026)</td>
<td>(22,162)</td>
<td>1,729</td>
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<tr>
<td>1989</td>
<td>(2,363)</td>
<td>(9,565)</td>
<td>(25,343)</td>
<td>1,805</td>
</tr>
<tr>
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<td>(7,687)</td>
<td>(35,568)</td>
<td>1,90!</td>
</tr>
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<td>1991</td>
<td>(8,749)</td>
<td>(8,457)</td>
<td>(38,760)</td>
<td>1,932</td>
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<td>(10,262)</td>
<td>(37,916)</td>
<td>2,062</td>
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<tr>
<td>1993</td>
<td>(4,849)</td>
<td>(11,814)</td>
<td>(41,910)</td>
<td>2,110</td>
</tr>
<tr>
<td>1994</td>
<td>(6,512)</td>
<td>(11,275)</td>
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<td>(15,602)</td>
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<td>8,940</td>
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<td>(37,600)</td>
<td>(15,433)</td>
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</tr>
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<td>(88,634)</td>
<td>(45,550)</td>
<td>9,400</td>
</tr>
<tr>
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<td>(46,861)</td>
<td>(69,940)</td>
<td>8,991</td>
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<td>(64,447)</td>
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<td>9,068</td>
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<tr>
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<td>(298,520)</td>
<td>(94,244)</td>
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<tr>
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<td>(219,638)</td>
<td>(308,340)</td>
<td>1,439</td>
<td>13,436</td>
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Source: 1) Statistic Year Book of Indonesia, Indonesian Central Bureau of Statistics, various editions (reprocessed); 2) Indonesia Balance of Payments Report, Bank Indonesia, various editions (reprocessed).


Appendix 7 – Indonesia Saving-Investment Gap, 1985-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>YN (Billion Rupiah)</th>
<th>CNG (Billion Rupiah)</th>
<th>CN (Billion Rupiah)</th>
<th>GNS= YN-CNG (Billion Rupiah)</th>
<th>GNI= IN+ING (Billion Rupiah)</th>
<th>SIG = GNS – GNI (Billion Rupiah)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>90,789</td>
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<td>56,858</td>
<td>22,610</td>
<td>35,779</td>
<td>(13,169)</td>
</tr>
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<td>1986</td>
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<td>60,591</td>
<td>18,882</td>
<td>33,432</td>
<td>(14,551)</td>
</tr>
<tr>
<td>1987</td>
<td>118,522</td>
<td>16,214</td>
<td>71,989</td>
<td>30,319</td>
<td>48,308</td>
<td>(17,989)</td>
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<tr>
<td>1988</td>
<td>135,099</td>
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<td>81,045</td>
<td>34,128</td>
<td>56,290</td>
<td>(22,162)</td>
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<td>88,752</td>
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<td>135,880</td>
<td>78,477</td>
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<td>131,809</td>
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<tr>
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<td>279,876</td>
<td>112,753</td>
<td>173,995</td>
<td>(61,242)</td>
</tr>
<tr>
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<td>59,530</td>
<td>325,585</td>
<td>133,806</td>
<td>204,969</td>
<td>(71,163)</td>
</tr>
<tr>
<td>1997</td>
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<td>79,096</td>
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<td>243,493</td>
<td>(100,419)</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<td>------</td>
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<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
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<tr>
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<td>2.579.827</td>
<td>3.227.955</td>
<td>(648.128)</td>
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</tbody>
</table>

Source: Statistic Year Book of Indonesia, Indonesian Central Bureau of Statistics, various editions (reprocessed).

Information: YN = Gross national product, CNG = government’s consumption expenditure, CN = Private consumption expenditure, GNS = gross national savings, GNI = gross national investment, IN = Private investment, ING = government’s investment expenditure, SIG = Saving-Investment Gap.

REFERENCES

EFFECT OF FINANCIAL REPORTS ON PUBLIC COMPANIES LISTED IN INDONESIA STOCK EXCHANGE

Aba Fransiskus X Lara
Faculty Economics and Business, Atma Jaya Catholic University of Indonesia
E-mail: fransiskus.lara@atmajaya.ac.id

ABSTRACT
The purpose of this research is to know empirical evidence of several factors affecting Audit Delay. Formulated research problem that is how influence of problematic of transmission of information of company financial report, profitability, solvency, and auditor opinion influence audit delay and added value at property company listed in Indonesia Stock Exchange (IDX). Audit delay is an important issue as it affects the timeliness of the release of the transmission of accounting information. The factors that will be tested in this research are company size, profitability, solvency, and auditor opinion. The population of this study is a property company listed on the Indonesia Stock Exchange period 2014-2016. The results show that the audit delay is between 25 days to 121 days with an average of 77.73 days and a standard deviation of 14,343. It appears that the average audit delay of the sample companies is still below 90 calendar days which is the limit set by the Financial Services Authority (FSA) in the submission of the financial statements of March 31 of each year. It also appears that there are companies that are late because they have audit delay over 90 days. The lowest Return On Asset (ROA) is owned by PT New Century Development Tbk in 2014, while the highest ROA occurs in 2015 at PT Metropolitan Kentjana Tbk. The Debt to Equity Ratio variable has a minimum value of -2.904703 and a maximum value of 2.466707 with an average of 0.793721 of the sample number of 111. The lowest solvency ratio is owned by PT New Century Development in 2015, while the highest ratio is at PT. Duta Anggada Realty in 2016.

KEY WORDS
Financial report, property, audit delay, profitability, solvency.

Investment is an investment or money in a particular company in order to gain profit. There are various types of investments commonly used by investors, such as investment deposits, gold investment, or property investment (Anthony and Govindarajan:1995). Of these types of investments have different advantages. Of the three types of investment, property investment is an investment product that has the highest profits. Nevertheless, property investment also requires substantial funds, as property prices are also high. Many investors are choosing to switch to investing in the property sector for higher returns (Bing., et all: 2014; McLaughlin: 1969).

From the perspective mentioned above financial report is a very important tool to obtain information and results achieved by a company (Behn, Choi & Kang: 2008). In addition, financial report are one important instrument that supports the continuity of a company, especially in companies that have gone public (Carcello & Nagy:2004; Innes, Brown, & Hatherly: 1997). One of the obligations of companies that have gone public is to publish financial report that have been prepared with Financial Accounting Standards and have been audited by public accountants registered with the Financial Services Authority (FSA). In Indonesia, the deadline for publicly-listed corporate financial statements is regulated by FSA. The public company must submit its annual financial report accompanied by the auditor's opinion to the FSA and announce it to the public no later than the end of the third month after the date of financial report should be audited within 90 days. which is longer.

The delay in the publication of the financial report is the delay in issuing the financial report at the Indonesia Stock Exchange (IDX) or to the print media. In order to more useful financial report in addition to timely reporting to the public, financial report must also be audited by public accountants (Boyton and Kell: 2003). Thus, the company's management...
has financial report data that can be trusted more accuracy level, for the purpose of decision making and also for the interests of investors because the audited financial report in which contains the company's earnings information serve as one of the basis of decision making the purchase or sale of securities owned investors. That is, the earnings information from the published financial report indirectly leads to an increase or decrease in stock prices.

**LITERATURE REVIEW**

Property shows to something commonly known as an entity in relation to the possession of a person or group of persons to an exclusive right (Ahmed, & Hossain: 2010). The main forms of this property include real property (land), personal property of other physical property, and intellectual property. The right of ownership is related to the property which makes the goods a "belonging to a person" whether private or group, guarantees the owner of his right to do anything to the property in his or her favor, whether to use or not to use it, to transfer ownership of the property. Some philosophers claim that property rights arise from social norms (Carey, & Simnett:2006). Others say that rights arise from morality or natural law. Modern property ownership rights contain a right of ownership and tenure which is the property of a legitimate individual, even if the individual is not a real person (Che-Ahmad, & Abidin: 2008; Henry: 1975). For example in a company, where a company has equal rights with other citizens’ rights including constitutional rights, and hence the company is referred to as a legal entity.

Properties typically used in conjunction with union rights include: (i). Control over the use of the property, (ii). Right to any gain from property such as "mining rights", "lease rights", (iii).A rights to transfer or sell property. (iv). A right to own exclusively. The legal system has developed in such a way as to protect transactions and disputes over the use, utilization, transfer and distribution of property, in which the system is included with the so-called contract term (Chen., et all:2011; Hatherly., et all: 1991).

**Translation Implications of Financial Reports and Property Investment.** Some of the advantages of investing in property are: (i). Low risk: Property investment has no risk of investment in stock. This is because the movement of property values is not as tight as stocks. If the stock will continue to be based on market conditions and experience a value up and down, while property movements remain stable. That way, this investment is suitable for investors who do not want to get too high risk (Hay: 1998; Jones: 1988). (ii). Have added value: Property will have added value which tend to be big. This added value can be derived from development development, where the property is built on vacant plots then can be used and earn multiple benefits (Pashalian & Crissy: 1950; Tower, & Bauer: 1991). For example, a cafe is built on an empty land, but has a strategic location with access to good facilities. In addition, with the strategic location of the property, rental rates will also be different from the suburban property. (iii).Have an increase in profits from year to year: Property will have an increased value from year to year. These benefits are like rent or contract. Each year the rental price or the contract also increases due to the scarcity of land (Moreno & Casasola: 2016). In addition, for its own sales, property will also continue to rise every year due to the times and currency values. (iv). Can be used as collateral: For investors who have invested property can be used for loan or mortgage application. The advantages of property investment will be easier to get a loan. In this way, investors can reinvest in another property (Chen., et all:2013; Zorio., Garcia-Benau & Civera:2011).

Transmission of financial reporting is one source of information that communicates the financial condition of the results of the company's operations within a certain period to the parties concerned so that management obtain useful information (Al-Ajmi: 2008). The financial report have the primary objective of providing useful information for economic decision making. Users of financial report will use it to forecast, compare and assess the financial impacts arising from economic decisions it makes.

The following are the users of the financial report and their benefits (Clinch, Stokes, & Zhu: 2010): (i). Investors: To help determine what action to take in conducting an investment assessment of a company. (ii). Shareholders: To obtain information on share prices and
other transactions it is necessary for shareholders to determine decisions that may affect the stability of stock prices. (iii). Managers: The rights and obligations of the control holder are exercised by management based on the financial statements. (iv). Employee: Is one factor to be able to achieve company goals. They are interested in information on the stability, profitability and information that allows to assess their ability to provide remuneration, retirement benefits and employment opportunities (Faisal., et all: 2012). (v). Government: As a basis for compiling national income statistics. (vi). Society: The financial report help the community by providing information on the latest trends and developments of the company's prosperity and its range of activities.

**Problematic Transmission of Financial Report Information.** Audit Delay is the time frame for completion of annual financial report audit, measured by the length of days required to obtain an independent auditor's report on the audit of the company's annual financial report, from the closing date of the company's fiscal year as of 31 December to the date indicated in the independent auditor's report (Al-ghanem & Hegazy: 2011).

In conducting the audit, it is necessary to have an audit plan, one of which is the formulation of time budget which simply sets the guideline regarding the amount of time from each audit section. The main purpose of the audit is to express an opinion in accordance with generally accepted auditing standards, not to meet the time budget (Garcia-Benau, & Zorio:2004; Healy; 1977). The direct consequences of unrealized time budgets include late financial reporting.

The size of the company can show how much information is contained therein, while reflecting the awareness of the management of the importance of information, both for external parties and internal companies (Préfontaine., & Lecavalier: 1990; Zeghal, Maingot & Tassé:2000). Large companies tend to present financial report more timely than small firms. Company size categories are: (1). The Big Company is a company with net worth greater than IDR. 10 Billion including land and buildings. Has more sales than IDR. 50 Billion / year. (2). Medium-sized companies are companies with net worth of IDR. 1-10 Billion including land and buildings. Having sales results greater than IDR. 1 Billion and less than IDR. 50 Billion. (3). A small company is a company with a net worth of at most IDR. 200 million excluding land and building and have minimum sale proceeds of IDR. 1 Billion / year.

Profitability is a performance indicator conducted by management in managing the company's wealth indicated by the profit generated. Broadly speaking, the profits generated by the company come from sales and investments made by the company (Francis, Richard & Vanstraelen: 2009; Piot: 2005; Pound: 1981). Profitability of a company reflects the level of effectiveness achieved by a company's operations. Rationale that the level of profit used as one way to assess the success of the company's effectiveness is of course related to the final result of the company's policies and decisions that have been implemented by the company in the current period (Fakhfakh: 2013a).

The indicators used to measure the level of profitability is to use the ratio of profit margin, return of assets, return of equity. ROA is usually referred to as the result of a return on total assets. This ratio tries to measure the effectiveness of total resource usage by the company. The profitability level benchmark is ROA that is obtained by the following:

\[
ROA = \frac{EBIT}{Total \; Assets} \times 100\%
\]

Where: Return on Asset (ROA) - Profitability Ratio Level; EBIT - The amount of net profit after tax; Total Asset s - The number of companies owned by the company.

Solvency is also known as the financial leverage ratio. Measurement is based on the use of liability to shareholder's equity owned by the company. Leverage is a tool used to measure how far a company depends on financing by its creditors against its assets (Fakhfakh:2013b; Hargis, Hernandez & Hughes:1998).Firms with high leverage mean they are very dependent on outside loans to finance their assets. While companies that have low leverage more finance their investment with their own capital. Based on that, then the management tends to delay the reporting of financial reports containing bad news. Solvency
benchmarks are debt to equity ratio that compares total assets with total liabilities (either short or long term). Debt to Equity Ratio (DER) can be calculated by the formula:

\[
\text{DER} = \frac{\text{Total Liability}}{\text{Total Equity}} \times 100\%
\]

Audit opinion is an independent accountant's opinion on the audited annual financial report of the company. The main information in the audited financial report is the auditor's opinion. Accounting Association (Alghanem & Hegazy: 2011; Amari & Jarboui: 2013) argues that the audit report is the final step of the entire audit process. Thus the auditor in giving opinion is based on his professional beliefs. There are 5 types of audit opinions that can be given by the auditor of the audited financial statements. (1) Unqualified Opinion: The auditor provides an unqualified opinion if it concludes that the financial statements have been presented fairly. The standard audit report with unqualified opinion can be used if the following conditions are met: all financial report (balance sheets that reflect the position of assets, liabilities and equity, income statement, earnings changes report, cash flow statement and sufficient cash flow). (2). Qualified Opinion: The auditor concludes that the financial report are presented fairly with the exception of certain items (Jones & Shoemaker:1994; Klare: 1963). When an auditor issues a fair report with an exception, the auditor should use the term "except for" in the opinion paragraph. (3) Adverse Opinion: The auditor concludes that the financial report are not presented fairly. An unreasonable opinion is provided only if the auditor is satisfied that the overall financial report presented contain material or misleading misstatements and do not present fairly the financial position or results of operations of the company in accordance with generally accepted accounting principles. This unreasonable opinion is made only if the auditor has sufficient audit evidence (Fakhfakh: 2015a; Smith & Taffler:1992b). (4). Disclaimer opinion: Does not provide an opinion given by the auditor if the auditor can not conclude whether the financial report have been presented fairly or not. The statement does not provide an opinion given by the auditor if the auditor feels that the entire financial report have been presented fairly. (5). Unqualified opinion with explanatory paragraphs and modified wording:

The auditor provides an unqualified opinion with an explanatory paragraph in his audit report because the audits he has performed meet the criteria of a leng ed audit process with satisfactory results and the financial report have been presented fairly. But the auditor feels the need to provide some additional information in the financial report. The following are some of the most important causes of adding explanatory paragraphs in the unqualified audit report: there is no consistency, doubt on going concern, emphasis on something and reports involving other auditors (Fayard: 2006).

Corporate Measurement Parameters and Relationship to Delay Audit. Corporate Size Factor is one of the most frequently researched factors in previous research. Research found a relationship between company size, corporate complexity and quality of internal control with Audit Delay. In this study company size is measured by using total assets. The results found empirical evidence that firm size did not significantly affect the timeliness of financial reporting (Apadore & Mohd Noor: 2013; Hammami: 2004). Profitability is the company's success in making a profit. So it can be said that profit is good news for the company. The Company will measure the company's ability to generate Profitability from the level of sale, asset, capital or certain shares. The company will not delay the delivery of good news information. Thus companies that are able to generate profits will tend to be more timely delivery of financial report than companies that suffer losses.

Debt to equity ratio (DER) illustrates the comparison of liabilities and equity in the company's funding and shows the capability of the company's own capital to be able to fulfill all its obligations. The higher the DER, the greater the company uses the capital of the creditors. Companies that have large amounts of liabilities tend to urge auditors to start and complete audits more quickly. This is because companies with large liabilities are monitored and monitored by creditors so that it will put pressure on companies to publish audited financial report more quickly to reassure the owners of capital (Fakhfakh: 2015b; Labasse: 1999). From the exposure, the higher the solvency the shorter the audit delay.
Audit opinion has an effect on the time frame of financial report submitted in audit. Opinions issued by the auditor are based on evidence and invention during field work (Préfontaine & Lecavalier: 1996). If during the course of the field work the auditor finds no problem or very distorted evidence in accordance with generally accepted accounting principles then the auditor may be able to quickly complete his duties and then issue an audit opinion in accordance with the results obtained, but if the auditor finds irregularities because the financial reporting do not fit with generally accepted accounting principles it is likely that auditors will be looking for more irregularities and other evidences that may ultimately affect the completion of audit time (Gangolly, S., Hussein, Seow, & Tam:2002).

METHODS OF RESEARCH

Theoretical relationship between firm size variables, profitability proxied by ROA, Solvency proxied with Debt to Equity Ratio, audit opinion, and change. This research is conducted on property companies listed on Indonesia Stock Exchange. The author conducted a study in November 2017 by obtaining data from the official website of Indonesia Stock Exchange. The population of this study are property and real estate companies that have been going public on the Indonesia Stock Exchange and are still listed for 3 consecutive years in 2014 until 2017.

The method of analysis used in this study is statistical analysis method using multiple regression equation, then tested the classical assumption and testing using multiple regression. Classic assumption test and multiple regression testing is done by using software.

RESULTS AND DISCUSSION

Data analysis is presented in three parts, including descriptive statistical analysis, classical assumption test results, and hypothesis test results. Descriptive statistical analysis describes the dependent variable audit delay and five independent variables that are suspected to affect it.

The analysis is done by comparing the minimum, maximum, and sample values. The following table is the descriptive statistics of audit delay variable and dependent variable scale, ie firm size, profitability, and solvency:

<table>
<thead>
<tr>
<th>Table 1 – Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td>Audit delay</td>
</tr>
<tr>
<td>Total asset</td>
</tr>
<tr>
<td>ROA</td>
</tr>
<tr>
<td>DER</td>
</tr>
</tbody>
</table>

The table shows that the audit delay value is between 25 days to 121 days with an average of 77.73 days and a standard deviation of 14,343. It appears that the average audit delay of the sample companies is still below 90 calendar days which is the limit set by FSA in the submission of the financial report or the 31st of March of each year. It also appears that there are companies that are late because they have audit delay over 90 days.

The fastest 25-day delay audit experienced by 2014 by PT Alam Sutra Realty Tbk. While the longest delay audit is 121 days, experienced by PT Bhuwanatala Indah Permai Tbk in 2015. The size of the company has a range of values between IDR. 166.67 billion up to IDR.10.26 trillion with an average of IDR. 3.23 trilliun and standard deviation of IDR. 1.87 trilliun. It appears that there is a relatively high fluctuation in the size of the firm in the sample company as measured by the total assets of the firm.
The size of the company measured by the total minimum assets is owned by PT Bhuwanatala Indah Permai Tbk in 2016, while the maximum size of the company is owned by PT Lippo Karawaci Tbk in 2015. (iv). Profitability ratio measured by Return On Asset ranged from -0.422956 to 0.151034 with an average of 0.030216 and the standard deviation of 0.043566. Negative value means the company suffered losses so there are companies that suffered losses up to -42.29%. The average profitability ratio for the sample company is 3.68%. The lowest Return On Asset is owned by PT New Century Development Tbk in 2014, while the highest Return On Asset occurs in 2015 at PT Metropolitan Kentjana Tbk.

Debt to Equity Ratio variable has a minimum value of -2.904703 and a maximum value of 2.466707 with an average of 0.793721 of the total sample of 111. The lowest solvency ratio is owned by PT. New Century Development in 2015, while the highest ratio is at PT. Dutia Anggada Realty in 2016. Testing of data normality in this study using Kolmogorov-Smirnov non-parametric statistical test by making a hypothesis: H0: residual data is normally distributed and H1: residual data is not normally distributed; If the significance value is greater than 0.05 then H0 is accepted, whereas if the significance value is less than 0.05 then H0 is rejected.

Table 2 – Kolmogorov Smirnov One-Sample Normality Test Result Test

<table>
<thead>
<tr>
<th>Normal Parameters</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute</td>
<td>0.081</td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>0.081</td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>-0.059</td>
<td></td>
</tr>
<tr>
<td>Kolmogorov-Smirnov Z</td>
<td>0.849</td>
<td></td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>0.466</td>
<td></td>
</tr>
</tbody>
</table>

From the table above, the magnitude of Kolmogorov-Smirnov (K-S) is 0.849 and the significance at 0.466 so it can be concluded that the data in the regression model has been normally distributed, where the significance value is greater than 0.05 (p = 0.466> 0.05). Hypothesis testing; To find out whether the independent variable in the regression model has an effect on the dependent variable, then tested by using t test (t test) and F test. Test F; To see the effect of total assets, Return On Assets, Debt to Equity Ratio, audit opinion on audit delay simultaneously can be calculated by using F Test.

Table 3 – Test Results F

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>4548.156</td>
<td>5</td>
<td>909.631</td>
<td>5.282</td>
</tr>
<tr>
<td>1 Residual</td>
<td>18081.736</td>
<td>105</td>
<td>172.207</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22629.892</td>
<td>110</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Percantage, RCA, Total aset, DER, Opini audit
b. Dependent Variable: Audit delay

From the table above, it appears that the value of F arithmetic on the research model of 5.282 with a significance level of 0.000. The value of significance is below 0.05 indicating that the independent variables simultaneously have a significant influence on audit delay. T test; The significance test of individual parameters, also called statistical test t is the test
used to see the effect of partial independent variables on the dependent variable. Here is the result of calculating the value of t arithmetic and significance level in this research.

Table 4 – Test Results t

<table>
<thead>
<tr>
<th>Coefficients²</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>91.093</td>
<td>4.645</td>
<td></td>
</tr>
<tr>
<td>Total Asset</td>
<td>-2.412E-6</td>
<td>.000</td>
<td>-.315</td>
</tr>
<tr>
<td>ROA</td>
<td>-.616</td>
<td>.305</td>
<td>-.187</td>
</tr>
<tr>
<td>DER</td>
<td>-.018</td>
<td>.022</td>
<td>-.073</td>
</tr>
<tr>
<td>Opini audit</td>
<td>-6.718</td>
<td>3.596</td>
<td>-.173</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Audit delay

From result of t test can be seen the amount of t_hitung for asset total variable is -3.569 < t_tabel (-1.9815), and value of research significance equal to 0,001 <0,05. The above shows the total asset has a significant effect on audit delay. So it can be concluded H_1 (The first hypothesis) is accepted. The above table also shows the amount of t_hitung for the variable Return On Asset of -2.020 < t_table (-1.9815), and significance value 0.046 <0.05. It means Return On Asset (ROA) has an effect on audit delay. So it can be concluded H_2 (second hypothesis) accepted.

The value of t_hitung for Debt to Equity Ratio variable is -0.830 < t_table (-1.9815) and significance value 0.409> 0.05. This means that Debt to Equity Ratio (DER) has no significant effect on audit delay. So it can be concluded H_3 (third hypothesis) rejected. While the nilai hitung variable audit opinion is -1,868 < t_table (-1.9815) and significance value is 0,065> 0.05. This means that audit opinion does not significantly influence audit delay then H_4 (fourth hypothesis) is rejected.

CONCLUSION

In conducting investment activities, investors need to first look at the company's financial statements to ensure that investors will choose the right stock. The financial statements are the main benchmark in measuring the growth of the property company's profit, because the company's operating profit will have a significant effect on the growth of the company's stock.

In general, auditing is a systematic process of obtaining and evaluating objectively objective statements about economic activities and events, with a view to establishing the degree of conformity between the statements with predetermined criteria, and the delivery of the results to the interested users (Azubike & Aggreh:2014; Li: 2008). The general audit objective of the auditor's financial statements is to express an opinion on the fairness in all material matters, the financial position of business results and cash flows in accordance with accounting principles generally accepted in Indonesia.

Profitability ratio measured by Return On Asset ranged from -0.422956 to 0.151034 with an average of 0.030216 and the standard deviation of 0.043566. Negative value means the company suffered losses so there are companies that suffered losses up to -42.29%. The average profitability ratio for the sample company is 3.68%. The lowest Return On Asset is owned by PT New Century Development Tbk in 2014, while the highest Return On Asset occurs in 2015 at PT Metropolitan Kentjana Tbk. Debt to Equity Ratio variables have a minimum value of -2.904703 and a maximum value of 2.466707 with an average of 0.793721 from the number of samples of 111. The greater the profitability ratio of the company, the
better the profits to be generated by the company. Companies that experience profits tend to report information from their financial statements more quickly than firms with lower profit levels.

The lowest solvency ratio is owned by PT New Century Development in the year 2015, while the highest ratio is at PT Duta Anggada Realty in 2016. From the result of t test can be seen the amount of \( t_{hitung} \) for asset total variable is \(-3.569 < t_{table} (-1.9815)\), and value of research significance equal to 0.001 < 0.05. The above shows the total asset has a significant effect on audit delay. So it can be concluded \( H_1 \) (The first hypothesis) is accepted. Debt to equity ratio (DER) illustrates the comparison of liabilities and equity in the company's funding and shows the capability of the company's own capital to be able to fulfill all its obligations.

REFERENCES

ANTECEDENT BRAND EQUITY AND CONSEQUENCES ON REPURCHASE INTENTION

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ABSTRACT
This research was conducted on Bali Banyuatis coffee products Brand Two in One Legend Taste. The population in this study were all connoisseurs of the Banyuatis brand of coffee domiciled in Denpasar City, the number of the population could not be counted or infinite population. The sampling technique used in this research is nonprobability sampling technique. The nonprobability sampling technique chosen was purposive sampling. Data collected through questionnaires consisted of questions arranged based on each variable, including brand association variables, brand awareness, brand image, brand equity, and repurchase intention. The results of the study found that brand associations have a positive and significant effect on brand equity. Brand awareness has a positive and significant effect on brand equity. Brand image has a positive and significant effect on brand equity. Brand equity has a positive and significant effect on repurchase intention.

KEY WORDS
Brand association, brand equity, brand awareness, brand image, repurchase intention.

As time progresses, the culture of drinking coffee changes dynamically into a lifestyle. Drinking coffee is no longer a tradition that is only done by parents, but at this time drinking coffee is a part of the lifestyle of the Indonesian people, regardless of whether young people or parents. The culture of drinking coffee which originally came from the western region now appears and transforms into a need that is not released in the lives of many people, especially for coffee lovers. Like fashion, coffee also has its own trends from time to time. Therefore Bali Banyuatis Coffee Company launches its new product, Bali Banyuatis Coffee Two in One Legend Taste in sachet form at competitive prices. Not only parents, the younger generation is also expected to enjoy and love Balinese coffee.

Brand is an important aspect for the company. Through the brand of a company will be known and considered good or bad by the community. Banyuatis coffee is one of the brands of coffee products originating from Buleleng Regency and has been known by the Balinese people. Brands have a very important role for the company. To build a brand into a strong and trustworthy brand is not an easy thing. It takes time and a good strategy for a brand to get a place in the community. Brands can create associations with a product so that it can be embedded in the minds of consumers. By having a brand, the product will be more easily recognized by consumers and as a differentiator of one product with another product (Till et al., 2011).

The long-term success of a brand is the emergence of consumer interest to repurchase. In the buying process, consumers have a tendency to choose products with strong brand equity because they consider the product to be of good quality. The long-term relationship between consumers and the company and the brand of a product from the company will provide long-term benefits and greater profits for the company, so that the company will continue to strive to provide satisfaction to their consumers so that the intention to repurchase their products.

Many variables are examined in the dimensions of brand equity such as brand awareness, brand association, brand loyalty, perceived quality, brand attitude, brand image, brand preference and purchase intention. Buying intention is an important indicator in consumer behavior (Wu et al., 2011). Several studies have shown that between brand equity with repurchase intention has a positive relationship. According to Dharmayana and Rahanathata (2017) brand equity has a positive relationship with repurchase intention.
Research conducted by Lin et al. (2011) also supports that brand equity has a direct and positive effect on repurchase intention. According to Gunawardane (2015) concluded that brands with a high level of brand equity would result in higher consumer buying intentions.

Brand awareness is in the range between uncertain feelings towards the introduction of a brand to the feeling that the product is the only product in the class. This range can be divided into four, namely unaware brand (unaware of the brand), brand recognition, brand recall, and top of mind. Brand recognition is a minimal level of brand awareness gained from recall through assistance. Brand recall is obtained by recalling a brand in a product class without assistance. In the task of recalling a brand, the first mentioned brand means a brand that achieves top of mind awareness. According to Shah et al. (2016) brand awareness is the first step to building brand equity that can be created both by putting a point of interaction, a sense of familiarity with a brand that acts as a signal of trust in consumers’ minds to consider a brand that is worth buying. Brand awareness significantly affects consumer decision making and has a direct effect on brand equity (Suki, 2013). In the research of Gil et al. (2007) obtained insignificant results between brand awareness of brand equity. Brand awareness is an important component of brand equity. The first step to building brand equity is to create brand awareness according to Aaker (1991) in Alhaddad (2015). According to Sasmita and Suki (2015) brand awareness is how consumers associate brands with certain products that brands want. Brand awareness generates brand equity in four different ways, first creating a brand in the consumer’s memory, second giving the brand a feeling in the mind of the consumer, third giving the brand a sense of trust, and fourth giving sufficient reason to consider the brand (Gil et al., 2007). In the study found brand awareness has a positive relationship to brand image according to Juntunen et al. (2011) and Ming et al. (2011). However, in Christian's (2011) study, there was a negative relationship between brand awareness of brand image.

Some of the factors that potentially affect brand equity are brand image. According to Yanti and Sukotjo (2016) the brand image is related to the brand because when brand impressions appear in the consumer's memory are increased due to the increasing number of consumer experiences in consuming or buying the brand. In research (Rubio et al., 2014) confirms that brand image has a positive effect on brand equity. From the results of research by Kashif et al. (2014) found that brand image has a positive impact on brand equity. But the results of these studies differ from Woodside and Walser (2009) which states that there is no effect of brand image on brand equity.

Brand equity has a positive effect on repurchase intention. In addition to influencing preferences, brand equity is one of the main factors influencing buying intentions (Emor and Pangemanan, 2015). Brand awareness is the first step to attract customers to buy. When customers are aware of the brand, it is easier for consumers to decide which purchases to do. Consumers will buy products that are well known and known. The higher the brand awareness, will higher the repurchase intention.

**LITERATURE REVIEW**

*Brand Association.* Brand associations reflect the image of a brand to a certain impression in relation to habits, lifestyle, benefits, attributes, products, geography, prices, competitors, celebrities / someone and others. An established brand will certainly have a position that is more prominent than competitors. Consumers will use associations to process, organize and store information in their memory so that everything can be used to simplify the purchasing decision making process. The connection to a brand will be stronger if based on many experiences or appearances to communicate it. Brand associations have a very important role in brand literature. Profitable brand associations offer several benefits to consumers according to Kashif et al. (2014). Furthermore, it was also stated that brand associations were associated with the benefits sought from attitudes toward products / services / goals, alignment of functional benefits, and brand personality, all of which contributed greatly to increasing brand equity. Some information is created in memory that
helps consumers give meaning to the brand. Once a node is activated, it will trigger several sets of associations in the consumer's mind that determine the strength of the association.

**Brand Awareness.** Brand awareness measures the extent to which consumers are aware of brand image elements, while brand image measures consumer perceptions of brand identity (Kashif et al., 2014). Brand awareness is the extent to which consumers can remember, recognize, and have knowledge about brands. According to Shah et al. (2016) brand awareness is the first step to building brand equity that can be created both by putting a point of interaction, a sense of familiarity with a brand that acts as a signal of trust in consumers’ minds to consider a brand that is worth buying. There are four levels of brand awareness, namely unaware brand (unaware of the brand), brand recognition, brand recall, and the last one is top of mind. The main objective of the company to increase brand awareness is to make its brand top of mind in certain product categories. Brand awareness refers to the added value of a product given by a brand (Jalilvand et al., 2011). Brand awareness is an important component of brand equity. The first step to building brand equity is to create brand awareness according to Aaker (1991) in Alhaddad (2015). Brand awareness is related to the ability of potential buyers to recognize and remember that brands are members of certain product categories (Torres et al., 2015).

**Brand Image.** According to Yanti and Sukotojo (2016) the brand image is related to the brand because when brand impressions appear in the consumer’s memory are increased due to the increasing number of consumer experiences in consuming or buying the brand. Consumers more often buy products with well-known brands because they feel more comfortable with things that are known, the assumption that famous brands are more reliable, always available and easily searchable, and have undoubted quality, so that more well-known brands are more frequent chosen by consumers rather than famous brands. According to Yanti and Sukotojo (2016) the brand image is related to the brand because when brand impressions appear in the consumer’s memory are increased due to the increasing number of consumer experiences in consuming or buying the brand. Consumers more often buy products with well-known brands because they feel more comfortable with things that are known, the assumption that famous brands are more reliable, always available and easily searchable, and have undoubted quality, so that more well-known brands are more frequent chosen by consumers rather than famous brands.

**Brand Equity.** Generally, brand equity is defined in terms of the marketing effects that are uniquely associated with the brand. That is, brand equity is related to the fact that different results result from marketing a product or service because the brand element is compared to results if the same product or service does not have brand identification. Although a number of different views on brand equity have been disclosed, they are generally consistent with the basic assumption that brand equity represents "added value" that is awarded a product or service as a result of past investments in brand marketing. Brand equity is used in various dimensions of diversification to solve various problems in different ways (Khan et al., 2016). A brand includes names, logos, images, and perceptions that identify products, services, or providers in the minds of customers or consumers (Farris et al., 2010).

**Repurchase Intention.** There are various definitions to explain the concept of repurchase intention depending on which point of view this concept is seen. In a service context according to Hellier et al. (2003) in Balla et al. (2015), repurchase intention is defined as an individual’s assessment of repurchasing services provided by the same company taking into account the conditions and situation of the company. From a behavioral perspective, Seiders et al. (2005) in Balla et al. (2015) defines repurchase intentions as the possibility of consumers to repurchase in the future. From the view of purchasing online, Chiu et al. (2009) in Balla et al. (2015) states that repurchase intention refers to the subjective probability that someone will continue to buy products from vendors or online stores in the future. The repurchase from the consumer side according to Samad (2014) is the result of the attitude and commitment of consumers to the repurchase of certain products.
Hypothesis:
H1: Brand associations have a positive and significant effect on brand equity;
H2: Brand awareness has a positive and significant effect on brand equity;
H3: Brand awareness has a positive and significant effect on brand image;
H4: Brand image has a positive and significant effect on brand equity;
H5: Brand equity has a positive and significant effect on repurchase intention.

METHODS OF RESEARCH

The population in this study are all coffee connoisseurs of Bali Banyuatis Coffee, the Two in One Legend Taste brand domiciled in Denpasar City, the number of population cannot be counted or infinite population. The sampling technique used in this research is nonprobability sampling technique. The nonprobability sampling technique chosen was purposive sampling. This study uses Structural Equation Modeling (SEM) based on component or variance, namely Partial Least Square (PLS) and uses Smart PLS 3.2.3 software.

RESULTS AND DISCUSSION

In this structural model, there are three dependent variables, namely: brand image (Y1), brand equity (Y2), and repurchase intention (Y3). The coefficient of determination ($R^2$) of each dependent variable can be presented in Table 1 below.

<table>
<thead>
<tr>
<th>Variabel</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
<td>0.510</td>
</tr>
<tr>
<td>Y2</td>
<td>0.546</td>
</tr>
<tr>
<td>Y3</td>
<td>0.470</td>
</tr>
</tbody>
</table>

The size of $Q^2$ has a value with a range of $0 < Q^2 < 1$, where getting closer to 1 means the model is getting better. The results of these calculations obtained the value of $Q^2$ is equal to 0.5954, so it can be explained that the model has a very good predictive relevance ($Q^2 = 0.5954 > 0$). This study uses the Partial Least Square (PLS) analysis approach to test and analyze the research hypotheses previously stated. Based on the calculation results, the inner model is presented in Table 2. below.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Coefficient Correlation</th>
<th>t-statistic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand aso. → brand eq.</td>
<td>0.307</td>
<td>2.500</td>
<td>Sig.</td>
</tr>
<tr>
<td>Brand aw. → brand eq.</td>
<td>0.244</td>
<td>2.141</td>
<td>Sig.</td>
</tr>
<tr>
<td>Brand aw. → brand img.</td>
<td>0.714</td>
<td>11.436</td>
<td>Sig.</td>
</tr>
<tr>
<td>Brand img. → brand eq.</td>
<td>0.266</td>
<td>2.908</td>
<td>Sig.</td>
</tr>
<tr>
<td>Brand eq. → Repurchase</td>
<td>0.686</td>
<td>10.887</td>
<td>Sig.</td>
</tr>
</tbody>
</table>

Based on Table 2 it can be stated that brand association has a positive and significant effect on brand equity with a coefficient of 0.307 with a statistical t value of 2.500 and significant at 0.05 (t value> t table 1.96). These results are consistent with several previous studies namely research conducted by Sasmita and Suki (2015) also found that brand
associations have a positive impact on brand equity and have a significant effect. This is supported also by research from Mishra and Datta (2011) which confirms that brand associations have a significant effect and positively effect brand equity. Where in the study it was found that brand royalties, brand associations, brand names, and brand communication must be increased to improve Customer Based Brand Equity.

Brand awareness has a positive and significant effect on brand equity with a coefficient of 0.244 with a statistical t value of 2.141 and significant at 0.05 (t value value> t table). This result is consistent with several previous studies, namely Khan et al. (2016) found that brand awareness has a positive impact on brand equity. Brand awareness has a direct effect on brand equity as in the research of Pouromid and Iranzadeh (2012). Furthermore, in Sasmita and Suki's research (2015) it was also found that brand awareness has a positive impact on brand equity and has a significant effect. This is also supported by research from Mishra and Datta (2011) which confirms that brand awareness has a significant effect and positively effects brand equity.

Brand awareness has a positive and significant effect on brand image with a coefficient of 0.714 with a statistical t value of 11.436 and significant at 0.05 (t value value> t table). These results are consistent with several previous studies, namely brand awareness has a positive relationship to brand image according to Juntunen et al. (2011). Furthermore, in the study of Ming et al. (2011) also mentions that brand awareness has a positive relationship to brand image and has a significant effect.

Brand image has a positive and significant effect on brand equity with a coefficient of 0.266 with a statistic t value of 2.908 and significant at 0.05 (t hitun value> t table). These results are consistent with some previous studies, namely Huang et al. (2014) found that brand equity has a significant positive effect on repurchase intention. Lawu (2015) who examined brand knowledge and brand equity obtained the results of brand equity consisting of brand loyalty, brand association, brand awareness, perceived quality, and brand image there was a significant effect simultaneously on repurchase intention. Research conducted by Lin et al. (2011) in Taiwan also found that brand equity had a positive effect on repurchase intention.

CONCLUSION AND SUGGESTIONS

Based on the results of the research discussion, it can be concluded that:

- Brand associations have a positive and significant effect on brand equity, meaning that the more positive the brand associations obtained by the customer, the higher the brand equity in the Bali Banyuatis Coffee product. The Two in One Legend Taste brand.

- Brand awareness has a positive and significant effect on brand equity, meaning that the higher the brand awareness gained by the customer, the higher the brand equity of the Bali Banyuatis Coffee product, the Two in One Legend Taste brand.

- Brand awareness has a positive and significant effect on brand image, meaning that the higher the brand awareness gained by the customer, the brand image in the customer's mind will increase.

- Brand image has a positive and significant effect on brand equity, meaning that the more positive the brand image, the higher the brand equity in the Bali Banyuatis Coffee product, the Two in One Legend Taste brand.

- Brand equity has a positive and significant effect on repurchase intention, meaning that the more positive the brand equity, the higher the intention to buy back the customer in the Bali Banyuatis Coffee product. The Two in One Legend Taste brand.
Suggestions that can be given based on the conclusions obtained are as follows:

- Producers need to focus on the taste of coffee that tends to be savory, slightly bitter, and has a slight taste of sour Bali Coffee Banyuatis Brand Two in One Legend Taste so that it is easy to recognize brands that lead to the ability of consumers to recall the Bali Banyuatis Coffee Brand Two in brand One Legend Taste, because these two things become important indicators for consumers to get a positive buy back intention and ultimately make consumers loyal to Banyuatis coffee products.

- Producers also need to focus on the ability of consumers to remember the Bali Banyuatis Coffee brand, the Two in One Legend Taste Brand, to remain at the top of mind level, thus making the Banyuatis Coffee company more established in the competition in the market.

- Future research needs to be done using different brands in the same product category to be used as a comparison of the results of the research that has been done.

- Future research needs to be carried out in a wider area such as in the entire province of Bali so that research results can be generalized.

*Research Limitations:*

- This research focuses on just one coffee brand. So it is necessary in the next research to do research with the same product category with different brands in the future to complement and enrich empirical studies related to the topic of this research. This is needed to compare the intention to buy back the same product but a different brand.

- The object of the study was only aimed at customers of Banyuatis branded coffee products in Denpasar City, so that the results of this study could not be generalized to cases outside of Denpasar City. Future research is expected to expand the scope of the research location in accordance with the Banyuatis Coffee sales area.

- There are still many variables that can affect repurchase intentions other than brand associations. Future research is expected to increase the number of research variables such as brand preference, brand loyalty, customer satisfaction, and other variables used to determine the intention to buy back the consumer.

**REFERENCES**

8. Huang, Chen, C., Yen, S.W. dan Liu, C.Y., 2014. The Relationship Among Brand Equity, Customer Satisfaction, and Brand Resonance to Repurchase Intention of Cultural and


DOI https://doi.org/10.18551/rjoas.2018-10.04

ANALYSIS OF CUSTOMER PREFERENCES IN SELECTING FUNDING PRODUCTS AT BANK: SAVINGS, GIRO AND DEPOSITS

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ABSTRACT
This study aims to determine the influence of external factors of the marketing mix in the form of products, prices, place, promotions, service processes, people, as well as the physical evidence of customer decisions in choosing banking products offered. The research was conducted at hotels, inns, and villas in Batu City, East Java. Quantitative research method accidental sampling techniques were applied to determine the sample. The number of samples was 85 respondents. Binary logistic regression analysis in SPSS 16 was performed to analyze the obtained data. The results showed that there were significant effects of marketing mix variables (products, prices, places, and processes) on customers' considerations of selecting banking products (savings, giro, deposits). Other marketing mix variables (promotion, people, and physical form) do not have a significant effect on the decision to choose the use of banking products.

Key words
Marketing mix, customer decision, funding products, bank.

Banks are financial institutions that have an important role in supporting economic growth. As an intermediary institution, namely collecting funds from third parties and channeling them in the form of credit, making the bank as one of the sources of development funds. The national banking system consists of two types, which are conventional (using the interest system as payment for equity participation) and sharia (using profit-sharing as payment for equity participation).

Sharia banks have the same growth opportunities as conventional banks in Indonesia, although the number of accounts in Sharia banks is relatively lower than in conventional banks. This is shown in Figure 1, where there a raised of account in Sharia banks from 2010 to 2015 despite the fact that it is still below the conventional bank. The graph illustrated customer preferences in choosing to save in Sharia banks still exist over the time although still below the conventional banks.

![The number of accounts in Sharia and Conventional Bank](Image)

Figure 1 – The number of accounts in Sharia and Conventional Bank
(Source: Deposit Insurance Agency)

Banking service customers are not just individuals, but banks as financial management services also handle customers in the form of institutions and companies. One of the fastest growing companies in Indonesia is a company or industry engaged in the tourism sector. According to data from the Central Bureau of Statistics (BPS) the growth of tourism in Indonesia in 2015 was 7.2 percent or above the world tourism growth of 4.4 percent. One industry that needs attention is the hospitality industry, recorded in BPS data that a number
of 16,156 hotel businesses in Indonesia are calculated in 2015. East Java Province has the most number of hotel businesses, namely 2091 hotel businesses, with a total number of domestic and foreign guest visits. 23,578 during 2015 (Central Bureau of Statistics/BPS). The data shows that East Java has the most income in the hotel business sector compared to other provinces in Indonesia.

Batu City, East Java, as one of the main tourist destination for both domestic and foreign tourists, according to BPS Batu City has the second highest number of hotels after Pasuruan, it was 440 hotel businesses in 2014 (jatim.bps.go.id, 2014). This opportunity could motivate the banking services to attract customers from the hospitality industry in Batu City, with the hope of being able to increase the number of third-party funds (DPK) as the main funding source in banking services. Based on the data above, conventional and Sharia banking have the opportunity to earn trust from hospitality companies in Batu City in using banking products. Zulpahmi (2010) cited in Yupriti and Sari (2012) describes the factors that influence customers in using Sharia banking services in the absence of interest (usury), the attitude and behavior of employees who are friendly and polite, the security of customer funds, the interesting and innovative variety, easily accessible and strategic location. According to Sutisna (2002), purchasing decisions are decisions by consumers to purchase a product beginning with the existence of the fulfillment of needs and desires. In order for the management to get to know the customer and understand the customer's wishes now and in the future. Good and excellent service is expected to be provided by the bank to create customer loyalty.

Research conducted by Selim & Rahman (2015) states that conventional marketing strategies satisfy customers based on the customer's current needs. Whereas Sharia marketing strategies satisfy customers based on human values, marketing culture, and Sharia rules and regulations (sharia law). From several previous studies, there is a research gap that discusses customer preferences in the conventional bank or Sharia bank product selection. Therefore, this study was conducted to determine the influence of external factors in the form of products, prices, locations, promotions, service processes, people, and physical evidence of the customer's decision in choosing to use the banking products offered.

**LITERATURE REVIEW**

*Consumer Behavior.* Consumer behavior is the act of individuals or groups in selecting and buying an item or service to satisfy their needs (Solomon, 2002). Whereas according to Amirullah (2002), consumer behavior is a number of real actions of individuals (consumers) that are influenced by reasonableness (psychological) factors and other external factors (external) that direct them to choose and use the desired items. Consumer behavior models can be interpreted as a framework or something that represents what consumers believe in making buying decisions (Mangkunegara, 2002). In general, the purchase process begins long before the actual and has consequences long after purchase (Kotler in Sumarni, 2002). Kotler et al., (2000) also argue that the stages in the buying process need recognition, information retrieval, alternative evaluation, purchasing decisions, and behavior after purchase

*Consumer Preference.* Customer preference is the attitude of customers who want an item or service based on the ability to provide satisfaction with what is purchased or offered so that people who want goods or services have an attitude of buying behavior (Marwan, 1990). Salvatore (2006) says that consumer preferences can be deduced from a number of sufficient observations of choices or purchases in the market, without investigating individual preferences directly.

According to Kotler (2002), the marketing mix is a set of marketing tools that companies apply to continuously achieve their marketing goals in the target market. Payne (1993) states that the marketing mix consists of product, place, price, promotion, people, process, provision of consumer service. According to Collier (1991) states the service marketing mix consists of product, price, place, promotion, people (personal traits), physical
evidence, and process. Some studies show customer preferences in banking product selection. Research by Al Ajmi et al., (2009) states that Islamic bank customers choose products because they are more familiar with products or services in accordance with sharia. Research by Oke (2012) shows that the effect of product development, price of service, promotional activities, and place and channel of distribution of banking on bank performance is significant. Research by Kaura (2013) shows that in price justice banking, transparency services, distribution of banking services in an easy way, employee behavior, customer education, tangibility, and processes through technology play an important role in differentiating services from competitors.

Research by Shamsudin and Rahman (2014) explains that sharia banking could compete in the market and at the same time can improve the level of trust between Muslim customers to buy Halal goods and services. Similarly, conventional banks must consider applying the concept of Islamic marketing rather than conventional if they really want to meet the needs, desires, and desires of Muslim buyers. Research by Islam and Rahman (2015) show that products, prices, and promotions have a significant effect on bank marketing performance, while locations and promotions have no significant effect on bank marketing performance. Research by Roy and Khan (2015) states that there are five variables from the service marketing mix, namely product, price, promotion, process and physical evidence that influence consumer perceptions to give decisions in the selection of savings product. Research by Ahmed and Rahman (2015) found that the marketing mix (price, product, place, and promotion) while upholding and adhering to the rules and regulations in the Quran and Sunnah must maximize and prioritize "customer satisfaction" beyond "profit".

Customer preference in the banking world refers to what values are captured by customers regarding products and how these values can affect the customer's point of view in seeing a product from a service company in this case banking services. The company's internal environment variables are known as 4P consist of product, price, promotion, place, and distribution channel. Oke (2012) in his research stated that banks are likened to a product type of banking so that the variables that influence customer preferences to use a banking product, especially banking products are the marketing mix of goods, products, prices, promotions, places and channels distribution. Likewise with research conducted by Ateba et al., (2015), where in this study the service mix used was the marketing mix of goods namely products, prices, promotions, places and distribution channels so that here the banking products are considered goods rather than services. In contrast the study with Islam and Rahman (2015) where in addition to using products, prices, promotions, places and distribution channels with added environmental variables in the service company that distinguishes the way of delivering services (known as 3P), that are employee services, processes, and physical evidence and characteristics of the service provider bank.

Based on the theoretical foundation and previous research, the following hypothesis can be formulated:

- **H₁**: Products have a significant effect on customer decisions in using funding products at bank;
- **H₂**: Price has a significant effect on customer decisions in using funding products at bank;
- **H₃**: Place have a significant effect on customer decisions in using funding products at bank;
- **H₄**: Promotion has a significant effect on customer decisions in using funding products at bank;
- **H₅**: People (employee) have a significant effect on customer decisions in using funding products at bank;
- **H₆**: Process has a significant effect on customer decisions in using funding products at bank;
- **H₇**: Physical evidence has a significant effect on customer decisions in using funding products at bank.
METHODS OF RESEARCH

The type of research used in this study is descriptive and causality. The approach used in this study is a quantitative approach that is a research method that seeks to quantify data and usually applies certain statistical analyzes (Malhotra, 2010). The location of the study was conducted in Batu City. The population of this study is all hotels, inns and villas are 550 in Batu City which become customers of banking services both conventional banks or Sharia banks. The sample was taken by accidental sampling technique using the Slovin formula (Sevilla & Ochave 1960) so that 85 respondents were obtained.

Refer to the research objectives, the variables taken include: (1) the dependent variable is the consideration of the customer choosing funding product offerings, and (2) the independent variable is a marketing mix variable that influences consumer decision making, namely product, price, place, promotion, people, process, and physical evidence. Weighting on each variable using a five-level scale (likert scale) consisting of strongly agree, agree, doubt, disagree, and strongly disagree. Based on the calculation of Pearson's product moment correlation index with a significance level of 5%, all items in the question item of the customer preference variable are valid. Similarly, the reliability test uses Alpha Cronbach which shows all reliable question items.

![Figure 2 – Research framework](image)

This study uses logistic regression to determine the effect of the independent variable on the dependent variable with the condition that the value of the dependent variable is 0 and 1 (binary). The model used in logistic regression analysis is Logit (pi) = \( \beta_0 + \beta_1 \times X \) with logit (pi) is the value of logit transformation for the probability of success events, \( \beta_0 \) is the intercept of regression line model, \( \beta_1 \) is the slope of regression line model, and X is an explanatory variable. The following is an estimation of the logistic regression model (Nachrowi & Usman, 2002):

\[
Li = \ln \left[ \frac{p}{1 - p} \right] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \cdots + \beta_k X_k
\]

Thus, the estimated models used in this study are:

\[
Li = \ln \left[ \frac{p}{1 - p} \right] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7
\]
Where:
\[ L_i = \ln \left( \frac{p}{1-p} \right) \]: preferences of customer decisions in choosing products funding at bank (saving, giro, deposits);
X1: Product;
X2: Price;
X3: Place;
X4: Promotion;
X5: People;
X6: Process;
X7: Physical Evidence.

RESULTS AND DISCUSSION

Model feasibility testing was carried out using a comparison of -2 log likelihood, Omnibus test, Hosmer and Lemeshow test.

Table 1 – Result of Comparisan -2 Log Likelihood

<table>
<thead>
<tr>
<th>-2 Log Likelihood</th>
<th>Negelkerke R^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 0 Constants</td>
<td>97,210</td>
</tr>
<tr>
<td>Block 1 Constants + Independent variable</td>
<td>30.461</td>
</tr>
<tr>
<td></td>
<td>0,798</td>
</tr>
</tbody>
</table>

Source: binary logistic regression analysis in SPSS 16.

The value of -2 log likelihood in the model involving independent variables (30,461) smaller than the model without involving the independent variable (97,210) shows that the addition of the independent variables in the regression model is better than without the independent variables so that the model used is feasible.

Table 2 – Results of Omnibus Test

<table>
<thead>
<tr>
<th>( \chi^2 ) statistic</th>
<th>Significance</th>
<th>( \chi^2 ) value (7.5%)</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>66,749</td>
<td>0.000</td>
<td>12.592</td>
<td>Influence</td>
</tr>
</tbody>
</table>

Source: SPSS 16.

The calculated Chi-Square value obtained is 66,749 with a significance value of 0.000. Because the Chi-Square value is greater than the Chi-Square table (66,749 > 12.592) and the significance value is smaller than alpha 5% (0.000 < 0.050), it can be concluded that the model involving independent variables is better and can be used in model or it can be said that there is a real influence simultaneously or together.

Table 3 – Results of Hosmer and Lemeshow Test

<table>
<thead>
<tr>
<th>( \chi^2 ) statistic</th>
<th>Significance</th>
<th>( \chi^2 ) value (7.5%)</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.200</td>
<td>0.636</td>
<td>12.592</td>
<td>Not significant</td>
</tr>
</tbody>
</table>

Source: SPSS 16.

The calculated Chi square value obtained was 5,200 with a significance value of 0.636. Because the Chi square value is smaller than the Chi square table value (5.200 < 12.592) and the significance value is greater than alpha 5% (0.636 > 0.050), it can be concluded that the model used has a predictive probability equal to the observed probability or model those formed are able to predict observation data well and the model is feasible for use.

After conducting a feasibility test on the model, the next step is to test the hypothesis using the basic chi square where if the Wald variable value is greater than the chi square value or the significance value is smaller than alpha 5% then it can be said that there is a real influence of the independent variable to the dependent variable.
The logistic regression equation that is formed is as follows:

\[ L_n = \left( \frac{p}{1 + p} \right) = -33,935 + 0.669 \times 1 + 1.197 \times 2 + 0.425 \times 3 + 0.120 \times 4 + 0.199 \times 5 + 0.589 \times 6 + 0.076 \times 7 \]

Product (X1) variable has Wald value (9.063) greater than the Chi-Square value (3.841) and significance (0.003) smaller than alpha 5% (0.050), so it can be said that product variable (X1) will have a significant effect on selecting decisions of banking products. The results of this study are in accordance with the research of Roy and Khan (2015) which states that products have a role in influencing consumer preferences, various types of banking products can affect consumer preferences, consumers have different needs and desires and also different motives to make a purchase or product selection. Provision of diverse products allows the meeting point between consumer needs and offers made by banks so that it can influence consumer decisions to use banking products from the bank.

Price (X2) variable has Wald value (7.471) greater than the Chi-Square value (3.841) and significance (0.006) smaller than alpha 5% (0.050) so it can be concluded that the price (X2) variable has a significant effect of decision in selecting banking products. In the banking world, the price taken when someone decides to use banking products is the administrative costs that must be incurred by consumers and interest or profit sharing offered to consumers. This is seen as an advantage for consumers who become stimulants to use banking products. The results of this study support the research of Oke (2012), Kustiningsih (2014), and Roy and Khan (2015) which explained that prices are one of the external factors that are proven to influence the decision to use banking products.

Place (X3) variable has Wald value (4.972) smaller than the Chi-Square value (3.841) and significance (0.026) smaller than alpha 5% (0.050) so it can be said that place variable (X3) has a significant effect on customer decision in selecting banking products. The results of this study are in accordance with research by Kustiningsih (2014) which shows that determining the location of offices along with supporting facilities and infrastructure is very important so that customers can easily reach each of the existing bank locations.

Variable promotion (X4) has a Wald value (0.159) smaller than the Chi-Square value (3.841) and significance (0.690) greater than alpha 5% (0.050) so it can be said that the promotion (X4) variable has no significant effect on banking product selection. It can be seen that in Indonesia bank advertisements are mostly only done when sponsoring certain events and the intensity of printed or non-printed is rarely found, both in sharia and conventional banks. This study supports the research of Fajri et al., (2013) which found the only significant process and product variables.

Variable people (X5) has Wald value (1.198) smaller than the Chi-Square value (3.841) and significance (0.274) greater than alpha 5% (0.050), so it can be said that people (X5) variable has no significant effect on the decision in banking products usage. Staff hospitality cannot be felt unless the person has indeed gone to the bank to conduct transactions so that people have less factor in influencing customers' decisions. This is consistent with the research of Roy and Khan (2015) which explained that from seven dimensions of marketing, people are one of the factors that have no significant effect because both Sharia and conventional banks both have standard operating procedures (SOP) about hospitality and
ways of addressing customers so that there is no difference that can make someone choose one of the two types of banks in product selection.

Variable process ($X_0$) has a Wald value (7,592) greater than the Chi-Square value (3,841) and significance (0.022) smaller than alpha 5% (0.050) so it can be said that the process ($X_0$) variable has a significant effect on the decision in banking products usage. The service process and also staff knowledge about bank products become an advantage for consumers to choose banking products. Punctuality and speed of service are very crucial factors in the service business. Therefore, service time is a concern for all sharia and conventional banking businesses. Banks with a long service process will tend to be avoided by consumers, especially in the millennium era where banks are required to be as effective as possible to provide services so that consumers are not disappointed with the services provided. This study supports the research of Kaura (2013), Islam & Rahman (2015), and Roy & Khan (2015) which prove that the service process of banks in addressing consumers, both in terms of timeliness and ease of process, has an important role in influencing consumer decisions to use banking products at the bank.

Variable physical evidence ($X_1$) has a Wald value (0.272) smaller than the Chi-Square value (3.841) and significance (0.602) greater than alpha 5% (0.050) so it can be said that the physical evidence ($X_1$) variable does not significantly influence the decision of banking products usage. Physical form cannot be a factor that can distinguish between one bank and another. This is because building standards and designs are only physical forms that can be directly copied or surpassed by other banks. The strongest differentiator in the service business lies in the intangible of the products sold, namely the process, and also the reliability of banking products. This study is in line with research by Islam and Rahman (2015) which states that physical evidence is one of the external factors that have no significant effect.

CONCLUSION

Based on the results of this study, it was found that there was a significant effect between the marketing mix variables on the customer’s consideration in the selection of the use of banking funding products (savings, giro, and deposits), among others: product, price, place and process. Several other marketing mix factors, namely promotion, people, and physical evidence turned out to have no significant effect on the customers consideration in the selecting to uses of banking products.

Based on the results of this study, it was found that the product factor was the most considered by customers in the selection of the use of banking products (savings, giro, and deposits). The consideration of customers in the selection of the use of banking funding products in this study was also seen through the products offered by the bank. Conventional bank products are preferred by consumers because products and banking systems are familiar with consumers, administrative processes are easier when compared to Sharia banks, and the interest or profit sharing offered is far competitive and administrative costs are relatively cheaper.

REFERENCES


ABSTRACT
This research was administered to: (1) analyze whether competence shared any influence on employee performance, (2) measure the influence of competence on employee performance in the Department of Population and Civil Registry in Kendari City. This study was expected to provide theoretical benefits for writers and readers in understanding the influence of competence on employee performance. Furthermore, this study also offered a practical benefit with its valuable insights for the betterment of policies made to improve the competences of employees in the Department of Population and Civil Registry. The population of this study included 85 employees from which 55 samples were selected, consisting of 43 civil servant employees and 12 honorary employees as operators. The data of this research were collected using questionnaires, observation and documentation. A statistical test in the form of simple regression analysis was employed to analyze the obtained data. Results of the regression test indicated that competence simultaneously showed a positive and significant influence of 73.00% on employee performance in the Department of Population and Civil Registry in Kendari City. Meanwhile, the remaining 27% was influenced by other factors. Therefore, it can be inferred from the results that employee performance was enhanced if the competence was improved.

KEY WORDS
Competence, employee, performance, population, public service.

Civil Servants (PNS) serve as the state apparatus element responsible for providing public services in a professional, honest, fair, and equitable manner in the organization of the state, government and development duties. The work productivity of civil servants in carrying out their functions is related to their competences. Therefore, organizations need to systematically make efforts of competence development. Competence development can be done through coaching and improvement of work competence and motivation possessed. Work competence is improved by upgrading aspects underlying the element. Improving the bureaucracy performance in providing public services becomes an increasingly important issue to immediately get noticed by all parties. A bureaucracy with poor public service performance will greatly affect government performance in improving the state competitiveness in the global era. The performance of the public sector in Indonesia specifically still receives a lot of criticism. The people’s expectation of a cleaner, more transparent and accountable governance has not been well realized. Corruption, Collusion and Nepotism practices are still widely found in the process of governance and public services. In fact, Corruption, Collusion and Nepotism practices have extended in scale and the perpetrators have worsened the performance of the public sector (Dwiyanto, 2006:52).

Demands of public services will always increase in terms of both quality and quantity along with the increase in population, community welfare, and environmental changes. To meet the demands needs more readiness and improvement in the apparatus performance so that there is no gap between the people’s demands or expectations and the apparatus competences in carrying out their duties and functions. To reduce even eliminate the gap, the government bureaucracy must have high competences and continuously follow developments in the community. Besides, to anticipate such conditions, the government...
bureaucracy must be systematically prepared by creating a good and integrated apparatus institutional system, personnel system and governance mechanism so that the government bureaucracy is able and ready to face the increasing people’s demands of public services.

One important issue often discussed internationally is related to demography as we often find in cases of immigration between countries. Deportation, detention, and even criminal cases are frequently underlain by citizenship status that is not completed with valid and official citizenship documents accordingly with the applicable standards in both the Republic of Indonesia and the international world.

The chaos of our population administration system has brought impacts in various fields, especially issues related to banking, economy, society, politics, and security in which there are often found double identities. Ironically, such double identities are mostly released by the same institution but different domiciles.

Law No. 24 of 2013 Article 68 states that civil registration certificates are civil annotations and records in the form of both citizenship identities and certificates while demographic events are events experienced by citizens that must be reported as it has implications to the issuance or change in the family card, identity card, and/or other civil certificates including the moving, arrival, change of temporary residence address, and change from limited stay status to permanent stay status. In terms of civil registration, demographic events are vital events experienced by citizens regarding civil records, such as: (a) Birth Certificate, (b) Death Certificate, (c) Marriage Certificate, (d) Divorce Certificate, and (e) Child Recognition Certificate, and (f) Child Legitimization Certificate.

The Department of Population and Civil Registry of Kendari City as the official government institution authorized to carry out the administrative activities of the population and civil registry has sought to improve public services but there are still complaints and demands for repairs. Some of the complaints and demands are related to the lack of information about civil registration, double ID cards, convoluted rules, and the unavailability of demographic databases as a reference for the implementation of development programs including regional head elections. The lack of socialization from the implementing apparatuses is one of the causes of the non-optimal conditions of civil registry services to the public. Instead of actively participating in serving the public, the implementing apparatuses mostly tend to position themselves to wait for customers. Ultimately, many people are dissatisfied with the performance of the population and civil registry organization.

Moreover, Sinambela et al. (2010: 117) suggested that at least, there were 385 types of public services provided by the government apparatuses to the community, ranging from the making of birth certificates to death certificates. All the types of public services provided by both the central and regional government apparatuses to the community generally are still not satisfying. This is because the services provided are too complicated by reason that it is based on the defined procedures. Besides, it mostly takes a big amount of service costs and a very long service time, leading to ineffective and inefficient services.

Several observation results have shown that there are still various weaknesses in civil services in Kendari City as follows: 1) the number of service apparatuses is still less compared to the people served, 2) the quantity and quality of facilities/infrastructure supporting the services are insufficient, 3) the skills of service apparatuses are inadequate, seen from the delays in a number of daily duties related to public services, especially online-based services. Additionally, the frequent delays in the delivery of ID card-making forms from the Central Government cause the Civil Registry services in Kendari City to often accumulate and make the settlement process too late.

Seen from the ratio between the total population and the total underserved people, it is still far from the expectation. It can be reflected in the low output of services and the high number of unregistered vital demographic events occurring in the community. This is allegedly caused by the low performance of the Department of Population and Civil Registry in Kendari City.

Based on the background above, the statements of problems of this research are as follows:
Does competence have a significant effect on employee performance in the Department of Population and Civil Registry in Kendari City?

How much is the effect of competence on employee performance in the Department of Population and Civil Registry in Kendari City?

Thus, the objectives of this research are as follows:

1) To describe whether competence affects employee performance in the Department of Population and Civil Registry in Kendari City.
2) To describe how much competence affects employee performance in the Department of Population and Civil Registry in Kendari City.

This research benefits theoretically and practically as follows:

- Theoretically, this research is expected to contribute to the theoretical improvement of human resource development, particularly the development of the concept of government apparatus competence and performance as well as regional government management;
- Practically, this research is expected to provide input for perfecting the policies of Kendari City Government, particularly the Department of Population and Civil Registry regarding the competence improvement of the City Government apparatus/officials so as to enhance their performance of public services.

**LITERATURE REVIEW**

_The Concept of Competence._ There are two terms deriving from two different schools about the concept of conformity in work. The terms are “Competency”, which is a description of behaviors, and “Competence”, which is a description of a task or the result of work (Palan, 2007: 5).

Although the difference between the two terms is generally accepted, the use of both terms is still frequently exchanged, causing everyone to have different meanings. According to Wibowo (2011: 325), competence is an ability to carry out a job or task based on skills and knowledge supported by work attitudes required for the job.

According to Spencer and Spencer in Sutrisno (2011: 207), the components of competence, including motives, traits, self-concepts, knowledge and skills, will affect performance.

Furthermore, Spencer and Spencer in Palan (2007: 6) outlined five characteristics forming competence as follows:

- Knowledge, referring to information and learning outcomes;
- Skills, referring to one’s ability to carry out an activity;
- Self-concepts and values, referring to one’s attitudes, values and self-image, such as one’s belief that he can succeed in a situation;
- Traits, referring to physical characteristics and consistency of responses to situations or information, such as self-control and the ability to remain calm under pressure;
- Motives, referring to emotions, desires, psychological needs or other impulses driving actions.

Based on Government Regulation No. 100 of 2000, civil servant competence the ability and characteristics possessed by civil servants, including knowledge, skills, behaviors and/or attitudes required in carrying out the duties.

Covey, Roger and Merrill in Mangkunegara (2005:112) explained that competence includes:

- Technical competence: knowledge and skills to achieve agreed goals and the ability to think of problems and seek new alternatives;
- Conceptual competence: the ability to see a large image to test various assumptions and change perspectives;
- Competence of interdependence effectively with others, including the ability to listen, communicate, get a third alternative, create a win-win agreement, try to reach a third alternative solution, operate effectively in an organization as a whole.
Purwanto (2006: 8) asserted that competence is a capability required in carrying out a position. Competence is usually associated with expertise, skills, professionalism or functional jobs. State or political functional competence is far different from structural competence. The difference is in the main tasks, authority functions and responsibilities between one another.

From all the above arguments, the independent variable used in this research is competence, covering 5 (five) dimensions, namely (1) motives, (2) traits, (3) self-concepts, (4) knowledge, and (5) skills.

The Concept of Employee Performance. Performance is an often-used term in the management of organizations, both private, public, and government organizations. Mardiasmo (2005: 121) stated that performance is an important concept in a good and responsible governance. According to Simanjuntak (2005: 1), performance is the achievement level of the implementation of certain tasks. Performance measurement is highly important to assess organizational accountability in producing better public services.

On the other side, Osborne and Gaebler in Keban (2010:1) revealed that performance appraisal or evaluation is an important key for the improvement and progress of both institutions and individuals. The only way to determine whether an institution or individual has succeeded in achieving the goal is by evaluating the performance of the institution or individual. From the evaluation results, it can be determined the types and levels of the incentives to be proposed or given.

Meanwhile, Rivai and Basri (2005: 14) argued that performance is a person’s result or level as a whole during a certain period in carrying out his tasks compared to the likelihood results such as work standards, targets or criteria determined and mutually agreed in advance. Moreover, Sedarmayanti (2005: 51) explained that performance includes five aspects, namely: (1) quality of work, (2) promptness, (3) initiative, (4) capability, and (5) communication. The five aspects can be used as a measure in determining individual and organizational performance levels.

According to Mangkunegara (2005: 9), performance is work results achieved by someone in carrying out his function, covering work quality, work productivity, initiative, cooperation and responsibility. Furthermore, Simamora (2003: 416) described that in terms of performance, there are three aspects that are interrelated and needed to be understood by each employee or leader of a work unit or organization, namely (1) the description of jobs or tasks to be performed; (2) the expected results or goals of the jobs or functions; and (3) the required time to complete the jobs as expected.

From the review of literature above, the indicators used to measure the employee performance variable include (1) work quality, (2) work quantity, (3) initiative, (4) cooperation, and (5) responsibility.

Competence and Performance of Employee. Performance is a multi-dimensional construct covering many influencing factors. According to Palan (2007: 25), several experts have argued that one’s competence will generate performance by a formula that Competence = Performance.

Gibson in Moehleriono (2012: 66) described that there are three factors influencing one’s performance, namely:

- Individual factors, including ability/ skill, family background, experience, and social and demographic levels;
- Psychological factors, including perception, role, attitude, personality, motivation and job satisfaction;
- Organizational factors, including organizational structure, job design, leadership, and reward system.

Mahmudi (2013: 20) explained that in the traditional system of performance appraisal, performance is only associated with personal factors. However, in reality, performance is often caused by other factors beyond personal factors, such as systems, situations, leadership or teams.

Meanwhile, according to Ruky in Sutrisno (2011: 209), competence consists of a number of key behaviors required to carry out certain roles to produce satisfactory work
performance. The behaviors are usually showed consistently by employees carrying out their work activities. Behaviors without an intention or purpose cannot be defined as competence. Sutrisno and Edi (2011) depicted the relationship between Competence and Performance as follows:

According to Clelland in Sedarmayanti (2012: 283), competence is a person's fundamental characteristics that have a direct influence on or can predict excellent performance. Spencer and Spencer in Palan (2007: 13) said that to be a superior performer in the workplace, one must have competence referring to the characteristics underlying his behaviors, consisting of motives, traits, self-concepts, knowledge, and skills that will affect his performance. If employee competence is good, his performance will be good too.

Thinking Framework. The thinking framework of this research illustrates that competence affects the quality of public services as depicted in the following chart:

Hypothesis. It is assumed that Competence significantly influences Employee Performance in the Department of Population and Civil Registry of Kendari City.

METHODS OF RESEARCH

The population of this research was all employees working in the Department of Population and Civil Registry of Kendari City in 2018 which amounted to 85 people distributed to 2 divisions, 1 secretariat and 10 Technical Implementation Units (UPTs) in 11 districts of Kendari City.

The sampling in this research was done intentionally by involving 55 employees, consisting of 43 civil servant employees and 12 honorary employees as operators spread over 10 Technical Implementation Units (UPTs) in 11 districts of Kendari City.

To obtain the data required in this research, the researchers used several techniques as follows:

1. Questionnaire: giving a list of questions to the respondents (employees) of the Department of Population and Civil Registry in Kendari City;
2. Documentation: recording data directly from documents related to the research problems;
3. Observation: observing directly the duty implementation of employees within the scope of the Department of Population and Civil Registry in Kendari City.
The data in this research were analyzed using a simple linear regression analysis method with a computer application program namely SPSS (Statistical Product Service and Solution) Version 20 (Santosa and Ashari, 2013). Besides, an inferential statistical analysis was performed using a simple linear regression analysis method (Sudjana, 2013: 324) with the following equation model:

\[ Y = a + bx + e \]

Where: \( Y \) = Competence of Government Apparatus; \( X \) = Employee Performance; \( a \) = Constant Number; \( b \) = Regression Coefficient; \( e \) = Error Level/Interference Factor.

The hypothesis in this research was tested using a t-test. T-test aims to determine the effect of independent variables (partial) on the dependent variable. This test was done by observing the \( t_{\text{count}} \) at 95% confidence level (\( \alpha = 0.05 \)) with the degree of freedom (df) of \( n-k-1 \) where \( n \) is the number of observations and \( k \) is the number of independent variables.

The criteria for testing the hypotheses are as follows:
- If the \( t_{\text{count}} > t_{\text{table}} \), \( H_1 \) is accepted, \( H_0 \) is rejected;
- If the \( t_{\text{count}} < t_{\text{table}} \), \( H_1 \) is rejected, \( H_0 \) is accepted.

RESULTS AND DISCUSSION

Description of the Department of Population and Civil Registry in Kendari City. The Department of Population and Civil Registry in Kendari City is one of the institutions under the control of the Mayor of Kendari City in charge of providing population and civil registration in Kendari City. The number of employees in the Department of Population and Civil Registry of Kendari City was 85 people consisting of 43 civil servant employees and 42 honorary employees.

The Department of Population and Civil Registry of Kendari City serves 11 districts consisting of 65 sub-districts. The population of Kendari City in 2006 amounted to 244,586 people, increasing to 251,477 in 2007 and 334,335 in 2017 (Department of Population and Civil Registry of Kendari City, 2018). Growth in the population of Kendari City is expected to increase by 0.97% per year. The high population growth in Kendari City demands the capability of the Department of Population and Civil Registry of Kendari City to provide better public services.

Education Level-Based Respondent Characteristics. The level of education in this research is the level of last education possessed by the respondents. Education levels greatly influence in providing perceptions and judgements of questions, distinguishing a person’s way of thinking in response to various problems faced.

Education levels of the respondents can be seen in Table 1 below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Education Level</th>
<th>Number of People</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Senior High School (SMA)</td>
<td>9</td>
<td>16.36</td>
</tr>
<tr>
<td>2.</td>
<td>Associate Degree (D3)</td>
<td>1</td>
<td>1.82</td>
</tr>
<tr>
<td>3.</td>
<td>Bachelor Degree (S1)</td>
<td>39</td>
<td>70.91</td>
</tr>
<tr>
<td>4.</td>
<td>Master Degree (S2)</td>
<td>6</td>
<td>10.91</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>55</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The table above shows that majority of the respondents, amounted to 39 people (70.91%), possessed the bachelor degree (S1) education level. The other 9 respondents (16.36%) was lastly graduated from Senior High Schools (SMA), followed by 6 respondents (10.91%) with a master degree (S2) and 1 respondent (1.82%) with an associate degree (D3). That is, the education levels of the respondents are relatively high, thus it can be predicted that they have sufficient basic thinking skills to plan and carry out work as well as solve various problems encountered.
Working Period-Based Respondent Characteristics. The working period of an employee refers to the employee’s working experience in a particular institution. The working period of the respondents can be seen in Table 2 below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Working Period (Years)</th>
<th>Number of People</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1-9</td>
<td>7</td>
<td>12.73</td>
</tr>
<tr>
<td>2.</td>
<td>10-25 and above</td>
<td>48</td>
<td>87.27</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>55</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on the table above, the majority of the respondents, which amounted to 48 people (87.27%), have worked for 10-25 years and above in the Department of Population and Civil Registry of Kendari City while the rest 7 respondents (12.73%) have worked there for 1-9 years. It means that the working periods of employees of the Department of Population and Civil Registry of Kendari City are relatively long, thus it can be predicted that they have adequate experience to carry out their duties.

**RESULTS OF STUDY**

Regression Analysis Results. As described above, a simple linear regression analysis was done to answer the problems and hypothesis proposed in this research regarding the simultaneous effect of the independent variable on the dependent variable.

In summary, the results of the simple linear regression analysis are presented in the following table.

Table 3 – Results of the simple linear regression analysis

<table>
<thead>
<tr>
<th>Research Variables</th>
<th>Unstandardized Coefficient (β)</th>
<th>t_count</th>
<th>Sig</th>
<th>Alpha (5%)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competence →</td>
<td>Employee Performance</td>
<td>3.669</td>
<td>2.739</td>
<td>0.008</td>
<td>Significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.082</td>
<td>11.966</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

R = 0.854
F-hitung = 143.184
Sample = 55
R-Square = 0.730
Sig.F = 0.000

Source: Processed Data Using SPSS Version 20.

Based on the computerized data processed using SPSS Version 20 in the table above, it can be obtained the following regression equation:

\[
Y = 3.669 + 0.082
\]

The regression equation above can be explained as follows: \(b_0 = 3.669\) reflects that the competence variable affected employee performance by 3.669%; \(b_1 = 0.082\) reflects that if an increase in the competence variable by one unit was followed by an increase in employee performance by 0.082%.

Table 4 – Determination Coefficient (R²)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.854</td>
<td>0.730</td>
<td>0.725</td>
<td>1.33852</td>
</tr>
</tbody>
</table>

Source: Processed Data Using SPSS Version 20.

The data processing analysis of the effect of the competence variable on employee performance in the Department of Population and Civil Registry of Kendari City showed an
R-value of 0.854. That is, the competence variable was closely and positively correlated with employee performance because the correlation coefficient was close to +1.

Meanwhile, the effect of the competence variable (X) on the employee performance variable (Y) shown by the R-square ($R^2$) reached 0.730. It means that 73.0% of the employee performance was affected by their competence while the remaining 27% was affected by other factors outside this research focus.

**T-Test.** This test aimed to determine whether the competence variable (X) partially had a positive effect on the employee performance variable (Y) based on the regression results presented in the table above. The t-test was done by comparing the $t_{\text{count}}$ value with the $t_{\text{table}}$ value. From the comparison, it was concluded that if the $t_{\text{count}}$ > the $t_{\text{table}}$, the competence variable (X) significantly affected the employee performance variable (Y). Vice versa, if the $t_{\text{count}}$ < the $t_{\text{table}}$, the competence variable (X) significantly affected the employee performance variable (Y).

<table>
<thead>
<tr>
<th>Variable</th>
<th>$t_{\text{count}}$</th>
<th>Sig</th>
<th>$t_{\text{table}}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competence (X)</td>
<td>11.966</td>
<td>0.000</td>
<td>2.006</td>
</tr>
</tbody>
</table>

*Source: Processed Data Using SPSS Version 20.*

Based on the statistical partial test (t-test) of each variable as presented in the table above, the regression coefficient test of the competence variable (X) showed a $t_{\text{count}}$ of 11.966 while the $t_{\text{table}}$ at 5% distribution was 2.006. That is, the $t_{\text{count}}$ (11.966) was greater than the $t_{\text{table}}$ (2.006), indicating that there was a positive relationship between competence and employee performance.

From the t-test results above, it was concluded that the competence variable partially had an effect on employee performance. Thus, the hypothesis stating that Competence significantly influences Employee Performance was accepted.

**DISCUSSION OF RESULTS**

The discussion was made by looking at the empirical evidence from the hypothesis testing that had been conducted. It also includes the theories or empirical findings from the previous studies, either supporting or contradicting the results of the hypothesis testing conducted in this research.

**The Effect of Competence on Employee Performance.** The analysis results suggest that competence simultaneously had a positive and significant effect on employee performance in the Department of Population and Civil Registry of Kendari City, thus the research hypothesis was accepted. In other words, the competence variable simultaneously could explain the improvement of employee performance in the institution.

The effect of the competence variable with its dimensions is explained as follows:

1. From the motive dimension, it can be explained that employees in the institution have demonstrated organizational awareness to improve their workability and spirit in carrying out their duties and functions. Besides, the leader of the institution, at any time, provides stimulation to arouse the subordinates’ work passion, provide explanation/information to them about their duty implementation so as to create a conducive work climate, and always tries not to discriminate treatments for subordinates. Besides, promotions are given accordingly with the employee work performance and the employee recruitments are done accordingly with the job requirements so that the employees can show their good performance.

Regarding this, Dharma in Sutrisno (2011: 209) revealed that competence always contains an intention and goal often driven by motives or traits leading to an action to obtain a result. The leader of the institution has tried to do both formal and personal approaches to subordinates to move their hearts for increasing their devotion to the organization but there are still employees who have not optimally shown their performance.
2. The *trait* dimension refers to perceptions of civil servant attitudes and behavior in self-control and self-confidence, such as being honest and adroit in carrying out their duties. It indicates that employees in the institution have implemented the values of honesty and dexterity in working, automatically improving their performance in carrying out their duties and functions even though there are still employees who have not been able to adjust to their work environment as expected.

According to Thoha (1998: 186), human behavior is a function and interaction between an individual and his environment. An individual's behavior is formed through the process of interaction between himself and his environment. Each individual has different characteristics to be always carried when entering a certain environment such as a person or bureaucracy. These characteristics include personal trust, appreciations, needs, and experience. Likewise, people as individual environments have certain characteristics, namely regularity manifested in the hierarchical order, division of certain duties and functions, authorities and responsibilities. Employees of the Department of Population and Civil Registry in Kendari City have interacted well with the community in the process of serving. However, there are still a huge number of complaints due to the long and complex procedure from the Technical Implementation Unit to the district level. As a result, many people try to take shortcuts by making direct administration. Another problem which often occurs and slows up the service is the run out of the forms required for ID card handling.

3. The self-concept dimension refers to perceptions of the ability of civil servants to develop and build group collaboration and be job satisfaction-oriented. In principle, government organizations in carrying out the duties and responsibilities must be accountable so as not to create doubt for employees and communities who deal with government institutions. Whether or not the implementation of a task is considered good is highly dependant on the sense of responsibility of employees in completing their duties and how they do it. It is also inseparable from employee discipline which is expected to be the main parameter of organizational success. Regarding this, employees of the Department of Population and Civil Registry in Kendari City have reflected a consistent attitude and sense of responsibility in completing the work. However, there are still some who are less disciplined in carrying out their duties.

According to Prasetyo (1997: 1), performance is the result of work, a management process, or an organization as a whole which must be shown concretely and can be measured by predetermined standards or benchmarks.

4. The knowledge dimension refers to the knowledge of employees of the Department of Population and Civil Registry in Kendari City regarding the tasks, authorities, and information related to the execution of their duties. The education level qualifications of the employees, which are mostly bachelor degree and master degree, sufficiently support the insight and ways of thinking of the employees so as to improve their performance.

In principle, employee performance can run well as expected if it is supported by adequate knowledge of the main duties and functions. This is consistent with the view of Covey, Roger and Merrill dala Mangkunegara (2005: 112) stating that technical competence is knowledge and expertise to achieve agreed goals and the ability to think various problems arising and seek new alternatives to solve them.

Thus, knowledge needed by civil servants in carrying out their duties can be improved as well as possible so as to optimize their performance. That is, it is necessary to improve the method of carrying out the duties and responsibilities imposed on civil servants, including work standards and targets which are likely to be achieved as expected by the government and society. Employees of the Department of Population and Civil Registry in Kendari City have the ability to interpret the concept formulated by the leaders (integrating policies) as well as gathering information from members of the organization and processing it into policy recommendations to be used as the leader’s guidelines in making policies. Besides, they also have sufficient knowledge to complete their various tasks of any duties, are able to work hard, solve problems arising in the field effectively, and performing complex tasks. On another side, the work environment can encourage them to learn and improve knowledge about new work processes so as to generate better performance. Nevertheless, there are
still employees who just work after being commanded and most of them are still limited in knowledge of their work.

5. The skill dimension refers to perceptions of the ability of civil servants to carry out their duties with high performance, often viewed from various criteria.

According to Hamalik (2005: 17), the skill aspect is based on the following criteria: (1) knowledge skill, namely decision making, problem solving and logical thinking, (2) psychomotor skill, referring to the skill to perform physical actions, (3) reactive skill, referring to habitual attitudes and self-awareness, (4) interactive skill, which is acting in interaction with other people (including both physical elements and thinking activities).

Regarding this, employees of the Department of Population and Civil Registry in Kendari City have participated in various training related to their duties although the number is still limited. The research results indicate that the employees have been increasingly skilled to do their tasks even though they are not yet maximal. However, overall, they have been able to support the process of carrying out the duties related to population and civil registration in Kendari City. This is in line with Atmojoandrapo (2001: 52) stating that competence comes from formal education, graded education and training, and functional training.

Employee participation in education and training programs is basically an effort for employee development in terms of knowledge and skills. It is highly effective in shaping employee attitudes. In this regard, an employee in carrying his tasks should notice work dimensions that can affect his performance.

Kendari City Government has made maximum efforts to develop human resources based on technology although it is still not evenly distributed and its application has not been optimal. It is strongly related to competence-based management of apparatus human resources which is expected to lead to recruitment, selection, development, performance management, career management, and compensation. Adequate employee competence, in turn, can produce a high performance that is indispensable in current regional government organizations.

**CONCLUSION**

Competence simultaneously influences the performance of employees in the Department of Population and Civil Registry viewed from the three dimensions as follows:

- Motive dimension, in which employees have work competence and spirit so as to increase their performance;
- Trait dimension, in which employees are honest and adroit in working and this positively affects their performance;
- Self-concept dimension, in which employees have the sense of responsibility in serving the community, automatically improving their performance;
- Knowledge dimension, in which majority of employees have the education level qualifications of bachelor degree and master degree, meaning that they have sufficient insight and way of thinking so as to improve their performance;
- Skill dimension, in which there have been various training participated by employees although the number is still limited, leading to increased job mastery and performance improvement.

Based on the regression test, competence significantly influences the performance of employees in the Department of Population and Civil Registry of Kendari City. That is, the higher the employee’s competence value is, the better the employee’s performance will be.

The results of the determination coefficient analysis indicate that competence had a significant effect of 73.00% on the performance of employees in the Department of Population and Civil Registry of Kendari City while the remaining 27.00% was influenced by other factors.
SUGGESTIONS

It is necessary to increase the competence of employees of the Department of Population and Civil Registry in Kendari City, hold training according to the employee main duties and functions so as to improve their performance.

It is necessary to improve supporting facilities and infrastructure for employees so as to improve their performance in serving the community.

Future researchers are expected to further emphasize and deepen the study of the influence of competence on employee performance by adding other dimensions outside this research focus. Besides, it is necessary to add samples to examine other factors influencing employee performance in addition to the competence variable.

REFERENCES

EFFECT OF ENVIRONMENTAL PERFORMANCE, ENVIRONMENTAL DISCLOSURE AND PUBLIC VISIBILITY ON ECONOMIC PERFORMANCE OF COMPANIES LISTED IN INDONESIA STOCK EXCHANGE DURING PERIOD OF 2015-2016

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ABSTRACT
This study aims to determine the relationship between the environmental performance, environmental disclosure and public visibility on economic performance. This study used a sample of companies listed on the stock exchanges in Indonesia in 2015-2016 and there were 66 companies who met the study criteria. Multiple linear regressions were used to test the hypothesis in this study. The results of this study indicate that the environmental disclosure negative significant effect on the economic performance visibility whereas public variables have a significant effect negatively on economic performance, but for environmental performance variables showed significant results on economic performance.

KEY WORDS
Public service, disclosure, economic effect, performance.

Living in a country that has the world’s largest archipelago with 17,000 islands located between two oceans and two continents make the country Indonesia ranks fourth as the country with the largest population in the world. On population much that Indonesia is blessed with abundant wealth in the form of biological wealth. However, in Indonesia now that deforestation was well above normal limits. About 2% per year in Indonesian forests damaged by illegal logging and the lack of concern for the community to participate in helping the government in preserving the forest. The impact of forest destruction is the destruction of ecosystems and natural resources resulting in natural disasters such as floods, landslides, and global warming. Indonesian forests are the lungs of the world.

The pollution caused by vehicle emissions, human waste, and industrial waste pose a direct threat to human health and welfare. The heavy influence of air pollution, environmental pollution, or also called the waste caused by companies who do not have a sense of high concern for the environment. Here’s an example of environmental issues conducted by several companies.

Companies are now not only faced with the problem of the business goals, but the company is also required to complete and fix the environmental problems that exist around their company. The business world a lot rests on the concept of capitalism that is more about maximizing the prosperity of the owners of capital rather than the comfort of other stakeholders (Kemal Ceka 2017).

As a result, profit established as the highest goal and looked at other aspects as priority underneath. Environmental problems currently a very competitive issue in the business world. Environmental issues lately many steal the company, so the company seeks to make improvements by increasing the sense of responsibility to the environment surrounding the company. To realize accountability in the corporate environment using the essential elements of the environmental costs. This prompted the company to have a financial information system that can help the company's management in addressing environmental problems. Accounting as a discipline raised the issue of social and environmental issues through the mechanism of social and environmental accounting (Sara Segura 2017).

The concept of environmental accounting has actually been started to develop since the 1970s in Europe. Due to the pressure instead of government agencies and increasing environmental awareness among the people who urged companies applying environmental
management is not just a business for the sake of industrial activity only (Yongxiang Wang, 2017).

Examples of companies that can cause damage to the environment is PT Newmont Nusa Tenggara dangerous to use technology in the ocean, that submarine tailings disposal (Submarine Tailings Disposal) system, which has resulted in pollution in Buyat Bay, North Sulawesi, PT Newmont Minahasa Raya. In fact, the survey results KLH conducted in September 2004 in the area of Tongo Sejorong, Benete and lava, West Nusa Tenggara, showed approximately 76-100% of respondents fishermen stated that their incomes declined after Newmont dispose of tailings into the bay Senunu, which has up to 120,000 tonnes of tailings per day, or 60 times the amount of tailings Newmont in Buyat bay.

Empirical research on the relationship between environmental performance, environmental disclosure and public visibility to economic performance has generally been considered the strength of the relationship between these variables. Research conducted by Tiansen Liu (2016) says that the effect on the Economic Performance Environmental Performance. Research conducted by Keunyeob Ohb, Insoo Han (2017) states that global environmental management positively influences the company's intention environmental innovations. Environmental innovation behavior in general has a greater effect on the environment performance of the economy's performance.

HYPOTHESIS DEVELOPMENT

Legitimacy theory. According to Deegan and Rankin (1996), legitimacy theory states that companies continually have to ensure that their activities are in accordance with the norms enshrined in society, so that the organization or the company can be accepted by outsiders (legitimized). Because in addition to the rights of investors, other things that also need to be considered by the organization is the rights of the public, especially those in the region, organizational or company is operating.

The basis of the theory of legitimacy is the presence of "social contract" between the company and the communities that surround the company’s operations, and how companies in the use of economic resources (Ghozali and Chariri, 2007). So every company has an implicit contract with society to carry out its activities in accordance with the norms prevailing in society. If the contract is violated by the company, it would appear the rejection of society which can certainly result in losses for the company.

Theory Triple Bottom Lines. The concept of CSR is growing and the development of the CSR concept so many theories that emerged expressed regarding CSR. The famous one is the theory of the triple bottom line where this theory the view that if a company wants to survive, then it must pay attention to "3P" (Wibisono: 2007).

Environmental accounting. Environmental accounting is to identify, measure and allocation of environmental costs and integration costs into business decision making and communicating the results to the stockholders of the company (Rossje: 2006).

The concept of environmental accounting reporting had developed in the 1970s in Europe. Due to pressure from non-governmental organizations and the growing environmental awareness society that urged companies implementing environmental management, not only focus on business sectors (Djogo, 2006: 1).

Each company’s operational activities aim to make a profit as possible. In general, management reduce production costs as much as possible. During this time the cost of environmental damage is considered as externalities to the activities of the company. Therefore, environmental accounting is applied as a new technique that is used to identify the cost of environmental damage and report it as the cost of production is more accurate (Purwanto, 2000)

Implementation of environmental accounting helps companies to determine the actual production costs to take into account the environmental costs arising from the operations of the company. By knowing the costs actually occurred, management will be able to have a basis for making more accurate decisions, especially with regard to environmentally friendly processes and efficiency cost-effective production.
Effect of Environmental Performance, Environmental Disclosure and Public Visibility Toward Economic Performance. Research conducted by Keunyeob Ohb, Insoo Han (2017) states that the behavior control environment and global environmental management to positively affect the company's intention environmental innovations. Environmental Behavior of innovation in general has a greater effect on the environment performance of the economy's performance. The environmental performance was also positively affect economic performance. Innovation in product design improves environmental performance at the national level models, and in Shandong, Jiangsu and Shanghai.

Companies exaggerate the level of their CSR practices to create a more positive corporate image to their stakeholders (Kemal Ceka, 2017). Companies registered in China with the center of the state ownership are encouraged to create social and environmental disclosure pursuant SASAC recommendations, but these companies do not show a substantial difference in social and environmental disclosure compared with other Chinese listed companies. The involvement of the Big Four in the financial audit was also unsuccessful substantial differences in social and environmental disclosure (Indra Abeysekera, 2014)

Disclosure of environmental information would benefit the market as well as the ability to benefit from its investment in Indonesia environmental improvements. However, the findings for the other three variables, namely ROA, ROE, and EPS do not show any significant correlation between the total environmental disclosure (Inaliah Mohd Ali, 2016). Environmental Performance positive effect on the Financial Performance (Economic Performance). Social Performance positive influence on Institutional Owning (Robin W., Roberts, 2017). Green Accounting proven to improve financial performance. Government regulation is an important approach to ensuring CER. That the Government of China should further improve the legal and regulatory environment, strengthen government supervision, urging the company to do more CERs.

The impact of mass media, the ability to induce cognitive change among individuals, has been dubbed the agenda setting function of mass communication. Herein lies the most important effect of mass communication, media capabilities for structuring the world for us (JUN Cheng, Yuyu Liu, 2018). The audience not only learns the news and other things through the media, but also learns how much importance is given to an issue or topic of how the mass media gives emphasis to the topic. Not all customers could see PROPER score, as well as the Environmental Disclosure via the annual report can be rarely touched by the customer. Then the media become the most powerful tool to proclaim the company's environmental activities to customers because this medium has great potential to be read or seen by the customer. Coverage by great media can influence the opinion of the customer to remain loyal or will move to the company committed to the environment (JUN Cheng, Yuyu Liu, 2018)

Based on the formulation of the problem under study, the hypothesis proposed in this study are:

- **H1:** Environmental Performance positive effect on the Economic Performance;
- **H2:** Environmental Disclosure positive effect on the Economic Performance;
- **H3:** Public Visibility positive effect on the Economic Performance.

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**Diagram:**

- **Environmental Performance**
  - **Environmental Disclosure (X2)**
  - **Public Visibility (X3)**
  - **Economic Performance**
METHODS OF RESEARCH

Population, Sample and Sample-making techniques. This study uses documentary method of data collection. According Bungin (2005: 144), documentary method is a method used to explore the historical data. In this study, the majority of reports in the form of data, be it financial statements (to determine the economic performance measured by ROA), the company's annual reports to find out environmental disclosure (disclosure environment), as well as the results of PROPER assessment (to determine the environmental performance assessment).

The type of data in this research is quantitative data. The data used in this research is secondary data using documentation method that uses the data collected from the library, books, and the Internet. Besides using the data in the form of financial statements and annual reports collected from www.idx.co.id, list of environmental performance assessment ratings derived from www.menlh.go.id/proper in 2015-2016 ,

The population used in this study is all manufacturing companies listed in Indonesia Stock Exchange. This study uses the population according to the criteria specified by purposive sampling method with the criteria that are used as follows:

- Noted as issuers continuously (never encountered delisting);
- Presenting all the data used.

Variable Operational Definition of Research. The dependent variable in this study is economic performance. Economic performance will be measured by profitability. Profitability is a measure of the company's success in generating profits by using the resources of the company (Sudana, 2011: 22). This study uses the return on assets (ROA) for assessing economic performance.

The operational definition of each of the independent variables is as follows:

Environmental Performance by Ignatius Bondan Suratno, Darsono, Siti Mutmainah (2006) is the company's performance in creating a good environment (green). Environmental performance is measured on the achievements of the company enterprise PROPER program which is one of the efforts made by the Ministry of Environment (MOE) to promote structuring of companies in environmental management through information instruments. PROPER performance rating system includes a ranking of companies within five (5) colors will be scored in a row with the highest value of 5 for the gold color and the lowest one for black.

Environmental disclosure is disclosure with the environment in a company report (Ignatius Bondan Suratno, Darsono, Siti Mutmainah, 2006). Environmental disclosure is the disclosure of information relating to the environment in the company's annual report. Environmental disclosure is measured by a score according to the criteria. Criteria for environmental disclosure CSR index is based on guidance issued by the GRI (Global Reporting Initiative).

Public Visibility is measured by the presence or absence of the media / magazines / websites / web preach environmental awareness level of the company. If during the year there is a mass media reported a good response to the environment by companies then given a score of 1, if there is given a score of 0.

Analysis method. The analytical tool used to test the hypothesis in this study is multiple regression analysis, as the dependent variable (economic performance) is influenced by more than one independent variable. The goal is to make an estimate that can be trusted to the value of the dependent variable, if the independent variables are known (in this study is environmental performance, environmental disclosure).

RESULTS AND DISCUSSION

From Table 1 it can be seen that the value of R square of 0.279 or 27.9% variable only Economic Performance, Environmental Disclosure and Public Visibility can be explained in the Variables Economic Performance but her leftovers amounted to 72.1% influenced by
other variables because many other variables that affect a company’s Economic Performance.

According Ghozali (2009: 16), F statistical test indicates whether all the independent variables included in the model have jointly influence on the dependent variable. The hypothesis can be tested by using analysis of variance (ANOVA).

Table 1 – Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.281a</td>
<td>0.279</td>
<td>0.057</td>
<td>245.90100</td>
<td>1.432</td>
</tr>
</tbody>
</table>

Table 2 – ANOVA Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>662066,805</td>
<td>3</td>
<td>220683,935</td>
<td>3.650</td>
<td>.014*</td>
</tr>
<tr>
<td>Residual</td>
<td>7739814,454</td>
<td>128</td>
<td>60467,300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8401881,260</td>
<td>131</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant) -148,235</td>
<td>131,169</td>
<td></td>
<td>.281</td>
</tr>
<tr>
<td></td>
<td>x1 36,633</td>
<td>46,523</td>
<td>.165</td>
<td>1.867</td>
</tr>
<tr>
<td></td>
<td>x2 -347,628</td>
<td>170,386</td>
<td>-.202</td>
<td>-2.040</td>
</tr>
<tr>
<td></td>
<td>x3 126,157</td>
<td>48,615</td>
<td>.250</td>
<td>2.595</td>
</tr>
</tbody>
</table>

The test results using ANOVA with F test shows the calculated F value of 3.650 with a significance value of 0.014. Due to the significance value less than alpha (5%), then the conclusion is variable environmental performance (Environmental performance), environmental disclosure (disclosure environment), and public visibility together significantly affect the performance of economic variables (economic performance).

*Environmental Performance*. Based on t test, it is known that the value of the significance of environmental performance (environmental performance) as measured by PROPER above 0.05 or a total of 0.064 so it can be said that the environmental performance negatively affect economic performance. Thus the first hypothesis (H1), which states that environmental performance has a significant positive relationship to economic performance declined. These results are contrary to research conducted by Xingle Longa et al (2017), Sara Segura (2017), and Lois Mahoney et al (2017). This is because,. Not all customers could see PROPER score in the annual report.

*Environmental Disclosure*. Based on t test, it is known that the value of the significance of environmental disclosure (disclosure environment) below 0.05 is 0.043 with a negative coefficient so that it can be said environmental disclosure significant negative effect on economic performance (economic performance). Thus the second hypothesis (H2) which states that environmental disclosure has a significant positive relationship to economic performance declined in terms of direction. This study supports the research that has been done by Norhasimah Md Nor et al (2016), but contrary to research conducted by Yan Qiu (2014).

According to Md Nor Norhasimah et al (2016), there are two reasons why the effect was not significant. The relationship between sustainable development commitments is
illustrated through environmental disclosure score, and profitability is very low, making it difficult to detect. Research conducted by Norhasimah Md Nor et al (2016) conclude that although the company is causing a lot of pollution environmental disclosure, transparency level of activity They may not adequately describe its sustainability commitments of the company.

The results of this study confirm that environmental disclosure in annual reports less effectively unreadable by stakeholders. It is possible that for information on the compliance of the company to meet its legal obligations relating to the environment, stakeholders tend to look through other media are more easily understood, rather than reading lengthy annual report.

Influential environmental disclosure on economic performance but reversed direction from the hypothesis needs to get special attention. The more items disclosed by the company's environmental, economic performance actually declined. This indicates that environmental disclosure in the notes to the financial statements, the message is not delivered effectively by the reader. Other factors that are negative (eg, poor product quality) possible major cause of declining sales, and in this case the environmental activities of the company cannot help to improve economic performance.

Public Visibility. Based on t test, it is known that the value of the significance of Public Visibility below 0.05 or a total of 0.011 so it can be said public visibility significant effect on economic performance (economic performance). Thus the third hypothesis (H3), which states that public visibility have a significant positive correlation to economic acceptable performance. This study supports the research that has been conducted by Jun Cheng et al (2018).

Not all customers could see PROPER score, as well as the Environmental Disclosure via the annual report can be rarely touched by the customer. Then the media become the most powerful tool to proclaim the company's environmental activities to customers because this medium has great potential to be read or seen by the customer. Coverage by great media can influence the opinion of the customer to remain loyal or will move to the company committed to the environment (June Cheng et al, 2018).

CONCLUSION

Environmental performance as measured using the PROPER proved not significantly affects the economic performance measured by ROA (return on assets). This is because not all customers could see PROPER score in the annual report.

Environmental disclosure was measured using BAPEPAM. The results of this study stated that environmental disclosure significant negative effect on economic performance. Disclosure of the environmental activities of the company but not matched by the quality of the product, causing a negative influence between environmental performance with economic performance.

Public visibility measured from the news in the online media has a significant influence on economic performance (economic performance). Media become the most powerful tool to proclaim the company's environmental activities to customers because this medium has great potential to be read or seen by the customer. Coverage by great media can influence the opinion of the customer to remain loyal or will move to the company committed to the environment.

REFERENCES

5. Dapeng Liang. 2016. Does the environmental management capability of Chinese industrial firms improve the contribution of corporate environmental performance to economic performance?
17. Article 47 of Law No. 40 Year 2007 regarding Limited Liability Company.
19. Environment Minister Regulation No. 07 Year 2008 on Program Performance Rating In Environmental Management.
22. Sara Segura. 2017. Environmental versus economic performance in the EU ETS from the point of view of policy makers: a statistical analysis based on copulas
ACTUAL USE OF ONLINE STORES: A STUDY OF E-SERVICE QUALITY AND ATTITUDE

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ABSTRACT
The purpose of this study was to determine the effect of service quality on the determinants of attitudes and actual user on user behavior online store. The research data was obtained from 206 questionnaires distributed by students and the general public in the city of Surabaya, East Java in Indonesia country who had used the services of online stores. The results showed that E-service quality not exhibited significantly influential to actual use. But it is different from the E-service quality significantly influence the attitude which indicates that the service is an important factor for web users online shop. As for Reliability, Responsiveness, Availability, and Privacy show results significant positive effect on E-service quality, it is similar to the attitude that the positive effect on actual use.

KEY WORDS
E-service, quality, attitude, actual use.

For this year followed by increasingly sophisticated information technology has a great influence people's lifestyles. With the internet provides easy access to all kinds of information in the aspects of economy, trading, automotive, and even includes shopping. Public shopping style spending currently following the evolving technology, which was originally expenditure was always met with the seller but now shopping via smartphones certainly be owned by the community that can be accessed anywhere and at any time if you use the internet or WiFi network. Comfort and convenience are offered to the public in Indonesia create an online store is growing rapidly.

The online store is a means of buying and selling is done through the internet by ordering through the website or social media then paid by transfer to the bank account usually provided by online sellers. The online store in Indonesia is not only available on the websites of course even many who use Instagram as a medium to sell his things with display images that can attract public attention. Most seller use Instagram by reason of absence of such binding rules are not required to collect taxes from his goods selling, then do not have to take care of permits and so on.

The attitude has been considered an important factor that determines the use of technology to developing countries, then the behavior and the quality of service is also important for the continuation of the online store. The service company seeks to improve efficiency strategies to provide good and high quality services and that can give satisfaction to customers. According to Oliver et al (2002), E-services are key to the long-term benefits in the digital age, the quality of service is important is the appeal and customer loyalty for the service industry in Indonesia. The quality of service will motivate or push the level of satisfaction and will give effect to a higher usage rate.

The research aims to determine the E-service is quite commonly found in a wide variety of research conducted in a wide range of countries as research samples. However, research on the online store in Indonesia is also not too much. The Research that focus on online web shop in different countries, among others: the purchase of plane tickets through the web in Taiwan (Shu Fang and Tzai Zang, 2011); the use of e-banking in Taiwan (Chien Ta and Wen Chuan, 2010); E-business experience in Greece (Emmanouil and Christos K, 2009); purchase online through web at the University in the United States (Godwin, Kallol, and Peeter, 2010); as well as E-service on the web sports in Australia (Jamie and Aron, 2010).
The purpose of this research is to know the influence of the determinants of service quality and attitude of the actual user on user behavior online store. The online store that used in this study includes Shopee, Lazada, Tokopedia, bukalapak, and JD.id. The reason researchers use the online shop for researchers surveyed from the highest ranking from the play store which is located at the android and Iphone, apps downloaded from the play store No 5 of the highest order from a wide range of applications online store in Indonesia.

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

Technology Acceptance Model (TAM). Significant progress this decade able to explain user acceptance of technology supported by the Technology Acceptance Model (TAM). Venkatesh and Davis (2000), A variety of studies using TAM consistently theory to examine the influence of user behavior and intentions of use for better TAM theory digunakan with theory TRA or TPB planning theory. TAM theory explains that the individual behavioral intention to use the system is determined by the confidence and ease of use. Confidence is a person of trust to the system that can improve performance, and ease the user's trust on the use of systems that are not difficult and does not require many efforts. The function of TAM Theory that feeling can affected the easy to use because the easier system can make be more quality.

Diffusion of Innovation (DOI). Lemuria and France (2005), Diffusion of Innovation (DOI) is a more popular models used in information systems approach to explain the adoption of the new technology. DOI is a process in which an innovation communicated through certain channels among all members of the social community. Innovation is the object or idea that still new. The level of innovation diffusion can be influenced by the relative advantage, compatibility, complexity, observability, and trialability. Rogers (1995), scientists found that the relative superiority is the best innovation in the adoption rate of invasion, because of these advantages is able to demonstrate the costs and benefits of adoption. The relative advantages included in the rate of economic profitability, decrease discomfort, low initial cost, Rogers (1995), compatibility is the extent to which innovation is considered consistent with the values, past experience and needs so as to help the individual has a specific meaning to the idea. Innovation can be compatible or not with their beliefs, ideas need to innovate and advance. Furthermore, the complexity of which is the extent to which innovation is considered relatively difficult to do.

E-service Quality (ESQ) and Actual Usage (ACU). In research conducted by Khanifar et al (2012) found that the attributes of the E-service Quality significantly affect the intent of use. This study promotes literature on the relationship between service quality and customer satisfaction and between customer satisfaction and the actual usage of online stores. Therefore, this study propose and test hypotheses as follows:

H1: E-service Quality Affects positively Actual Usage of Online Shop.

Factor of E-service Quality (ESQ). Services E-services is a long-term cognitive assessment regarding a high quality and excellence of an organization. Customer-oriented quality essential for companies to encourage customer behavioral intentions continuously (Zhengwei dan Jinkun, 2012). E-service is defined as an interactive service or web-based services that are connected by the Internet, in the service of interaction between the customer and the service provider through advanced technologies such as web sites. According to Godwin, Kallol, and Peeter (2010) defines E-service as a web site that makes it easy for shopping and time efficiency for purchase, as well as an effective delivery. For the website today's era not only be opened via a laptop or notebook that will be difficult to carry anywhere because of the larger size and weight, but can use a smartphone that is more practical to carry anywhere. E-service quality can be defined as well as businesses, shows that the deliver through information technology.

According Ajzen (2005) the value comes from the ability of an object that has a significant influence on the individual. The more objects that give a positive goal, the more favorable the desire that affects the object. According to research conducted by Carlos and O'Cass (2010) found that the quality of E-service effect on consumer attitudes in using sports.
web sites. Chu et al, 2012; Pearson et al, 2012; Chang et al, 2009) found that the E-service affects the quality of information, satisfaction and perceived value. This is supported by Chen et al (1999) and Chen et al (2002) found that the three attributes of quality E-services such as entertainment, informativeness, and the organization can be associated from the website to a positive attitude. Then the online shopping showed that a variety of E-service quality has a positive effect on consumer attitudes on the website (Wolfinbarger and Billy, 2003; Yoo and Donthu, 2001). Grace and O’Cass (2004) found that E-service effect on consumer attitude. Therefore, this study propose and test hypotheses as follows:

H2: E-service Quality Affects Attitude positively Users of Online Shop.

E-service Quality Measurement. According to Parasuraman, Zeithaml and Malhotra (2005) identifies dozens of features on the website level attributes and classifies them into eleven size of e-SQ including reliability, responsiveness, access, flexibility, ease of navigation, efficiency, assurance or confidence, security or privacy, knowledge of price, aesthetics website, and personalization. A study by Yang, Chai and Zhou (2005) developed a quality of service measurement instrument that produces five E-service quality factors, namely usability, website usability, interaction, adequacy of information, and accessibility. The fifth of these factors significantly influence the quality of the overall E-services. This is supported by research from Al Tarawneh (2012) who found that the six dimensions of quality E-services, namely reliability, ease of use, security, responsiveness, personalization.

Reliability in the quality of E-service refers to the technical function of a web, to measure the extent to whether functioning properly or not, then the accurate representation of a product and the accuracy of the order. This is supported by research from Wolfin et al (2003) and Elliot and Speck (2005) who found that reliability has all been found to predict customer attitudes towards online store website. Research Kim et al (2006) found that responsiveness, compensation, privacy, efficiency, system availability, information, graphics style, fulfillment, and contact affects the quality of the E-service. Therefore, this study propose and test hypotheses as follows:

H2a: Reliability / fullfillment positively Affects E-service Quality of Online Shop.

Responsiveness is quick response to the customer to customer orders and make transactions fast. Zeithaml et al (2002) defines responsiveness is timely given the right of a service provider of E-service online store to customers who are transacting online. Eid al (2012) found that responsiveness and dimensions of E-service more positive effect on the quality of E-services. Collier and Bienstock (2006) found that the responsiveness affect the development of the attitude of customers who use online web store. Therefore, this study propose and test hypotheses as follows:

H2b: Responsiveness positively Affects E-service Quality of Online Shop.

Hu et al (2012), Availability refers to the technical function of a system. In this context the availability of system availability is described as an online store website that provides the service to purchase goods online customers and provide a smooth process if you want to trade. According to research conducted by Kim et al (2006) found that the availability and nine items of other E-services significantly affect the E-service to the online store website. Therefore, this study propose and test hypotheses as follows:

H2c: System Availability positively affects E-service Quality of Online Shop.

Tamer and Abeer (2010), Privacy is a measure of the extent to which the website is secure and protect all customer privacy information so that no information can be distributed to other online websites. This is supported by research from Wolfin et al (2003) and Elliot and Speck (2005) who found that privacy has all been found to predict a customer's attitude toward online store website. Zeithmal et al (2005) says that privacy is a guarantee of confidentiality of the transaction data such as credit card information, debit card information and protect every individual. Such information can be identified and explored through the internet which is privacy’s matter must be addressed as it uncovers customer privacy information for commercial purposes should not happen and it is a determinant of customer trust to the online web store. Therefore, this study propose and test hypotheses as follows:

H2d. Privacy / Security positively Affects E-service Quality of Online Shop.
Determinants of Attitude (ATT). According to the theory of diffusion of innovation (DOI) is influenced by the level of diffusion of innovation relative advantage, compatibility, complexity, observatiliy, and trialability. Relative superiority is the level where innovation considered better than the idea that it replaces. Lemuria and France (2005) relative advantage is the size of the extent to which an innovation is seen ahead of its predecessor, the relative advantage can be measured by profitability. According to research Olatokun and Igbinedion (2009) found that the relative gains significant effect on customer attitudes towards online store website. However this is not supported by research Folorunso et al (2010) which states that the relative advantage not positive effect on attitude of customer on the website of the online store.

Compatibility is a measure of the extent to which innovation looks compatible with the beliefs, experiences, values and needs adopters. Menurut Olatakun research and Igbinedion (2009), and Folorunso et al (2010) found that compatibility significant positive effect on the attitude of the use of online trading technology in Hong Kong.

Then the complexity is defined as critical components that affect the attitude towards the use of information systems or technology. The complexity is similar to the use of TAM that is the extent of the innovation seen by potential adoption because it is relatively difficult to use and difficult to understand. This is supported by research Olatakun and Igbinedion (2009) which states that the complexity significantly affect customer attitudes. However, it is contrary to research Folorunso e al (2010) actually found that complexity does not significantly influence the attitude of the online store website.

Explanation of the above mentioned about various dimensions of attitude. Attitudes can be formed based on trust and the interests (needs) of users are considered in making a decision. A study of Akinyemi et al (2013), Adesiana et al (2010), Ndubisi et al (2006), Jahangir et al (2007), Karlujoto et al (2002), Davis (1989) argues that the attitude of the positive effect on the use of website by users. Therefore, this study propose and test hypotheses as follows:

H3: Attitude Affects positively affects Actual Usage of Online Shop.

Figure 1 below presents the model of this study. This study focuses on examining the influence of the determinants of service quality and attitude of the actual user on user behavior online store.

![Figure 1 – The proposed Research Model](image-url)
METHODS OF RESEARCH

Population and Sample Research. Data from this study were obtained from questionnaires were distributed and disseminated to students and the general public who live in Surabaya, in Indonesia. Charles et al (2016) study used survey method to test the research model consisting of the following instruments demographic data of respondents, online shop website usage and measurement variables. The survey questions to measure each of the variables were developed from the existing literature that have been tested on previous researchers. On the question of a questionnaire on factors of quality E-service adoption of A.Parasuraman and Valerie A.Zeithaml (2005). Measurement of attitude that comes from Diffusion of Theory (DOI), which adopted a research Lemuria and France (2005).

Sampling Procedure and Data Collection. The survey instrument is distributed in the form of a questionnaire with disseminated through google form randomly in Surabaya. The sampling procedure used random sampling, which means the selection of samples taken at random. The analysis technique used is WarpPLS 6.0 for windows that use multi-item scale to measure the research variables are rated on a 5-point Likert scale ranging from 1 is "strongly disagree" to 5 "strongly agree". Data were analyzed using PLS SEM using validity and reliability test for the measurement items. While the outside variable the model using the measured measurement with convergent validity test and discriminant validity.

Instrument Development. In the first part of the questionnaire contains demographic data of respondents, then in the second part contains 32 items of questions to measure all the variables described earlier adopted from previous research and has been modified. This questionnaire distributed in Indonesia since the target respondents in this study is the people of Indonesia.

Operational Definition and Measurement of Variables. Independent Variables. E-service Quality of five dimensions such as Reliability / fulfilment., Responsiveness, Security / Privacy, Availability. Reliability is the extent to which the promise of these websites send orders and the availability of goods, Responsiveness is how handling problems effectively and go back to the web, Privacy, namely the degree to which this site is secure and able to protect the information of customers, the latter Availability is a technical function right from the web , Attitude is composed of three dimensions including relative advantage, compatibility and complexity. The extent to which the relative advantages are better perceived innovation of ideas. Compatibility is the degree to which innovation is considered consistent with existing values. Then Complexity is the degree to which innovation is considered relatively difficult to use. Dependent Variables. Actual Usage namely the percentage of use of a system by the user.

Demographic profile and Online Shop Usage. Survey respondents in this study is an individual who never shopped or have ever used an online store website either via smartphone or laptop. Number of questionnaires in the data was 211 respondents, but because there is a questionnaire double charging by the respondents, it is eliminated 5 and the result is 206 valid respondents used for analysis. Charles et al (2016) PLS make for the SmartPLS 3.0 to test the hypothesis to be reflective or formative modeled. PLS is a model of casual maximizing criterion variables of latent variable that can be explained, and SEM-PLS is right method when seen from the nature of the study.

Measurement Model. Reability and Validity tests of the measurement model was measured using a composite reliability, Cronbach's alpha. Average variance extracted, R-Square coefficients, and Adjusted E. Squared coefficients. Mahfud (2013: 65) suggests that the items must have a value of at least, 070 in order to be maintained for subsequent analysis. In this study, there are nine items measuring which has a loading factor of 0.70 below the minimum limit of which (FUL1, FUL4, FUL5, RES4, RES5, AVA1, RA3, CT3, CT4) were excluded from the analysis of the results of the next factor analysis. Recommended AVE value must be greater than 0.5. All models are consistent with the construction of a 0.7 coefficient α using WarpPLS 6.0.
Reliability of composite value of the item reliability / fulfilment of 0.891, amounting to 0.838 Responsiveness, Availability of 8.19, Security / Privacy amounted to 0.824, Actual Use of 0.917, E-service quality by 0.770, and Attitude of 0.833. Value composite reliability coefficients of each was qualified worth above 0.70. Thus we can conclude the statements in the questionnaire reliable because the value is more than 0.70 (Hair et al., 2011). This indicates that each item of the questions used to be able to obtain consistent data, which means when the question was asked back will be obtained relatively the same answer to the previous answer.

Validity converging of measurement of each item can be seen from some of the results from the combine output loading, loading patterns and structure loading. When viewed from the outer combine loading the figures indicated more than the maximum value of 0.70. Discriminative validity was measured using a means of comparing with other constructive.

Table 1 – Correlations among Latent Constructs (φ matrix) with Square root of Aves Hypothesis Test

<table>
<thead>
<tr>
<th>hypothesis</th>
<th>Path</th>
<th>path Coefficient</th>
<th>P-Values</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>ESQ</td>
<td>ACU</td>
<td>0.07</td>
<td>0.15</td>
</tr>
<tr>
<td>H2</td>
<td>ESQ</td>
<td>ATT</td>
<td>0.66</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>H2a</td>
<td>FUL</td>
<td>ESQ</td>
<td>0.27</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>H2b</td>
<td>RES</td>
<td>ESQ</td>
<td>0.39</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>H2C</td>
<td>AVA</td>
<td>ESQ</td>
<td>0.35</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>H2D</td>
<td>ESQ</td>
<td>PR</td>
<td>0.39</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>H3</td>
<td>ATT</td>
<td>ACU</td>
<td>0.62</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

It can be concluded that E-service quality variables no positive effect on the actual usage of online web store. This can be seen by the p-value of 0.15 where the value is greater than 0.05. Based on the resulting value is the path coefficient of 0.07. A positive sign in the regression coefficients indicate a direct relationship whereby if the value of E-service quality can provide the better and higher, the actual use on the web shop will also be getting better. It can be concluded that the hypothesis 1 is the variable E-service quality does not affect the actual use.

E-service quality variables significant positive effect on the attitude of web users shop online. It can be seen from the p-value of <0.001 and 0.66 coefficient path value. It can be concluded that the hypothesis 2 that E-service quality significant positive effect on attitude. Then variable reliability / fulfillment that significant positive effect on E-service quality. It can be seen based on the value of the p-value of <0.001 and 0.27 coefficient path value. hypotheses 3 can be concluded that significant positive effect on the reliability of E-service quality. For further variable would be equal to a variable interpretation already described.

**Structural Equation Model Results:**

Hypothesis 1 represent that E-service quality no positive effect on actual use. The results of this study prove that web services quality do not affect the actual use online web store. That's because the quality of service is something that is felt by the user when using the web shop, if users feel comfortable, can feel save to share personal information, find the information needs can be obtained from the web store that will influence the attitudes and web user loyalty. This contrasts with research by Khanifar et al. (2012) who found that the attributes of the E-service quality significantly affect the intent of use.

Hypothesis 2 represents that E-service quality significant positive effect on attitude. The results of this study prove that the quality of web services significantly affect the attitude of web users shop online. This is because the quality of services provided by an online web store is an important factor which web users give a good response and have the desire to use the web as much as possible to make transactions. If the web service is an online store that provides a good quality then the customer's attitude will always good and interested in using the online web store.

This is supported by Carlos and O-cass (2010) found that the quality of E-service effect on consumer attitudes on the web, sports content in Australia, meaning that sports lovers more developed and find it more advantageous to use a content site where they feel web sports the better provide E-services of high quality. This study is in line with Chu et al, 2012;
Pearson et al, 2012; Chang et al, 2009) found that the E-service affects the quality of information, satisfaction and perceived value. Chen et al (1999) and Chen et al (2002) found that the E-service also affect customer attitudes. Likewise applies to (Wolfinbarger and Billy, 2003; Yoo and Donthu, 2001) which says that the quality of online shopping services positively affects consumer attitudes.

Hypothesis 2a represent that reliability significant impact on E-service quality. This proves that the reliability affects the quality of service. This is because the reliability itself is a way to measure the extent to which the web can function properly and the accuracy of a booking. If the reliability of an online web store can provide the accuracy of the order, send the goods on time as promised then web users will find that the quality of online store web service was good. And when a user orders in accordance with what is offered on the web page, the frequency online shop users to shop online or use the web will be more frequent and can be regular because they feel that qualities that are suitable to their expectations.

This is supported by research Yang, Chai and Zhou (2005) who found that affect the reliability of E-service quality. Al Tarawneh(2012); Wolfin et al (2003) also found that significantly influence the reliability of E-service quality. Elliot and Speck (2005) examines the five factors of E-service, among whom reliability that influence E-service quality using the scenario of online shopping in student marketing, and the result means that the online seller must emphasize factor of sites that fit the profile of engagement / their online web user experience. Then the study of Kim et al (2006) also states that significantly influence the reliability of E-service quality.

Hypothesis 2b states that responsiveness significant positive effect on E-service quality. This proves that the responsiveness affect the quality of service. This is because the responsiveness rapid response and provide transaction services quickly. Web shop online usually gives users a grace period for transferring nominal price in goods it sends, if the delivery of the goods quickly and well received by the user with the user will find the web service is able to transact quickly. Or if there are transactions of goods that cannot be processed and web online stores provide a response or notification to the user to reprocess the users feel that they are served by the web shop online quickly and well, unconsciously it could make them feel comfortable using the web online store.

This Research backed by Al Tarawneh (2012) which says that the responsiveness and dimensions of E-service more positive effect on E-service quality. Collier and Bienstock (2006) found that the responsiveness affect the development of the attitude of customers who use online web store. This study includes not only E-service on the website but also test the quality of results and recovery of quality so that research is more developed.

Hypothesis 2c states that the availability of significant positive effect on E-service quality. This is because the availability refers to the technical function of a web system. When users access a web-shop online they will assess the convenience, service, and speed of access, if the availability of web online store can be accessed quickly, do not often experience interference or error, and when the transaction goes well, the user feels that the web store online goes according to technical and that the quality of services provided including web view online stores and attractive to users.

This researcher is in line with Kim et al (2006) found that the availability and nine items of other E-services significantly affect the E-service to the online store website. Availability provides a strong influence on the evaluation of the quality of web services online stores. With a more diverse how good the online store's web browser accommodate functions as if it could not make users and online retailers are desperate and it can minimize the loss of browser incompatibilities due to E-service quality web users.

Hypothesis 2d represent that the positive effect on the privacy of E-service quality. This is because the privacy measures the extent to which the web can store users' personal information. Sometimes many users are still afraid because of personal information can be accessed by other online web store or any other person who may abuse it. Jika privacy online web store can be guaranteed and does not make the user feel scared then the user will feel safe if they have to share personal information to the web such as a credit card or debit card. Users will think that shopping online can also guarantee that the personal
information that describes the quality of service provided is very high because it ensures that
person's information cannot be accessed by others.

This research was supported by the Wolfin et al (2003) and Elliot and Speck (2005)
have all found privacy to predict a customer's attitude toward online store website. It is also in
line with the study of Kim et al (2006) which states that the privacy greatly affect the quality of
web services. Often, online retailers using security certification, and the terms of use of
information that can improve the user initiative to share personal information. Most online
retailers provide information about the privacy and security policies, but tend to forget to
promote or advertise by exposing the security certification; if it is done it will slightly reduce
the user's worries.

Hypothesis 3 represent that the attitude positive effect on actual use. Attitude in this
study using three dimensional models such measurements relative advantage, compatibility
and complexity. If the web user was a web shop that is in conformity with the way he
shopped, susia his lifestyle to transact online, and users find it easier to gather information
on the web is the attitude displayed by the user is able to demonstrate the quality of service
can meet all kinds of needs the user is required. This is supported by (Olatokun and
Igbinedion (2009); Folorunso et al (2010)) which states attitude affect actual users use
et al (2007), Karlujoto et al (2002), Davis (1989) argues that the attitude of the positive effect
on the use of website by users.

Figure 2 – Model of Online Shop Users with Coefficien of Significant Paths

DISCUSSION OF RESULTS

This study whether quality of service can affect the determinants of attitudes and actual
use online web store. In particular the four dimensions of E-service quality (reliability,
responsiveness, availability, privacy) significant positive influence on the quality of services
provided by the online store website as Shopee, Lazada, Tokopedia, bukalapak, and jd.id. Can be seen in Figure 3 that the online web store frequented by respondents is 55.3%
Shopee, users feel attracted to what is offered web online store and assume web it has a
good quality service. We know that Shopee provide free shipping on promotion for each
delivery of goods purchased by the user.
The quality of service is very important and always rated by users. People in today's smarter to choose what is more applications keep costs down and be more practical, but it is also based on the consideration of various aspects that make the user feel safe and trust. User confidence could be built through how secure your privacy policy which can protect user information, the user will think if the website can send goods according to the given timeframe and stuff it in accordance with what is shown not it drawn web. All aspects that can affect the attitudes and actual use so that when users access the web, they will find shopping more fun and efficiency time if you use online web store and it will become routine and habits of users.

Otherwise it will create challenge for online store web owners must provide the features and web interface are packaged as attractive as possible in order to attract users, as well as promotions that can be given will also make web users interested. It was not separated from the good quality of services provided and make users embed mindset in their mind that if they want to shop then they will go directly to the online store's web. It can be supported by easy access to the web without being subject to interference and buffering. Their website online store is able to provide all sorts of information on the needs required by society without coming directly into the store.

CONCLUSION

The purpose of this study was to determine the effect of service quality on the determinants of attitudes and actual user on user behavior online store. The research data was obtained from 206 questionnaires distributed by students and the general public in the city of Surabaya, East Java in Indonesia country who had used the services of online stores such as Shopee, Lazada, Tokopedia, bukalapak, and Jd.id that there are several criteria. This study uses a quantitative method with primary data obtained from questionnaires. This study uses WarpPLS 6.0 using Validity and Reliability tests for measurements models. The results in this study that E-service quality does not affect the actual use, but significant positive effect on attitude. Then the four dimensions of E-services such as reliability, responsiveness, availability, and privacy significant positive effect on E-service quality. Variable attitude which uses three dimensional measurement (relative advantage, compatibility, complexity) significant positive effect on actual use.

The study had several limitations. First, assess the immediate impact of attitude, and service quality test website online store without the intention also to use online web store. This is because the demographic data is not given an option that never use these web sites or not. So all respondents who have ever shopped via online and that can not be filled out the questionnaire this. Second, the study results could be affected by other demographic data related to the study sample. 65.6% is the number of respondents who have not worked, the rest 34.4% is the respondents who are already working. And is dominated by scholars of 70.7%. Supposedly more refined research object with a scope. Web users shop online more dominated by people who have not worked and aged between 15-20 years, not too specific. Researchers further need to examine the additional variables: user intent and behavioral
intention in two online web store just to be more specific for example in Lazada and Shopee, so researchers could compare the respondents more interested in using Lazada or Shopee to buy an item. Future studies need to list the amount of income earned if the respondent has been working and has not worked in order to see the range of income how much more frequently shop online. Researchers can compare the respondents more interested in using Lazada or Shopee to buy an item. Future studies need to list the amount of income earned if the respondent has been working and has not worked in order to see the range of income how much more frequently shop online. Researchers can compare the respondents more interested in using Lazada or Shopee to buy an item. Future studies need to list the amount of income earned if the respondent has been working and has not worked in order to see the range of income how much more frequently shop online.

REFERENCES

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ANALYSIS OF GOVERNMENT EXPENDITURE AND LABOR ON GROSS REGIONAL DOMESTIC PRODUCT IN MALUKU PROVINCE OF INDONESIA

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ABSTRACT
Gross Regional Domestic Product (GRDP) is an indicator used to measure economic growth at the regional level. This study aims to analyze the effect of government expenditure and labor on Gross Regional Domestic Product (GRDP) in Maluku Province. Data sources used are secondary data obtained from the Central Bureau of Statistics of the Province of Maluku in the form of government expenditure, labor and GRDP period 2010-2016. Data analysis uses multiple regression approaches. The findings in this study indicate that Government expenditure and labor simultaneously influence the Regional Gross Regional Domestic Product of Maluku Province, while the partial effect shows that government expenditure has an effect on Gross Regional Domestic Product and labor does not affect the Gross Regional Domestic Product of Maluku Province. This study recommends that achieving effective economic development; local government expenditures must be allocated appropriately in accordance with the potential of each region in Maluku Province.

KEY WORDS
Government expenditures, labor, GRDP, multiple regression.

Economic development is needed by a country in order to improve the standard of living and welfare of the community, by developing all fields of an activity that exists in a country. Economic development is very important because when talking about economic development means there is a development process that involves economic growth followed by several changes. In the development process, local governments have an important role because local governments are more aware of the potential and resources of both humans and nature that are owned by their own regions (Meier, 1995) in Alfiyanto (2014).

In the process of economic development, economic growth is one of the benchmarks of success in economic development. The increase in economic growth means that there is an increase in economic activity in the area, if there is a decline then economic activity in the area is experiencing a decline. Economic growth that occurs during a certain period is inseparable from the development of each sector or sub-sector that contributes to the economic added value of a region (Novianto and Atmanti, 2013). High economic growth still leaves problems that must be faced in the development of a region (Dhanang, 2013).

Economic the growth of a country can be seen from the production of goods and services that can be produced by the economy in the country. Myrdal stated that development as a movement upward from the whole social system. Because of that economic growth is not only the attention and agenda of the central government or nationally but also the attention and agenda of each region in a country. This is because a country's economic growth is also influenced by economic growth in each region. For this reason, regional economic growth is an important concern not only for the regional government but also for the central government. To find out the regional economic growth, it can be seen from the region's Gross Regional Domestic Product (GRDP) (Weley et al. 2015).

According to the Department of Economic and Monetary Statistics of Bank Indonesia, GRDP is one of the important indicators for knowing the economic conditions in an area within a certain period, both at current prices and on the basis of constant prices. Thus, the GRDP value is able to be used as a benchmark for the value of goods and services produced by a region in a certain period by using the production factors owned by the region.
There are several reasons underlying the selection of economic growth using gross regional domestic product (GRDP) in Adriansyah (2017), namely:

- GRDP is the amount of added value produced by all production activities in the economy. This means that an increase in GRDP also reflects an increase in remuneration to the production factors used in the production activity.
- The area limit of GRDP calculation is the country (domestic economy).
- GRDP is one indicator that can be used as a measure to assess the success of a region's development, or reflected through GRDP growth.

The role of government is very important in improving economic growth because it includes providing public needs and services to the public that cannot be provided by the private sector. This role is contained in government expenditures, namely, the overall expenditure made, namely expenditures which include consumption and investment. Government expenditure is government expenditure (expenditure) on capital goods, consumer goods, and services (Anggraeny, 2016).

Government expenditure is an instrument to measure the magnitude of the role of the government and the role of the private sector. Besides that, government expenditure can be used as a determinant of the amount of aggregate expenditure as well as determining the growth of real GNP in the short term. Government expenditure on goods and services is grouped into two groups, namely government consumption and government investment (Umayi, 2017). Included in the first category (government consumption) is the purchase of goods and services that will be consumed, such as paying the salaries of school teachers, buying stationery and paper for use and buying gasoline for government vehicles. While government investment includes expenditure to build infrastructure such as roads, schools, hospitals, and irrigation (Sukirno, 2006) in Chandra (2012).

Workforce contributes greatly to economic growth. The population is one of the factors that influence economic growth in a region. The increase in population over time is able to become a driver and inhibitor of economic growth. The size of the population will cause a large amount of labor. The results of the study Fahri (2013) show that government expenditure in the industrial and labor sectors have a positive and significant effect on regional economic growth. Finally, the role of local governments through government expenditures that can stimulate employment is expected to increase regional economic activities in order to achieve economic growth and increase community income. From the description above, it is necessary to examine the effect of government expenditure and labor on GRDP in Maluku Province in 2010-2016.

METHODS OF RESEARCH

This the study uses quantitative data, the data sources used are secondary data obtained from the Central Bureau of Statistics of the Province of Maluku in the form of government expenditure and labor and GRDP in 2010-2016, where government expenditure is taken from direct expenditure, labor based on the workforce, whereas GRDP is based on the Constant Price Base. Data the analysis in this study uses multiple regression analysis USE SPSS 22 program. The multiple regression models in this study can be written:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e \]

Where: \( Y \) = GRDP; \( X_1 \) = Government Expenditure; \( X_2 \) = Labor; \( E \) = Error; \( \beta_0 \) = Constanta; \( \beta_1, \beta_2, \beta_3 \) = Regression coefficient.

RESULTS AND DISCUSSION

This regression analysis is used to Statistic the amount of influence between independent variables, namely government expenditure (\( X_1 \)) and Labor (\( X_2 \)) on the dependent variable, namely Gross regional domestic product (GRDP) in Maluku province. Hypothesis testing is carried out simultaneously and partially.
Simultaneous Hypothesis Test. To test the existence of a positive and significant influence between variables of government expenditure \((X_1)\) and Labor \((X_2)\) on the dependent variable, namely Gross regional domestic product (GRDP) in Maluku province. Simultaneously used the Test, hypothesis testing criteria as follows:

- \(H_0\) rejected if \(F\) Statistic > \(F\) table or significance value <0.05;
- \(H_0\) accepted if \(F\) Statistic < \(F\) table or significance value >0.05;

Simultaneous testing can be seen in Table 1.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>(F)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.017</td>
<td>2</td>
<td>.009</td>
<td>23.240</td>
<td>.006*</td>
</tr>
<tr>
<td>Residual</td>
<td>.001</td>
<td>4</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.019</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Gross Regional Domestic Product (GRDP).
b. Predictors: (Constant), Government Expenditure, Labor.

Source: **Primary data processed, 2018.**

In Table 1, it can be explained at a 95% confidence level \((\alpha = 0.05)\) and whereas \(F\) table amounted equal to = 4.32 while the value of \(F\) Statistic = 23.240, thus the value of \(F\) Statistic > \(F\) table so that \(H_0\) rejected or \(H_a\) accepted, so it is statistically proven that there is a real influence of government expenditure \((X_1)\) and Labor \((X_2)\) simultaneously on Gross regional domestic product (GRDP) in Maluku province. Therefore the hypothesis which states that there is a positive and significant influence between government expenditure \((X_1)\) and Labor \((X_2)\) simultaneously on improving the Gross regional domestic product (GRDP) in Maluku province can be accepted and tested statistically.

**Hypothesis Testing in Partial (t test).** \(T\) test to determine whether the government expenditure \((X_1)\) and Labor \((X_2)\) partially have a significant effect on GRDP in Maluku. If \(T\) Statistic > \(t\) table or \(-T\) Statistic < \(-T\) table at a significance level of \(\alpha\) 0.05 then \(H_0\) rejected and \(H_a\) accepted. Meanwhile if \(T\) Statistic < \(t\) table or \(-T\) Statistic > \(-T\) table then \(H_0\) accepted and \(H_a\) rejected. The results of the \(t\) test can be shown in Table 2.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>(t)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>7.758</td>
<td>3.087</td>
<td>2.513</td>
<td>.066</td>
</tr>
<tr>
<td>1</td>
<td>Government Expenditure</td>
<td>.476</td>
<td>1.159</td>
<td>.010</td>
</tr>
<tr>
<td></td>
<td>Labor</td>
<td>-.627</td>
<td>-.253</td>
<td>-.103</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Gross Regional Domestic Product

Source: **Primary data processed, 2018.**

Based on Table 2, the regression equation is obtained as follows:

\[
\log(Y) = 2.06 + 0.476 \log(X_1) - 0.627 \log(X_2) + e
\]

Table 2, obtained the value of \(T\) Statistic of the government expenditure variable equal to 4.59, whereas \(t\) table amounted to 2.78 As \(T\) Statistic > \(T\) table namely 4.59 > 2.78 or significance value (0.00<0.05) then \(H_0\) rejected and \(H_a\) accepted so it can be concluded that partially the government expenditure influences the Gross Regional Domestic Product of Maluku Province.

Hypotheses testing for Labor variables in Table 2, obtained the value of \(T\) Statistic equal to -1.003. Meanwhile \(t\) table equal to -2.78. As \(T\) Statistic < \(T\) table namely -1.003 > -2.78 or not significance value (0.373>0.05) then \(H_0\) accepted and \(H_a\) rejected so that it can be concluded...
that partially the Labor did not influence the Gross Regional Domestic Product of Maluku Province.

* Determination Coefficient ($R^2$). To find out the magnitude of the contribution of the independent variable to the dependent variable used the $R^2$ value presented in Table 3:

<table>
<thead>
<tr>
<th>Model</th>
<th>$R$</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.960*</td>
<td>0.921</td>
<td>0.881</td>
<td>0.01915</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Government Expenditure, Labor.

*Source: Primary data processed, 2018.

The determination coefficient is used to statistic the influence or contribution of the independent variable to the dependent variable. In Table 3, Correlation coefficient 0.921, indicating that performance is influenced equal to 92.10% by Government Expenditure and Labor and the remaining 7.90% is influenced by other factors outside this research. These results concluded that the ability or great diversity of Government Expenditure and Labor in explaining the performance was 92.10%.

**DISCUSSION OF RESULTS**

*Effect of Government Expenditures on GRDP.* The results of the analysis show that government expenditures have a positive and significant effect on GRDP in Maluku Province. This is in accordance with Anggraenys (2016) study which states that government expenditures have a significant positive effect on GRDP in Surakarta City. This is because the support of government expenditures on development activities from year to year is increasing, in the concept of macroeconomic government expenditures will increase the national economy. According to Mangkoesoebroto (1998), in Sitiapessy (2013) government expenditure reflects government policy. The research presented by Alfawwaz (2015), Ponzetto & Troiano (2018), d’Agostino et al., (2018), Hein (2018), Nurudeen & Usman (2010), Fölster & Henrekson (2001), Devarajan et al., (1996), Cashin (19995), and Fan et al., (2000), that total government expenditures has a positive impact on economic growth. If the government has established a policy to buy goods and services, government expenditure reflects the costs incurred by the government to implement the policy. Government expenditures in real terms can be used as an indicator of the amount of government activity financed by government expenditure. The bigger and more government activities, the greater the government expenditure involved. The proportion of government expenditure on national income (GNP) is a measure of government activity in an economy.

Supported by research Ratih’s et al (2017) also states that government expenditures has a positive and significant effect on GRDP. GRDP can describe the ability of an area to manage its natural resources. The amount of GRDP produced by each region is very dependent on the potential of natural resources and the factors of production of the area. The limitations in the provision of these factors cause the GRDP to vary between regions. GRDP based on constant prices shows the overall economic growth rate / each sector of the economy from year to year and measures the rate of growth of consumption; investment and foreign trade, inter-island / inter-provincial trade (Sulaksono, 2015).

Government expenditure policies that can directly stimulate economic growth are expenditure because these variables are realized in economic and social infrastructure development. The development of government expenditure is measured by the amount of direct expenditure and indirect expenditure. This classification of direct and indirect expenditure is used in the central and regional government budgeting systems (Zahari, 2017). Another study put forward by Budiyanto et al., (2014) suggests that government expenditures can have an impact on GRDP.

*Influence of Labor on GRDP.* The results of the analysis show that the workforce does not affect the GRDP in Maluku Province. The results of this study are supported by research
conducted by Rathi et al. (2017) which states that labor has a positive and insignificant effect on GRDP in the Sarbagita Region of Bali Province, this is due to a large number of unemployed in the area, so the region does not receive taxes. Supported by research Pamungkas, et al (2018) which states that labor does not have a positive effect on GRDP, this is because of that population growth (increasing labor) in the long run, will reduce the level of development to a lower level. This happens because the law of increasing yields decreases because, in the long run, the economy will reach a stationary state. With the low employment available, the resulting productivity also decreases. To be able to increase productivity, what is needed is an increase in capital accumulation. A large population but very high efficiency and productivity can increase the rate of economic growth.

Research by Wibowo et al., (2017) and Salim (2003) suggests different things where Labor has a positive and significant effect on Gross Regional Domestic Income (GRDP). This is because Labor is one of the factors of production that drives the economy in the region. Aside from being a productive workforce, labor is also a source of regional income from the tax sector and is also a consumer. In line with Maharani's research (2017) which states that labor has a significant effect on GRDP, this is because Labor is seen as a production factor that is able to increase the efficiency of other production factors (cultivating the land, utilizing capital etc.) so that the company views labor as an investment and many companies that provide education to their employees as a form of labor capitalization.

REFERENCES

ONE-STOP SERVICE SYSTEM TO IMPROVE PUBLIC SERVICES

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ABSTRACT
In terms of licensing, one technical step to improve the quality of community services is through the establishment of an Integrated Service Unit using a one-stop service system. This study focuses on the process of licensing service mechanism, the quality of public services (in terms of licensing), the supporting factors, and the obstacles of improving public services (in terms of licensing) by using a one-stop service system. The findings show that: 1) With this system, the applicant only needs to submit an application file and take the completed license or accept the refusal of the application if it does not fulfill the technical requirement through the available counter at the Licensing Service Office; 2) The use of a one-stop service system provides a convenience to the community in the process of license management. However, this has not been able to fully improve the quality of public services especially in ensuring the time and cost of licensing; 3) The supporting factors to improve public services (licensing) by using a one-stop service system are the high commitment and sincerity of regional leaders; 4) Last but not least, the coordination with relevant agencies, inadequate facilities, and infrastructure, as well as employee's mental attitudes and skills are the inhibiting factors in this matter.

KEY WORDS
Public services, integrated service unit, good government.

The function of the government in its development has indeed undergone a paradigm development. Referring to the history of the state, the social contract between citizens and the government as the executor of the social contract is a classic form of service duties carried out today. We can see the development of this paradigm from the point of demands for changes in government functions. If at first the government is only required to carry out the implementation of state functions and duties, then with many demands, the globalization changes and challenges have an impact on the changes of government functions. This day, the government is also demanded as a good service provider in addition to other state functions (agent of development). Therefore, the current demand that arises is the creation of good government.

The good government itself leads to the achievement of the government to implement excellent state functions and public services. The implementation of state functions is realized in the form of the realization of development programs that have been formulated. In this context, development is not only in terms of physical development but also non-physical development. On the other hand, public services are realized by providing quality services to the community. This service is not only related to basic administrative services such as KTP (ID card), SIM (Driving License), certificates, and etc. but more on the service of community basic needs. Good Local Government becomes a very possible thing to be realized. The local government is very responsive in reading the needs of the community which is then realized in an aspirational development program.

This does not mean that in order to make it happen, there is no challenge. Chapman and Cleveland in Redioka (2001) said that, in the future, there are four major forces that can be seen as challenges to public services, namely: a) the pressure on centralization and decentralization, b) the work unions in public services, c) the increasing community involvement, and d) the strong influence of technological change.

Meanwhile, the implementation of public services carried out by government officials in various service sectors related to the fulfillment of civil rights and basic needs is still
considered not fully in accordance with the demands and expectations of the community. Various service weaknesses that often become the talk of the public and the business community involve service procedures that are still complicated, not transparent, less informative, less accommodating, and less consistent so as not to guarantee legal certainty as well as time and costs efficiency. This also generates brokering practices, illegal fees, thuggery, and indications of corruption.

The weaknesses of these services must be solved as soon as possible because we still experiencing various multidimensional crises in this era of free trading and because of the increasing demands from society and the business community to increase the quality of public services. The perception of the public towards public services has changed drastically; a good service is a full right of the community that must be answered by the government officials by carrying out their duties responsibly in order to provide excellent service. Therefore, the adoption of a new paradigm in providing democratic, transparent, and accountable services must always be improved and supported together with full commitment and spirit from all levels of government officials at the Central and Regional level, from the leaders to the leading executors.

The same thing is also stated by Kristiadi (1994) that in order to overcome the bad image of the bureaucracy and to prepare the bureaucracy to face the globalization flow which can rapidly change the social environment of the community, there are a number of things that need to be taken into account by the bureaucracy to anticipate these changes; the bureaucracy must be balanced with organizational improvements thus it is characterized by a modern, lean, effective, and efficient organization which also able to distinguish the tasks that need to be handled by the bureaucracy and the tasks that can be handed over to the community; The system of work procedures must be in accordance with the characteristics of a modern organization which are fast, precise, and accurate by maintaining the quality, cost, and timeliness in the production process. Based on the above background, the problem of this study can be summarized as follows: What are the supporting and inhibiting factors in improving public services? Therefore, the purpose of this research is to find out and analyze the supporting and inhibiting factors in improving public services.

**METHODS OF RESEARCH**

This study used a qualitative approach with a view to discover, understand, explain, and get a picture of the one-stop service system in improving public services in terms of licensing. Based on the problems and objectives that have been formulated above, the focus of this research is the supporting and inhibiting factors in improving public services at the Licensing Service Office.

In accordance with the problem and focus of this research, the data sources are as follows: This is a qualitative research so that the sampling technique is done purposively (purposive sampling). The selection of informants is based on the subject I who controls the problem has the data and is willing to provide the data. Whereas, the informants are selected according to the objectives and research topics. This method is called "Snow Ball Sampling". The last informant is chosen based on data saturation where there is no more variation in the information provided by the informant. In this study, the selection of informants is adjusted to the main tasks and functions of each selected informant that is related to the implementation of a one-stop service system at the Licensing Service Office. Therefore, a precise and in-depth data on the research topic can be obtained at the end of the research. Besides that, a qualitative data analysis was also used as proposed by Milles and Hubermann (1992) with several procedures such as data reduction, data display, and drawing a conclusion or data verification.

**Supporting and Inhibiting Factors in Improving Public Services.** In order to improve public services at the Licensing Service Office of Kendari, there are a number of things that can support the efforts to improve the services provided to the community, some of which are: the support and commitment from the Regional Government; the Licensing Service Offices are not used as a major source of increasing local revenue.
In an effort to improve the licensing services to the public, the Licensing Service Office still faced several obstacles. Some of those are: the coordination with relevant agencies in licensing issues; the employees’ mental attitudes and technical skills; the facilities and infrastructure.

**DISCUSSION OF RESULTS**

Licensing is an instrument of government policy to control the negative externalities that may be caused by social and economic activities. The license is also an instrument to allocate public goods efficiently and fairly. It prevents information asymmetry and protects the legality for ownership or operation of activities. (Suhirman, 2002). Considering the central function to prevent market failure from individual activities, it is clear that the function of a license is a regulatory function that must be held by the government.

The licensing services from the government in the Decree of the Ministry of Administrative and Bureaucratic Reform of the Republic of Indonesia number 63 of 2003 as administrative service group said that a service that produced various forms of official documents is needed by the public. As a state administrative decision that contains activities that can or cannot be done by the community, the government needs and has an organization called as bureaucracy. Associated with the context of the Indonesian government, Priyo Budi Santoso (1997) defined bureaucracy as a whole government organization which carries out the tasks of the state in various government organizational units under departmental institutions and non-departmental institutions both at the center and in the regions. There are three categories of bureaucratic organizations. The first category is the general government bureaucracy that carries out the regulation. The second category is the bureaucracy that provides public services. The third category is the development bureaucracy which is a government organization that runs one specific field to achieve the goal of state development such as government organizations engaged in agriculture, industry, education, and others. In the practice, licensing in Indonesia is categorized as a service provider so that it is done by a bureaucracy that provides public services.

The general public and the business community often complain that the process of licensing delivered by the government is complicated, not transparent, and needs extra costs. They often go back and forth from one office to another just to manage the licensing service. This makes the community to feel like being played by the government officials so that the overall performance of public services is bad. In the business community, the problem is known to come from the lack of clarity in procedures as well as time and costs so that the costs incurred are ultimately high. In addition, this condition causes the public to have less trust in the government.

Developing integrated services is believed to be one of the steps to resolve licensing issues that have been complained of by the public. However, to form an Integrated Service Office with one-stop and one-door service pattern, Rustiani (2001) proposed that it needs a commitment from the Regional Government (officials) by formulating a Regent/Mayor's Decree or Regional Regulation in regards to the formation of Technical Implementation Unit. This can be an indicator that the Regional Government takes this issue seriously. The commitment from the Regional Government also can be proved through the policy of Regional Budget allocation to finance the establishment of the Technical Implementation Unit and its duties.

**CONCLUSION AND SUGGESTIONS**

From the study and analysis of this research (One-Stop Service System to Improve Public Services), the conclusions can be drawn as follows: the use of a one-stop service system provides a convenience to the community in the process of obtaining a license. However, it has not been able to fully solve the problem of time and costs delays in the process. To measure the quality of licensing services provided, there are some criteria such as a) simplicity, b) clarity, c) timeliness, d) accuracy, e) security, f) responsibility, g)
completeness of facilities and infrastructure, h) ease of access, i) discipline, courtesy, and friendliness, and j) hospitality to see how far the principles of public services are applied in the provision of public services.

To improve public services in terms of licensing, it can take advantage from the support provided by the City Government with the commitment from the Regional Government (officials) shown in its legal products such as the Mayor's Decree and Regional Regulations. Besides that, the Licensing Service Office is not used as a source of Local Revenue but as an accelerator of economic growth. In this effort, there are some obstacles such as the coordination with relevant agencies, inadequate facilities, and infrastructure, as well as the mental attitudes and skills of the employees.

Based on the conclusions of the research as stated above, it is suggested that: the simplification of the licensing process through a one-stop service system still needs to be followed by a simplification in terms of technical and administrative requirements. In correlation with that, the conditions submitted must be really relevant to the license; improving the coordination and unifying the visions/missions between relevant institutions in the process of license arrangement. In order to get the same views on licensing issues so as to eliminate the sectorial-ego on each agency, it needs to; focus on developing human resources so that the employees can have adequate mental attitudes and technical skills thus they can provide good service to the community. This also can be done by registering them to the public service training programs and conducting comparative studies in other regions that are successful in implementing a one-stop service system.

REFERENCES

37. Starling, Grover. 1998. Managing Public Sector. School of Business and Public Administration: University of Houston : Clear Lake Hart Court College Publisher. USA.
DOI https://doi.org/10.18551/rjoas.2018-10.10

THE EFFECT OF ENVIRONMENTAL DYNAMICS, MANAGEMENT CAPABILITIES AND BUSINESS STRATEGIES ON THE PERFORMANCE OF SASIRANGAN SMALL AND MEDIUM INDUSTRIES IN SOUTH KALIMANTAN PROVINCE

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ABSTRACT
This study aims to examine the direct influence of environmental dynamics, management capabilities business strategies on the performance of small and medium industries. The study was applied to the Sasirangan Small and Medium Industry (SMI) sector in South Kalimantan. The method used was a quantitative approach because the data obtained from the survey results was in the form of numbers analyzed using statistics to answer questions and test the research hypotheses. The sample consisted of 83 respondents spread in three regencies/cities in South Kalimantan; they were owners or managers of the Sasirangan SMI. They were determined by the purposive sampling technique. Data collection was done through observations, questionnaires, and direct interviews. Secondary data was obtained from the Provincial Government of South Kalimantan and related agencies. The data analysis involved Generalized Structured Component Analysis. The results of hypothesis testing show that environmental dynamics, management capabilities, and business strategies have a direct and positive effect on the performance of SMI. The good environmental dynamics encourages better performance of SMI, the management capabilities of the SMI owners can directly improve the performance of SMI, and the implementation of the business strategy carried out by SMI can improve the performance of SMI.

KEY WORDS
Environmental dynamics, management capabilities, business strategies, SMI performance.

Globalization has made business environment (external factors) as a determinant for the competitive advantage of a company. The environment is seen as a dynamic whose changes are difficult to predict, yet can create opportunities as well as challenges for the company (Miles et al., 2000; Hashim et al., 2001; Nandakumar et al., 2010; Bastian and Muchlish, 2012; Mohd et al., 2013). Thus, the survival and success of a company depends on the ability to monitor and adapt to its business environment. According to Hashim et al. (2001), power outside the company that affects performance is included in the dynamism variable, which identifies the uncertainty of environment. Environmental influences, in addition to uncertainty, can also be in the form of intensity of competition referred to as the hostility variable (Hashim et al., 2001).

The business environment has a strong influence on the organization of the company, especially when the world of business is a borderless world; the change of hard technology to smart technology and other fundamental changes affect the policies that will be taken by the company management (Hunger, 2007; Brooks, 1997; Lumpkin, 2005).

Facing increasingly fierce industrial competition due to changes in the business environment has been forcing industries, both in the manufacturing and service industries, to think of new ways to win the competition. The development of small and medium industries (SMIs) in regional and global markets must be based on continuous efforts to make them a strong business; the role of SMIs cannot be underestimated because they are a determining factor of most of the world economy (Storey, 1994).

Changes in the business environment require specific ways to deal with because most of these changes are beyond the control of the company (Efferin and Handrian, 2010) and
can bring both opportunities and threats to the company (Lawrence and Weber, 2010; Efferin and Soeherman, 2010). For companies that can dynamically utilize the changes as a new opportunity, the company will benefit, but on the contrary, for companies that tend to be static, changes will become a threat to survival. This external environment alone will give reciprocal influence to each other (Brooks and Weatherston, 2000; Lawrence and Weber, 2010). The survival and success of a company depends on the ability to monitor and adapt to its business environment (Boyd and Fulk, 1996), to guide business strategies to realize the achievement of business objectives effectively (Bisbea and Malagueno, 2012).

A business environment that focuses on environmental dynamics can be conceptualized as a rapidly changing and discontinuous environment in demands, market, competitor, technology, and regulation, so information is often inaccurate or unavailable (Bastian and Muchlish, 2012). Furthermore, Hashim et al. (2001) identify the existence of environmental uncertainty and high intensity of competition that environmental dynamics encourages companies to behave as entrepreneurs. Mohd et al. (2013) argue that the external environment has a direct effect on the performance of the company without looking at the choices of the strategies carried out by the company; this can mean that the external environment can hinder and or directly support performance. Research conducted by Isabela and Waddock (1994) confirms a positive relationship between organizational performance and environmental dynamics. Bastian and Muchlish (2012) suggest that the results of research in manufacturing companies show a significant influence of environmental uncertainty on business performance. This is also in line with research conducted by Purnomo and Subrato (2016), which shows that a significant influence of environmental uncertainty on business performance. Entrepreneurial orientation and business strategies have a significant effect on company performance. Entrepreneurial orientation of Sasirangan SMI owners has been proven to be able to support business strategies; this means that entrepreneurial orientation directly affects the implementation of business strategies (Maskur, 2018).

Miles et al. (2000) and Azadegan et al. (2013) state different opinions that there is no evidence of the direct influence of external environment on company performance. This gap provides an opportunity to examine the direct effect of environmental dynamics on the performance of SMIs.

Based on findings from previous studies, environmental dynamics have a close correlation with the performance of small and medium industries. Therefore, it is necessary to further test the relationship.

Tidd and Pavitt (1998) state that management capability is very important in small, medium, and large-scale industries, where each requires management activities to coordinate the capabilities or skills of the workers and the coordination of resources. The role of leaders or owners of the company to understand and carry out management functions is crucial to achieve the success of a business. Peters (1998) states that during the growth phase, a leader or manager requires management skills to develop a business.

Management skills by an entrepreneur are used to manage the company in terms of marketing, production, finance, and human resources. Ansoff (1990) reveals the ability of a business to include the ability to make plans, determine priorities or strategies, and correct strategies. Furthermore, Edward (1994) states that the level of business ability is related to the way one formulates the company’s functional policy to determine the strategic actions to be taken. According to Wai and Kuan (2011), solid management is the key to success. However, small and medium industries sometimes face difficulties in developing the management skills needed to survive in a complex environment.

The results of the empirical study show that most SMI owners do not have management skills because of the low educational background. According to Suci (2009), most IKM owners rely on experience and knowledge from parents. In general, is only for the short term and the majority of businesses are run simply for owners or workers to earn for their daily needs.

Some results of empirical studies confirm that management capabilities have a significant effect on business performance in small and manufacturing industries (Chi et al.,
2011; Wai and Kuan, 2011; Dani et al., 2013; Fening, 2012). This is confirmed by Chi et al. (2011) explaining that management ability if supported by good knowledge will improve the performance of small and manufacturing businesses. There are several gaps from previous studies—some confirm that management skills are not significant for business performance (Nurhayati, 2004; Suci, 2009; Nur, 2014; Urisc and Mulej, 2005), while others confirm that management skills have a positive and significant influence on business performance (Mokros, 2007; Latief, 2008; Yahya et al., 2010; Mahmud, 2011). Thus, further studies to examine the effect of management capabilities on performance of small and medium industries must be carried out.

The literature study of strategic planning and performance shows that companies proactively investing time in developing strategies have higher levels of performance than companies that are proactive but do not develop strategies (Covin and Slevin, 1991). In line with this, Jiao et al. (2013) explain that the superior position in competition can be realized if the company is able to capture the opportunities offered by the business environment; in other words, it can reduce the impact of threats through the formulation of strategies, and then use them as a strong foundation to implement strategies. Surachman (2002) further explains that the analysis and diagnosis of a company’s external environment must be done synergistically, as well as be used as input in the preparation of strategies to create sustainable performance. Porter (2005) explains that the concept of contingency emphasizes alignment of strategies with the business environment as a determinant of survival or performance of a company.

Zhi and Jintong (2012) argue that companies implementing business strategies in their business activities will be able to overcome the business uncertainty. The results of this empirical study also confirm that business strategies have a significant effect on the performance of small and medium enterprises (Parnell, 2010; Hashim et al., 2001; Mohd et al., 2013; Hsu, 2012; Li and Tan, 2013); yet, Xiaoqing et al. (2008), Zhi and Jintong (2012) have found that business strategies have no significant effect on performance.

The different results of the previous studies have motivated the researcher to further test whether business strategies have an influence on the performance of small and medium industries.

CONCEPTUAL FRAMEWORK

Hashim et al. (2001) explore the role of business strategies on performance and produce a contingency alternative model. The model proposed by Hashim et al. (2001) offers a mediating role from environmental factors in the relationship of business strategies and performance, as well as the role of business strategies that directly affect performance. In the present study, the model shows the role of environmental dynamics as an independent variable directly affecting the performance of SMLs. Based on these findings, the researcher examines the effect of environmental dynamics on performance of SMLs, which simultaneously compares the findings of previous studies, especially Hashim et al. (2001) in small and medium enterprises in Malaysia.

In addition, this study will also examine the effect of management capabilities as investigated by Chi et al. (2011) and Wai and Kuan (2011) on performance. This study is the synergy of the previous conceptual framework by Hashim et al. (2001), Miles et al. (2000), Nandakumar et al. (2010), Bastian and Muchlish (2012), which examined the dimensions of environmental dynamics and strategies for performance, as well as the research by Wai and Kuan (2011), Chi et al. (2011), and Dani et al. (2013) about the influence of management capabilities on business performance.

The existing models are the basis for the formation of a conceptual framework; yet not all models are fully adopted. This study will test and explain the influence of environmental dynamics, management capabilities, and business strategies on performance of SMLs. In accordance with the description on the background, theoretical basis, and previous research, the following conceptual framework is proposed.
Methods of Research

Study Sites. This study was conducted in three areas in South Kalimantan, namely Banjarmasin, Martapura, and Banjarbaru as they are the centers for SMIs, are close to each other, and are home for many Sasirangan SMI owners compared to other regencies.

This study aims to examine the influence of environmental dynamics, management capabilities, and business strategies on the performance of SMIs. The study is explanatory research, a kind of study conducted by identifying facts or events that arise from the object under study, then an investigation to explain the phenomenon of problems based on the interaction of the variables under study is conducted (Sugiono, 2008). The analytical method used is Generalized Structured Component Analysis (GSCA). The study employed primary data and secondary data. Primary data was collected through questionnaires, interviews, and observations to respondents or managers of Sasirangan SMIs, while secondary data was obtained through related agencies.

Research Design. The approach was a quantitative approach (positivism) because the data obtained from the survey in the form of numbers analyzed using statistics to answer questions and test hypotheses. The results of statistical tests are used to explain the position of the variables studied and predict the relationship of variables (Creswell, 2009).

Population and Sample. The population and sample in this study is elaborated in Table 1.

<table>
<thead>
<tr>
<th>No</th>
<th>City/Regency</th>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Banjarmasin</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>2</td>
<td>Martapura</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>3</td>
<td>Banjarbaru</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>83</td>
<td>83</td>
</tr>
</tbody>
</table>

The population in this study was 83 owners of Sasirangan SMIs in three cities/regencies of South Kalimantan. The data came from questionnaires distributed directly to all owners; these 83 owners were also samples in the study.
Measurement Scale. Based on the operationalization of the research variables, the indicators cannot be measured directly (latent variables); the variables need to be translated into manifest variables. The measurement results are related to the analysis as to provide understanding of variables and interaction patterns. The measurement scale used in this study is a Likert scale. It generally involves scale points and degree of agreement. In this study, the alternatives were 1 to 5, in which 1 means strongly disagree, 2 means disagree, 3 means neutral, 4 means agree, and 5 means strongly agree.

Validity Test. The validity measurement was done by doing bivariate correlation between each item score and total item score, with Pearson Correlation Coefficient. The test of item validity aims to find out the relationship between independent variables (constructs) to their proxy (indicators) by correlating the value of items with total values (Parsian and Dunning, 2009). Questions or statements are considered valid if the correlation coefficient (r) is equal to or greater than 0.3, because r which is less than 0.3 represents small influence or a weak relationship (Cohen, 1992). If an indicator has items less than 30, then the benchmark for item validity is corrected r, with the following formula (Azwar, 2013):

$$r_{(c-r)} = \frac{r_s - S_y}{\sqrt{S_y^2 + S_x^2 - 2r_s S_y S_x}}$$

In which r represents the Pearson Correlation Coefficient:

$$r_{xy} = \frac{n \Sigma xy - \Sigma y \Sigma x}{\sqrt{(n \Sigma y^2 - (\Sigma y)^2)(n \Sigma x^2 - (\Sigma x)^2)}}$$

The results of the validity test for each variable are completely presented in the following tables.

Table 2 – Validity Test Results on Indicators of Environmental Dynamics (X1)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Item</th>
<th>Corrected r</th>
<th>Minimum Criteria</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Uncertainty</td>
<td>X1.1.1</td>
<td>0.538</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X1.1.2</td>
<td>0.579</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X1.1.3</td>
<td>0.312</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X1.1.4</td>
<td>0.387</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td>Intensity of Competition</td>
<td>X1.2.1</td>
<td>0.638</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X1.2.2</td>
<td>0.561</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X1.2.3</td>
<td>0.587</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X1.2.4</td>
<td>0.422</td>
<td>0.3</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Environmental dynamics (X1) consists of two (2) indicators and eight (8) items. All meet the minimum criteria of having corrected r > 0.3. This means that all items are valid, thus all can be included in the research process.

The validity test results on the management capabilities are shown in Table 3.

Table 3 – Validity Test Results on Indicators of Management Capabilities (X2)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Item</th>
<th>Corrected r</th>
<th>Minimum Criteria</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning.</td>
<td>X2.1.1</td>
<td>0.489</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X2.1.2</td>
<td>0.489</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td>Organizing</td>
<td>X2.2.1</td>
<td>0.484</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X2.2.2</td>
<td>0.484</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td>Directing</td>
<td>X2.3.1</td>
<td>0.591</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X2.3.2</td>
<td>0.591</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td>Monitoring</td>
<td>X2.4.1</td>
<td>0.556</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X2.4.2</td>
<td>0.556</td>
<td>0.3</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Management capabilities (X2) consist of four (4) indicators and eight (8) items. All meet the minimum criteria of having corrected r > 0.3. This means that all items are valid, thus all can be included in the research process.
The validity test results on the business strategies are shown in Table 4.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Item</th>
<th>Corrected r</th>
<th>Minimum Criteria</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Cost Strategy</td>
<td>X3.1.1</td>
<td>0.538</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X3.1.2</td>
<td>0.538</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X3.1.3</td>
<td>0.071</td>
<td>0.3</td>
<td>Not Valid</td>
</tr>
<tr>
<td></td>
<td>X3.1.4</td>
<td>0.192</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td>Differentiation Strategy</td>
<td>X3.2.1</td>
<td>0.634</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X3.2.2</td>
<td>0.710</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X3.2.3</td>
<td>0.664</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X3.2.4</td>
<td>0.438</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td>Focus Strategy</td>
<td>X3.1.1</td>
<td>0.454</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X3.1.2</td>
<td>0.446</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X3.1.3</td>
<td>0.618</td>
<td>0.3</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Business strategies (X3) consist of three (3) indicators and eleven (11) items. From the eleven (11) items, one did not meet the minimum criteria of having corrected r > 0.3, i.e. the item was X3.1.3 (production cost efficiency) on the Y1.1 indicator (low cost strategy). This means that this one not-valid item is not included in the research process.

The validity test results on the performance of SMIs are shown in Table 5.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Item</th>
<th>Corrected r</th>
<th>Minimum Criteria</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Growth</td>
<td>Y1.1.1</td>
<td>0.703</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Y1.1.2</td>
<td>0.703</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td>Profit Growth</td>
<td>Y1.2.1</td>
<td>0.581</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Y1.2.2</td>
<td>0.581</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td>Capital Growth</td>
<td>Y1.3.1</td>
<td>0.468</td>
<td>0.3</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Y1.3.2</td>
<td>0.468</td>
<td>0.3</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Performance (Y1) consists of three (3) indicators and six (6) items. All meet the minimum criteria of having corrected r > 0.3. This means that all items are valid, thus all can be included in the research process.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicators</th>
<th>Alpha</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Dynamics (X1)</td>
<td>Environmental Uncertainty (X1.1)</td>
<td>0.716</td>
<td>Reliable</td>
</tr>
<tr>
<td></td>
<td>Intensity of Competition (X1.2)</td>
<td>0.744</td>
<td>Reliable</td>
</tr>
<tr>
<td></td>
<td>Planning (X2.1)</td>
<td>0.656</td>
<td>Reliable</td>
</tr>
<tr>
<td></td>
<td>Organizing (X2.2)</td>
<td>0.638</td>
<td>Reliable</td>
</tr>
<tr>
<td></td>
<td>Directing (X2.3)</td>
<td>0.722</td>
<td>Reliable</td>
</tr>
<tr>
<td></td>
<td>Monitoring (X2.4)</td>
<td>0.677</td>
<td>Reliable</td>
</tr>
<tr>
<td>Management Capabilities (X2)</td>
<td>Low Cost Strategy (X3.1)</td>
<td>0.633</td>
<td>Reliable</td>
</tr>
<tr>
<td></td>
<td>Differentiation Strategy (X3.2)</td>
<td>0.795</td>
<td>Reliable</td>
</tr>
<tr>
<td></td>
<td>Focus Strategy (X3.3)</td>
<td>0.893</td>
<td>Reliable</td>
</tr>
<tr>
<td>Business Strategies (X3)</td>
<td>Sales Growth (Y1.1)</td>
<td>0.824</td>
<td>Reliable</td>
</tr>
<tr>
<td></td>
<td>Profit Growth (Y1.2)</td>
<td>0.732</td>
<td>Reliable</td>
</tr>
<tr>
<td></td>
<td>Capital Growth (Y1.3)</td>
<td>0.622</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

Table 6 shows that all indicators have an Alpha Cronbach greater than 0.6, so all variables are reliable and can be used as a data collection tool.

**RESULTS AND DISCUSSION**
Table 7 shows that owners are mostly male (44 people or 53%), and the rest 39 people or 47% are female. The difference in number is not big; this shows that both male and female are suitable as entrepreneurs or owners of SMIs, needing characteristics as a risk taker and being responsible (to employees and business). Therefore, the role of women in the future will be increasingly important as entrepreneurs in SMIs, especially in the three regencies/cities in South Kalimantan. This finding is expected to inspire women to be an entrepreneur.

Table 7 – Description of Sasirangan SMI Owners Based on Sex

<table>
<thead>
<tr>
<th>No</th>
<th>Sex</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>44</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>39</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>83</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 8 shows that the majority of owners live in Banjarmasin (48 people or 57.8%), then 29 people or 34.9% and 6 people or 7.2% live in Martapura and Banjarbaru. The finding shows that most Sasirangan SMIs are in Banjarmasin, as the business was originally started there. In addition, Banjarmasin also has a strategic position for business because it is in the provincial capital. The other two locations, however, are not far from Banjarmasin.

Table 8 – Description of Sasirangan SMI Owners Based on Residence

<table>
<thead>
<tr>
<th>No</th>
<th>Residence</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Banjarmasin</td>
<td>48</td>
<td>57.83</td>
</tr>
<tr>
<td>2</td>
<td>Martapura</td>
<td>29</td>
<td>34.94</td>
</tr>
<tr>
<td>3</td>
<td>Banjarbaru</td>
<td>6</td>
<td>7.23</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>83</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 9 shows that most ISM owners graduated senior high school (37 people or 44.6%), junior high school (27 people or 32.5%), elementary school (8 people or 9.6%), while the remaining graduated a Diploma program (2 people or 2.4%), S1 (7 people or 8.4%), and S2 (2 people or 2%). This illustrates that the majority of owners graduated high school and lower. Based on their position, as owners and managers, education is important for the development of their industry. The results of the interviews provide an overview of the need for education and training programs for SMI entrepreneurs to improve the ability and insight in managing a business.

Table 9 – Description of Sasirangan SMI Owners Based on Education

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>8</td>
<td>9.6</td>
</tr>
<tr>
<td>Junior High</td>
<td>27</td>
<td>32.5</td>
</tr>
<tr>
<td>Senior High</td>
<td>37</td>
<td>44.6</td>
</tr>
<tr>
<td>Diploma</td>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td>S1 (under-graduate)</td>
<td>7</td>
<td>8.4</td>
</tr>
<tr>
<td>S2 (post-graduate)</td>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 10 shows that the most ISM owners are in the age range of 31 to 40 years (33 people or 39.8%) and 41 to 50 years (33 people or 39.8%). Only a small number of them are
above 50, in which 2 people or 2.4% are 51 to 60 years old, 3 people or 3.6% are 61 to 70 years old, 1 person or 1.2% are 71 to 80 years or more. In general, most owners are 31 and 50 (79.6%); these people are the second generation continuing the family business and those who used to work as employees then open their own businesses. This shows that young generation is interested in developing the industry because it is one of the superior products of South Kalimantan.

Table 11 – Description of Sasirangan SMI Owners Business Age

<table>
<thead>
<tr>
<th>No</th>
<th>Business Age (Year)</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>≤ 5</td>
<td>20</td>
<td>24.10</td>
</tr>
<tr>
<td>2</td>
<td>6 – 10</td>
<td>17</td>
<td>20.48</td>
</tr>
<tr>
<td>3</td>
<td>11 – 15</td>
<td>22</td>
<td>26.50</td>
</tr>
<tr>
<td>4</td>
<td>16 – 20</td>
<td>7</td>
<td>8.43</td>
</tr>
<tr>
<td>5</td>
<td>21 – 25</td>
<td>15</td>
<td>18.08</td>
</tr>
<tr>
<td>6</td>
<td>&gt; 25</td>
<td>2</td>
<td>2.41</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>83</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 11 shows that most owners run the business for 5 years, 6 to10 years, and 11 to 15 years (59 business or 71.08%). This means that most of the Sasirangan SMI owners in South Kalimantan Province are relatively new. The business can be considered as mature because during that short period of time, owners have had the internal ability to be responsive and adaptive to the dynamic changes in the business environment.

Table 12 – Description of Sasirangan SMI Owners Business Workshop Status

<table>
<thead>
<tr>
<th>No</th>
<th>Business Workshop Status</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Personally Owned</td>
<td>77</td>
<td>92.8</td>
</tr>
<tr>
<td>2</td>
<td>Rent</td>
<td>6</td>
<td>7.2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>83</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 12 shows that most Sasirangan SMI owners already have their own workshop (77 people or 92.8%). The remaining 6 people or 7.2% still rent a place to run their business. The results of data collection confirm that most owners already have a house, and they use their house as the workshop.

Table 13 – The Measurement Model for Environmental Uncertainty (X_{1,1})

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading Estimate</th>
<th>SE</th>
<th>CR</th>
<th>Weight Estimate</th>
<th>SE</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_{1,1}</td>
<td>0.817</td>
<td>0.010</td>
<td>85.09</td>
<td>0.421</td>
<td>0.034</td>
<td>12.51</td>
</tr>
<tr>
<td>X_{1,2}</td>
<td>0.851</td>
<td>0.016</td>
<td>52.5</td>
<td>0.469</td>
<td>0.048</td>
<td>9.79</td>
</tr>
<tr>
<td>X_{1,3}</td>
<td>0.654</td>
<td>0.012</td>
<td>54.5</td>
<td>0.413</td>
<td>0.036</td>
<td>11.47</td>
</tr>
<tr>
<td>X_{1,4}</td>
<td>0.723</td>
<td>0.118</td>
<td>8.12</td>
<td>0.355</td>
<td>0.024</td>
<td>15.11</td>
</tr>
</tbody>
</table>

The indicators to measure the environmental dynamics are environmental uncertainty (X_{1,1}) and intensity of competition (X_{1,2}). Each indicator is developed into some items.
The environmental uncertainty indicator (X1.1) is measured by 4 (four) items, namely newcomers can threaten sales volume in the market (X1.1.1), products made by other companies become alternative choices for consumers (X1.1.2), government regulations provide support for SMIs (X1.1.3), and raw and supporting materials for industries often cause price and quality problems (X1.1.4). The results of the measurement model for this indicator show all items are valid and significant at α 0.05. The item “products made by other companies become an alternative choice for consumers (X1.1.2)” has the highest factor loading of 0.851; thus, it is considered as the best representation of environmental uncertainty. The contribution of other items seen from the loading factor is newcomers (X1.1.1) of 0.817, materials (X1.1.4) of 0.723, and regulations (X1.1.3) of 0.654.

Table 14 – The Measurement Model for Intensity of Competition (X1.2)

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td>X1.2.1</td>
<td>0.823</td>
<td>0.025</td>
</tr>
<tr>
<td>X1.2.2</td>
<td>0.779</td>
<td>0.006</td>
</tr>
<tr>
<td>X1.2.3</td>
<td>0.760</td>
<td>0.052</td>
</tr>
<tr>
<td>X1.2.4</td>
<td>0.661</td>
<td>0.014</td>
</tr>
</tbody>
</table>

The second indicator as to measure environmental dynamics (X1) is the of competition (X1.2) measured by using 4 (four) items, namely the tight competition on product quality among the Sasirangan industry (X1.2.1), various promotional strategies carried out by each Sasirangan industry (X1.2.2), the tight price competition among the Sasirangan industry (X1.2.3), and product innovation carried out by each Sasirangan industry (X1.2.4). The results of the measurement model show all items are valid and significant at α 0.05. The “tight product quality competition among the Sasirangan industry (X1.2.1)” has the highest factor loading of 0.823; it is considered as the best representation of competition intensity. The contribution of other items seen from the loading factor is promotional strategies (X1.2.2) of 0.779, price competition (X1.2.3) of 0.760, and product innovation (X1.2.4) of 0.661.

The two (2) indicators of environmental dynamics (X1) are valid. Based on the loading factor, the item that contributes the most for environmental uncertainty is on “products made by other companies become an alternative choice for consumers” (X1.1.2), with a loading value of 0.851. For competition intensity, the item that contributes the most is “the tight competition of product quality among the Sasirangan industry” (X1.2.1), with a loading value of 0.823.

The variable of management capabilities (X2) is measured by four (4) indicators, namely planning (X2.1), organizing (X2.2), directing (X2.3), and monitoring (X2.4). Each indicator is developed into several items.

Table 15 – The Measurement Model for Planning (X2.1)

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td>X2.1.1</td>
<td>0.876</td>
<td>0.020</td>
</tr>
<tr>
<td>X2.1.2</td>
<td>0.848</td>
<td>0.012</td>
</tr>
</tbody>
</table>

The planning indicator is measured by 2 (two) items, namely being able to plan a strategy (X2.1.1) and making decisions without the help of others (X2.1.2). The results of the measurement model show that the items are valid and significant at α 0.05. Both items are considered dominant in reflecting planning because the loading value is not much different, at 0.876 and 0.848.

The second indicator of management capabilities (X2) is organizing measured using 2 (two) items, namely distributing work well to employees (X2.2.1) and building a reliable work team (X2.2.2). The results of the measurement model for this indicator show both items are valid and significant at α 0.05. Both items are considered dominant in reflecting organizing because the loading value is not different, at 0.858 and 0.865.
Table 16 – The Measurement Model for Organizing (X2.2)

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td>X2.2.1</td>
<td>0.858</td>
<td>0.024</td>
</tr>
<tr>
<td>X2.2.2</td>
<td>0.865</td>
<td>0.010</td>
</tr>
</tbody>
</table>

Table 17 – The Measurement Model for Directing (X2.3)

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td>X2.3.1</td>
<td>0.875</td>
<td>0.023</td>
</tr>
<tr>
<td>X2.3.2</td>
<td>0.908</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The third indicator of management capabilities (X2) is directing measured using 2 (two) items, namely communicating well with employees (X2.3.1) and completing the work on time (X2.3.2). The results of the measurement model show both items are valid and significant at α 0.05. The “completing the work on time (X2.3.2)” has the highest factor loading of 0.908; it is considered as the best representation of directing. The item “communicating well with employees (X2.3.1)” has a loading value of 0.875.

Table 18 – The Measurement Model for Monitoring (X2.4)

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td>X2.4.1</td>
<td>0.886</td>
<td>0.007</td>
</tr>
<tr>
<td>X2.4.2</td>
<td>0.878</td>
<td>0.023</td>
</tr>
</tbody>
</table>

The fourth indicator of management capabilities (X2) is monitoring measured using 2 (two) items, namely making changes towards work in order to achieve better corporate goals (X2.4.1) and being able to resolve conflicts that occur between the company and employees and with customers (X2.4.2). The results of the measurement model show both items are valid and significant at α 0.05. Both items are considered dominant in reflecting organizing because the loading value is not much different, at 0.886 and 0.878.

The four (4) indicators forming management capabilities (X2) are valid. Based on the loading factor, the item that contributes the most for directing is “completing the work on time” (X2.3.2) with a value of 0.908; for supervision, the item that contributes the most is “making changes towards work in order to achieve better company goals” (X2.4.1) with a value of 0.886; for planning, the item that contributes the most is “being able to plan a strategy” (X2.1.1) with a value of 0.876; and for organizing, the item that contributes the most is “building a reliable work team” (X2.2.2) with a value of 0.865. Among the four indicators, the highest contribution for management capabilities (X2) is directing and the weakest is organizing.

Business strategies in this study are defined as the strategic efforts undertaken by ISM entrepreneurs to be able to compete and achieve business goals. The indicators used to measure the strategies (X3) are Low Cost Strategy Indicator (X3.1), Differentiation Strategy (X3.2), and Focus Strategy (X3.3). Each indicator is then developed into several items.

Table 19 – The Measurement Model for the Low Cost Stratgey (X3.1)

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td>X3.1.1</td>
<td>0.923</td>
<td>0.024</td>
</tr>
<tr>
<td>X3.1.2</td>
<td>0.910</td>
<td>0.011</td>
</tr>
<tr>
<td>X3.1.3</td>
<td>0.309</td>
<td>0.015</td>
</tr>
</tbody>
</table>

The low cost strategy is measured by 3 (three) items, namely maintaining the production continuity by maintaining the availability of raw materials and supporting materials
(X3.1.1), optimizing the existing tools and facilities (X3.1.2), and making costs lower from competitors (X3.1.3). The results of the measurement model show all items valid and significant at α 0.05. The item “maintaining the continuity of production” (X3.1.1) and “optimizing the existing tools and facilities” (X3.1.2) are considered dominant in reflecting the low cost strategy as they have the highest loading values, at 0.923 and 0.910. The item “making costs lower than competitors” (X3.1.4) is the weakest item with a loading value of 0.309.

Table 20 – The Measurement Model for the Differentiation Strategy (X3.2)

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td>X3.2.1</td>
<td>0.830</td>
<td>0.010</td>
</tr>
<tr>
<td>X3.2.2</td>
<td>0.865</td>
<td>0.003</td>
</tr>
<tr>
<td>X3.2.3</td>
<td>0.816</td>
<td>0.062</td>
</tr>
<tr>
<td>X3.2.4</td>
<td>0.634</td>
<td>0.021</td>
</tr>
</tbody>
</table>

The second indicator for business strategies (X3) is differentiation (X3.2) measured using 4 (four) items, namely developing a unique Sasirangan motif with distinctive characteristics from competing products (X3.2.1), improving the quality to create a competitive advantage (X3.2.2), making Sasirangan products based on market segments (upper middle or lower middle class) (X3.2.3), and making custom colors or motifs to provide better service for customers (X3.2.4). The results of the measurement model show all items valid and significant at α 0.05. The item “improving quality for competitive advantages” (X3.2.2) has the highest loading factor of 0.865; it is considered dominant in reflecting the differentiation indicator. The loading values of other items are 0.830 for “developing a unique motif” (X3.2.1), 0.816 for “making products based on market segments” (X3.2.3), and 0.634 for “providing custom orders” (X3.2.4).

Table 21 – The Measurement Model for the Focus Strategy (X3.3)

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td>X3.3.1</td>
<td>0.867</td>
<td>0.034</td>
</tr>
<tr>
<td>X3.3.2</td>
<td>0.937</td>
<td>0.017</td>
</tr>
<tr>
<td>X3.3.3</td>
<td>0.925</td>
<td>0.011</td>
</tr>
</tbody>
</table>

The third indicator for business strategies (X3) is the focus strategy (X3.3), which is measured by 3 (three) items, namely selling only certain products (X3.3.1), selling only to certain groups (X3.3.2), and selling only to certain customer segments (X3.3.3). The results of the measurement model for this indicator show all items valid and significant at α 0.05. The item “selling only to certain groups” (X3.3.2) has the highest loading value of 0.937; it is considered dominant in reflecting the focus strategy. The loading value of other items is 0.925 for “selling to certain customer segments” (X3.3.3) and 0.867 for “selling only certain products” (X3.3.1).

The three (3) indicators for business strategies (X3) are valid. Based on the loading factor, the item that contributes the most for the low cost strategy is “maintaining the production continuity by maintaining the availability of raw and supporting materials” (X3.1.1) with a value of 0.923; for the differentiation strategy is “improving quality for competitive advantages” (X3.2.2) with a value of 0.865; and for the focus strategy is “selling only to certain groups” (X3.3.2) with a value of 0.937. Among the three (3) indicators, the highest contribution for business strategies (X3) is the focus strategy and the weakest is differentiation.

The performance of SMIs in this study is interpreted as the level of achievement of the company in a certain period; this is very decisive in the development of the company. The indicators used to measure the performance (Y1) are sales growth (Y1.1), profit growth (Y1.2), and capital growth (Y1.3). Each indicator is developed into several items.
Environmental dynamics have a significant positive effect on SMI performance. GeSCA results in Table 25 show a path coefficient of 0.073* and CR of 2.64* (significant, positive sign). These results indicate that good environment dynamics encourages better performance of SMIs. Environmental uncertainty and competition intensity as indicators...
forming environmental dynamics can be used directly to increase sales growth, profit growth, and capital growth as a form of SMI performance.

Table 25 – The Results of Hypothesis Testing

<table>
<thead>
<tr>
<th>No</th>
<th>The Relationship of Variables</th>
<th>Direct Effect</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Environmental Dynamics-&gt; Performance</td>
<td>0.073 0.028 2.64</td>
<td>Significant</td>
</tr>
<tr>
<td>2</td>
<td>Management Capabilities-&gt; Performance</td>
<td>0.029 0.007 4.28</td>
<td>Significant</td>
</tr>
<tr>
<td>3</td>
<td>Business Strategies-&gt; Performance</td>
<td>0.571 0.032 17.99</td>
<td>Significant</td>
</tr>
</tbody>
</table>

This study supports Bisbe and Malaguen (2012) by taking a sample of 267 respondents from medium and large companies in Spain. Data is analyzed using SPSS Macro. Their findings indicate that environmental dynamics have a significant effect on organizational performance. Furthermore, the results of the present study also support the results of Jiao et al. (2013) by taking a sample of 115 respondents. Data is analyzed using structural equation models (SEM). Jiao et al. (2013) confirm that environmental dynamics have a significant impact on the performance of new businesses; this study concludes that a dynamic ability is more effective for organizational changes at a high degree of environmental dynamics. Bastian and Muchlish (2012) and Mohd et al. (2013) show that environmental dynamics have a significant effect on organizational performance. Nandakumar et al. (2010) suggest that environmental dynamics affect business performance mediated by business strategies. The results of this study are contradictory to Azadegan et al. (2013), that environmental dynamics have no significant effect on performance.

The results of this study support Nisjar and Wanardi (1997) that complex environmental influences can affect the performance of an organization. Furthermore, Mohd et al. (2013) argue that external environment has a direct effect on the performance of the company without looking at the choices of the strategies carried out by the company; this can mean that the external environment can hinder and/or directly support performance. Hashim et al. (2001) affirm that power outside the company influencing performance is a dynamism variable, which identifies the environmental uncertainty. Environmental influences other than uncertainty can also take the form of competition intensity.

Management capabilities have a significant positive effect on SMI performance. GeSCA results in table 25 show a path coefficient of 0.029* and CR of 4.28* (significant, positive sign). These indicate that management capabilities of SMI owners can directly improve performance. This suggests that the implementation of management capabilities, which include planning, organizing, directing, and monitoring, can be used directly to increase sales growth, profit growth, and capital growth as a form of SMI performance. The most dominant form of management capabilities is directing on completing the work on time. Then, the variable forming SMI performance that contributes the most is sales growth, through an increase in turnover from year to year.

The findings support the results of previous studies by Akgun et al. (2008), taking a sample of 356 respondents from 112 companies, involving managers and employees from various companies operating in Istanbul. Data is analyzed by a hierarchical regression, and results show that emotional abilities have a significant and positive effect on financial performance and organizational effectiveness. Furthermore, Man and Wafa (2008), taking a sample of 100 SMEs in the manufacturing sector in Malaysia, using structured questionnaires and interviews with SME owners, multiple regression and One-Way ANOVA analysis, reveal that management capabilities have a positive and significant effect on the performance SMEs. The findings of this study are also in line with Suci (2009) that management capabilities have a significant positive effect on performance; in other words, sufficient management capabilities can determine the success of SMI performance. The findings are also supported by several other studies such as Wai and Kuan (2011), Chi et al. (2011), Hsu (2012), Fening (2012), and Dani et al. (2013), that management skills directly affect performance. The results of this study contradict the findings by Ursic and Mulej
(2005), that management capabilities directly have no significant effect on business performance.

The results of this study support the theory of Tidd and Pavitt (1998), that management capabilities are very important in small, medium, and large-scale industries, where each requires management activities to coordinate the skills of workers as well as coordination of resources of the company. The role of the leaders or owners of the company is to understand and carry out management functions as the main thing to achieve success. Management is the achievement of organizational goals in an effective and efficient way through planning, organizing, directing, and controlling organizational resources (Daft, 2006).

Business strategies have a significant and direct positive effect on performance. The result of GeSCA in Table 25 shows a path coefficient of 0.571* and CR of 17.99* (significant). This means that the implementation of the business strategy by SMI owners can improve performance. This proves that the more appropriate the low cost strategy, differentiation, and focus strategy, as indicators of business strategies, the more sales growth, profit growth, and capital growth will be.

This finding supports the theories of Pierce II and Robinson (2007) defining strategic management as a set of decisions and actions that result in the formulation and implementation of plans designed to achieve company goals. Jauck and Glueck (1988) assert that the flow of strategic management processes shapes the flow of decisions and actions that lead to the formation of effective strategies to achieve organizational goals. This study supports the findings of Parnell (2010) who examines the relationship between membership of strategic groups and performance of retailers in the United States in the complexity of strategy-performance relationship. Parnell takes a sample of 277 retail traders in the Midwestern city of the United States and uses a regression method for the data analysis; the findings indicate that business strategies have a positive and significant effect on business performance in a relatively short period of time and high business performance results in positive profits in the long term. Acquaah (2013) also proves that business strategies affect the performance of family business organizations.

Some other research including Man and Wafa (2008), Bordean et al. (2010), Hsu (2012), Li and Tan (2013), and Mohd et al. (2013) state that business strategies have a significant effect on performance. In contrary, Xiaoying et al. (2008) and Zhi and Jintong (2012) find that business strategies do not affect performance.

CONCLUSION

Environmental dynamics have a significant positive effect on SMI performance. These indicate that the dynamics of environment encourage better SMI performance. Environmental uncertainty and competition intensity as indicators of environmental dynamics can be used directly to increase sales growth, profit growth, and capital growth as indicators of SMI performance.

Management capabilities have a significant positive effect on SMI performance. These indicate that the management capabilities of the SMI owners can directly improve SMI performance. This finding suggests that management capabilities, which include planning, organizing, directing, and monitoring, can be used directly to increase sales growth, profit growth, and capital growth as indicators of SMI performance.

Business strategies have a significant and direct positive effect on SMI performance; this means that the business strategies carried out by SMI owner can improve the SMI performance. This proves that appropriate implementation of low cost strategies, differentiation, and focus strategies, as indicators of business strategies, will further increase sales growth, profit growth, and capital growth as indicators of SMI performance.

Recommendations:

- Further studies are advised to include more areas as the study site and more respondents considering that the SMI actors are increasing and spread throughout the cities and regencies in South Kalimantan;
• Owners of Sasirangan SMI should improve management capabilities as these will help to formulate the right business strategy in such dynamic environment;
• Owners of Sasirangan SMI should improve the quality of Sasirangan products, by choosing quality raw and coloring materials, as well as innovative motif designs, so the products can be accepted by local and international markets or consumers.

REFERENCES


CORPORATE STRATEGY: HOW COMPANIES RESPOND TO POLITICAL STABILITY AND ECONOMIC GROWTH?

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ABSTRACT
In determining the strategy to be applied the company is very important consider the political risks and its effects on the organization. This is worth considering because changes in an action or political policy in a country can have a major impact on the country's financial and economic sectors. This study tries to study the company's strategy in responding to the political stability and economic growth of a country. The population in this study is a manufacturing company listed in Indonesia Stock Exchange in 2012-2016. These results indicate that political stability and economy growth directly influence the corporate strategy.

KEY WORDS
Political stability, economy growth, corporate strategy, public service.

In a democratic country like in Indonesia it cannot be separated from the political world. The political world becomes the subject of conversation in every institution, because the existence of the political world can attract every circle. It cannot be denied that one of the successes of a company cannot be separated from the influence of the political environment of a country. The objectives of politics to formulate public policy include the interests of the business world. Conversely, the business world can support the politics of a country, it can be said that business and politics are two things that are related.

Politics is the behavior, actions of government, parliament, parties, and organizations to achieve a goal, especially in relation to the fields of state life and to organize community life together. Within this framework, politics is understood as a practical, calculated attitude and step of life to achieve a goal maximally and effectively (Cengga 2017).

Economic growth is one of the most important indicators to assess the economic performance of a country. Economic growth usually measured by indicators of Gross Domestic Product (GDP) shows the extent to which the performance of the economic sectors in generating output (Septiani, 2014). In 1998 Indonesia experienced a prolonged crisis that resulted in many companies that eventually went bankrupt, allegedly due to weak corporate governance at the time. Therefore, corporate governance gets serious attention both for government and investors (Lestari, 2017).

Chandrawibowo (2009) explains that the direction and stability of political factors is an important consideration for managers in formulating corporate strategy. Political factors determine the legal and regulatory parameters that limit the company's operations. Political constraints imposed on firms through decisions on fair trade, antitrust law, taxation programs, minimum wage provisions, pollution and pricing policies, administrative boundaries, and more measures intended to protect workers, consumers, the public, and environment. Because such laws and regulations are usually restrictive, they tend to reduce the company's profit potential. However, some political measures are designed to protect and benefit the company. Such actions include patent laws, government subsidies, and product research fund grants. Thus, political factors can limit or benefit the affected company.

In determining the strategy to be applied the company is very important consider the political risks and its effects on the organization. This is worth considering because changes in an action or political policy in a country can have a major impact on the country's financial and economic sectors. Political risk is generally closely related to government and the political and security situation in a country.

This study tries to study the company's strategy in responding to the political stability...
and economic growth of a country. Management requires a strategy as a tool to win the competition and maintain the survival of the company. Strategy is a pattern of decisions and specific actions that enable managers to achieve organizational goals (Hill and Jones, 1998). Hill and Jones (1998) also define strategic change as the movement of what is being done right now into the future in order to increase the competitive advantage.

This study refers to previous researches conducted by Isa (1996), Feng (1997), Musyarofah (2003), Armah (2009), Li, Weiwen (2012), Ngan (2013), Donnelly (2013), Cheng & Leung (2015), Li, Sihai (2015), Harymawan (2016), Chen (2017) outline the studies discuss how the company's role of political connections and the impact of political connections in various countries. As the research conducted by Harymawan (2016) "find that the earnings quality of politically connected firms increases as government effectiveness improves, but decreases as the political environment becomes more stable". Feng (1997) found "democracy has an indirect effect on growth through its impact on the probability of regime change and the change of constitutional government from one ruling party to another". 

Therefore, in this study intends to review the problem of political stability in developing countries such as Indonesia in the face of democratic period of general election of State officials. The focus of this research is to see how the country's political stability influences the company's strategic change with intervening variable of economic growth. The purpose of this study is to see the existence of political stability with the relationship with the company's management of the company's strategy. So it can be explained that the political situation of a State becomes one of the factors changing the company's strategy so it is expected to support the phenomenon that politically related executives can function as disciplinary or monitoring mechanisms in political economy. The population in this study is a manufacturing company listed in Indonesia Stock Exchange in 2012-2016. The results of this study provide evidence that the Political stability influence to Economy Growth, Economy Growth influence on Corporate Strategy and Political Stability can directly affect Corporate Strategy.

LITERATURE REVIEW

Legitimacy of society is a strategic factor for the company in order to develop the company in the future; it can be used as a vehicle to construct company strategy, especially related to positioning itself in the middle of an increasingly advanced society (Hadi, 2011: 87). Deegan (2002) expresses legitimacy as "... a system oriented perspective, the entity is assumed to be influenced by, and in turn, the society in which it operates. Corporate disclosure is considered to represent one important means by which management can influence external perceptions about organization".

Sudaryanto (2011: 14) states that the company has a contract with the community to conduct its activities based on the values prevailing in the community, and how the company responds to various corporate interest groups. 

Political theory is the discussion and generalization of political phenomenon. In other words, political theory is discussed above, a) the purpose of political activity, b) the ways to achieve it, c) the possibilities and needs arising from certain political situations and d) the obligations resulting from the political objectives. The concepts discussed in political theory include, among others, society, social class, state, power, sovereignty, rights and duties, independence, state institutions, social change, political development, modernization and so forth. (Budiharjo, 1992: 30).

Stability is a condition of a system whose components tend to be in or back to a stable relationship (Jack et al., 1989; Syahrul Romadhon, 2006). Political Stability can be understood as a condition in which there is no fundamental change or what is revolutionary in the political system (government), or changes occurring at defined limits (Plano, 1985, Syahrul Romadhon, 2006)

In some theoretical studies looking at the relationship of corporate political connections can benefit from being better able to understand the process of public policy, gain direct access to politicians, and provide legitimacy by relating the reputation and status of the
company (Hillman, 2005; Harymawan, 2016). In the research (Harymawan, 2016) shows a change in the Political Stability of government actions on market performance and improving the quality of accounting information.

Kuznets (Jhingan, 2000) defines economic growth as a long-term increase in a country's ability to provide more types of economic goods to its population. This capability grows according to technological progress, and the institutional and ideological adjustments required by the residents of the country in question. This definition has three main components; (1) the economic growth of a nation is seen and the continuous increase of supply of goods, (2) advanced technology is a factor in economic growth that determines the degree of capability growth in the provision of various goods to the population, and (3) the widespread and efficient use of technology requires an adjustment in the institutional and ideological fields so that the innovations produced by human science can be properly utilized. Sadono Sukirno (2000) defines economic growth as a change in the level of economic activity prevailing from year to year. An economy is said to be growing if the level of economic activity is higher than what has been achieved in the previous time period. The rate of economic growth is measured by the rate of GDP at constant prices.

Boediono (1992) defines economic growth as a process of increasing per capita output over a long period of time. Economic growth includes three aspects; (1) economic growth is an economic process, namely; change from time to time, (2) economic growth is closely related to two important aspects of total output and population, and (3) economic growth is said to increase if per-capita output increases over the long term.

Strategy in KBBI (1990: 859) is a war strategy or science of war strategy. Strategies can also be said to be a careful plan for activities to achieve specific targets. Potter (1998) says strategy as an art and science of formulating, implementing, and evaluating strategic decisions between functions that enable an organization to achieve its goals in the future.

Porter (1985) describes three different generic strategies at the business level: cost leadership, differentiation and focus. Meanwhile, Miles and Snow see the type of strategy not based on the level of strategy but on the level of changes in market and product orientation. There are four types of business strategies identified by Miles and Snow (1978) according to the level of product or market change: prospectors, defenders, analyzers and reactors. Hill and Jones (1998) define strategic change as the movement of what is being done right now into the future in order to increase competitive advantage. Strategic changes made can be: (1) reengineering (2) restructuring and (3) innovation.

**HYPOTHESES DEVELOPMENT**

**Political Stability on Economic Growth.** In determining the strategy to be applied the company is very important consider the political risks and its effects on the organization. This is worth considering because changes in an action or political policy in a country can have a major impact on the country's financial and economic sectors. Political risk is generally closely related to government and the political and security situation in a country. It can not be denied that one of the success of a company can not be separated from the influence of the political environment. The objectives of politics to formulate public policy include the interests of the business world. Conversely, the business world can support the politics of a country, it can be said that business and politics are two things that are related. Several studies of political stability and economic growth were carried out by Isa (1996), Feng (1997), Romadhon (2006), Aisen and Jose (2010), Septian (2014) Sen et al (2014), Facchini and Melki (2013), Uddin et al (2017), Ali and Azmi (2017), Cox and Weingast (2018). Therefore the first hypothesis in this study:

H1: Political Stability has a positive effect on Economic Growth.

**Economic Growth to Corporate Strategy.** Ali (2009) revealed the quality of an institution will determine economic growth. Weak institutions will disrupt economic growth because it causes economic agents to struggle against a bad institutional system rather than continue economic activity. One form of institution within a country is politics. Politics has an influence in the economy because politics will provide a restriction and market environment as a form
of control over consumers and companies (Drazen, 2001). Several studies related to economic growth with company strategy Peng et al (2008), Augier and Teece (2009), Urata et al (2009), therefore the second hypothesis in this study:

H2: Economic Growth positively affects Corporate Strategy.

Political Stability on Corporate Strategy. Every action in an organization is political, except charity or social organization. These factors determine the smooth running of a business. Therefore, if the political situation supports, then business will generally run smoothly. In terms of the stock market, a conducive political situation will make stock prices rise. Conversely, if the political situation is uncertain, it will create an element of uncertainty in the business. Some research on political stability and corporate strategy is carried out by Armah (2009), Antia et al (2012), Badelea and Fundeanua (2014), Waisman et al (2015), Unsal et al (2016), Cheng (2016), Gama et al (2018). Therefore the third hypothesis in this study:

H3: Political Stability directly affects Corporate Strategy.

METHODS OF RESEARCH

The population in this study is a manufacturing company listed in Indonesia Stock Exchange in 2012-2016. However, because this study looks at changes in corporate strategy involved in Political Stability, this study uses a proportional method in determining the sample.

For Political Stability (PS) variables, we rely on indexes provided by WGI World Bank. Stability is a condition of a system whose components tend to be in or back to a stable relationship (Jack et al., 1989; Munaqosyah, 2006). Political Stability Measurement using index ranges from -2.5 to 2.5 higher values represents a more stable political situation.

For variable Corporate Strategy (CS) researcher use method in research of Balsam et al (2011); Chang et al (2015); Wibowo et.al (2017) used to measure product strategy with Sales / CoGS Ratio is the ratio of net sales to cost of goods sold or cost of sales. Companies that implement cost leadership strategies try to minimize cost of goods sold compared to companies that implement product differentiation strategy.

The intervening variable is the interrupt variable located between the dependent variable and the independent variable (Sugiyono, 2007). The purpose of this intervening variable is to examine the direct and indirect effects of independent variables on the dependent variable, then it will be drawn a conclusion whether this intervening variable can strengthen or even weaken the independent influence on the dependent.

Measurement of Economic Growth (EG) in a country / region is usually calculated by a percentage of Gross Domestic Product (GDP). Gross Domestic Product (GDP) is total revenue and total national expenditure on output of goods and services. The purpose of GDP is to summarize economic activity in a particular money value over a period of time (Mankiw, 2007).

The control variable as the independent variable controller can explain the existence of the dependent variable. Use of control variables is to avoid any element of bias research results. So the result of research by using control variable will minimize bias compared with research without using control variable. The control variables used in this research are:

The size of a company is determined by its asset size. The greater the total assets owned by a company, the company is considered to have good prospects in the long term. In addition, companies with a large asset are considered relatively stable and more able to generate profits. The indicator variable to represent the firm's size factor is the total assets owned by the company (Hay et al., 2008). The firm size in this variable will be measured using the natural logarithm of the company’s total assets at the end of the year. This variable is then denoted by SIZE.

ROA is a ratio that measures the ability of firms to generate profits by using the total assets (wealth) owned by the company after adjusted for the costs to fund the asset. This variable is denoted by ROA: Net profit after tax is the company's operating profit derived from the company's principal transactions net of tax; Total assets represent total assets owned by
the company, either current assets, fixed assets, or intangible assets.

Age of the company in this study is the length of life of a company that shows that the company still exist and able to compete in the business world and able to maintain the continuity of its business (Seragih, 2015).

According Syamsudin (2001: 89), the term leverage is usually used to describe the ability of companies to use assets or funds that have fixed costs (fixed cost assets or funds) to increase the level of income (return) for the owner of the company. According to Samani (2008), the proportion of leverage (LEV) is measured by the ratio of total debt to total assets. The proportion of leverage is expressed in percentage.

Company growth is measured by price book value (PBV), which is divided by book value per share.

The method of analysis used in this study is the regression model. The regression model derived from the Ordinary Least Square (OLS) method is a regression model that produces the best linear estimate (BLUE) estimator. Test F (simultaneous) is done by comparing the level of significance F of test results with significance value used in this study. Next Test t (Partial) Testing is done by using significance level 0.05 (α = 5%).

In this study also uses path analysis (path analysis), which is an extension of multiple linear regression analysis. Path analysis is used to test the influence of intervening variables in this study. The results of this path analysis test will also be used to compare which effect is greater between direct and indirect effects, as well as to draw a conclusion as to whether this intervening variable can strengthen or weaken the independent influence on dependents (Ghozali, 2009).

**RESULTS OF STUDY**

In table 1, the average Economic Growth in 2012-2016 is 4.53%, while Political Stability still holds negative value, i.e. -0.43 which means Indonesian political power in 2012-2016 is still relatively weak as WIG indexes are raised, Corporate Strategy manufacturing in cost ratio has an average of 1,153.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Growth</td>
<td>4.18</td>
<td>5.28</td>
<td>4.5302</td>
<td>.42288</td>
</tr>
<tr>
<td>Political Stability</td>
<td>-.55</td>
<td>.29</td>
<td>-.4311</td>
<td>.10516</td>
</tr>
<tr>
<td>Corporate Strategic</td>
<td>-2.14</td>
<td>22.06</td>
<td>1.1537</td>
<td>.96133</td>
</tr>
<tr>
<td>Company Size</td>
<td>11.40</td>
<td>19.75</td>
<td>14.6403</td>
<td>1.81466</td>
</tr>
<tr>
<td>Return on Asset</td>
<td>-20.80</td>
<td>74.84</td>
<td>5.4397</td>
<td>9.10781</td>
</tr>
<tr>
<td>Age</td>
<td>15.00</td>
<td>111.00</td>
<td>36.1491</td>
<td>18.50057</td>
</tr>
<tr>
<td>Leverage</td>
<td>.12</td>
<td>2.88</td>
<td>.5559</td>
<td>.42088</td>
</tr>
<tr>
<td>Company Growth</td>
<td>-.69</td>
<td>9.33</td>
<td>1.5072</td>
<td>1.61915</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Predicted significance</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Size</td>
<td>+</td>
<td>1.016</td>
<td>.310</td>
</tr>
<tr>
<td>Return on Asset</td>
<td>+</td>
<td>6.843</td>
<td>.000</td>
</tr>
<tr>
<td>Age</td>
<td>+</td>
<td>.143</td>
<td>.887</td>
</tr>
<tr>
<td>Leverage</td>
<td>-</td>
<td>-.430</td>
<td>.668</td>
</tr>
<tr>
<td>Company Growth</td>
<td>+</td>
<td>4.553</td>
<td>.000</td>
</tr>
</tbody>
</table>

Based on the value of 5% trust in the table seen ROA variable and Growth of the company (growth) effect on Corporate Strategy. In testing the first hypothesis then here seen the value of R-square from Political Stability variable on Economic Growth has value 0,207 or 20.7% which means 20.7% Political Stability variable can explain in Economic Growth variable but the remaining 79.3% is influenced by other variable. Because many other variables that can affect the economic growth of a country.
Table 3 – Summary Model (Political Stability - Economic Growth)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.455a</td>
<td>.207</td>
<td>.206</td>
<td>.3765</td>
</tr>
</tbody>
</table>

Table 4 – Political Stability - Economic Growth

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>3.741</td>
<td>.067</td>
<td>56.080</td>
</tr>
<tr>
<td>PS</td>
<td>-1.831</td>
<td>.150</td>
<td>-455</td>
<td>-12.175</td>
</tr>
</tbody>
</table>

From the results of hypothesis testing using t test value that the value of significance of 0.000 is smaller than 0.05 with 5% confidence value, it can be said Ho rejected or H1 accepted that Political Stability positively positive to the Economic Growth.

Table 5 – Summary Model (Economic Growth - Corporate Strategy)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.763a</td>
<td>.582</td>
<td>.582</td>
<td>.97086</td>
</tr>
</tbody>
</table>

In testing the second hypothesis then here seen the value of R square from Economic Growth variable on Corporate Strategy has a value of 0.582 or 58.2% which means 58.2% Economic Growth variables can explain in the variable Corporate Strategy but the remaining 41.8% is influenced by other variables. Because in determining the strategy to be taken by the company, the company or management will consider the external factors one of which is the country's economic growth in this case is to see the GDP of Indonesia.

Table 6 – Economic Growth - Corporate Strategy

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>EG</td>
<td>.252</td>
<td>.009</td>
<td>.763</td>
</tr>
</tbody>
</table>

From the results of the second hypothesis testing using t test value that the significance value of 0.000 is smaller than 0.05 with a confidence value of 5%, it can be said Ho rejected or H1 accepted, i.e. Economic Growth positive effect positive to Corporate Strategy.

Table 7 – Summary Model (Political Stability - Corporate Strategy)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Squareb</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.765a</td>
<td>.585</td>
<td>.583</td>
<td>.96882</td>
</tr>
</tbody>
</table>

In testing the third hypothesis, it can be seen that the R square value of Political Stability and Economic Growth variables on Corporate Strategy has a value of 0.585 or 58.5% which means that 58.5% of Political Stability and Economic Growth variables can be explained in Corporate Strategy variable but the remaining 41.5% influenced by other variables. Because in determining the strategy to be taken by the company, the company or management will consider external factors one of them is the economic growth of the country which in this case is to see the GDP of Indonesia, as well as the Political Stability of the country.

Table 8 – Political Stability- Economic Growth - Corporate Strategy

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>PS</td>
<td>.798</td>
<td>.433</td>
<td>.236</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>.328</td>
<td>.042</td>
<td>.394</td>
</tr>
</tbody>
</table>
The direct effect of PS given to CS is 0.236, whereas the indirect effect of PS to EG is the multiplication of beta value of PS to EG with beta value of EG to CS, i.e. -0.347. Then the total effect given by PS to CS is direct influence plus indirect effect that is -0.111. Based on the results of the calculation is known that the value of direct influence of 0.236 and indirect influence of -0.111 which means that the value of direct influence is greater than the value of indirect influence, these results indicate that directly PS has an influence on CS. Then H1 is acceptable.

CONCLUSION

From the tests conducted by the researchers found First, Political Stability has an influence on Economic Growth it supports several studies such as yang dilakukan by Yi feng (1997); Uddin et.al (2017) proves the relationship between politics and economics, so that economic development is dependent or determined by the existing political environment. Secondly, Economic Growth has an influence on Corporate Strategy that supports Augier and Teece (2002); Mike et.al (2008) indicates that in determining the company's strategy the economic factor is an external factor that must be considered by management. Thirdly, Political Stability directly affects Corporate Strategy in line with the research by Kathleen et.al (1988) as well as economic factors; political factors are also taken into consideration in determining the company's strategy.

Companies that want to be successful should be able to develop a plan map to achieve the mission we call a strategy, where Strategy is a plan to achieve success in the competition (Hezron, et al, 2012). Management requires a strategy as a tool to win the competition and maintain the survival of the company. Strategy is a pattern of decisions and specific actions that enable managers to achieve organizational goals (Hill and Jones, 1998).

In an effort to achieve success the role of management is very important. This is closely related to the task and function of using cost management information that includes financial information on costs and revenues as well as nonfinancial information and other key determinants of success for the organization. In determining the strategy that will be applied the company that is considering political and economic risks. This is worth considering because changes in an action or political policy in a country can have a major impact on the country's financial and economic sectors. It cannot be denied that one of the successes of a company cannot be separated from the influence of the political environment. The objectives of politics to formulate public policy include the interests of the business world. Conversely, the business world can support the politics of a country, it can be said that business and politics are two things that are related.

Limitations of this study are measurements used by researchers in measuring corporate strategy and identification of factors, other due to some obstacles in data search. Subsequent research should be broader in the measurement of corporate strategy, and can add several factors that may affect the company's strategy.

REFERENCES

MANAGING LOCAL RESOURCES TO IMPROVE COMMUNITY EMPOWERMENT AND REDUCE POVERTY

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ABSTRACT
This study aims to build a model describing the relationships among local resources management strategy, community empowerment, and poverty alleviation. This is a conceptual paper describing a key role of local resources to improve the skill of local community which lead to reduce poverty. Well managed local resources utilizing technology might increase value added and improve the income of society. It is argued that imperfectly imitable and non-substitutable local resources contribute to society economy improvement, therefore it will have a greater impact on poverty reduction. Theoretical contribution of this study is to enlarge body of knowledge in the field of strategic management. Meanwhile, managerial implications of this study can be applied by small medium enterprises (SME) and stakeholders to manage local resources and solve poverty problems.

KEY WORDS
Local resources, community, empowerment, poverty.

LITERATURE REVIEW

Local Resources Management. The popularity of the resource-based "view" (RBV) of strategic management is manifest in its rapid diffusion throughout the strategy literature...
(Priem and Butler, 2001). This theory has been developed and studies as the basic for managing local resources to generate competitive advantage. To do so, a resource must provide economic value and must be presently scarce, difficult to imitate, non-substitutable, and not readily obtainable in factor markets (Powell, 1992).

Resource-based theory attributes advantage in an industry to a firm's control over bundles of unique material, human, organizational and locational resources and skills that enable unique value-creating strategies (Rindova and Fombrun, 1999). Hence, firms will generate sustained competitive advantage, gain higher profit and better performance.

Community Empowerment. Concepts of empowerment may vary according to the necessity to explore and explain diverse contexts (Eyben et al, 2006). In the field of management studies, concept of empowerment among both management researchers and practitioners has been reviewed thoroughly by some scholars (e.g. Block, 1991; Conger and Kanungo, 1988). Empowerment is defined as a process of enhancing feelings of self-efficacy among organizational members through the identification of conditions that foster powerlessness and through their removal by both formal organizational practices and informal techniques of providing efficacy information (Conger and Kanungo, 1988).

Empowerment is simultaneously a consequence and a process of development at individual or community scales (Rappaport, 1987). Empowerment is both a value orientation for working in the community and a theoretical model for understanding the process and consequence of efforts to exert control and influence over decisions that affect one's life, organizational functioning, and the quality of community life" (Perkins and Zimmerman, 1995). There are four dimensions of empowerment at individual and community scales put forward by Constantino et al (2012) namely psychological, social, economic, and political. Many interpretations of community empowerment are based on understandings of this concept as either as a process or as an outcome (Bernstein et al, 1994). Through the process of empowerment, communities are able to assume power to act effectively to change their lives and environment. The community empowerment process promotes the participation of people, organizations and communities for increased individual and community control, political efficacy, improved quality of life and social justice (Laverack and Wallerstein, 2001).

Poverty. The meaning of poverty may be intuitively obvious, but its measurement is complex (Adams et al, 2004). Poverty means different things to different people. However, common definitions are based on monetary (such as per-capita income) or nonmonetary (such as health or mortality) criteria, although broader approaches have been suggested (Sen, 2001). Poverty is a multi-dimensional concept implying lack of income, lack of resources and deprivation of means of livelihood.

Bradshaw (2007) examines theories of poverty place its origin from individual deficiencies, cultural belief systems that support subcultures in poverty, political-economic distortions, geographical disparities, or cumulative and circumstantial origins. People who live in poor conditions being mainly involved in livestock and agricultural activities, they face many challenges, including a lack of access to the market, inadequate skills, illiteracy, droughts, and financial problems (Ramimi, 2015). To overcome these problems, it requires proper identifications of the poor including their characteristics and survival strategies (Elijah and Ogunlade, 2006).

METHODS OF RESEARCH

The main purpose of this paper is to build a model integrating local resources management, community empowerment, and poverty reduction. Although previous studies has described these constructs (e.g. Narayan, 2002; Tokuda, 2005), but lack of research investigated relationships those three constructs in a comprehensive model. To propose hypotheses of this study, review on literature has been conducted to fulfill requirements to be tested using structural equation modeling.

Measures used in this study employ existing literature. The construct of local resources management is measured using multi-item scales adapted from Hitt et al (2011). The
measures consist of tangible resources (physical evidence, financial resources, and natural resources) and intangible resources (human capital, organizational capital, and relational capital). Measures for community empowerment are based upon the existing literature put forward by Narayan (2002). The measures are divided into four elements of empowerment including access to information, inclusion and participation, accountability, and local organizational capacity. Poverty is measured using monetary (income, purchasing power) and nonmonetary criteria (health, education) adapted from Sen (2001).

DISCUSSION OF RESULTS

Local resources management and community empowerment. Local resources can be utilized as a source of competitive and comparative advantage if they are managed professionally. In doing so, communities in that area are required to improve their capabilities and skills. Hence, community empowerment is viewed as a process rather than as an outcome, which is most consistently determined in the literature. By measuring community empowerment as a process, it is possible to monitor the interaction between capacities, skills and resources at the individual and organizational levels (Laverack and Wallerstein, 2001). Therefore, managing local resources is a very important aspect to empower community.

In line with the above argument, Constantino et al (2012) have assessed four types of scales that facilitated local empowerment included the value of natural resources, rights to trade and manage resources, political organization of communities, and collaboration by stakeholders. They point out that managing natural resources in a positive way might improve community empowerment. In addition, Laverack and Wallernstein (2001) identified factors influencing community empowerment namely participation, leadership, problem assessment, and organizational structure. Lack of community capabilities can affect the failure of community empowerment (Adamson, 2010). His findings identify major barriers to the achievement of community empowerment including issues of community capacity, institutional capacity, organizational cultures and regulatory frameworks. These scholars believe that local resources that are well managed and traded will improve community empowerment. Therefore, it is proposed that “local resources management positively influences community empowerment”.

Community empowerment and poverty reduction. Community empowerment has become a popular topic in many areas and it has been implemented as one of strategies to reduce poverty. Although no one theory explains all instances of poverty, Bradshaw (2007) has examined how community development practices that address the complex and overlapping sources of poverty more effectively reduce poverty compared to programs that address a single theory. In this case, poverty needs to be addressed using approach from various background of study. This is due to poverty is a multifaceted concept which include social, economic, and political elements.

Parallel with the above argument, Ramimi (2015) suggested community empowerment as a solution to poverty reduction. When people become more empower, their capabilities and skills are getting higher, and therefore they tend to achieve better education, health, and economy level. More precisely, community will earn better income and live in enhanced conditions. This is also supported by Narayan (2002) who point out that community empowerment is a useful approach to overcome poverty problems in many countries. Based on these studies, it is proposed that “community empowerment positively influences poverty reduction”.

Local resources management and poverty reduction. Local resources should be utilized and managed in proper, wise and professional ways. The resources include both tangible and intangible assets such as natural resources, human capital, and relational capital. When local resources are well managed, the product can compete in the markets not only in domestic markets but also in global markets. This is in agreement with Collis’ study (1991) that examined the contribution of local resources to global competition in particular and to strategic management in general.
Moreover, Moser (1998) has investigated how asset management affects household poverty and vulnerability. Those assets consisting of tangible and intangible assets will provide benefits to community if they are well managed. Hence, local resources management will impact on economic development which in turn increase income and reduce poverty. Therefore, it is proposed that “local resources management positively influences poverty reduction”.

Based on the above discussion, a proposed model of study can be figured out as below:

CONCLUSION

Poverty is a major problem across country, specifically in developing countries. Academics in all background of study are challenged to provide contributions in reducing poverty. In other words, poverty problems need to be overcome using multi discipline approach. In an attempt to contribute to this issue, this paper suggests some proposed hypotheses to be tested in empirical study based on literature review.

This paper has also discussed the importance of community empowerment for reducing poverty. To become empower, communities need to improve their capabilities and skills through local resources management. They are trained to be more entrepreneurs and well informed to get an access to information and technology. To sum up, managing local resources is a useful approach for empowering community that lead to alleviating poverty.

REFERENCES

THE INFLUENCES OF TRANSFORMATIONAL LEADERSHIP, ORGANIZATIONAL JUSTICE, TRUST, AND ORGANIZATIONAL COMMITMENT TOWARD EMPLOYEE PERFORMANCE

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ABSTRACT
This research testing of the relationship between the influence of the application of transformational leadership, organizational justice, trust, and organizational commitment toward the performance of employees in government organizations in this case study in the Account Representative at Pratama Tax Service Office throughout Malang. The population of this research is Account Representative in the Pratama Tax Service Office throughout Malang, represented by 153 respondents as the sample of this research. The sample used purposive sampling. The results of this research indicate that transformational leadership a significant influence on organizational justice and employee performance but did not a significant influence on organizational trust and commitment. In addition, organizational justice a significant influence on organizational trust and commitment but did not a significant influence on employee performance. Moreover, trust a significant influence on organizational commitment but did not a influence on employee performance. One of the reasons insignificance influence is the inconsistency the application of policies, structural changes and an assessment of the General Performance Index that has been set individually. It is the probability of the low level of trust and organizational commitment in the Pratama Tax Service Office throughout Malang.

KEY WORDS
Transformational leadership, organizational justice, trust, organizational commitment, employee, performance.

In implementing development in various sectors, Indonesia currently prioritizes its funding sources from the taxation sector. The increase in funding from the tax sector which started with tax reforms namely the implementation of a self-assessment system in tax collection in 1983. Then it continues until now.

In 2018, the Ministry of Finance mandate that related Revenue and Expenditure Budget (APBN) in 2018 asked of tax revenue target of 1,618.1 trillion rupiahs. This figure skyrocketed 9.9% compared to 2017 which was set at 1,472.7 trillion rupiahs. From the tax revenue, the Directorate General of Taxes itself has a mandate of 1,424.0 Trillion rupiahs, while Directorate General of Taxes has 194.1 Trillion rupiahs. Therefore, the Directorate General of Taxes must work extra in pursuit of an additional 145.4 trillion rupiah from the target of tax revenue in 2017. Moreover, In 2017, the realization of new tax revenues was reached 91%. Thus, it takes even harder efforts from the Directorate General of Taxes. Therefore, the tax is an important aspect in the development of the country.

In the concept of modern taxation services which the Account Representative is one of the spearheads of exploring the potential of state revenue in the field of taxation which carries out the task of tax intensification through providing guidance/appeals, consultation, analysis and supervision of taxpayers. To optimize the performance of the Account Representative needed a leader who has a leadership style appropriate a need. So that is something that is absolutely needed by the organization, the right system or leadership style or appropriate to support the achievement of the organization's target of tax revenue. The burden of achieving the Revenue and Expenditure Budget revenue target requires that Directorate General of Taxes institutions have creative and inspiring abilities. However, a good strategy is not enough but the institution need a reliable leader. Because a reliable
leader must not only be skilled in strategizing but also be able to carry out strategies effectively because leaders will produce strategies and at the same time strive to realize that strategy. The leadership style possessed by a leader is his effort in achieving organizational goals by paying attention to the rules, skills, attitudes, and nature of employees. Thus, the leadership style is considered the most effective is a leadership style that can motivate subordinates, can provide a positive attitude from subordinates to the work and organization, and can easily adapt to all situations.

In various problems related to leadership which efforts have been made for better human resource management solutions to encourage employee performance (Boyne, 2010; Uen et al., 2012). There are more related research has been conducted showing the impact of transformational leadership style on employee performance (Boyne, 2010; Brownell, 2010). Leaders who adopt transformational leadership can inspire subordinate trust, loyalty and respect, and motivate them to engage in behavior that is beneficial to the organization and performs unexpectedly (Bass, 1985). All this time, the leadership style that has existed at the Directorate General of Taxation is the style of transactional leadership. This leadership style is carried out by guiding subordinates to achieve the goals that have been determined based on compensation and reward methods. Managers who use transactional can use compensation methods to improve institutional performance, such as by rewarding subordinates who show high performance, by admonishing low-performance and overcoming subordinate behavior with strengthening and punishment mechanisms.

It is expected that the Directorate General of Taxation can incorporate transformational leadership styles in each of its echelon lines. Leaders who adopt transformationally can inspire trust, loyalty, and subordinate trust, and motivate them to engage in behaviors that benefit the organization and appear beyond expectations. Managers who adopt transformationally can inspire subordinates to contribute to the organization in terms of higher ideals and concepts of morality. In other words, their subordinates will show their trust, admiration, loyalty, and respect for their managers and feel that their work and performance are important to the organization. With the implementation of appropriate leadership styles, it is expected that organizational justice (both procedural justice and distributive justice) can increase organizational trust and commitment and ultimately can improve employee performance towards institutions.

Based on the study, this research will test and analyze the influence of the application of transformational leadership, organizational justice, trust, and organizational commitment toward the performance of employees.

LITERATURE REVIEW

The concept of transformational leadership integrates ideas developed in the character, style and contingency approaches. Transformational leadership was originally introduced by Downton (1973) developed by Burns (1978) and further refined by Bass (1985). According to Downton (1973), transformational leadership is characterized by the motivation of mutually beneficial relationships between leaders and followers. Bass (1985) defines transformational leaders as leaders who motivate their followers to appear unexpectedly by activating the need for high levels of followers, encouraging a climate of trust and followers to sacrifice self-interest for the sake of the organization. According to Burns (in Yukl 2010: 290) "Transformational leadership calls for moral values rather than followers in their efforts to increase their awareness of ethical issues and to mobilize their energy and resources to reform institutions”.

It was argued that leaders who transformational leadership has actions that can drive desired outcomes from their followers (Chiang and Jang, 2008). Managers adopting transformational leadership can inspire subordinates to contribute to the organization in terms of higher ideals and the concept of morality. In other words, their subordinates will show their trust, admiration, loyalty, and respect to their managers and feel that their work
and performance are important for the company (Rust et al., 2000). This transformational leadership is truly interpreted as true leadership because this leadership really works towards goals that direct the organization to a goal that was never achieved before (Locke 1997: 59) with the implementation of transformational leadership, subordinates will feel trusted, valued and subordinates will appreciate their leaders more.

Gibson et al. (2012) define that organizational justice as a level where an individual feels treated equally in the organization where he works. Another definition says that organizational justice is a fair perception of a person towards decisions taken by his superiors (Colquitt, LePine, & Wesson, 2009). Organizational justice focuses on the process by which employees feel fair treatment and the process by which these perceptions affect the results of other organizations (Chen McCain et al., 2010; Pillai et al., 1999). When subordinates feel fair treatment when output is higher than input, their work performance is improved.

Colquitt et al. (2009) suggested that organizational justice has four types, namely distributive justice, procedural justice, interpersonal justice, and informational justice. Organizational justice in this research focuses on procedural and distributive justice. Procedural justice refers to the principle of fairness in a standard or method of decision making when good performance or punishment decisions must be made by the manager (Hon and Lu, 2010). Distributive justice refers to subordinates' perceptions of fairness when comparing their contributions (input) and compensation (output), emphasizing perceptions of the consequences of subordinates to the organization (Hon and Lu, 2010; Pillai et al., 1999). Subordinates tend to compare input ratios and results with their peers. When the ratio is even, they feel treated fairly and satisfied. Therefore, their perception of justice depends on what they get.

Trust is defined as the level of a person's belief in the competencies and expectations of others about the possibility that he will act in a fair and ethical manner (Brownell, 2010). It is the mechanism of trust. Therefore, further research is needed to determine how its function in the relationship between superiors and subordinates and to interpret how to gain trust from employees can help supervisors achieve success (Hon and Lu, 2010). Thus, this study considers trust as a level of trust that one party has interaction with other parties.

According to Colquitt et al. (2009) defines organizational commitment as the desire of employees to be a part and member of an organization. Porter et al. (1974) present an indicator of organizational commitment. There are three indicators, namely 1) Strong belief and acceptance of the organization's goals and values (Acceptance). Strong confidence and acceptance of organizational goals and values. So, if the employee feels that the organization's goals can fulfill its wishes, then the employee will give full commitment to the organization. 2) A willingness to exert considerable effort on behalf of the organization (Willingness). Willingness to exert great effort on behalf of the organization. So, employees can feel responsible for building the organization and feel happy with the organization. 3) A strong desire to maintain membership in the organization (Maintain). A strong desire to maintain membership in the organization. So that employees will be willing to be involved in the organization and strengthen their position so that they feel they are needed and valued. This will give a high work commitment to the employee. Organizational commitment in this study is defined as the individual recognition of and willingness to contribute to the values and goals of the organization, which leads to an understanding of identification and intention to remain with the organization.

Performance is a comparison between work performance, namely the comparison between the results of the work and the expected standards (Dessler, 2005). According to this definition, performance is focused on the results of its work. Kane (1993) (in Harahap, 2010) explains, performance as a record of the results of work obtained by certain employees through a process of activity within a certain period of time.

According to Supardi (1999) (in Ginting, 2012), there are seven performance appraisal indicators, namely 1) Quality of work: Quality of work includes accuracy, thoroughness, neatness, carrying out work, using and maintaining work tools, carrying out skills and skills task. 2) Work Quantity: Work quantity includes output and target of work. 3) Knowledge:
Knowledge is the ability of an employee in relation to matters relating to work duties and procedures, the use of work tools and techniques or work skills. 4) Adjustment of work: Adjustment of work in terms of the ability of employees in carrying out their duties outside of work as well as the existence of new tasks and the speed of thinking and acting in the work. 5) Reliability: Reliability is the ability of employees to carry out tasks, for example when carrying out procedures, work rules, initiatives, discipline, and others. 6) Employment relations: Work relationships can be seen from the attitude of employees towards others, the attitude of employees towards the rules, and the willingness to accept changes in work. 7) Occupational safety: Work safety concerns how employees pay attention to work safety.

As stated earlier, transformational leaders pay attention to the demands of their subordinates (Chiang and Jang, 2008). Therefore, the core values of procedural justice will be closer and closer to the transformational leadership than distributive justice. As a result, subordinates can grow with help and guidance from transformational leaders (Bass and Avolio, 1994).

Establishing good exchange relationships between leaders and subordinates through negotiating and continuing benefits and the exchange process can lead to higher leadership efficiency. During negotiations and the exchange process, leaders can confirm with their subordinate problems such as their expected compensation, understand the points of balance of their inputs and outputs, clarify their functional roles, and explain to them the desired working principles (Pillai et al., 1999). After subordinates reach the desired level of performance, managers can give subordinates the benefits they deserve. In conclusion, transformational leaders are more humane and flexible.

Transformational leaders can gain respect and trust from subordinates, inspire subordinates of internal motivation and increase their sense of mission to reach the organization of goals (Bass and Avolio, 1994).

Uen et al. (2012) mention transformational leaders can encourage employee trust and commitment. Transformational leaders can encourage subordinates' willingness to achieve organizational goals (Bass and Avolio, 1994). Therefore, the hypothesis is as follows:

**H1:** Transformational leader has a positive influence related to the perception of subordinates about procedural justice. Transformational leaders can encourage enthusiasm and optimism, thus, making subordinates believe that they can do unexpectedly (Bass and Avolio, 1994). Uen et al. (2012) mention transformational leaders can encourage employee trust and commitment. Transformational leaders can encourage subordinates' willingness to achieve organizational goals (Bass and Avolio, 1994). Therefore, the hypothesis is as follows:

**H2:** Transformational leader has a positive influence on trust. Transformational leaders can encourage subordinates willingness to achieve organizational goals (Bass and Avolio, 1994). Transformational leaders can encourage enthusiasm and optimism, thus, making subordinates believe that they can do unexpectedly (Bass and Avolio, 1994). Therefore, the hypothesis is as follows:

**H3:** Transformational leader has a positive influence on organizational commitment. Pillai et al. (1999) show that subordinate organizational justice has a positive influence on their trust in managers, and their distributive justice may be related to trust. Therefore, this study proposes that the rights and interests of subordinates are primarily distributed by managers and fair distribution has a positive impact on trust. The following predictions are submitted:

**H4:** Transformational leader has a positive influence on performance. According to Pillai et al. (1999), subordinate organizational justice has a positive influence on their trust in managers, and their distributive justice may be related to trust. Thus, this study proposes that the rights and interests of subordinates are mainly distributed by managers and that fair distribution has a positive impact on organization. The following predictions are submitted:

**H5:** The perception of subordinates about organizational justice is positively related to trust. As Pillai et al. (1999) show that subordinate organizational justice has a positive influence on their trust in managers and their distributive justice may be related to trust. This study proposes that the rights and interests of subordinates are primarily distributed by
managers and that fair distribution has a positive impact on performance. The following predictions are submitted:

**H6**: *Subordinate's perception of organizational justice is positively related to organizational commitment*. Many research testing about trust relationships, organizational commitment, and performance. It is significant that trust can lead to organizational commitment and that both organizational trust and commitment have an impact on performance. For example, Chiang and Jang (2008) and Hon and Lu (2010) all find that subordinate managers' trust is positively related to organizational commitment and performance. The following predictions are submitted:

**H7**: *Subordinates' perceptions of organizational justice are positively related to performance*. Some studies have tested trust relationships, organizational commitment, and performance. It is significant that trust can lead to organizational commitment and that both organizational trust and commitment have an impact on performance. For example, Chiang and Jang (2008) and Hon and Lu (2010) all find that subordinate managers' trust is positively related to organizational commitment and performance. The following predictions are submitted:

**H8**: *Subordinate trust has a positive influence on organizational commitment*. Then Kristanto, Harris (2015), stated that organizational justice with organizational commitment as an intervening variable influences employee performance. As such, the following predictions are tested:

**H9**: *Subordinate trust has a positive influence on performance*. The purpose of this study was to investigate the relationship between transformational leadership, organizational justice, trust, and organizational commitment to performance in KPP Account Representatives throughout Malang.

**H10**: *The commitment of subordinate organizations has a positive influence on performance*. The research model is shown in Figure 1.

![Research Model](image)

**Figure 1 – Research Model**

**METHODS OF RESEARCH**

The object in this study is the Account Representative in the KPP environment in Malang. Sampling used by purposive sampling method which is sampling using several criteria. Sampling in this study uses several criteria, namely:

- Employees with a minimum age of 25 years, work as an Account Representative for a minimum or more than 2 years and are in the KPP unit which is investigated for a minimum of 1 year with a service period of at least 4 years at the Directorate General of Taxes;
- The number of samples is not limited to men and women according to the amount available where the sample is taken from the total number of Account Representatives registered in the Pratama KPP in Malang Raya;
Having a minimum class of IIc as the lowest class of requirements to become an Account Representative.

Existing respondents namely Account Representatives throughout the Pratama Tax Service Offices throughout Malang participated in this survey. A total of 167 questionnaires were sent in accordance with the number of Account Representatives working in their respective work units, there were 153 valid questionnaires obtained, taken, and considered sufficient (91.6%). Nearly 60% of respondents were women (n = 871, 56.87%). In terms of education level, the majority group has a bachelor's degree or university (n = 89, 58.17%). The majority of subjects had ages 25 - 35 years (n = 67, 43.80%).

The respondent's profile is as follows:

Table 1 – Profile of Respondents

<table>
<thead>
<tr>
<th>Information</th>
<th>Total</th>
<th>Persentase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 25 year</td>
<td>0</td>
<td>0 %</td>
</tr>
<tr>
<td>25 – 35 year</td>
<td>67</td>
<td>43.80%</td>
</tr>
<tr>
<td>36 – 45 year</td>
<td>48</td>
<td>31.37%</td>
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<tr>
<td>46 – 55 year</td>
<td>31</td>
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<tr>
<td>&gt;55 year</td>
<td>7</td>
<td>4.57%</td>
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<tr>
<td>Total</td>
<td>153</td>
<td>100%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>66</td>
<td>43.13%</td>
</tr>
<tr>
<td>woman</td>
<td>87</td>
<td>56.87%</td>
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<tr>
<td>Total</td>
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</tr>
<tr>
<td>Education</td>
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<tr>
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<tr>
<td>DIPLOMA 1</td>
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<tr>
<td>DIPLOMA 3</td>
<td>38</td>
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<tr>
<td>Undergraduate (S1)</td>
<td>89</td>
<td>58.17%</td>
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<tr>
<td>Postgraduate (S2/S3)</td>
<td>5</td>
<td>3.26%</td>
</tr>
<tr>
<td>Total</td>
<td>153</td>
<td>100%</td>
</tr>
</tbody>
</table>

The questionnaire developed in the Indonesian language. All items were tested using a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). You-De Dai's research, You-yu Dai, Kuan-Yang Chen, Hui-Chun Wu (2013) is used as a reference for designing construction and questions for organizational justice, questions for trust that refer to confidence and performance when making exchanges and transactions and the main organizational commitment scale. All three constructs of organizational commitment are tested, including the concepts of identifying values, willingness to strive, and intentions to remain in an organization (Porter et al., 1974). In other words, an individual's willingness to identify with the values and goals of the organization leads to a sense of identification with the desire to remain in the organization.

This research used SEM method based on Partial Least Square (PLS) which was first developed by Herman Wold (1982) with outer model measurement to determine the validity and reliability of indicators that measure latent variables, and inner model measurements to provide predictions of relationships between variables latent to ensure that the structural model built is accurate using the coefficient of determination (R-Square).

Based on table 2, the value of the outer loadings for each variable that includes transformational leadership, organizational justice, trust, organizational commitment, and performance has values above 0.5. Thus, all indicators used in measuring variables of transformational leadership, organizational justice, trust, organizational commitment, and performance are declared valid.

Based on table 2 above shows the value of cronbach's alpha for all constructs is above 0.6. Thus, all constructs in this research model are transformational leadership variables, organizational justice, trust, organizational commitment and performance that meet reliability requirements.
In this study, it can be seen that all of the constructs in this study have strong enough values. So it can be ascertained that the relationship between latent variables is accurate.

### RESULTS AND DISCUSSION

Based on PLS analysis, this study examines the effect of applying transformational leadership, organizational justice, trust, and organizational commitment, on employee performance, and the results are shown in Table 2.

**Table 2 – Outer and Inner Model Analysis**

<table>
<thead>
<tr>
<th></th>
<th>PE</th>
<th>OJ</th>
<th>T</th>
<th>OC</th>
<th>PE</th>
<th>Cronbach’s Alpha</th>
<th>R Square</th>
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<tr>
<td>TFL</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>TFL1</td>
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<td></td>
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<tr>
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<tr>
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<tr>
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<tr>
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<td></td>
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<td></td>
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</tr>
</tbody>
</table>

H1: Transformational leadership has a positive and significant influence on organizational justice. The influence of transformational leadership on organizational justice shows the calculation of the path coefficient value to 0.569814, t-statistic 10, 31347 and the value of Sig 0.00. These statistical results prove that there is a positive and significant influence between transformational leadership and organizational justice. Therefore, the research hypothesis which states that there is a significant influence between transformational leadership on organizational justice is accepted.

The results of data analysis and hypothesis testing show that transformational leadership has a positive and significant effect on organizational justice. Whether good or bad, the leadership style in the Directorate General of Taxation will have an impact on the level of organizational justice felt by employees. This is in line with tax reform in the field of
human resources that have been proclaimed by the Directorate General of Taxation. According to Gibson et al. (2012), organizational justice as a level where an individual feels treated equally in the organization where he works. Colquitt et al. (2009) suggested that organizational justice has four types, namely distributive justice, procedural justice, interpersonal justice, and informational justice. Organizational justice in this study focuses on procedural and distributive justice. Procedural justice refers to the principle of fairness in a standard or method of decision making when good performance or punishment decisions must be made by the manager (Hon and Lu, 2010). Distributive justice refers to subordinates' perceptions of fairness when comparing their contributions (input) and compensation (output), emphasizing perceptions of the consequences of subordinates to the organization (Hon and Lu, 2010; Pillai et al., 1999). By giving consideration to incorporating a dynamic transformational leadership style in exploring the relationship between superiors and subordinates in government organizations, in this case, the Tax Service Office, is expected to create organizationally equitable conditions, both procedural justice and fair distribution by distribution. This result is corroborated by previous research by Chiang and Jang (2008) which proves that transformational leadership has a positive and significant impact on organizational justice.

Hypothesis | Variable | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | Standard Error (STERR) | T Statistics (|O/STERR|) | Sig P | Conclusion |
---|---|---|---|---|---|---|---|---|
H1 | TFL→OJ | 0.369814 | 0.585717 | 0.055249 | 0.055249 | 10.31347 | 0.00 | ACCEPTED |
H2 | TFL→T | 0.087823 | 0.084103 | 0.092547 | 0.092547 | 0.948948 | 0.34 | REJECT |
H3 | TFL→OC | 0.135842 | 0.145022 | 0.084947 | 0.084947 | 1.599143 | 0.11 | REJECT |
H4 | TFL→PE | 0.24427 | 0.245425 | 0.130082 | 0.130082 | 1.877817 | 0.06 | ACCEPTED |
H5 | OJ→T | 0.605048 | 0.606181 | 0.091344 | 0.091344 | 6.623806 | 0.00 | ACCEPTED |
H6 | OJ→OC | 0.463449 | 0.454173 | 0.115166 | 0.115166 | 4.024185 | 0.00 | ACCEPTED |
H7 | OJ→PE | 0.084947 | 0.090473 | 0.169327 | 0.169327 | 0.501673 | 0.62 | REJECT |
H8 | T→OC | 0.198781 | 0.202595 | 0.096584 | 0.096584 | 2.058123 | 0.04 | ACCEPTED |
H9 | T→PE | 0.037302 | 0.044953 | 0.152178 | 0.152178 | 0.245123 | 0.81 | REJECT |
H10 | OC→PE | 0.337862 | 0.330538 | 0.113128 | 0.113128 | 2.986536 | 0.00 | ACCEPTED |

H2: Transformational leadership has no influence on Trust. From the output path coefficient results in table 5 shows that the effect of transformational leadership on trust shows the calculation of the path coefficient value to 0.087823, t-statistic 0.948948 and the value of Sig 0.34. The results of these statistics prove that there is no statistically proven positive and significant influence between transformational leadership on employee trust. Therefore, the research hypothesis which states that there is a significant influence between transformational leadership on trust is rejected.

The results found that transformational leadership has no influence on trust, this result means that incorporating transformational leadership style does not affect the increased trust of the Directorate General of tax employees in this case the Account Representative to the institution. This is contrary to the opinion of Bass and Avolio (1994) where transformational leaders can encourage enthusiasm and optimism, thus, making subordinates believe that they can do unexpectedly, and Uen et al. (2012) which states that transformational leaders can encourage employee trust and commitment. Many factors that cause this assumption to occur are one of the inconsistencies in the application of policies to assess human resources in achieving high levels of trust in institutions. with the implementation of the existing real estate, the Account Representative level of the existing policy is carried out regional mutations, but the reality is that mutations are carried out between regions. Another example is the application of reward and punishment policies for employees for the performance achieved, the Account Representative having a good performance not getting home base placement awards, this reinforces previous research conducted by Helmi, Avin Fadila and Arisudana, Iman (2009) proving that transformational leadership has no significant effect on trust an.
H3: Transformational leadership has no influence on organizational commitment. The influence of transformational leadership on organizational commitment shows the calculation of the path coefficient value to 0.135842, t-statistic 1.599143 and the value of Sig 0.11. The results of these statistics prove that there is no statistically proven positive and significant influence between transformational leadership on organizational commitment. Therefore, the research hypothesis which states that there is a significant influence between transformational leadership on organizational commitment is rejected.

Based on the results of the analysis found that transformational leadership has no influence on organizational commitment, this result means that incorporating transformational leadership style does not affect the increased commitment in organizing the employees of the Directorate General of taxation in this case the Account Representative to the institution. This is contrary to the research of Bass and Avolio (1994) where transformational leaders can encourage enthusiasm and optimism, thus making subordinates believe that they can do unexpectedly, and Uen et al. (2012) which suggests transformational leaders can encourage employee trust and commitment. Many factors that cause this assumption to occur are the changes in policies related to human resources, for example, patterns of mutation, performance appraisal standards, rewards and penalties applied to employee performance, etc. This happened because of structural changes in the Directorate General of Taxation institutions, these changes created the shallowness of the commitment of its employees to this institution, which led researchers to the conclusion that commitment to a less powerful organization would cause transformational leadership to find no form. When the performance of a leader does not get the best results, it can lead to a lack of commitment to the existing institutions, this reinforces the previous research conducted by Sudianta, David et al. (2017) proving that to Transformational leadership has no significant effect on organizational commitment.

H4: Transformational leadership has a positive and significant influence on performance. From the results of the output path coefficient in table 5 shows that the effect of transformational leadership on performance shows the calculation of the path coefficient to 0.24427, t-statistics 1.877817 and the value of Sig 0.06. These statistical results prove that there is a positive and significant influence between transformational leadership and performance. Therefore, the research hypothesis which states that there is a significant influence between transformational leadership on performance is accepted.

The results of data analysis and hypothesis testing show that transformational leadership has a positive and significant effect on performance where good or bad leadership style within the Directorate General of Taxation will have an impact on the performance produced by employees. In accordance with what has been stated by Bass, 1985 that leaders who adopt transformational leadership can inspire the trust, loyalty and respect of subordinates, and motivate them to engage in behaviors that benefit the organization and do things unexpectedly. With the transformational leadership style that is dynamic in exploring the relationship between superiors and subordinates in government organizations, in this case the Tax Service Office is expected to boost the performance of its employees, in this case, the Account Representative in his duties and responsibilities to secure state revenue in taxes. And strengthened by the implementation of the General Performance Index (IKU) individually, which results in any leader, does not affect the performance of employees. This result is corroborated by previous research conducted by Uen et al. (2012) which proves that transformational leadership has a positive and significant impact on performance.

H5: Organizational Justice has a positive and significant influence on trust. The influence of organizational justice on trust shows the calculation of the path coefficient value to 0.605048, t-statistic 6.623806 and the value of Sig 0.00. This statistical result proves that there is a positive and significant influence between organizational justice and trust. Therefore, the research hypothesis which states that there is a significant influence between organizational justice on trust is accepted. Based on the results of the analysis shows that organizational justice has a positive and significant influence on trust, this result shows the percentage of fairness in the organization will affect the existance of trust in the organization itself. This is consistent with the opinion of Brownell (2010) that trust is defined as a person's
level of confidence in the competencies and expectations of others about the possibility that he will act in a fair and ethical manner. One effort to create a condition in which an institution becomes something that can be trusted by every employee must be preceded by pursuing a fair organizational life. This result is corroborated by previous research conducted by Wu and Wang (2008), Wang et al. (2008) which proves that organizational justice has a positive and significant impact on trust.

H6: Organizational Justice has a positive and significant influence on organizational commitment. From the results of the output path coefficient in table 5 shows that the effect of organizational justice on organizational commitment shows the calculation of the path coefficient to 0.463449, t-statistic 4.024185 and the value of Sig 0.00. These statistical results prove that there is a positive and significant influence between organizational justice and organizational commitment. Therefore, the research hypothesis which states that there is a significant influence between organizational justice on organizational commitment is accepted.

Based on the results of the analysis shows that organizational justice has a positive and significant influence on organizational commitment, these results indicate the percentage of sense of fairness in the organization will affect the commitment in the organization itself. This is consistent with the opinion of Porter et al. (1974) which suggests indicators of organizational commitment. There are three indicators, namely 1) strong belief and acceptance of organizational goals and values. So, if the employee feels that the organization's goals can fulfill its wishes, then the employee will give full commitment to the organization. 2) Willingness to exert great effort on behalf of the organization. So, employees can feel responsible for building the organization and feel happy with the organization. 3) A strong desire to maintain membership in the organization. So that employees will be willing to be involved in the organization and strengthen their position so that they feel they are needed and valued if they feel justice in their organization. This result is corroborated by previous research conducted by Pillai et al. (1999) which proves that organizational justice has a positive and significant impact on organizational commitment.

H7: Organizational Justice has no effect on performance. The influence of organizational justice on performance shows the calculation of the path coefficient value to 0.084947, t-statistic 0.501673 and the value of Sig 0.62. The results of these statistics prove that there is no statistically proven positive and significant influence between organizational justice and performance. Therefore, the research hypothesis which states that there is a significant influence between organizational justice and performance is rejected.

The results of the study found that organizational justice has no effect on performance, this result means that even though there is justice in the organization does not affect the performance improvement of the employees of the Directorate General of taxation in this case the Account Representative to the institution. This is contrary to the opinion of Bass and Avolio (1994) where transformational leaders can encourage enthusiasm and optimism, thus, making subordinates believe that they can do unexpectedly, and Uen et al. (2012 which suggests that transformational leaders can encourage employee trust and commitment. Many factors that cause this assumption to occur include one of the inconsistencies in the application of human resource assessment policies in achieving performance that weakens employee performance. This results in a continuing feeling of injustice. whoever the leader makes the employee do not perform well. For example in the implementation of the mutation pattern that has been proclaimed, not followed by the implementation of the existing real estate, the Account Representative level of the existing policy is carried out regional mutations, but the reality is that mutations are carried out between regions. Another example is, the application of a reward and punishment policy for employees for the performance achieved, the Account Representative who has a good performance does not get a home base placement award, this strengthens previous research conducted by Wang, Ximyan et al. (2010) prove that organizational justice has no significant effect on performance.

H8: Trust has a positive and significant influence on organizational commitment. From the results of the output path coefficient in table 5 shows that the influence between trust in organizational commitment shows the calculation of the path coefficient to 0.198781, t-
statistic 2.058123 and the value of Sig 0.04. These statistical results prove that there is a positive and significant influence between trust and organizational commitment. Therefore, the research hypothesis which states that there is a significant influence between trust in organizational commitment is accepted.

The results of the analysis show that trust has a positive and significant influence on organizational commitment. It can be explained that the higher the trust of all employees will affect the level of commitment given by the employee to the institution. This is consistent with the opinion of Brownell (2010) that trust is defined as a person's level of confidence in the competencies and expectations of others about the possibility that he will act in a fair and ethical manner. Many studies have examined trust relationships, organizational commitment, and performance. It is significant that trust can lead to organizational commitment and that both organizational trust and commitment have an impact on performance. For example, Chiang and Jang (2008) and Hon and Lu (2010) all find that the trust of subordinate managers is positively related to organizational commitment.

H9: Trust has no influence on Performance. The effect of trust on performance shows the calculation of path coefficient value to 0.037302, t-statistic 0.245123 and Sig value 0.81. The results of this statistic prove that there is no statistically positive and significant influence between trust and performance. Therefore, the research hypothesis which states that there is a significant influence between trusts in performance is rejected.

Based on the results of the analysis found that trust does not affect performance, this result means that the existence of a high level of trust does not affect the performance improvement of the employees of the Directorate General of Taxes, in this case, the Account Representative to the institution. This is contrary to the research of Chiang and Jang (2008) and Hon and Lu (2010) all find that subordinate managers’ trust is positively related to organizational commitment and performance. There are many factors that cause this assumption to occur, one of which is the inconsistency in the application of human resource assessment policies in achieving its performance to weaken employee performance. This results in a feeling of mistrust that continues to happen to whoever the leader is, making the employee not perform well. For example, in the implementation of a policy of reward and punishment for employees for the performance achieved, giving incentives to employees who perform well with certain standards, but for reasons of an unwillingness of the budget, the policy is not implemented, and this happens repeatedly. This reinforces previous research conducted by Jennifer Louise Lacewell (2015) proving that trust does not have a significant effect on performance.

H10: Organizational Commitment has a Positive and Significant influence on Performance. From the output path coefficient results in table 5 shows that the effect of organizational commitment on performance shows the calculation of the path coefficient to 0.198781, t-statistic 2.058123 and the value of Sig 0.04. These statistical results prove that there is a positive and significant influence between organizational commitment and performance. Therefore, the research hypothesis which states that there is a significant influence between organizational commitment to performance is accepted.

Based on the results of the analysis shows that organizational commitment has a positive and significant influence on performance. So, the higher the commitment of all employees in organizing to the institution of the Directorate General of Tax will affect the performance of the performance given by the employees to the institution. To optimize the performance of employees of the Directorate General of Taxes, in this case, the Account Representative in collecting state revenue in the field of taxation, a strong commitment from each line is needed to the burden and responsibility of the Directorate General of Taxes. In line with Kristanto’s research, Harris (2015), arguing organizational justice with organizational commitment as an intervening variable influences employee performance. Based on the results of the analysis showed that transformational leadership which is moderated by organizational justice variables, organizational trust and commitment has a positive and significant effect on the performance of employees in the Directorate General of taxation in this case the Account Representatives in the Primary KPP throughout Malang. Although individually, among the variables that exist, there are those that do not have a positive and
significant effect, namely transformational leadership does not affect trust, transformational leadership does not affect organizational commitment. This means that incorporating transformational leadership styles on each line can inspire trust, loyalty, and subordinate trust, and motivate them to engage in behaviors that benefit the organization and appear beyond expectations.

CONCLUSION

The Account Representative which is the backbone of the majority of state revenues has a heavy workload. A pattern of employee mutations that are not on target even though they have high wages. From the results of the investigation related to more dynamic transformational leadership, it can affect the perception and performance of the Account Representative requiring further exploration. The first contribution to this study is to give consideration to incorporating a dynamic transformational leadership style in exploring the relationship between superiors and subordinates in government organizations, in this case, the Tax Service Office. Moreover, it has been proven empirically that transformational leadership is able to improve employee performance.

Secondly, the Directorate General of Taxation institution, in this case, Pratama KPP was found that transformational leadership cannot increase the trust of the employees in this case the Account Representatives because accustomed to using transactional can use compensation methods to improve institutional performance, such as by giving awards to subordinates who show high performance by admonishing low-performance, and overcoming subordinate behavior with reinforcement and punishment mechanisms. So that when the leadership style is changed to become more moderate, distrust of institutions appears. Then it needs to be formulated the right way to incorporate new methods or styles in leadership. Likewise, the commitment to the organization cannot be increased if the changed leadership style becomes transformational. Fourth, it turns out that justice in an organization cannot improve employee performance. In line with this, that trust also has no effect on performance.

In the large tasks and responsibilities of an Account Representative in relation to state revenue, the Directorate General of Taxes can begin to think about adopting transformational leadership styles alternately with the transactional leadership style when directing employees, so as to inspire superior performance. For example, when using transformational leadership and giving gifts, employers can consider praising subordinates publicly and offering promotions instead of money-related awards such as when TSL is applied. Conversely, when there are penalties, employers must avoid direct rectification, which may hurt the dignity of employees. In this case, subordinates, when reprimanded, are not depressed and get pleasure when given a gift and can easily feel that the boss has a fair attitude towards each subordinate. Therefore, boss settings can be generated. Thus, transformational leadership and transactional leadership style can be used to balance each other.

REFERENCES

THE AFFECTING FACTORS OF COMMUNITY PARTICIPATION IN RURAL DEVELOPMENT PLANNING: A CASE OF KERTAWANGI VILLAGE OF BANDUNG BARAT DISTRICT

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ABSTRACT
This article aims to describe the affecting factors of community participation in rural development planning, low community participation as the problem of the rural development planning in Kertawangi Village. The method used is the descriptive qualitative method, data collection techniques used were observation, interview and documentation. The technique of data analysis is the inductive basis; data reduction, data presentation, data interpretation and conclusion. The result shows that the main affecting factor of community participation in Kertawangi village's development planning is the lack of community knowledge on rural development planning process. Other affecting factors are the lack of openness of the village government apparatus to accept community participation in the process of rural development planning, lack of regulatory support that briefly encourage all community members to participate in rural development planning, as well as there still paternalistic, patriarchy and primordialism that still strongly adopted by the community.

KEY WORDS
Community, participation, planning, villages.

Community participation in rural development planning is raising as an important issues after the implementation of Law Number 6 of 2014 on Villages, the central government not only gives the village government a local-authority to formulate rural development planning based on their potentials and characters, but also changes the approaches of rural planning from centralized planning to participatory planning. This change requires community participation in whole process. The community is placed not only as the object of the development but also as the subject of the development who has the rights to join other stakeholders in formulating the rural development planning based on the mutual interests.

There are at least 3 (three) reasons why rural participatory development planning is important. First, in the conceptual level, the participatory planning development is considered as a new approach (Ray, 2000 and Rietbergen, 2001, in Naku & Afrane, 2013. p.185) that conceptually criticized the centralized development planning as an old approach that is no longer matches with the recent local-autonomy that implemented widely across the nation. Second, in the practical level, the centralized development planning has experienced many failures (Eko and Krisdyatmiko, 2006), thus raising the idea of replacing the old development planning approach with the new development planning approaches as the answer to overcome those problems. Third, returning the original authority of the village community as a legal community which presenting and involving the community in rural development planning process is a must and a form of government responsibility to encourage community to participate in rural development.

The participatory development planning approach in Indonesian context is implemented through rural deliberative planning forum that bring the community and other stakeholders to jointly identify, compile and decide rural development plans based on mutual understanding and interests. Based on Law Number 6 of 2014 on Villages, the rural deliberative planning forum divide into 2 (two) steps, first Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa). The aims of the both forum as a means for community to deliver and to channel their aspirations.
The conceptual purpose of the forums is to join all the stakeholders together equally to make decision of rural planning based on mutual interests. But, in facts it is not in accordance with the conceptual purposes. Rural development planning actually raises the dominant role of village government and directly resulted declining of community participation. The village development program is trapped into a ceremonial forum which not only failed to create a dialogical participatory forum, but also failed to bring aspiration of the community demands into rural planning program (Karyana, 2011: 140-156), the accommodation of aspirations that becomes rural policy through Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa) is still minimal (Putri, et al ..2015: 1-11).

Another problem arising is lack of community understanding for the process of the rural development planning, the community did not know what should to do during the rural development planning process, consequently during the Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa), village government dominates the whole process, the village development policy produced did not reflect the needs and demands of the community, it more tends to impose the interests of the village government.

In line with the above problems, the empirical practice of rural development planning in Kertawangi village shows similar symptoms, such as low community participation in rural development planning that indicated by many people who do not know the process of village development planning, the present of the community in both Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa) does not represent all elements of the community. Last but not least, during Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa), the community member who attended was passive and did not understand what role/aspiration should be given, so that the community did not provide their contribution to rural development planning properly.

Based on the problems above, it is necessary to conduct a study that analyze the factors that influence community participation in the rural development planning process, therefore this article aims to further both describe and analyze the affecting factors of community participation in Kertawangi Village’s development planning.

**METHODS OF THE RESEARCH**

To reveal more deeply about the affecting factors of rural development in Kertawangi village’s development planning uses descriptive analysis methods. As disclosed by Sugiyono (2010: 8) which states that qualitative research methods are often referred to as naturalistic research methods because the research is carried out in natural conditions, so that the existing reality can be disclosed as what it is without being influenced by the existence of the researchers that could possible to reduce or influence the data.

In connection with the data revealed in this study is a narrative description data from various informants as well as from other data sources, this is in line with what is expressed by Garna (1999: 32) which states that a qualitative approach is oriented to understanding various symptoms that do not always require quantification, so that the results of using a qualitative approach will produce a description of the existing problems.

Sources of data in this study are informants and documentation from various sources, where there are two types of data sources, namely primary data sources and secondary data sources (Riduan, 2007: 24). Both primary data sources and secondary data sources are sourced from relevant stakeholders involved in rural development planning, focusing on community participation.

The research instrument is a tool to collect data in research. In this study the research instrument is the researcher himself (human instrument). Data collection techniques conducted in this study consists of observation, interviews (in-depth interviews) and documentation. Data analysis in this study is the activity of compiling data, namely compiling and sorting data into a particular category so that it can be interpreted and given the
meaning, which is done through 3 (three) stages as revealed by Creswell (1994: 153) namely data reduction, data presentation and conclusion or verification.

RESULTS AND DISCUSSION

Participatory planning is the planning that involves the community in achieving its goals, in line with the above understanding Wicaksono and Sugiaro (Wijaya, 2003: 16) says that participatory planning is an effort carried out by the community with the aim of solving problems based on the needs and ability of the community itself.

From those understanding, it is clear that participatory planning places the community on an important position, the community is a terminology used as a source of what problems must be solved and also as a subject to determine policy on the problem based on community interests. Furthermore, participatory planning is not only present the community physically, but also should able to present community as a capital that should give contributions, this is in line with the understanding from Samsura (2003: 2) that at least there are 4 (four) point of the planning to be called into participatory planning, the criteria as follows:

- There must be the involvement of all actors or stakeholders;
- There must be an effort to realize a community institution that has a legitimate nature;
- There must be a deliberation process or consultation process which will result in a collective agreement;
- There must be an effort to empower the community through learning activities as a manifestation of the democratization process.

From the above understanding, it is clear that presenting the community as a form of participation in development planning is a must and should be supported by all stakeholders in order to make the development meet its goals. Related to the participatory planning, community role main position who has the authority not only to determine their needed, but also to make a decision by own to meet their needed.

Participation is an involvement of community in the development both in the planning process and in the implementation process (Adisasmita, 2006:p.38). Meanwhile Pusic (Adi, 2001: 206-207) states that developments plan without participation or community involvement will become planning on paper. Therefore participation has reciprocity between two actors or more, participation is a feed-forward information and feedback information (Carter in Arimbi, 1993:1).

From the above understanding, it can be understood that participation is a process that intertwined in a two-way and reciprocal, related to village development planning, two-way relationship can be interpreted as a reciprocal relationship between the village government and the community.

There are many aspects affecting community participation, Slamets (Nurbaiti and Bambang, 2017: 224-228) says that community participation is influenced by knowledge and expertise, community work, education level and illiteracy, gender, belief in certain cultures. In line with the understanding above Angell (Ishak, et al., 2016: 70-71) states that participation that grows in society is influenced by awareness factors, factors of age, sex, education, occupation, length of stay, government support and equipment / facilities support. Meanwhile Kessa (2015: 14) says that factors affecting community participation consist of psychological factors, economic factors and cultural factors. In this article the factors that become the focus of the study are regulatory factors, community factors, village government factors and culture factors. The explanations of the affecting factors as follows:

Conceptually, the role of the community in rural development is both as the object as well as the subject of rural development. In a participatory planning that implemented in Kertawangi village should also put the village government and the community into the same position, both have the same rights in finding, formulating and identifying problems of rural development. But in facts, it is not in line with the conceptual framework. One of the reason is because of the Law Number 6 of 2014 on Villages does not accommodate the conceptual understanding above.
The conceptual of equal rights between village government and the community in rural development planning translated differently in The Law Number 6 of 2014 on Villages, the community in the Law Number 6 of 2014 on Villages is positioned as a "complement" and not a subject that has the same rights as the village government, this is stated in Article 80 paragraph 1 as "Village Development Planning is organized by including the village community".

The terminology of "including" in practice is defined as the authority of development planning to be entirely in the hands of the village government, while the community is the "included" part of the village development planning. The village government has power over rural development planning where the community is an element in it.

This understanding ultimately gives the assumption that rural development is the desire of the village government along with all its interests and the position of the community is only used as a justification for the policy made by the village government, the community not placed as an object in rural planning development.

Another thing that has become a weakness in Law Number 6 of 2014 on Villages is that there are restrictions on the community who have the right to attend and participate in the village development planning forum, the limitation of the presence of the community has directly limited the community member to participate and to be involved in the rural development planning, ideally the right for each member of the community can be presented in the rural development planning forum and being participated according to their respective abilities.

Rural participatory development planning requires community participation to succeed. The results of the study show that there are many inhibiting factors originating from the community, these factors can be explained as follows:

Kertawangi Village just like other villages in West Bandung Regency that still faced with a low level of community education, some of the community are still elementary school graduates, even among those who are still illiterate. Even so, the majority of people are high school graduates.

Associated with community participation in rural development planning, education level influences the way people articulate issues or problems of rural development that are limited to basic issues such as infrastructure issues, poverty alleviation and job creation. Issues such as empowering women and disabilities people, developing human resources are rarely addressed. This is inseparable from the mindset of the people who still interpret rural development to physical development. Whereas at the level of the structure of rural development planning, both physical development and non-physical development are equally important and can contribute to the success of the rural development.

Livelihood or type of community work influences community participation in rural development planning. People who have works or jobs outside Kertawangi village and bounded to work time from morning to evening have a tendency not to be actively involved in the rural development planning; this is because the community members should take time off from their work if they want to be actively involved in rural development planning. The impact of the community’s work is that in the implementation of development planning forums, both Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa), those who attend the forums are working in Kertawangi Village or people who work outside Kertawangi Village but have flexible time. The facts above show that rural development planning should be carried out flexibly in keeping with the availability of community time.

The poverty in Kertawangi village affects people's participation in rural development planning, the poor are more interested to be involved in the implementation of rural development than being participated in rural development planning, although in the Law Number 6 of 2014 on Villages explicitly to accommodate the poor and women, some of poor community still prefer participating in the implementation of rural development.

They argues that development planning is a process of rural development which does not necessarily mean that their aspirations will be accommodated and the benefits of their involvement would not have a direct impact, whereas in the implementation of development,
the poor will be involved such as being builders in the construction of rural roads and will receive rewards from their participation in the implementation of development. There are many members of the community who have the desire to participate by way of conveying the problems or aspirations that have existed, but they have no way of what should they do, most of community member do not know how they can channel their aspirations, especially regarding issues related to rural development planning. The community claimed that the local government (both provincial government and district government) did not provide socialization or training regarding community involvement in rural development planning, so they did not know to whom their aspirations were conveyed.

The statement was acknowledged by the village government which stated that the village government and the district government did not carry out training activities in the framework of community empowerment related to community participation in rural development planning, even though the village government stated the commitment to conduct socialization and training aimed at increasing public understanding of the rural development issues and encourage community participation to be involved in rural development planning.

It is undeniable that there are some people who have apathy and do not care about rural development planning that is being implemented, those people basically do not have any more concern for rural development. One of the reasons why some of the community are not interested in being involved in rural development planning is because in the past they were actively involved in development planning, but they felt disappointed because their aspirations and needed were not accommodated. This problem has become a concern for the village government to build trust and help the apathetic community to change their mind and attitude to then jointly participate in rural development planning by showing them the output of rural development planning that truly accommodate the interests of the community.

Village government plays an important role in rural development planning; this is based on Law No. 6/2014 on villages which stipulates that the village government is an organization at the village level that is given the authority to make rural development planning.

The authority given is demanding the village government to be able to carry out rural development planning in participatory approaches by involving the community. However, the implementation of rural development planning in Kertawangi Village is not in line with these objectives. The village government has not fully presented the community as part of rural development planning which has the same rights to formulate rural development planning. The above problems are caused by several factors as follows:

Kertawangi village government is still stuck with the old paradigm where the village government is part of the local government (Subdistrict Government) which should submit and obey to the vertical institutions above, including obey the rural programs that comes from local government (Subdistrict Government). The enactment of Law No. 6/2014 on Villages authorizes village government to plan rural development independently and structurally is no longer as a vertical part of local government (Subdistrict Government).

The old paradigm is still inherent in the government of Kertawangi village, the village apparatus defines rural development planning as part of the task of the village government vertically, development planning is carried out on the granting of authority from the local government (Subdistrict Government). In the process, all forms of rural development planning activities and program should be in accordance with the wishes and guidelines of the local government (Subdistrict Government).

This has bad implications for the village government which prioritizes and accommodates local government interests first compared to the community. The village government forgets the role of the community in the participatory development planning which community has the rights to get involved equally and determine the policy of rural development planning.

There needs to be an effort to change the mindset of the village government to accept a new paradigm in rural development planning in which the village government should accept that society is presented not only as a subject, but also as an object of rural development
The lack capacity of the village government apparatus in rural development planning is evidenced by the limited number of village apparatus, amounting to 12 people and the majority of them are high school graduates (Kertawangi Office, 2018). In the context of rural development planning, not all village officials take part in the rural development planning process.

This has implications for the quality of the process of rural development planning as expected, for example where in the stages of rural development planning such as the process of identifying problems in the community is carried out formally by the village apparatus. In practice the village apparatus does not know what is called a problem, how the problem is identified / formulated and what methods are used to determine the problem. Their misunderstanding is due to the level of education and also not all village apparatus take part in training of rural development planning.

Another thing as the implication of the limited capacity of the village government apparatus is the lack of understanding regarding community participation and what benefits will be gained if the community is widely involved in the process of rural development planning process.

The mindset of the Kertawangi village apparatus is still limited to understanding the presence of the community as the subject of development in which many rural development problems come from the community such as high levels of poverty, low levels of public health and so on. Understanding the village apparatus has not yet arrived at a position that places the community as a civilian capital that has the rights and able to encourage the achievement of success in rural development planning.

Other factors that influence community participation in rural development planning are the lack of common thought and willingness of the village government, the village head, village apparatus and village consultative body (BPD) have no same thought in making the rural development planning as a forum that not only brings village government together with the community but also provides opportunity to the community to voice aspirations, identify problems and participate in deciding rural development planning policy.

There is still an ego from the Kertawangi village government that development planning is the authority of the village government and makes the community only as a source of information on the problems of existing rural development. The community is placed in the position as the object of rural development to explore, identify and formulate problems of rural development, not placed the community as subjects who have the right to formulate and determine village development policies, the community has not been able to be placed as an actor in rural development that determines and drives the direction of rural development.

A commitment from the village government is needed to realize the community as a civilian capital that acts as a subject as well as an object in rural development. This will be built through the consistency of the village government opening up and continuing to encourage the community to always participate in rural development planning and make rural development a shared responsibility.

One of the tasks of the village government is community empowerment, including empowerment in the rural development planning process, so that the community has the responsibility to be involved in it, but in Kertawangi village there is few community empowerment programs from the village government specifically aimed at encouraging community to participate in rural development planning. The implication resulted the community did not knowing either the process of channeling community aspirations or the process of community participation in rural development planning.

Some community member in Kertawangi village do not know in what way and to whom and what process to channel their aspirations, this is because there is no socialization to the community about the process. Then also for the community member who participated in the rural development planning that was carried out also did not know the stages of the rural development planning and what role should be given, it is due to the lack of socialization and training activities regarding the process and techniques for the rural development planning.
The rights of the community to participate in rural development planning should be followed by the willingness of the village government to provide access for the community to rural development planning documents. This is a needed, so that the community understands the substance inside of the rural development planning documents and will contributes in determining the material or substance of the rural development planning documents.

But the practice in Kertawangi village, community have difficulty accessing rural development planning documents, Kertawangi village government does not fully provide the rural development planning documents that are being implemented, even though the village government opens documents to the community, only certain member of community that have access to rural development planning documents.

Another thing in the difficulty of community accessibility to rural development planning documents is that in the process of development planning forums, both Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa), rural development planning documents is given at the beginning of the forum, not in the previous day, so that in the ongoing forum community concentration was divided into two, first listening to the material presented by the village government and the second reading the rural development planning documents provided.

This condition of course not ideal for rural development planning based on participatory approaches where the community before the development planning forum both Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa) should be given the rural planning documents.

Culture according to Johnston et al (in Stephenson, 2008: 129) is a dynamic process involves the community that can be based on certain social processes (Thrift and Whatmore in Stephenson, 2008: 129), in relation to rural development planning, culture will not only form the characteristics and the output of the development, but also will determine the pattern of community participation.

In the process of rural development planning, cultural constraints are often far more important than the values of individual interests. (Mill in Guiso et al., 2006, p. 26), this understanding is in line with the existing conditions in Kertawangi Village where culture is also becoming influencing factors in rural development planning, including contributing to community participation. Although culture has a more positive impact on rural development planning, it is also has a negative impact, the culture that is adopted by the people in Kertawangi village and become affecting factors of community in rural development planning can explain as follows:

Kertawangi as a village with majority of Sundanese ethnicity puts the village head or "kuwu" as a respected leader both in the social context and in the village administration context, this position placed head village superior over the community. So that, in process of rural development planning if there is a critical attitude from the member of the community or even contradicts toughts towards the village head, it can be interpreted as an attitude of disrespect of the village head, so it is not surprising that in Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa) the community were passive and just approving what was conveyed by the village head, this is due to reluctance, respect for the leader and the older people is a principle in the life of the community.

Those manner is inseparable from the paternalistic culture that is still closely adopted by the community in Kertawangi Village, where the village head as a leader is not only central to the decision-making process, but also regarded as omniscient and omnipotent (Erlangga, et al. P: 177).

The paternalistic also influences the identification and formulation of rural development issues centered on the interests of the village head where the village head places his position to determine and manage what development planning issues is suitable for development planning. Whereas in the context of rural development planning, one of the principle of community participation is the involving of the community and shown by involving community in the process of formulating issues and identifying problems (Adi, 2007: 27). The
community has the right to determine which issues are eligible to be identified/assessed and made a decision into development planning policy.

The paternalistic in Kertawangi village becomes dilemma for community whose lives are still communalistic and homogeneous, on the one hand the paternalistic can become capital for village heads who have the capability as catalysts for accelerating rural development to ask the community together to advance their village through better development, but in practice this paternalistic is used by the village head for personal matters and interests by dominating development issues and problems, so that the development planning is more reflective of the wishes and interests of the village head rather than reflecting the aspirations and demands of the community.

Other culture that is still adopted by the community and has negative implications for community participation in rural development planning is a patriarchal that considers men to be superior compared to women (Sakina & Siti A.2017: 72). This proof by only a few women in Kertawangi village who became community leaders or person who had influence (Sesepuh Desa). The consequences of few female leaders in Kertawangi Village resulted a lack of representation of women who attending Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa), the forum is dominated by the men.

In the process of Village Consultation Forum (Musyawarah Desa) and Village Development Planning Forum (Musrembang Desa) the role of women leaders who attended those forum did not contribute too much both in the delivery/bargaining the ideas and influencing power in decision making of rural planning policy, they presents was passive, some of them only responded to what was conveyed by village heads and village government apparatus without making complain.

On the one hand, women's representation is very important in rural development planning because both the quantity of the large women population in village and the many existing problems that require the intervention of women. Even the patriarchal still stongly adopted by the community in Kertawangi Village and cannot be eliminated in a short time, it is needed to have a joint commitment among all stakeholders to provide equal rights and obligations for both men and women to be equally responsible and involved in rural development planning.

Other culture affecting community participation in Kertawangi village's development planning is primordialism in which the attitude of a person or community determined by the bonds they have from birth such as race and customs (Maryati, et al: 2014: 17). The primordialism in the rural development planning is shown by less accommodating the issues/problems and the presence of newcomers (outsiders/ or people who newly live in the village) in the village development planning process. This implies the attitude of apathetic from the newcomers towards rural development planning because from the beginning they feel that their aspirations are not accommodated and not directly involved to attending the rural development planning forums, so that the sense of belonging and the sense the of responsibility to participate in development planning among newcomers is still minimal.

CONCLUSION

This article can be concludes that there are 4 (four) affecting factors of community participation in Kertawangi Village’s development planning, namely: First, the regulatory factors which the community present in rural development planning forum (Musyawarah Desa and Musrembang Desa) is limited, only few of them is allowed to attend the forum. Second, the community’s internal factors which there are still many people who have a low education, as well as lack of knowledge on rural development planning process. Third, the village government factors, which the apparatus has not fully opened up to community participation in rural development planning. Fourth, cultural factors which the paternalistic, patriarchy and primordialism places the community inferior to the village government.
REFERENCES

23. Undang-Undang Republik Indonesia Nomor 6 Tahun 2014 Tentang Desa.
ABSTRACT
Resistance is directly carried out by victims by fighting directly against the perpetrators of violence, such as replying to acts committed by the perpetrator or reporting the perpetrators of violence to the authorities. Peaceful means carried out by the victims are without using a punitive path that focuses on repressive nature, namely by divorcing as a solution to the household problem. The way to divorce is considered effective because the victim no longer feels pain; the perpetrator is also not in prison. The role of the PPA Lamongan District Police Unit in resolving cases of domestic violence that occurred in Lamongan Regency is urgently needed, because the police are the spearhead when people need protection.

KEY WORDS
Family abuse, physical violence, Lamongan Regency, public relations.

Family abuse (known as KDRT in Indonesia) is the manifestation of gender inequity in the form of violence. The violence could be varies ranging from physical, mental, sexual and economic neglecting. Most of the physical abuse uses sharpened or solid stuff that would leave mark on its victim. Meanwhile, the mental health would be deceased by ruining the life of its victim. Another abuse, which is sexual, would not hesitate to commit raping. According to the data of women and child protection council, komnasperempuan.go.id, the number of KDRT, in personal affection of March 7th 2016, is 69% or 11,207 cases. The physical violence dominates the number by 38% or 4,304. it is followed by sexual harassment by 30% or 3,325 cases, the mental abuse possesses 23% or 2,607 cases and the economic arousal has 9% or 971 cases. Moreover, the previous study conducted by Arfa states that the number of KDRT is increasing based on Jambi Police Office data of 2010-2013, the factors are varies from economic, Affair, and behaviour factor (Majalah hukum forum akademika vol,25).

Family abuse is a violation toward law and human right. In order to intercept and prevent the increasing number of family abuse, it is very important to increase the awareness of law toward women about their equity in family. If the victim is continuously received the physical abuse, they must report about the abuse quickly. Eventually, the attacker will have deterrent outcome not to repeat their commit.

METHODS OF RESEARCH
This study uses a qualitative method. Qualitative methods are used to get in-depth data, a data that contains meaning. (Sugiyono, 2015). Sources used are primary data sources which are data sources that directly provide data to data collectors, while secondary data sources are data sources that do not directly provide data to data collectors such as documents (Sugiyono, 2015). In this study, researchers used primary data sources. The criteria for primary data sources to be taken by researchers are informants who have been victims of physical violence in domestic violence. In addition, the researchers will collect data from the Lamongan District Police PPA unit which specifically handles domestic violence related problems. For data collection, qualitative research can be done in various ways, various sources and various settings. Data collection techniques can be done in four ways including observation (observation), interview (interview), questionnaire (questionnaire), documentation or a combination of the four (Sugiyono, 2015).
DISCUSSION OF RESULTS

The self resistance performed by the victim in family abuse could be used to:

- Minimize and put an end to the abuse. By performing the resistance, it will demonstrate that the women could stand against the domination of men in the family. The women will be notorious, thus the abuse will be intercepted or even to end it for once;
- Aware the attacker who are mainly men. In other way, by standing against the abuse, the victims would have a chance to prove to the world that after violations stomped to them, they still possessed courage. Eventually, the men will think twice before they commit another attack;
- Inspire other women. To inspire the women not to stay quiet and surrender when getting abused. Reporting the abuse to the officers, sometime, is seen as bad options as they have no gut to do so. But, they could use another way in order to intercept and minimize the abuse.

For the police department, one of preventive way to intercept the abuse is by holding socialisation. The head of PPA unit of Lamongan stated that their team commence an illumination whereas the participation are coming from sub-districts representation such as head sub-district’s wife, PKK, Muslimat, and Aisiyah. Technically, the awareness of family abuse among society must be increasing as the socialisation is already held across the region. Unfortunately, there is unmatched between the number of KDRT and case report from police. The PPA unit has no the data because of the small numbers of the report. Meanwhile, in this research, the study successfully gathered 13 informants from Paciran sub districts who are family abuse’s victims. According to the Religion Court, the divorces that are caused by abuses exceed dozens each year. Here are the data of divorce that caused by physical abuse, in 2014 it states 2.03%. In 2015, it increases 0.02 into 2.5%. It is concluded that the divorce type is increasing from 2014 to 2015. It is recorded that there are 52 cases in 2014 and 67 cases in 2015. The data is clashed with the one gathered by PPA unit as the number of reports to them is little. This unmatched data shows that the victims of family abuses prefer divorce to report the abuse. Therefore, the family abuse campaign must be spread more intense to society. That is why, the awareness will be increasing and the victim will not afraid to report the abuse to police as they already know the procedures from socialisation. The police also has system of procedures, as follow:

- Spreading the socialization throughout each sub-districts. The committee of socialization comes from PPA unit and local resort police officers. By doing illuminations, it is expected for the society to understand of what is family abuse, the law that regulates it, the procedures and etc. this sub-district level of socialization will require each representations of each village. Thus, the introduction of KDRT will be spread in entire breadth of region;
- PPA and KUA collaboration. The collaboration between PPA and KUA (Religion Courts Council) may inform people about the regulation of divorce or how to handle the abuse. Thus, the spouse will think twice before they commit any family abuse in their very own little family;
- Revitalizing the function of Bhabinkamtibnas in each village. The active function of Bhabinkamtibnas which is to prevent such cases and minimize the family abuse loop among society.

CONCLUSION

The resistances performed by the victims could be in a form of direct action by duplicating of what the attacker had done to them, and report the abuse to the officers. Another way to resist this phenomenon is by not using final attempts, which is one of repressive attempt; it is divorce way that is assumed as final option to put an end to the abuse. This repressive way is considered as the best way felt by the family as the victims will
not receive any pain nor the attacker will serve in jail because of the action. The role of Lamongan PPA unit is very fundamental to overcome the family abuse cases as police is the front line when society merely needs such protection from their government. PPA unit still use mediation as their top priority to avoid divorce. But, if the mediation finds no good way, the unit will administrate their documents to the court. The problem arises when the spouse chose not to report their case to PPA that will result with small data that can be gathered by the unit. One of the factors is because the law awareness among society is still low. Most people still have an assumption that such reporting their inner problem to police is a disgrace. Even though, the number of divorce caused by physical abuse is dozens in each year. In contrast, the knowledge of society about their law consequences by performing divorce is very fundamental, the law is stated in article 14 act (c) law number 2 of 2002, it stated that the mandatory of police duty is commencing socialisation to increase people participation, the law awareness and the obedience of society to follow the rule. Thus, the number of family abuse will be easily intercepted. As one of preventive way, the PPA unit uses socialisation and become the informant on its event; the participants will come from each representation of sub-districts.

SUGGESTIONS

To maximise the awareness of family abuse, it is good option for PPA unit of Lamongan resort police to socialise to each sub districts. It is expected for each village would send their delegations to the socialisation. Surely, the unit must cooperate with local Bhabinkamtibnas as escort form each village. Moreover, the unit may cooperate with local religion court council to inform people about KDRT. Thus, the spouse that will do marriage already had an education about the dangerous will of family abuse. The spouse will think twice before they commit any kind of family abuse especially the physical abuse that may threaten the live of its victim. The sector police of each sub district may mandate their Bhabinkamtibnas personnel to spread the awareness as well. The challenge occurs to Bhabinkamtibnas, them must able to pursue and convince people that police officers will protect and guide them. Eventually, the society will not see reporting the abuse as disgrace to family but law procedures instead.

REFERENCES

THE REFORMULATION OF PUBLIC PROTECTION LAW

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ABSTRACT
In order to maintain and implement the Kamtibmas (The Order of Public Protection) in this dynamical society movement, there must be a strategy to intercept crime within several attempts to minimize them. This study uses descriptive qualitative to analyze the data. The result of study states that: a) in practical, there are several factors that affect regulation of public protection role, one of them is the lawless situation for Linmas (Public Protection) as part of Kamtrantibnas personnel and the analysis of social empowerment to help intercepting the crimes; b) The regulation that order about the role of public protection to intercept crimes in Klojen sub-district, there are three phases which are illumination to the officers whereas the importance of public protector to intercept crimes among society, increasing the public protector personnel capacity and granting their authority; and c) several factors and obstacles that affect the reformulation of public protection regulation to help the Polri’s duty intercepting crimes are: the limited budget provided by City government which is monthly Rp. 150,000 for each personnel, limited personnel option which still uses Karang Taruna youth participation as its finest personnel, this Bhabinkamtibnas assist is not enough because of another activity such as Pam, revising the procedures of local safeguarding by adding Linmas authority which most hamlet tend not to do as well.

KEY WORDS
Public protection, reformulation, intercept crimes, public service.

Geographically and economically, Klojen sub-district possessed a very strategically position. Geographically, the sub district is in the middle of other four sub district jurisdiction which is Lowokwaru, Sukun, Kedungkandang, and Blimbing sub-districts. Klojen becomes the centre of governance gathering and also economic centre for other four sub districts. Not only in internal region, the sub district also contributes to another regions such as Pasuruan region, Batu municipality, and Malang region. The busy economic traffic in this place invites many criminals to commit their action in this field. Based on Klojen sector police data of 2016, it shows unbalanced number of crimes and the case resolutions occurred during that year. The ability of officers to investigate the crimes is still under 10% even after the improvement of bureaucracy reformation of Polri internal structure, the reformation also affects Klojen Malang resort police as well. This revised version of reformation creates another personnel and authority addition. Meanwhile, the working culture of them is reformed by using working target system and Working Performance System known as SMK of Polri’s personnel.

METHODS OF RESEARCH
The research uses legal research type as a descriptive approach to qualitative analysis, whereas the form of a normative juridical study that describes the observations of the role of the Linmas in helping the police to prevent crime. Next phase is to draw legal principles in the formulation of norms that will become references / input in Regional Regulation Draft on the Role of Satlinmas in crime interception in the City of Malang, based on the catering of philosophical, juridical and sociological facts through the study of literature namely reviewing the material in the form of laws and research results, the results of studies and other references as primary data and secondary data available.
The data analysis method used in this study is a descriptive analysis model. The stages of the descriptive analysis model in this study consisted of: data condensation, data presentation, drawing conclusions and verification.

DISCUSSION OF RESULTS

The Regulation of Public Protection Role to Intercept Crime in Public Area. Technically, the consolidation of public protection attempts by Klojen resort police is by mandating each urban village of Klojen sub-district to revise the Code of Conduct order, Bhabinkamtibnas may assist the head of Neighborhood and Hamlet in process. The revision implementation is meant to consolidate the role and authorities of personnel in that area. If the members of public protector come from elders which has no maximum strength anymore, additional personnel may be added as functional duty or implementing structural function which is already stated in that revised version of Code of Conduct. First, there must be a mass illumination about the importance of public protection as part of neighborhood caring, it could be done by socialization within the head of civil service police of Malang city; socialization within head of Klojen sub-district about utilization of linims or other communities; socialization within head of urban village and hamlet. Second, it is about the training of crime interception procedure in Dodikjur Malang. Third, the assistance of Bhabinkamtibnas to help the head of Hamlet and Neighborhood to revise the code of conduct, the revised version must contain authority granting about intercepting crime.

Then, it is about the society participation in order to assist the officers to intercept the crimes. There are several phases in this stage. First, the personnel must be able to pursue people about law awareness and importance for them. the role of linmas, based on the result of study by Kepala Kesatuan Bangsa Politik dan Perlindungan Masyarakat, it states that the public protection service is a mandatory that becomes absolute authority for Province, region, and city government which are regulated on Law number 32 of 2004 about Regional Government specifically at article 13 and 14 act 1. Thus, the public protection must be daily improved and maintained, especially to assist government in improving social service, natural disaster, and maintain the daily public order in the name of defend country campaign. There are several phases to gain awareness of society principality: humanity, it is fundamental as the form of society is human itself. In practical action, the personnel must perform greeting, regards, and smile to show attitudes toward people; dedicated, it is meant to serve the society in whatever term to serve and protect people at ultimate cost. The personnel of Linmas must have total working performance to serve the society, discipline, it means that the personnel must take firm action in decision making process. Eventually, the personnel must follow the law as their ultimate guidance in action.

Second, it is the increasing capacity of the personnel. The formulation of personnel may be added by recruiting local people to become the member of Satlinmas in Nagara/Village/Urban Village by Nagari representation/ head of village/urban village. The candidate must meet the requirement to assist the personnel on the field. Increasing personnel capacity needs to follow andragodi principles especially in training process. Training or workshopping process is meant to make ready the candidates in carrying their future duty. Thus, the andragodi principles will suit the requirement. In order to reveal the weakness and strength of each individual, there must be sharing evaluation phase to achieve positive attitude effect. It is a professional attitude that will be required to enforce and empower the law as protector of people.

Third, it is granting the authority. The authority granting could be performed in safeguarding action of the order and safety of the people which are: watching over the unusual activity of some people (intelligence function); the strong community of safeguarding will be able to detect larger and bigger crime such as terrorism movement or another disintegration movement, moreover to the perverted doctrine. The watch over action must be continuously maintained to serve the safeguard of people, the personnel must also guard the neighborhood from social discrimination such as prostitution, littering, and destructing public stuff. Another bad behavior of society is when the husband had an affair to some widow of
another women; they must be able to distribute the fundamental need to society; they could also help in election process and regional election level. The principles followed in granting authority process is the administration which is cooperating with other related institution and to the people itself.

Some targets of efforts to prevent crime in the context of maintaining kamtibmas consist of first, adherence to the rules by both community protection officers and the general public. Obedience to the rules is not free from rule awareness, and good rule awareness is obedience to the rules, and unconscious good rules are disobedience. Obedience itself can be divided into three types, including: Compliance which is compliance, that is if someone obeys a rule, just because he is afraid of being sanctioned. Weakness of this type of obedience, because it requires continuous supervision; Obedience that is identification, that is if someone obeys a rule, just because he is afraid that his good relationship with the other party is damaged; Internalization, which is if someone obeys a rule, truly feels that the rule is in accordance with the intrinsic values adopted. The strictness of the rules is essentially the loyalty that someone has as the subject of the rules of the rules which are manifested in the form of real behavior. While the awareness of the rules of society is something that is still abstract which has not been realized in the form of real behavior to fulfill the will of the rules themselves. Many of the people who have actually been aware of the importance of rules and respect for rules as rules that need to be obeyed, whether due to the instinct or rational urge. But in fact, this awareness is not realized in everyday life or in real practice. Secondly, the implementation of national and local development processes in the Klojen District. The creation of kamtibmas is expected to facilitate the development process both nationally and locally in Klojen District. Klojen Subdistrict is a sub-district that is considered as the center of government of Malang City, so there are several important buildings such as Malang City Hall building, DPRD building, Merdeka Square, Tugu Square, Mayor's Office and Malang Regent, and others. Institutions other than the Village Head, RW Management and RT management are the Village Community Empowerment Institution or abbreviated as LPMK assisted by Community Empowerment Cadres or abbreviated as KPM. In addition, there are 135,179 people in Klojen (2017) Subdistrict, which is a combination of 31,864 households. The profession of the population is generally dominant as traders, transporters, civil servants, and industrial workers. Approximately 37,000 (thirty seven thousand) residents only graduated from high school or equivalent. The total number of Linmas members as a whole is around 754 officers to occupy around 256 patrol posts. Related to this, it is necessary to prevent crime in the context of maintaining social security.

Third, the safety guarantee from the personnel to implement city within low crime environment. The personnel are known as civil apparatus to help people in their neighborhood. Thus, the idea of safety and security will be achieved. Aside from the duty and role of satlinmas above, it has another duty to safeguard the election process, it is stated in Home Affair Ministry regulation number 10 of 2009 and the KPU regulation number 3 of 2015, it states that the power of satlinmas to help securing and ordering while the election process is on going, it is meant that satlinmas must help safeguarding the election setting. Satlinmas is an organization formed by the Nagari / Village / Kelurahan Government and consists of members of the community who are prepared and equipped with the knowledge and skills to carry out disaster management activities to reduce and minimize the consequences of disasters, and participate in maintaining security, peace and public order, and social activities. Fourth, it is the development of local people skill in order to maintain the safety of their neighborhood and intercept the upcoming crime which will threaten people. The guide lining process of linmas as server of people is trained by civil service police of republic of Indonesia (known as Satpol PP) since 2004. It is stated in law number 23 of 2014 about regional government which states that it is the mandatory of province/regional/city to maintain the safety of its people. The contribution of the society is very important in maintaining the order of public protection; the collective movement from both personnel and society determine the implementation of crime interception. It is mostly not a new concept where people help officers to make safe their neighborhood, it is the very own duty of the inner society to maintain their safety before the modern concept of police was invented.
The Factors Affecting Public Protection Role Regulation. Technically, there are internal and external factors that affect the regulation about public protection. The external factors come from several sectors. First, it is the program’s budget, it is very limited that the city governance only provide monthly Rp. 150.00 each personnel. Moreover, the financing process that come from CSR is still on low average, it is as a result of inactive action from Hamlet head to pursue the CSR owner to increase the budget. Second, it is the human resource of personnel. According to the legal letter number 340/2 1/35.73.500/2018 about the list of personnel members of 2018, it states that the Klojen sub-districts possessed 418 human resources which are spread among 11 urban villages. In the other hand, the human resource is considered as an obstacle in public service. The recruitment process is crucial when the personnel got limited option for the personnel which, at the end, still uses Karang Taruna youth participation. In one hand, the participation of Bhabinkamtibnas is still in low average as they are mostly busy on Pam program. Third, it is the order of code of conduct. Mainly, there are several steps which are; the head of hamlet and neighborhood, babinsa, bhabinkamtibnas, and local people must attend the conducting process including the SCR stakeholder; the participants must gather the type of crime that mostly occur in their area; decide the cleaning schedule for each member; another is structural and functional system of security for linmas; regulate the moral and social sanction; the substance or the crime material; and sending the documents to Polri office for next level of judgement; determine the CSR stakeholder in security department from company. From those steps, not all urban villages of Klonjen sub district has proposed their code of conduct.

Meanwhile, the internal factor could come from some activities. First, it is the environment situation. Barnest and teeters shows several steps to intercept crime which are the awareness of upcoming fundamental need that will rise the social and economical pressure, these two will trigger people to commit crimes to solve the problem; and focusing the watch over individuals who have most potential to commit crimes; the committed crimes would able to come from psychological and biological factors of the social and economical lankness that would lead to harmony in forming and committing crimes. From the opinion of Barnest and Teeters above, we could assume that the economical and social situation must be improved to make people not to commit crimes and intercept it automatically. Meanwhile, the biological and psychological factors are merely secondary factor. Maslow stated that humans will pursue their need ranging from basic into higher need (self actualisation). Second, it is the pattern of handling the nature of vulnerability in the general environment. The crimes are still vulnerable in our environment, the crimes has no schedule to be committed nor fear, the crimes is freely committed in Malang city both urban or rural area. As the icon of educational and tourism city object, the street crime and natural disaster are still haunting both local resident and the tourist who make visit to the city, meanwhile, Malang road become very rush as it is the only way to go on southern part of east java province. there are many factors that cause it, one of it is the development of life aspects of Malang city.the development of technology of communication and information has developed the life aspect of local residence as a result of internal condition, it is also as a result of regional, national, and even global movement. In order to intercept the negative change in bhabinkamtibnas, the police officers must be quick, total, and loyal in overcoming arising issues or even intercept the upcoming problem before it grows into major problem.

Third, it is the society support in public area. There are several things that people may execute to achieve bhabinkamtibnas; the religious and social elders must continuously inform the personnel about the current situation of bhabinkamtibnas on their neighborhood. Reviving the old security patrolling system of Siskamling to intercept the crimes, reviving the Sadarkum program on each level of society, the society must have scheduled meeting with police officers to predict the upcoming issue and how to handle it, the meeting process must be achieved in homogen perception instead of doing anarchy that will result on a new issue, the society must not be easily deceived with hoax, but they must be able to claim the anger or any other negative impact from the hoax. Fourth, it is the support from mayor of Malang city; the mayor only supports the Linmas by providing them a uniform and convinces the personnel to be neutral during the election process. The participation of mayor city is far from
ideal as it does only focus on the upcoming regional election in 2018 instead of the safety and security of its people. The fifth, it is the support from police of republic of Indonesia. Sixth, synergy and coordination function. Basically, Linmas may perform their field duty on its maximum effort if only the society would support them and their system of procedures is well maintained.

CONCLUSION AND SUGGESTIONS

Based on the analysis and discussion of the study above, there are three conclusions within the research. First, practically, there are several factors that affect the authority of people protection formula, one of the factor is the lawless condition that does not regulate the role of Bhabinkamtibnas and the analysis of society protection regulation empowerment in intercepting crimes. Second, about the regulation of people protection to intercept crimes in Klojen sub district, there are three phases of it which are the awareness campaign to the personnel about the importance of people protection to intercept crimes, the increasing capacity of the personnel, and authority granting. Third, there are several factors and obstacles that affect reformulation of people protection regulation to assist Polri in intercepting crimes, they are the limited budget where the city government only provide the program within monthly fee of Rp.150.000 for each personnel, in-optimum recruitment process as a result of limited option of the candidates that mostly picked up from Karang Taruna youth members, the minimum contribution from Bhabinkamtibnas who are mainly busy with Pam program, the revision of Code of Conduct that must grant the authority for Linmas, and most of the Hamlet still do not provide a proper Code of Conduct.

There are several suggestions, as follow:

- There must be an increasing number of Linmas members empowerment to support them in intercepting criminal action in Klojen sub-district;
- The reformulation of people protection regulation should be increased as stated in the form of Regional Law of Ministry of Home Affairs Law number 84 of 2014 about Society Protection Implementation.

REFERENCES

42. Muditha, C. R. (t.thn.). Efektifitas Pembinaan Anak Didik Pemasyarakatan dalam upaya perlindungan anak di Lembaga Pemasyarakatan.
46. Electronic Source: http://aizawaangela020791.blogspot.com/2011/01/
ANALYSIS OF PROFITABILITY, SIZE, BUSINESS RISK AND CAPITAL STRUCTURE IN THE COMPANY OF AUTOMOTIVE AND ALLIED PRODUCTS LISTED IN INDONESIA STOCK EXCHANGE FOR THE PERIOD OF 2013-2017

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ABSTRACT
This study aimed to determine the effect of profitability, company size, business risk to capital structure in the company of automotive and allied products listed in Indonesia Stock Exchange in the year 2013-2017. The sample used in this study is the company of automotive and allied products. The analysis technique used is multiple linear regression analysis, classical assumption (normality test, multicollinearity, autocorrelation test), hypothesis testing (F test, test determinant coefficient, t-test). Adjusted R-square value of 0.406 indicates that the variable capital structure can be explained by the variable profitability, firm size, and business risk only 40.6%, while the remaining 59.4% is explained by other variables. The results of this study indicate that the variable profitability and business risk significant negative effect on capital structure, while the variable size of the company does not negatively affect the capital structure. This is because the big or small of the size of the company does not guarantee the smooth operations of the company with the interest of investors to invest their funds in the company.

KEY WORDS
Profitability, company size, business risk, capital structure.

PASK No. 1 (2012) states that users of financial statements consist of potential investors, employees, lenders, companies and other creditors, customers, governments and their institutions, and the public. They use financial statements to meet several different needs. One investor, they need information to help determine whether to buy, hold, or sell the investment.

One component that can support the company's finances is funding that is used to finance the company's operational activities, especially those related to capital. The company must ensure that the capital structure obtained from internal and external funding is able to optimize funding so that there is no large debt and bankruptcy.

Yahdi and Puji (2014), said that the capital structure is an important first step in financing company activities. Companies must adjust operational activities to the company's goals by optimizing financing that can minimize capital and maximize the level of return (return) of the company, because when a company can increase its profitability, the company also provides benefits to the interests of the company and external parties (investors) and shareholders.

Profit is the difference in measurement of income costs. The size of the profit as a measure of asset growth depends on the accuracy of the cost measurement (Anis and Imam, 2007). Profit is often assumed to be a tool used to measure management performance.

One factor that influences the capital structure is profitability. Profitability is the ability to earn profits in a certain period. According to Bringham and Houston (2001), profitability is the net result of a series of policies and decisions. Profitability can also measure the effectiveness of the company's financial management with the profit generated. Yahdi and Puji (2014), companies that have a large rate of return tend to finance their operational activities with their own capital. This is because capital itself is considered more efficient and has a lower risk level than using external capital.
The size of the company is a grouping to measure the scale of the company. Bambang (2001: 299), a large-sized company will be more daring to expand capital by investing in stocks to meet the company's funding needs compared to small companies.

Gitman (2009) in Seftianne and Ratih (2011), business risk is a risk that comes from companies that cannot finance the company's operations and are influenced by the stability of revenues and costs. Companies with high business risks avoid using external funds (debt) compared to companies with lower business risks.

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Pecking order theory is a theory that explains the hierarchy of preferred sources of funds. This theory prefers companies to use internal funds to meet the operational needs of the company rather than using external funds, namely debt (Suad and Enny, 2012). If internal funding is insufficient, the company uses retained earnings then debt. This is done to minimize the costs and problems that arise from external funding contracts, namely debt.

Trade off theory is a theory that balances the benefits of funding with high interest rates and high bankruptcy costs. This theory explains that increasing debt to the capital structure will increase the value of the company by the tax rate multiplied by the amount of debt (Ade, 2011). The capital structure policy involves a trade off between the risks borne by the shareholders and the rate of return expected by the shareholders. Optimal capital structure is better in the balance between risk and rate of return that can maximize stock prices.

The capital structure of a company generally consists of several components, namely (Bambang, 2001):

- Foreign capital means capital originating from outside the company that is temporary for the company's operations which are usually referred to as a company that has a maturity date. Foreign capital originating from outside the company can be assumed to be a loan from creditors by selling securities;

- Own capital means capital that comes from the owner of the company that is embedded in the company for an indefinite time. This capital will be borne by the overall risk of the company and the capital that guarantees creditors.

According to Bringham and Houston (2011: 39), factors that influence the company's capital structure include:

- Sales stability means that relatively stable company sales can get more loans and bear a high fixed burden compared to companies with unstable sales.
- Asset structure means that companies whose assets are suitable to be used as credit guarantees tend to use more debt.
- Leverage operations means companies with smaller operating leverage tend to be better able to increase financial leverage because the company has a small business risk.
- The growth rate means that companies that experience rapid growth require more funding from external sources and face great uncertainty.
- Profitability means companies that have a high level of return on investment relative to using smaller debt. This high level of return allows the company to finance most of its operational needs with its own capital.
- Tax means that interest is a deductible expense for corporate tax purposes. However, the higher the corporate tax rate, the greater the benefits of using debt.
- Control means that the influence of the opponent's debt on the position of management control can affect the capital structure.
- Management attitude means that management can consider itself to make decisions about the right capital structure in terms of the use of external funds.
- The attitude of lenders and rating agencies often influences the decision of the company's financial structure.
• Market conditions mean that conditions in the stock market and securities that can experience long-term or short-term changes greatly affect the optimal capital structure of the company.

• The company's internal condition means that if the company predicts high profit and the increase is anticipated by investors because it has not been reflected in the stock price, then the company prefers financing with debt compared to issuing shares.

• Financial flexibility means that a smart manager can always provide a lot of capital to finance the company's operational activities so that the company is more productive. Kasmir (2013), profitability is a ratio to assess the company's ability to seek profit. This ratio also provides a measure of the level of management effectiveness of a company. Profitability is an illustration of the management's performance in managing the company and is used to determine the efficiency of the company doing production.

Company size is a scale for classifying a company. The size of the company is seen from the total assets owned by the company, if the company has a large total assets it will give management authority to use these assets. Dicky and Sri (2012), the size of the company is the amount of assets owned by the company. Company size is calculated by the natural logarithm formula of total assets.

Gitman and Zutter (2012) in Linda and Aan (2013), the definition of business risk is the risk of a company that cannot cover operating costs that are affected by the stability of costs and income. Saidi (2004), business risk is an uncertainty experienced by a company in carrying out its business activities to finance the company's operational activities.

Capital structure is one of the most important elements that determine the good and bad performance of the company, because the capital structure will regulate and determine the funding sources and expenditures made by the company to finance its operational activities. The capital structure is a balance between long-term debt and own capital owned by the company. Improved capital structure in the business world is an obligation to increase efficiency and survive to compete with other companies.

Sofyan (2013), profitability ratios describe the ability of a company to earn profits through all capabilities, and sources such as sales, cash, capital, and number of employees. This ratio is used to compare the value of the company's profit from the previous year with the current year, so that company management can find out the financial development, funds and assets of the company, both significant decreases and increases.

Based on research conducted by Mouamer (2011) in Yahdi and Puji (2014), it shows that there is a negative influence between profitability and capital structure. This is adjusted to the pecking order theory, where companies that have high profitability and generate high income are expected to use less debt than companies with low income. Companies that have high income borrow small amounts of external funds because the company already has sufficient internal funds to finance the company's operational activities.

H1: Profitability has a negative effect on the capital structure.

The size of a company can be seen based on the total value of assets owned by the company. The higher the total asset value, the greater the size of the company and the more attention it gets from the public and investors. The size of the company also determines how much the company uses external funding.

Based on research conducted by Glenn, Herlina, and Rina (2011) shows that there is a positive influence between firm size and capital structure. This is adjusted to the trade off theory, where companies with large size companies are increasingly using debt. The low risk obtained by the company will encourage companies to use more debt compared to smaller companies.

H2: Firm size has a positive effect on capital structure.

Brigham and Houston (2007) in Dicky and Sri (2011), business risk is how much the company's stock risk is when using large debt. Companies should be more aware of the existence of debt so that the business risks obtained are getting smaller, companies that have large business risks suddenly use less debt than companies that have small business risks.
Based on research conducted by Linda and Aan (2013), business risk affects the capital structure. This is because, if the company has a high business risk, it tends to use substantial external funding such as debt or issuing new shares. The external funding company is caused by investors considering that companies that have high business risk will also provide high returns. But the smaller the business risk can lead to a more optimal capital structure, whereas the greater the business risk, the smaller the capital structure of the company will be.

H3: Business risk affects the capital structure.

METHODS OF RESEARCH

The population in this study was automotive and allied products companies listed on the Indonesia Stock Exchange during the period 2013-2017. The population was chosen because the company was always productive and the products produced were always in demand by the public. When the demand for purchases of motorized vehicles increases, more and more parts are needed. Therefore the researchers want to know the development of automotive and allied products in the ASEAN free trade (MEA) 2015 will continue to grow and survive or will experience a decline in sales due to the phenomenon of fuel price increases in early 2015.

Sampling in this study uses purposive sampling method with several criteria that have been determined by researchers. The following are purposive sampling criteria: (1) Automotive and allied products companies that issue financial statements for the period 2013-2017, (2) Companies whose financial statements use rupiah, (3) Companies that do not carry out economic events, such as: acquisition, merger, and delisting for the 2013-2017 period, (4) The company has complete data related to the independent variables of the study, namely: profitability proxied by ROA, size of the company proxied by ln total assets, business risk proxied by EBIT standard deviation divided by total assets, and capital structure proxied by long-term debt divided by own capital.

Of the 18 companies listed as automotive and allied products on the Indonesia Stock Exchange, 12 companies were selected as samples of selected companies based on purposive sampling and studied for five years, so there were 48 samples.

This study took a sample of automotive and allied products that had been categorized through purposive sampling for the 2013-2017 period. The data used in this study are secondary data derived from the annual report of automotive and allied products listed on the Indonesia Stock Exchange for the period 2013-2017. Data collection techniques for the purposes of this study were carried out with documentation. The type of data in this study is quantitative data. The data was obtained from the Indonesian Capital Market Directory (ICMD) and www.idx.co.id.

The research variables used in this study include the dependent variable namely the capital structure and the independent variables consisting of profitability, company size and business risk.

Variable Operational Definition. Capital structure is the capital structure is one of the most important elements that determine the good and bad performance of the company, because the capital structure will regulate and determine the funding sources and expenditures made by the company to finance its operational activities.

Kasmir (2013), profitability is a ratio to assess the company's ability to seek profits. Profitability in this study is calculated using the formula of return on assets (ROA). ROA is a measurement of the company's ability to generate profits with the total assets of the company. The higher this ratio indicates that the better the state of a company.

Company size is a scale to classify a company. According to Glenn, Herlina, and Rini (2011), given the large asset value of a company, the process of calculating the size of the company, the total value of assets is calculated by the natural logarithm (Ln) formula.
Business risk is the uncertainty faced by the company in running its business. The higher the business risk of a company can reduce debt. In this study business risk will be measured using the EBIT standard deviation divided by total assets.

**Analysis Tool.** To examine the relationship between profitability, firm size, and business risk to the capital structure of automotive and allied products listed on the IDX 2013-2017, multiple linear regression models were used. Multiple linear regression analysis technique is used to examine the extent to which the independent variables influence the dependent variable. The analysis used to test the equation is mathematically formulated as follows:

\[
SM = \alpha + \beta_1 \text{PROFIT} + \beta_2 \text{SIZE} + \beta_3 \text{BRISK} + e
\]

Where:
- SM: Capital Structure;
- \(\alpha\): Constanta of regression equation;
- \(\beta_{1,2,3}\): Regression coefficients on each variable;
- PROFIT: Profitability;
- SIZE: Size;
- BRISK: Business Risk;
- e: Error term.

**RESULTS AND DISCUSSION**

Descriptive analysis is used to provide an overview of the variables in this study, namely the variable capital structure, profitability, firm size, and business risk.

Table 1 – Results of Descriptive Analysis for Five Years (2013-2017)

<table>
<thead>
<tr>
<th>Variabel</th>
<th>N</th>
<th>Minimum</th>
<th>Maksimum</th>
<th>Rata-rata</th>
<th>Std. Deviasi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitabilitas</td>
<td>60</td>
<td>-0,0861</td>
<td>0,3246</td>
<td>0,0956</td>
<td>0,0680</td>
</tr>
<tr>
<td>Ukuran perusahaan</td>
<td>60</td>
<td>11,1396</td>
<td>14,3304</td>
<td>12,5263</td>
<td>0,8406</td>
</tr>
<tr>
<td>Risiko bisnis</td>
<td>60</td>
<td>0,0368</td>
<td>47,2760</td>
<td>7,3793</td>
<td>11,5878</td>
</tr>
<tr>
<td>Struktur modal</td>
<td>60</td>
<td>0,0118</td>
<td>4,7513</td>
<td>0,6075</td>
<td>0,9021</td>
</tr>
</tbody>
</table>

Source: SPSS.

The table above shows the results of the descriptive analysis of the dependent variable (capital structure) represented by SM and independent in this study (profitability, firm size, and business risk), each of which is represented by PROFIT, SIZE, and BRISK.

From the results of the descriptive analysis can be seen the dependent variable of this study is the capital structure measured using long-term debt divided by own capital which has varied or heterogeneous data for five years of observation. This can be seen from the mean number which is smaller than the standard deviation number. It can be seen that the minimum value in the capital structure is 0.0118 which is owned by PT. Astra Otoparts Tbk in 2016, which means that companies tend to use their own capital to finance the needs and operations of the company so that the company can get maximum profit without having substantial debt. While the maximum value in the capital structure is 4,7513 owned by PT. Indomobil Sukses Internatioanl Tbk in 2013, which means that the company uses more external funding, namely debt rather than its own capital to meet the funding needs of the company so that the development and growth of the company gets better, but the greater the debt that the company has, the lower the profit generated by the company.

The next variable is the independent variable profitability which is proxied by ROA which is the ratio to assess the company's ability to find profit in a certain period that has data that is not variable or homogeneous during the five years of observation. This can be seen from the mean number which is greater than the standard deviation number. It can be seen that the minimum value on profitability is -0.0861 owned by PT. Prima Alloy Steel Tbk in 2013, which means that the company has poor profitability compared to other automotive and allied products companies. While the maximum value of profitability is 0.3246 owned by
PT. Indospring Tbk in 2016, which means that the company has good ability to generate profits compared to other companies.

The next independent variable is the size of the company measured using the natural logarithm (ln) of total assets. This variable has data that is not variable or homogeneous for five years of observation. This can be seen from the mean number which is greater than the standard deviation number. It can be seen that the minimum value on the size of the company is 11,1396 owned by PT. Multi Prima Sejahtera Tbk in 2013, which means that the company is a small company that has limited assets so that it can hamper the company's operations. While the maximum value of the company size is 14,3304 owned by PT. Astra International Tbk in 2017, which means that the company is a large company that has large assets and external funding that can meet its operational needs for the development of the company.

The last independent variable is business risk measured using the EBIT standard deviation divided by total assets. This variable has varied or heterogeneous data. This can be seen from the mean number which is smaller than the standard deviation number. It can be seen that the minimum value on business risk is 0.0368 owned by PT. Astra International Tbk in 2017, which means that investors tend to get smaller business risks from the company. And companies can get funds from investors to finance operations and other needs because investors get a small business risk from the company. While the maximum value on business risk is 47.2760 owned by PT. Multi Prima Sejahtera Tbk in 2015, which means that investors get a large business risk that is obtained from the investment results in the company. This means that if the company provides a large business risk, the company uses more external funding, namely debt and issuing new shares.

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Coefficient Regression</th>
<th>Standard Error</th>
<th>t Count</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constanta</td>
<td>2.948</td>
<td>2.030</td>
<td>1.452</td>
<td>0.152</td>
</tr>
<tr>
<td>Profitability</td>
<td>-8.360</td>
<td>1.367</td>
<td>-6.114</td>
<td>0.000</td>
</tr>
<tr>
<td>Size</td>
<td>-0.104</td>
<td>0.158</td>
<td>-0.662</td>
<td>0.511</td>
</tr>
<tr>
<td>Business Risk</td>
<td>-0.032</td>
<td>0.011</td>
<td>-2.787</td>
<td>0.007</td>
</tr>
<tr>
<td>R²</td>
<td>0.436</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.406</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F Count</td>
<td>14.440</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.F</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SPSS.

The results of the SPSS output indicate that the results of the SPSS output show an F count of 14.440 and a significance of 0.000. This shows that the significance value <0.05 which means H0 is rejected, and it can be concluded that the regression model is good (fit) and can be stated that profitability, company size and business risk together influence the capital structure. From table 2 it can be seen that the value of Adjusted R Square is 0.406 or 40.6%, which means that the capital structure variable can be explained by the variables of profitability, company size, and business risk by 40.6%, while the remaining 59.4% is explained by other variables or other models outside the independent variables studied. Standard Error of estimate (SEE) is 0.6952553513, which means that the smaller the SEE value will make the regression model more precise in predicting the dependent variable (capital structure).

The table above also shows that there are two independent variables that exist in the regression model namely profitability (PROFIT), and business risk (BRSIK) which have a significant negative effect. This can be seen from the significance value of the PROFIT variable of 0.000 and BRSIK of 0.007, where the two signatures are below 0.05. There is also one independent variable that is firm size (SIZE) which has no effect, it can be seen from the significance value for SIZE of 0.511 which means that the significance value is above 0.05. From these results it can be concluded that in the regression model in this study.
the capital structure is influenced by profitability (PROFIT), and business risk (BRSIK) with the equation obtained, namely:

\[ SM = 2.948 - 8.360 \text{Profit} - 0.104 \text{Size} - 0.032 \text{Risk} \]

The following is the interpretation of the regression coefficient above, namely: (1) The constant is 2.948 which means that if the independent variable (profitability, firm size, and business risk) is considered constant, then the capital structure is 2.948, (2) Profitability is -8.360 which means that if the profitability variable is one unit, then profitability will decrease by 8.360, (3) Business risk by -0.032, which means that if the business risk variable is one unit, the business risk will decrease by 0.032.

The Effect of profitability on capital structure. Profitability is the company's ability to generate profits with capital or company assets. Profitability can affect the capital structure because when a company is able to generate large profits, the company can also finance the operational needs of the company using the company's internal funds. This shows that companies use more internal funds, and companies can reduce the use of external funds, namely debt. This is consistent with the theory used in this study, namely the pecking order theory which states that companies prefer to finance the needs of companies with internal funds rather than external funds, namely debt. Therefore when the profitability of large companies can make the company's capital structure decline.

The results of this study contradict the research conducted by Dicky and Sri (2011) which states that profitability does not affect the capital structure. But the results of this study are in line with the research conducted by Glenn, Herlina, and Rini (2011) which states that profitability has a significant negative influence on capital structure. Because companies prefer to use earnings to hold as a source of funding. Thus the greater the profit generated by the company, the greater the costs that can be used to finance funding needs from retained earnings and the rest can be used to pay debt repayments so that the debt that the company has will be smaller. The results of this study are also supported by research from Mutmaminah (2003) in Dicky and Sri (2011) which states that the existence of a negative relationship between profitability and capital structure is due to profitability being the main indicator that the company has sufficient internal funds for funding.

By means of internal funding, companies can provide a high rate of return on investments that make debt smaller. The rate of return is used to finance funding needs, so managers prefer if financing needs through retained earnings, then debt, and finally the sale of new shares.

So it can be concluded that the higher profitability of the company will make the capital structure smaller. This is because high profitability can make company managers use internal funding from retained earnings to finance operational needs. Because profitability is the size of a company to be able to have sufficient internal funds for funding.

The Effect of company size on capital structure. Company size is a scale to classify a company. Company size is the size of assets owned by a company, the size can be seen based on the total assets owned by the company. The size of the company has no effect on the capital structure because the size of the company cannot determine the smooth funding of the company's needs and the capital structure of the company. The results of the t-test statistical test for firm size show that H_02 is accepted which means there is no influence on the capital structure.

The results show that the size of the company does not affect the capital structure. This proves that the large size of the company does not guarantee the smooth operation of the company. This is contrary to the results of research conducted by Dicky and Sri (2011) which states that firm size has a negative influence on the capital structure. But the results of this study are in line with research conducted by Friska (2011) which states that firm size does not affect the capital structure. The size of the company does not guarantee the survival of the company and the smooth funding of operational activities, and the size of the company cannot guarantee investors' interest to invest in the company.
So it can be concluded that the size of the company is not one of the factors that can affect the capital structure. When investors want to invest in a company, investors look more at the level of profitability produced by the company rather than looking at the size of the company. If the company is large but has little profitability and more capital structure, investors will be reluctant to invest because investors will think if the company cannot provide high returns to investors. And vice versa, if the company is small in size but the profitability is large and the capital structure is smaller, investors will consider investing in the company because the profitability of the company is quite attractive. And the size of the company cannot be a factor that can affect the capital structure.

The effect of business risk on the capital structure. Business risk is the basic risk that a company has in addition to financial risk as an additional risk to the company due to the use of debt to finance operational activities. Business risk is the uncertainty faced by the company in running its business. Business risk can affect the capital structure because companies that have high business risk tend to use internal funds rather than external funds. The company uses internal funds more because the company generates large profits and can fulfill its operational activities without using too much debt. This is in accordance with the pecking order theory which states that companies prefer to use internal funds rather than external funds.

The results of this study are not in line with the research conducted by Saidi (2004), and Friska (2011) which states that business risk does not affect the capital structure. But the results of this study are in line with the research conducted by Pramistha and Toto (2012) which states that business risk has a significant negative effect on capital structure. This means that if a company that has high business risk tends not to use external funds to finance the company's operations but with internal funds, namely its own capital, the company's capital structure tends to be small. While it should be noted that the high and low business risks can be seen from the variability of demand, price, input costs.

Companies that have high business risk tend to use less external funding, because if the company uses a small amount of debt, the company will provide a high business risk. That signifies a high level of business risk that will automatically impact high corporate profits. So if the company's profits are high, the company can manage internal funding well without funding the company's operations through debt. When a company has sufficient internal funds, the company does not need to use loans to finance operational activities, the company can use internal funds to reduce the risk of a larger debt, so the company's capital structure is smaller.

So it can be concluded that business risk has a significant negative effect on the capital structure or can be said to be inversely proportional. The company provides a high business risk which indicates that the company's profits show an increase and companies can use internal funds to finance operations without using debt, therefore the company's capital structure is smaller even though the business risks are high.

CONCLUSION

This study aims to examine the effect of profitability, firm size, and business risk on the capital structure of automotive and allied products listed on the Indonesia Stock Exchange in 2013-2017. This study uses the dependent variable, namely the capital structure. Sampling was carried out based on the purposive sampling criteria which resulted in 12 companies in the automotive and allied products industry listed on the Stock Exchange during 2013-2017 so that the number of samples was 60 data.

The data used in this study were obtained from information on corporate financial reports and Indonesian Capital Market Directory (ICMD), as well as Indonesian Stock Exchange (IDX). Testing in this study was carried out with SPSS 20.0, which uses the classic assumption test and multiple linear regression analysis consisting of normality test, multiclolonerity test, autocorrelation test, F test, determinant coefficient test (R2), and t test.

Based on the simultaneous influence test (F test) shows that the regression model is fit, ie the model is used to predict profitability, firm size, and business risk to the capital
structure and can be stated that the independent variables together affect the dependent variable (capital structure). Based on the results of the determinant coefficient (R2) shows that the independent variables (profitability, firm size, and business risk) can explain the dependent variable (capital structure) by 40.6%, but still unable to explain the dependent variable. Furthermore, the results of multiple linear regression analysis from the partial test (t-test) show that (a) the profitability variable has a significant negative effect on the capital structure. This significant negative influence means that if the profitability generated by the company is greater then the company's capital structure gets smaller. The results of this study are in line with the research conducted by Glenn, Herlina, and Rini (2011) which states that profitability has a significant negative effect on capital structure, (b) Variable firm size does not affect the capital structure. The meaning of these results is that the large size of the company does not guarantee the smooth operation of the company which cannot determine whether the company's capital structure is getting smaller or larger. The results of this study are in line with research conducted by Friska (2011) which states that firm size does not affect the capital structure, (c) Business risk variables have a significant negative effect on capital structure. This means that the company provides a high business risk indicating that the company's profits increase and the company uses internal funds to finance operations without using debt, therefore the company's capital structure is smaller even though the business risks are high. The results of this study are in line with the research conducted by Pramistha and Toto (2012) which states that business risk has a significant negative effect on capital structure.

Limitations in this study include (1) The number of sample companies in this study only used 12 companies from 18 companies selected from the sampling criteria, and (2) In this study the measurement of business risk using EBIT standard deviation of all automotive and allied products companies.

Based on the limitations of the study, the suggestions that can be given by researchers for future research so that further researchers are expected to continue this research by adding liquidity variables and replacing the company size variables with managerial ownership or new variables that are expected to influence the capital structure so that it can cover a wider range of his research. Then so that further research is expected to expand the company's sample as a whole not only in automotive and allied products but in other industrial sectors that have a large sample of companies in order to obtain more complete data with a larger number of samples, and so that further research is expected to be able to use business risk measurement using EBIT standard deviations per company in order to know the business risks obtained from each company.

REFERENCES


ABSTRACT
The results of this study find the store environment has a positive and significant effect on the urge to buy impulsively and impulse buying. This means that the application of a good store environment and the urge to buy high impulsively will trigger impulse buying in fashion products. The results of impulse buying tendency have a positive and significant effect on urge to buy impulsively and impulse buying. This means that the tendency of consumers towards fashion products will increase by being followed by insistence on themselves so that impulse buying of fashion products will occur. Urge to buy impulsively is a mediating variable that influences store environment and impulse buying tendency with impulse buying. Practical implications that can be given from the findings of this study is the application of a good store environment can be a factor that supports the occurrence of impulse buying. Impulse buying tendency is the tendency of consumers towards an object (fashion products) so that when consumers visit a mall that has a diversity of fashion products, consumers will feel a strong urge to impulse buying. Urge to buy impulsively is an insistence, so with the discount, consumers will become buyers impulse. Practical implications that can be given from the findings of this study are the application of the store environment through structuring the layout, the use of room temperature, the selection of the right music, is expected to encourage impulse buying in fashion products at Mal Bali Galeria, apart from external consumer factors, internal factors of consumers can creating urge to buy high impulsively for fashion products.

KEY WORDS
Store environment, impulse buying tendency, urge to buy impulsively, impulse buying.

People, who have a consumptive lifestyle, tend to choose to go to department stores or malls on holidays or in their spare time, of course through consideration of the convenience and convenience that will be obtained at shopping centers or malls (Herawati et al., 2013). The business opportunity is an opportunity for business people in various fashion industries, so marketing fashion products in shopping centers is quite a chance to bring up unplanned buying behavior for consumers. Dyatmika and Sudiksa (2015) stated that the potential in the retail sector must be studied and studied for business people in the retail field, towards the unique character of each consumer. The unique character in this case is the behavior of consumers who have their own characteristics compared to most other consumers. Most consumers have unplanned characters. They usually like to act on "last minute", if they shop, they often become impulse buyers (Susanta, 2007). Unplanned purchases are unique and continuous lifestyles by individuals (Saad and Metawie, 2015). Consumers who have an impulse attitude tend to come from social circles who are very concerned about social status and image, this is done in order to get attention in their social class environment (Seetha and Suganya, 2017). Rook (1987) states that impulse buying generally occurs due to the arrival of strong motivation that changes to the desire to buy a particular commodity. According to Utami (2010: 51) impulse buying is a purchase that occurs when consumers see a particular product or brand, then consumers become interested in getting it, usually because of an interesting stimulus from the shopping environment (mall).

Research proposed by Baker et al. (2002), Foroughi et al. (2013) factors from the store environment, namely ambient, design, and social, will bring more pressure on consumers, this is because ambient factors are the atmosphere as a basic characteristic of an unreal condition which tends to affect the nonvisual senses, which include temperature, sound,
smell and lighting, while the design factors are environmental components that tend to be seen and more real that adorn the store so that the store looks more attractive. Design factors can include color, facilities, merchandising arrangements, layout settings. Social factors are people (consumers and employees) who are in a store environment and interact with each other (Nuzula and Wusko, 2014). These three factors together form the insistence on the consumer, besides the store environment factor, the consumer's personality factor has an important role.

The tendency is an attitude that implies a person's desire for a product or service, this is what encourages impulse buying behavior that arises from each individual. This focus is based on the personality of the consumer, not on the external environment of an individual (Maymand and Ahmadinejad, 2011). Mohan et al. (2013), states impulse buying tendency is a spontaneity in purchasing activities without prior planning, with little or no consideration of the consequences that might be received. A higher impulse buying tendency can trigger pressure on impulse buying behavior. Omar et al. (2001) states that impulse buying tendency of an individual is conceptualized as a characteristic possessed by consumers, therefore impulse buying tendency can be defined as a uni-dimensional construction that embodies the tendency of consumers to think and shop in ways that are recognizable and different. Seetha and Suganya (2017) explains that impulse buying tendency can be attributed to personality traits that trigger a person to impulse buying habits, indirectly the tendency can trigger more pressure on impulse buying behavior.

Mohan et al. (2013) states that urge to buy impulsively is a feeling experienced when seeing or meeting an object in a store environment like a particular product. Muruganatham and Bhakat (2013) in their research found the availability of exclusivity of certain products, a clean atmosphere, wide format, and anonymity are a number of reasons to increase urge to buy impulsively at airport retail outlets. Research conducted by Badgaiyan and Verma (2015) states that there are three reasons regarding the relationship between urge to buy impulsively with impulse buying, namely, first, there are still many indicators that can influence these variables simultaneously, both economic variables that have an impact on consumers' impulse buying behavior are still lacking a lot of review, the third most of the research related to impulse buying is only done in western countries, while in countries in Asia it is still lacking attention. Verplanken and Herabadi (2001) state that affective aspects include emotional urges that simultaneously include feelings of pleasure and joy after buying without planning. Badgaiyan and Verma (2015), explained that urge to buy impulsively with impulse buying behavior has a positive relationship. Suprapti (2010: 50) also states that pressure will generally precede actual behavior.

**LITERATURE REVIEW**

Thurstone, defines attitude as "affection or feeling for a stimulus", this states that the attitude has a relationship with feelings not with trust, because trust is a cognitive aspect of an object, then attitude is a feeling or affective response that has about an object (Thurstone in Sunarto 2003: 160). Attitudes are expressions of one's feelings that reflect their likes or dislikes about objects. Because one's attitude is the result of a psychological process, it cannot be observed directly but must be inferred from what is said or done (Suprapti. 2010: 135). Judging from the structure, attitude consists of three components, namely the cognitive component, the affective component, and the conative component. The cognitive component in the form of one's beliefs, the affective component involves the emotional aspect, and the conative component is an aspect of the tendency to act in accordance with the attitude. The affective or emotional aspects are usually rooted most deeply as a component of attitude, which is most resistant to influences that might change attitudes (Zuchdi, 1995).

According to Japarianto and Sugiharto (2011) classifies unplanned buying behavior as follows:

- Planned impulse buying. Unplanned purchases made by consumers without any certainty of buying what products but have planned to shop when leaving for the store.
Reminder impulse buying. Spontaneous purchases made by consumers when they remember to purchase the product. It can be assumed that before the consumer had made a purchase and decided to make a repurchase.

Suggestion impulse buying. Purchases are made when the consumer sees the product, sees the usage procedure or benefits and decides to make a purchase.

Pure impulse buying. Impulse buying is done by consumers due to emotional outbursts so that they purchase products or goods outside of their buying habits so that this is purely derived from the internal conditions of consumers.

Urge to buy impulsively is a feeling that is experienced by someone suddenly and spontaneously to immediately buy the desired product. However, needs or desires, although often strong, are sometimes unbearable, but are not always done (Rook and Fisher, 1995: 305). According to Beatty and Ferrel (1998: 172) it seems reasonable to consider decisions and behavior separately. Urge to buy impulsively is the desire of past experience in dealing with an object in a particular environment. Consumers can feel the urge to do impulse buying behavior when seeing or meeting some things such as promotional programs of a product (Muruganantham and Bhakat, 2013). Xu (2007) states that the store environment will also affect consumers to the insistence in their series to make purchases that are not planned beforehand so that consumers will take the actual action of impulse buying.

Impulse Buying Tendency is defined as the extent to which an individual is likely to make an unwanted, immediate, and unthinkable purchase (Maymand and Ahmadinejad, 2011). Rook (1987) states that there are several psychological motivations from each individual to do impulse buying felt when shopping. Direct visual exposure or promotional actions will increase the individual's tendency to impulse buying, but sometimes without a reason or a clear stimulus, the individual may be motivated to impulse buying. The tendency to impulse buying has been conceptualized as the characteristics of each individual (Park and Lennon, 2006) that affect self-response to environmental stimuli.

Three types of store environment signals were studied in the study of Baker et al. (2002): ambient, design, and social. Ambient signals refer to store background characteristics, such as temperature, lighting, noise, music, and aroma. Design cues include stimuli that are at the forefront of consumer awareness, such as architecture, color, and materials. Social cues refer to conditions related to the number, type, and behavior of consumers and employees, and the same characteristics (Bitner, 1992). In addition, the level of density and the number of visitors as a reflection of the three aspects can also influence the consumer's desire to impulse buying (Xu, 2007). Donovan et al. (1994) and Mohan et al. (2013) show that the store atmosphere gives pleasure, so consumers will spend more time and money as well that a good layout reduces the "level of information", ie a good layout helps consumers find products and information easily, unlike if the layout a complicated shop. Suwantari and Ardani (2014) argue that, visitors to a store are not positively influenced by store lay-outs, but many negative effects will arise if the placement of lay-out is wrong, such as placing a counter inside a store that causes the visitor's space to be blocked.

Hypothesis:

- H1: Store environment has a positive and significant effect on urge to buy impulsively;
- H2: Impulse buying tendency has a positive and significant effect on urge to buy impulsively;
- H3: urge to buy impulsively has a positive and significant effect on impulse buying;
- H4: Store environment has a positive and significant effect on impulse buying;
- H5: Impulse buying tendency has a positive and significant effect on impulse buying;
- H6: Urge to buy impulsively can mediate significantly the influence of store environment with impulse buying;
- H7: Urge to buy impulsively can mediate significantly the effect of impulse buying tendency with impulse buying.

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METHODS OF RESEARCH

This research took place in a large mall in Badung Regency namely Mal Bali Galeria. This consideration is used because the mall has a shopping center such as department stores and Hypermart, and has a unique mall environment concept and complete facilities available, so consumers feel comfortable and want to spend time at the mall. Various types of outlets are available, it is expected to be able to meet the desires of consumers so that the tendency to impulse buying will also be greater. Although located in Badung Regency, visitors to the mall to be studied are not only from Badung Regency but also from other regions as long as the visitor meets the requirements as a respondent. This study uses data analysis techniques for Structural Equation Modeling (SEM). The use of the SEM method will be able to display a comprehensive model and can explain the relationship between variables with one another according to Gunadhi (2012).

RESULTS AND DISCUSSION

Impulsively as a mediating variable that influences store environment and impulse buying tendency towards impulse buying. The effect size criteria according to Cohen in Becker (2002) is 0.02 - 0.15 (weak impact), 0.15 - 0.35 (moderate impact), and> 0.35 (strong impact). VAF calculations can use the following formula: \( VAF = \frac{a \times b}{a \times b + c} \), where 
\( a = \) the magnitude of the effect of exogenous variables on endogenous variables; 
\( b = \) the magnitude of the influence of the mediator variable on the endogenous variable; 
\( c = \) the amount of direct influence of exogenous variables on endogenous variables.

Based on Table 1, it can be seen that the store environment variable has a direct effect on impulsively urge to buy variable at 24.6 percent, impulse buying tendency variable has a direct influence on impulsively variable urge to buy of 24.2 percent, variable urge to buy impulsively have a direct influence on impulse buying variables of 20.1 percent, store environment variables have a direct influence on impulse buying without going through impulsively to buy at 56.2 percent and impulse buying tendency variable has a direct influence on impulse buying without through urge to buy impulsively at 41.2 percent.

<table>
<thead>
<tr>
<th></th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store environment &gt; Urge to buy impulsively</td>
<td>0.246</td>
<td>-</td>
<td>0.246</td>
</tr>
<tr>
<td>Impulse buying tendency &gt; Urge to buy impulsively</td>
<td>0.242</td>
<td>-</td>
<td>0.242</td>
</tr>
<tr>
<td>Urge to buy impulsively &gt; Impulse buying</td>
<td>0.201</td>
<td>-</td>
<td>0.201</td>
</tr>
<tr>
<td>Store environment &gt; Impulse buying</td>
<td>0.562</td>
<td>0.049</td>
<td>0.611</td>
</tr>
<tr>
<td>Impulse buying tendency &gt; Impulse buying</td>
<td>0.412</td>
<td>0.049</td>
<td>0.461</td>
</tr>
</tbody>
</table>

VAF

\[
\text{Store Environment} \rightarrow \text{Urg to Buy Impulsively} \rightarrow \text{Impulse Buying} : \\
(0.246 \times 0.201) / (0.246 \times 0.201 + 0.562) = 0.08 \text{ (weak impact)}
\]

\[
\text{Impulse Buying Tendency} \rightarrow \text{Urg to Buy Impulsively} \rightarrow \text{Impulse Buying} : \\
(0.242 \times 0.201) / (0.242 \times 0.201 + 0.412) = 0.10 \text{ (weak impact)}
\]

In addition to direct influence, there is an indirect effect between store environment variables on impulse buying variables mediated by urge to buy impulsively and impulse buying tendency variable to impulse buying variable mediated by variable urge to buy impulsively. Store environment variables have an indirect effect on impulse buying variables through a variable urge to buy impulsively at 4.9 percent. Then the impulse variable buying tendency has an indirect effect on the impulse buying variable through the urge to buy impulsively variable of 4.9 percent. This shows that the influence of the variable store environment and impulse buying tendency on the variable impulse buying will increase if mediated by the variable urge to buy impulsively. Besides there are direct and indirect effects between variables in this study, there is also a total effect that shows the number of influences from various relationships. Total influence is the addition of direct and indirect
influences. The variable urge to buy impulsively as an intermediate variable increases the influence of store environment on impulse buying by 4.9 percent, so the total effect becomes 61.1 percent and the remaining 38.9 percent is explained by other variables. Similarly, the urge variable to buy impulsively as an intermediate variable increases the influence of impulse buying tendency on impulse buying by 4.9 percent, so that the total effect becomes 46.1 percent and the remaining 53.9 percent is explained by other variables.

Table 1 shows the results of the calculation of VAF urge to buy impulsively as a mediating variable the effect of store environment on impulse buying shows a value of 0.08 (8 percent) which means a weak impact. VAF urge calculation results to buy impulsively as a mediating variable impulse buying tendency towards impulse buying shows a value of 0.10 (10 percent) which means a weak impact.

**Table 2 – Regression Weights Estimation**

<table>
<thead>
<tr>
<th>Direct Effect</th>
<th>Estimate</th>
<th>Standard</th>
<th>p-value</th>
<th>Discription</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store Environment → Urge to Buy Impulsively</td>
<td>0.246</td>
<td>0.031</td>
<td>Sig.</td>
<td></td>
</tr>
<tr>
<td>Impulse Buying Tendency → Urge to Buy Impulsively</td>
<td>0.242</td>
<td>0.044</td>
<td>Sig.</td>
<td></td>
</tr>
<tr>
<td>Urge to Buy Impulsively → Impulse Buying</td>
<td>0.201</td>
<td>0.020</td>
<td>Sig.</td>
<td></td>
</tr>
<tr>
<td>Store Environment → Impulse Buying</td>
<td>0.562</td>
<td>0.000</td>
<td>Sig.</td>
<td></td>
</tr>
<tr>
<td>Impulse Buying Tendency → Impulse Buying</td>
<td>0.412</td>
<td>0.000</td>
<td>Sig.</td>
<td></td>
</tr>
<tr>
<td>Store Environment → Urge to Buy Impulsively → Impulse Buying</td>
<td>0.049</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Impulse Buying Tendency → Urge to Buy Impulsively → Impulse Buying</td>
<td>0.049</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

From the Regression Weights estimation output in Table 2, the results of the hypothesis proposed are as follows.

Hypothesis 1 which states that the store environment has a positive and significant effect on urge to buy is impulsively accepted with a coefficient of 0.246 and a probability value of 0.031 (8.0.05). This result gives the meaning that the better the store environment, the higher the urge to buy impulsively arising from consumers who will impulse buying on fashion products at Mal Bali Galeria. The results of this study are in accordance with the results of previous studies Mattila and Wirtz (2008), Yistiani et al. (2012), and, Putra and Sukawati (2015) show that a pleasant store environment can increase the pressure on purchases. Sellers can guide consumers to explore stores and various products, thus stimulating the desire for impulse buying.

Hypothesis 2 which states impulse buying tendency has a positive and significant effect on the urge to buy impulsively accepted with a coefficient value of 0.242 and a probability value of 0.044 (10.05). These results mean that the higher the impulse buying tendency of a person, the higher the urge to buy impulsively arising from consumers who will impulse buying on fashion products at Mal Bali Galeria. The results of this study are in accordance with the results of previous studies conducted by Mohan et al. (2013), Maymand and Ahmadinejad (2011), Hanzae and Taherikia (2010). Impulse buying tendency is conceptualized as the nature of consumers who make purchases spontaneously, as soon as possible, and kinetic, so consumers who have high impulse buying tendency tend to buy more than consumers who experience pressure to impulse buying (Rook and Fisher, 1995) . In this study the tendency is reflected as the consumer's desire for fashion products so that it can be said that the need for fashion products can cause pressure on consumers to impulse buying at Bali Galeria Mall.

Hypothesis 3 which states that urge to buy is impulsively has a positive and significant effect on impulse buying is accepted with a coefficient of 0.201 and a probability value of 0.020 (3.05). This result gives the meaning that the higher the urge to buy impulsively someone, the higher the impulse buying of consumers in fashion products at Mal Bali Galeria. Urge to buy impulsively is an urge to do impulse buying which generally will initiate actual impulse behavior. The results of this study are in line with the research conducted by Mohan et al. (2013), and Badgaiyan and Verma (2015). When consumers look at fashion products in a store, they will experience higher pressure so that it can lead to impulse buying (Beatty and Ferrell, 1998), so that consumers cannot resist urge to buy impulsively even
though they have made their best efforts to control or regulate this desire, this is consistent with research from Baumeister (2002). Other research from (Hanzaee and TaHERiKia, 2010; Foroughi et al., 2012; Beatty and Ferrell, 1998) states that urge to buy impulsively is positively related to impulse buying behavior.

Hypothesis 4 which states that the store environment has a positive and significant effect on impulse buying is accepted with a coefficient of 0.562 and a probability value of 0.000 (p<0.05). This result gives the meaning that the better the store environment, the higher the impulse buying that arises from consumers in fashion products at Mal Bali Galeria. The results of this study are in accordance with the results of previous studies conducted by Chen (2008), Yuliartini and Sulistyawati (2014), Kazempour and Lotfizadeh (2017) which state that the better the application of the store environment, the tendency to impulse buying will be even greater, from the store environment, namely sales clerks, structuring goods, store arrangements are things that are outside the individual (external factors), and external factors are very influential on the consumer purchasing process (Mangkunegara, 2002: 4). Store environment that is unique (layout, room conditions and lighting) and with a variety of fashion products offered, as well as salespeople who will always help consumers in finding the fashion products they want, consumers are expected to be impulse buying fashion products in the Mall Bali Galeria.

Hypothesis 5 which states impulse buying tendency has a positive and significant effect on impulse buying is accepted with a coefficient value of 0.412 and a probability value of 0.000 (p<0.05). These results mean that the higher impulse buying tendency of a person, the higher the impulse buying that occurs in fashion products at Mal Bali Galeria. Each person has a different tendency to do impulse buying. At this point the focus is on internal, not external or environmental surroundings. The tendency experienced by consumers may occur due to the experience that was felt when doing impulse buying before. Maybe consumers feel happy and satisfied with the items purchased; therefore they want to repeat it again. The results of this study are in line with the research conducted by Baumeister (2002), Mohan et al. (2013), and Rook (1987).

Hypothesis 6 which states that urge to buy impulsively has a significant effect on mediating store environment variables to impulse buying is accepted with a value of 0.049 coefficient value. Although it has a significant effect on mediating, although a positive effect mediates, the role of urge to buy impulsively has a weak impact, because it can directly impact the store environment on impulse buying, but by mediating urge to buy impulsively, the store environment will increase impulse buying. This result means that when consumers are in a comfortable and pleasant shopping environment, there will be a strong urge to impulse buying of fashion products at Mal Bali Galeria. The results of this study are in accordance with the results of research from Badgaiyan and Verma (2015), and Kazempour and Lotfizadeh (2017) explain that store environment promotes impulse buying, namely store environment is an important determinant of impulse buying itself, because the store environment is expected to influence consumer feelings so that there is a strong urge to buy impulsively against a fashion product and cause actual impulse buying (Graa and Dani-elKebir, 2012).

Hypothesis 7 which states that urge to buy is impulsively influential significantly mediating impulse buying tendency variable on impulse buying is accepted with a coefficient value of 0.049. Although a positive influence mediates, the role of urge to buy impulsively has a weak impact, because it directly impulse buying tendency can have an impact on impulse buying, but by mediating urge to buy impulsively, impulse buying tendency will increase impulse buying. This means that the tendency of consumers to fashion products will increase when followed by strong pressure from within the consumer, with discounts and offers and with a model that suits consumer desires can increase strong pressure on impulse buying of fashion products at Bali Mall Galeria. The results of this study in accordance with the research of Pranata (2013) states that consumers who have impulse properties will experience a tendency so that they have a greater likelihood of the occurrence of pressure to impulse buying before, because an individual's self reflection is a pattern of consumer behavior in the purchase process. Omar et al. (2001) in his study explained that a high
impulse buying tendency can trigger pressure on impulse buying behavior. Saad and Metawie (2015) stated that a higher level of impulse buying tendency can cause a high level of urge to buy impulse buying.

CONCLUSION AND SUGGESTIONS

Store environment has a positive and significant effect on urge to buy impulsively. This means that the better the store environment applied by Mal Bali Galeria, the higher the urge to buy impulsively arising from consumers to shop for fashion products.

Impulse buying tendency has a positive and significant effect on urge to buy impulsively. This means that the higher impulse buying tendency consumers, the higher the urge to buy impulsively arising from consumers to shop for fashion products.

Urge to buy impulsively has a positive and significant effect on impulse buying. This means that the higher the urge to buy impulsively, the higher the impulse buying that will occur in the product.

Store environment has a positive and significant effect on impulse buying. This means that the better the store environment that is implemented by Mal Bali Galeria, the higher the impulse buying that will occur to consumers who will shop for fashion products.

Impulse buying tendency has a positive and significant effect on impulse buying. This means that the higher impulse buying tendency of consumers, the higher the impulse buying will occur.

Urge to buy impulsively influential significantly mediates store environment with impulse buying. Based on the calculations in this study it was found that the role of urge to buy impulsively has a weak impact mediating the relationship between store environment variables with impulse buying, because the weak impact can be said urge variables to buy impulsively can be an intervening variable because it can theoretically weaken or strengthen relationships between variables (Sugiyono, 2013: 64). This means that the better the application of the store environment then impulse buying consumers will increase this is supported by the existence of urge to buy impulsively, so that impulse buying in fashion products will increase.

Urge to buy impulsively influential significantly mediates impulse buying tendency with impulse buying. Based on the calculations in this study it was found that the role of urge to buy impulsively has a weak impact mediating the relationship between impulse buying tendency variable and impulse buying, because the weak impact can be said to be an urge variable to buy impulsively can be an intervening variable because it can theoretically weaken or strengthen relations between variables (Sugiyono, 2013: 64). This means that the higher the tendency of consumers to shop for fashion products, then impulse buying will increase, this is supported by the urge to buy impulsively towards the need for fashion will increase.

Mal Bali Galeria can work with more companies providing other non-cash transaction services, this is based on today's consumers who want an easy and practical shopping experience, with this collaboration the mall has the convenience provided to consumers in making transactions, because some consumers who find fashion products that they like, tend to buy them even if they don't bring cash.

Mal Bali Galeria is expected to be a reference for shopping for fashion products according to the needs of consumers who always follow the trend. Fashion products that are sold must be up to date so that consumers are easily provoked to shop. The marketing division of fashion products found at Mal Bali Galeria must also research different tastes of consumers, so kinsmen are easily provoked to shop for fashion products they like.

For Mal Bali Galeria, it is best to provide a stimulus to improve consumer comfort while in the mall, this can be done by fixing the layout, coloring, room temperature, music being played, also important is the availability of various fashion products in the mall, salesperson services also need to be considered, because this can give a strong push to consumers in making decisions when buying fashion products at Mal Bali Galeria.
Providing offers and discounts at certain times (on national holidays, as well as certain events) can cause a special pleasure for consumers, so consumers will experience impulse buying of fashion products at Mal Bali Galeria.

For further researchers, it is expected to expand the scope of research with consumers spread across various regions, both regionally and nationally with fashion products that are preferred by the wider community.

Subsequent researchers can also change the object of research, for example a company engaged in the service industry that focuses more on its service experience, and should be done on several different types of products other than clothing, comparing and knowing which products are impulse buying higher for consumers. In future research also needs to be considered to use other variables so that it can enrich the information obtained such as store atmosphere variables, and positive emotions, so as to increase the occurrence of impulse buying.

**Research Limitation.** This research has several limitations, namely:

- The scope of this research is only for consumers of fashion products at Mal Bali Galeria, so that the results of the research cannot be generalized to consumers of fashion products in department stores or other malls that sell fashion products, besides that the respondents used are different. For further research it will be better if the scope of the research is expanded so that it can see how the implementation of impulse buying as a whole;

- This study only discusses impulse buying by consumers who are influenced by external factors (store environment) and internal consumers (impulse buying tendency and urge to buy impulsively) at Mal Bali Galeria so that the results of this study cannot be generalized to each mall because it has an environment that is different and not every consumer has a tendency or pressure to impulse buying in fashion products;

- This research is only carried out in certain time points (cross section) while the environment changes every time (dynamically), so this research is important to be done again in the future.

**REFERENCES**


33. Susanta. 2007. Majalah Marketing/EDISI KHUSUS/II. Jakarta
COMMUNICATION MEDIA FOR PUBLIC RELATIONS: READING STAKEHOLDERS’ OPINION ON CORPORATE SOCIAL RESPONSIBILITY IN INDONESIA

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ABSTRACT
Research using this quantitative method concentrates on being able to find out stakeholder opinions on the implementation of CSR programs carried out by five companies in Indonesia, namely: PT. Energasindo, PT. Sharp, PT. Pertamina, PT. Hongkong and Sanghai Banking Corporation (HSBC), PT Perusahaan Gas Negara (PGN). This research was conducted in the work area of each company spread in several cities such as: Bekasi, Karwang, Medan, Pontianak, Yogyakarta, Jakarta, Tangerang, Sidoarjo, and Pangkal Pinang. The survey that researchers did combine three scales to understand community opinion on CSR programs that have been rolled out by several companies. The three scale indicators include the CSR Index built by Dedy Prayogo and Yosef Hilarius; Chopra’s Kanji Corporate Social Responsibility by Kanji and Chopra; last is the scale adopted from ISO. This research is important to find out the stakeholder opinion on the CSR program that has been rolled out by the company considering that this opinion will have implications for the reputation of the company by the public at large. The results of this study indicate that in general stakeholders provide good opinions on the practice of implementing CSR by companies in Indonesia. However, in practice, the sustainability program category has not received a good assessment. Referring to this, the researcher offers a way to communicate this to the public with the concept of community involvement. The implementation of community involvement as a form of applicative communication for public relations to be able to dialogize with stakeholders through CSR.

KEY WORDS
Corporate social responsibility, public relations, stakeholder management, opinion, survey, quantitative.

Sarman Simanjorang, Deputy I of the Organization and Institutional Affairs of the Central Board of the Social Welfare CSR Forum, said that not many companies in Indonesia are fully concerned about CSR (Wulandari, 2016). Though some researchers explain that CSR can help companies to promote company products (Arli and Tjiptono, 2013). Not only can it help promote products, CSR can also help communicate the company’s identity to the public Verboven (2011). The other most important thing from the launch of CSR programs by companies can be a helper of the company when a crisis is caused by the public outrage (Kriyantono, 2015). Of course, if reviewed in more detail, this will have implications for public or community support for the sustainability of the company’s operations.

This CSR will also have implications for the company’s reputation and community support for the company. It also remembers that CSR is an important factor for consumers to assess the company’s credibility and consideration in purchasing company products (Sen & Bhattacharya, 2001; Vanhamme and Grobben, 2009) and especially for the mining and oil and gas industry, this program has a strategic position to build reciprocal relations between the corporation and its stakeholders (Prayogo, 2011). On a business basis, the results of the program evaluation can be used as an objective presentation of corporate social performance, which then becomes very useful to improve corporate image and consideration for potential investors to be able to collaborate with corporations (Orlitzky and John, 2001).

A similar statement was also conveyed by Regester and Larkin (2008) that three quarters of the population paid close attention to the company’s reputation before buying products and 60% of consumers said that they avoided buying products from certain
companies because they still doubted the company's social, ethical and environmental record. Especially if at a time when the company is in a crisis position, CSR can be used as a strategy to be able to maintain the company's reputation, namely as a crisis management tool (Coombs, 1995; Dincer and Dincer, 2013; Tesler and Malone, 2008; Vanhamme and Grobben, 2009), because each crisis raises public challenges about corporate social responsibility (Coombs, 2010; Ferguson, Wallace and Chandler, 2010).

In addition to the issue of community support and maintaining a reputation for harmony during the crisis, CSR is an important element of corporate dialogue with its stakeholders. Stakeholders in this context are groups of CSR stakeholders or more specifically researchers refer to the community. For the record, in this context the CSR beneficiary community of the company enters the company's external stakeholder section. This is evidenced by several studies which explain that many corporations rely on the end result of CSR (Bhattacharya, Kroschun, and Sen, 2009; Kriyantono, 2015) as an element of dialogue. Communities as part of stakeholders also become part of the overall strategic planning process in the organization (Freeman, 1984), because they are people who can influence and be influenced by company activities and decisions (Coombs, 2007; Dempsey, 2009; Freeman, 1984; and Grunig and Repper, 2008), including CSR activities.

In the context of communication, CSR is a long-term corporate social investment that is useful to build a corporate reputation in the eyes of stakeholders (Kriyantono, 2015; 2016), because it contributes positively to the improvement of social welfare (Bhattacharya, et al, 2009), not only for corporate benefits only, but also for employees, stakeholders, consumers, community, environment and society (Kanji and Chopra, 2010). Moreover, according to the presentation conveyed by the Register and Larkin (2008), the community is more likely to judge that the company is more socially responsible than just spending products at low prices. Harrison (2008) refers to this as a company performance that is defined as a demand for the company that the company not only produces and sells products but the company must also be able to manage its social and political environment.

However, this has not been well understood by companies in Indonesia. Evidently based on Sarman's explanation, there are only three companies that have good reputation in Indonesia, namely Unilever, Pertamina, and Telkom (Social Welfare CSR Forum, 2016). This is also reinforced by recent research which states that companies in Indonesia have a lower quality of corporate social responsibility (CSR) compared to Thai companies due to low company understanding of CSR practices (Suastha, 2016). So Sarman can classify that there are three types of companies in implementing CSR, namely: (1) companies that have committed to implement CSR, (2) companies that want to implement CSR but do not know how to channel it, (3) companies that only when asked to issue a program CSR (Thaha, 2016).

This statement was further strengthened by an explanation given by Eugene Tan, Co-director of the Center for Scholaris Development Singapore Management University, that many companies that companies in ASEAN do not have regulations in implementing sustainable CSR (Suastha, 2016). However, this condition should be different from Indonesia because Indonesia already has a clear regulation for the implementation of CSR by its implementing companies is still low. Because of this, a research is needed to find out the implementation of CSR by companies in Indonesia, as expressed by Yanti Triwadianti, Chair of the ASEAN CSR Network, that the involvement of academics and research is an important key in encouraging sustainable business practices (Suastha, 2016) . Specifically, more than that, there are facts that show that even though Indonesia has a regulation using the concept of mandatory approach to regulate corporate CSR activities, its implementation is still low and even only three corporations have a high commitment to CSR implementers and the company is wrong oil and gas is certainly a big question. Although Indonesia has obliged (mandatory approach) companies in Indonesia to implement CSR, but this cannot be used as a benchmark that the implementation of CSR in Indonesia is good (Kriyantono, 2015). Referring to these arguments and the facts conveyed that the 2016 Forkesos RI requires a study on the assessment of the implementation of CSR in Indonesia. One way to find out this
assessment is through stakeholder opinion which in this context is represented by the beneficiary community towards CSR implementation activities.

Therefore, based on several empirical arguments and the facts above, it becomes important to do a research to see the opinions of CSR beneficiaries as part of the company's stakeholders. Because of this it is quite urgent to be able to do a research with a focus on the formulation of the problem about the company's stakeholder opinion about the CSR implementation activities by the company. The opinion of the beneficiary is an essential matter because the opinions expressed will show the legitimacy given by the community to the company. Legitimacy is obtained from the approval of communities around the organization (Habermas, 1975, quoted in Culbertson, et al., 1993) and is built on two aspects: organizational competence (organization's competence) and organizational character (Veil et al., 2005). In addition, it refers to the findings of research conducted by Shah and Chen (2010) that CSR as a social aspect of a company that gets a positive assessment from the community will be able to improve the credibility and reputation of the company. In this regard, the formulation of the problem is answered by one frame of quantitative research method with the positivistic paradigm.

LITERATURE REVIEW

Corporate Social Responsibility (CSR) is a form of corporate social responsibility to the community voluntarily to create social welfare that focuses more on economic problems (Siltaoja, Malin, and Pyykkonen (2015). Van Marrewijk (2003) further defines CSR as a relationship Corporate social responsibility in the community regarding economic, social and environmental issues (in, Cho, Furey, and Mohr, 2016) More specifically Kim (2014) made six categories of CSR activities such as: (1) environmental stewardship, (2) philanthropic contribution, (3) educational commitments, (4) community / employee involvement, (5) public health commitments, and (6) sponsorship of cultural / sports activities (in, Cho, Furey, and Mohr, 2016) Referring to these six categories, it can be said that the greatest essence of the CSR concept is that the company is required to compensate each company for good activities directly, or will not directly affect the community around the company. This is because currently the public needs a lot of information and oversees the company's practices and contributions to the lives of surrounding communities through CSR (Lehtimaki, Kujala, and Heikkinen, 2011).

Furthermore, based on the literature review that researchers have done it can be seen that so far CSR and existing research focuses on several things such as: (1) Research on the influence of CSR on consumer behavior is carried out by Arli and Tjiptono (2013). This research was conducted in Indonesia using survey methods. In this study it can be seen that consumers will be more supportive of companies that carry out CSR with philanthropic concepts such as donations, direct assistance, and volunteerism. Arli and Tjiptono (2013) also added that through CSR companies can promote their products. (2) Furthermore, other studies on CSR discuss much about communicating CSR to the public as practiced by Verboven (2011). Verboven (2011) examines the use of slogans to communicate CSR and corporate identity to the public. Through qualitative research methods using rhetorical theory, it is found that the communication of CSR by chemical industries aims to obtain a "license" from the community so that the company can continue to operate. Next, another research on CSR leads to (3) the relationship between CSR and employees such as research conducted by Smith and Langford (2011). Smith and Langford (2011) use the survey method to find out about this and the results show that CSR carried out by companies can attract prospective employees and can better strengthen the relationship between employees and the company.

Next, other researches on CSR are involved (4) the influence of regulation on the implementation of CSR by companies such as those carried out by Kriyantono (2015). Research conducted by Kriyantono (2015) using this survey method shows that the main purpose of the regulation on CSR is to create social welfare for the community and in its implementation in Indonesia, the person considered the most important in the process of implementing a company's CSR is public relations. Several other studies that also reviewed
CSR were also carried out by Chapple and Moon (2005) with the aim of (5) observing the implementation of CSR in seven countries in Asia through the website. Chapple and Moon (2005) explained that the implementation of CSR in countries in Asia is homogeneous which is influenced by the stages of state development and globalization. However, it can be concluded that multinational companies in Asia implement CSR more comprehensively in the countries where they operate than their countries of origin. Research on CSR is also carried out by Zoller and Tener (2010) using (6) CSR as a tool for conducting environmental and stakeholder management. Zoller and Tener (2010) conclude that by being a "good neighbor" through CSR, companies can play a central role in making decisions in the community to gain legitimacy from the company's operations and can influence people's perceptions of environmental conditions that may need to be changed or given innovation.

Similarly, Zoller and Tener (2010) stated that CSR is used to shape community perceptions, O'Connor and Gronewold (2012) and Lehtimaki, Kujala, and Heikkinen (2011) also found similar results. O'Conner and Gronewold stated that (7) by making a comprehensive CSR communication especially on environmental issues for mining companies will help companies to be sustainable. Next Lehtimaki, Kujala, and Heikkinen (2011) also stated from the results of their research that (8) communicating CSR can reduce conflict tension and controversial situations in companies or investors in the company. The utilization of CSR for the benefit of one side of the company is not only revealed by the three studies above. Jamali (2008) also revealed that (9) CSR as a method to approach stakeholders. This is also further strengthened by the results of research conducted by Malin and Pyykkonen (2015) that (10) in the process every part of the company, especially employees, must be able to define CSR well that focuses on welfare.

Based on the explanation of several preliminary studies above, it can be seen that there is no single research on CSR that specifically examines stakeholder opinion through three measurement scales as well as a comprehensive one. Whereas on the one hand CSR through its dimensions has the potential as a medium for dealing with poverty. This refers to the concept of CSR which is defined as a form of corporate social responsibility to the community voluntarily to create social welfare that focuses more on economic problems (Siltaoja, Malin, and Pyykkonen (2015). Furthermore Van Marrewijk (2003) defines CSR as a the relationship of corporate social responsibility to society regarding economic, social and environmental issues (in, Cho, Furey, and Mohr, 2016) More specifically Kim (2014) makes six categories of CSR activities such as: environmental stewardship, philanthropic contributions, educational commitments, community / employee involvement, public health commitments, and sponsorship of cultural / sports activities (in, Cho, Furey, and Mohr, 2016). Other dimensions of CSR are also made by Carroll (1991) in four dimensions: economic, legal, ethical, and philanthropic. In addition to Carroll Dahlsrud (2008) also made five dimensions in implementing CSR namely: in environment, social, economic, stakeholder and volunteerism. From these dimensions, an early preposition can be drawn that economics is an important CSR element to be implemented.

However, it seems that CSR research related to economic issues is not much done or has not yet become a focus. This refers to several presentations of previous research related to the focus of research and implementation of CSR. So that it becomes a challenge in itself to be able to show that CSR has the potential to be developed into a poverty alleviation media in the economic dimension of CSR. Especially in CSR there are several supporting dimensions such as community involvement and volunteerism. When these three dimensions are combined, of course economic empowerment can be carried out so indirectly this will help alleviate poverty by making the community empowered.

This argument is also reinforced by the statements of Brammer, He, and Mellahi (2014) that current research on CSR must focus on social problems. This focus is also seen from the problems that are often raised on several companies' websites such as issues about community and the environment, although there are also several other problems such as human rights and employees (Smith, 2017). However, even so, the community is still a dominant topic considering CSR is an integration of the resolution of social and
environmental problems by the company. Therefore, the social problems raised in this study relate to the problem of community namely poverty.

Of course based on some of the research above it can be concluded that no one has specifically studied and described stakeholder opinions. Even though through the implementation of good stakeholder management can help companies to predict the environment in order to ensure the sustainability of the company in the future. This is also further strengthened by the statement of Bhattacharya, Korschun, and Sen (2009) about understanding the company's stakeholders in CSR as an important agenda. Plus, trace Kriyantono (2014), stakeholder management provides a comprehensive explanation of how to build company relations with various parties related to the company's operational activities to achieve superior performance. Therefore it is important for the company to identify this influence group. On this occasion the author tries to provide an example of stakeholder management. The processing becomes a foundation that must be controlled by the company to be able to control and predict all forms of problems and changes in the environment (Freeman and McVea, 2001). One way that can be done to manage stakeholders is the benefit of CSR as a dialogical media of the company and stakeholders. Stakeholders in this study are specifically beneficiaries of the CSR programs of the five companies.

This urgency is considering CSR is a company program to engage in social problems by contributing and value benefits to economic development and improving people’s welfare in the day-to-day operations of the company (Kottler & Lee, 2004; Iriantara, 2004; Kriyantono, 2016; Turker, 2009). In addition CSR is an important element of corporate dialogue with its stakeholders and researchers find many companies rely on the end result of CSR (Bhattacharya, et al, 2009; Kriyantono, 2015). The final results can be interpreted as a form of community assessment of CSR activities that have been carried out by the company. This assessment can be done by asking public opinion about the CSR program that was rolled out.

Continuing Freeman and McVea’s (2001) statement of change in confusion in CSR, the researchers outline that the environment in question is not only limited to the natural environment but also encompasses an environment that deals with social, political and cultural problems. Freeman and McVea (2001) added that stakeholder management is an integrated approach to determine or make a company decision that ultimately the decision is expected to satisfy stakeholders. The word “satisfying” in this context can be seen as a value that the company seeks to fulfill. This value is the basis for the emergence of stakeholder theories which are assumed to be an important part of a business (Freeman, Wicks, and Parmar, 2004). This makes the company must be able to facilitate and bring stakeholders to be able to build shared values and understanding about the related company.

**METHODS OF RESEARCH**

Next, enter the research method. The method used is quantitative with a large umbrella of the positivistic paradigm. Next enter the research object. The object of research in this study are five companies in Indonesia, especially those engaged in the oil and gas sector such as: PT. Pertamina Drilling Indonesia, State Gas Company (PGN), PT. Energy Station, Hongkong Sanghai Bank Corporation (HSBC), and PT Sharp Indonesia. This is because according to Himawan (2017) the oil and gas sector contributes greatly to Indonesia by contributing gross domestic product of three to four percent per year. Realistically, if the corporation engaged in oil and gas is also required to be able to provide a balanced contribution in the context of CSR, considering that the corporation is capable of lifting 802,000 barrels of oil per day (Novalius, 2017). Although this amount is an accumulation of all oil and gas corporations in Indonesia, this can reflect that this sector has the ability to be able to carry out CSR more comprehensively. When viewed based on data showing the 10 largest oil and gas companies in Indonesia, Pertamina is not a company in the first rank in this category but is capable of bearing the title as a company that implements CSR well version of the Kesos RI CSR Forum 2016. In addition to Oil and Gas, researchers also added several companies engaged in banking such as Hongkong and Shanghai Bank.
Corporation (HSBC) and companies engaged in manufacturing such as PT. Sharp Indonesia. These five companies were selected with consideration of accessibility of research data.

In total in the study there were five companies that became the object of research. The five companies are spread in several major cities in Indonesia including: Bekasi, Karwang, Medan, Pontianak, Yogyakarta, Jakarta, Tangerang, Sidoarjo, and Pangkal Pinang. Furthermore, with regard to the number of samples to be taken for this study, it refers to the elaboration given by Prayogo and Hilarius (2011) that for CSR research samples were taken between 75-300 samples. This is considering that the number of recipients of CSR programs is very heterogeneous. Researchers take the upper limit of the sample is 300 respondents in this study. In this study, researchers combined three measurement scales to determine public opinion on CSR program activities that have been carried out by some of these companies. The measurement scale that researchers first used is an indicator that has been built by Dedi Prayogo and Yoseph Hilarius (2010) to evaluate CSR. Prayogo and Hilarius (2010) studied it from the context of sociology and researchers are currently studying from the context of communication and public relations. The indicators built by Prayogo and Hilarius are called the Community Development Index (CD Index) which has six indicators, namely: (1) effectiveness, (2) relevance, (3) sustainability, (4) impact, (5) empowerment, (6) participation.

Furthermore, the second scale that researchers use is the CSR measurement scale developed by Kanji and Chopra (2015). This Chopra Corporate Social Responsibility (KCCSR) Kanji scale is used by researchers to be able to see how far the company has run social responsibility. KCCSR has indicators that enable researchers to be able to identify, classify, analyze and respond to CSR. Some KCCSR indicators include: (1) social accountability and social investment, (2) ethics and human resources, (3) corporate governance and economic responsibility, (4) environment protection and sustainability. The next measurement scale used to evaluate CSR is ISO 2600. ISO 2600 is used to determine public opinion on the implementation of CSR programs based on international standards. This ISO 2600 includes: (1) organizational governance, (2) the environment, (3) labor practice, (4) fair operating process, (5) human rights, (6) consumer issues, (7) community involvement and development. The three scales used by researchers to determine public opinion on the implementation of CSR activities that have been carried out by five companies and nine major cities in Indonesia. The measuring scale is translated into the items in question with a scale of 1 to 4.

**RESULTS OF STUDY**

*Kanji Cophra Corporate Social Responsibility (KCCSR)*. In the first discussion, in this section the researcher enters the scales used to conduct this research. The first scale that the researcher will present is Kanji Cophra Corporate Social Responsibility (KCCSR) which is used to view social media that is successfully obtained by the company through the roll-out of CSR programs. This KCCSR has four main indicators, namely: (1) social accountability and social investment, (2) ethics and human resource, (3) corporate governance and economic responsibility, and lastly (4) environment protection and sustenance ability. The four indicators are assessed through 31 statement items that the researchers detailed in the table below as follows:

<table>
<thead>
<tr>
<th>NO</th>
<th>Index Category</th>
<th>Mean Scores</th>
<th>Maximal Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The company has been transparent and open about its business activities</td>
<td>3.24</td>
<td>4.00</td>
</tr>
<tr>
<td>2</td>
<td>The company has provided a system to prevent corruption in the company environment, including preventing financial abuse and transaction fraud</td>
<td>3.147</td>
<td>4.00</td>
</tr>
<tr>
<td>3</td>
<td>The company has provided arrangements to produce positive impacts for a better society</td>
<td>3.137</td>
<td>4.00</td>
</tr>
</tbody>
</table>
Table 1 Continue

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Value</th>
<th>Total Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>The company has provided facilities for socially responsible investments, such as education and health facilities</td>
<td>3.143</td>
<td>19.064</td>
</tr>
<tr>
<td>5</td>
<td>The company has provided social accountability within itself to meet public expectations</td>
<td>3.090</td>
<td>19.064</td>
</tr>
<tr>
<td>6</td>
<td>The company has considered its social responsibility to the community to be important</td>
<td>3.307</td>
<td>19.064</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>19.064</strong></td>
<td><strong>24%</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Index Value</strong></td>
<td><strong>79.433%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Ethics And Human Resource**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Value</th>
<th>Total Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>The company contributes to campaigns and projects that focus on community welfare</td>
<td>3.137</td>
<td>3.137</td>
</tr>
<tr>
<td>8</td>
<td>Companies always pay taxes regularly and continuously</td>
<td>3.150</td>
<td>3.150</td>
</tr>
<tr>
<td>9</td>
<td>The company supports people who want to get additional education</td>
<td>3.167</td>
<td>3.167</td>
</tr>
<tr>
<td>10</td>
<td>The company provides complete and accurate information about its products to the public.</td>
<td>3.190</td>
<td>3.190</td>
</tr>
<tr>
<td>11</td>
<td>The company respects the rights of the community as determined by the rule of law</td>
<td>3.193</td>
<td>3.193</td>
</tr>
<tr>
<td>12</td>
<td>The company has been concerned about environmental problems for its customers</td>
<td>3.210</td>
<td>3.210</td>
</tr>
<tr>
<td>13</td>
<td>The company has implemented a transparent system to control labor practices such as: Normal working hours, There is no labor exploitation, Hard and inhumane treatment of labor</td>
<td>3.130</td>
<td>3.130</td>
</tr>
<tr>
<td>14</td>
<td>The company has successfully implemented a clean and hygienic workplace and safe working conditions</td>
<td>3.207</td>
<td>3.207</td>
</tr>
<tr>
<td>15</td>
<td>The company does not discriminate against its employees / society for welfare.</td>
<td>3.173</td>
<td>3.173</td>
</tr>
<tr>
<td>16</td>
<td>The company encourages people to participate in voluntary activities</td>
<td>3.327</td>
<td>3.327</td>
</tr>
<tr>
<td>17</td>
<td>The company supports non-governmental organizations (NGOs) overcoming social problems</td>
<td>3.150</td>
<td>3.150</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>35.034</strong></td>
<td><strong>44%</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Index Value</strong></td>
<td><strong>79.622%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Corporate Governance And Economics Responsibility**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Value</th>
<th>Total Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>The company has interacted with the community in conducting social responsibility programs (CSR)</td>
<td>3.273</td>
<td>3.273</td>
</tr>
<tr>
<td>19</td>
<td>Company management is very concerned about the needs and desires of the community</td>
<td>3.110</td>
<td>3.110</td>
</tr>
<tr>
<td>20</td>
<td>The company has respected the quality of life of the workforce and their families and the community as a whole</td>
<td>3.003</td>
<td>3.003</td>
</tr>
<tr>
<td>21</td>
<td>Management decisions related to the community are usually fair</td>
<td>3.103</td>
<td>3.103</td>
</tr>
<tr>
<td>22</td>
<td>The company has achieved its contribution to the country's economic development</td>
<td>3.063</td>
<td>3.063</td>
</tr>
<tr>
<td>23</td>
<td>The company has been able to create employment opportunities for the surrounding community</td>
<td>3.057</td>
<td>3.057</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>18.609</strong></td>
<td><strong>24%</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Index Value</strong></td>
<td><strong>77.537%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Environment Protection And Sustainability**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Value</th>
<th>Total Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>The company has attempted to manage and control risks in the company to control incidents such as environmental accidents</td>
<td>3.194</td>
<td>3.194</td>
</tr>
<tr>
<td>25</td>
<td>The company has attempted to publish the environmental impact of its products on the website or print media so that the public is aware</td>
<td>3.180</td>
<td>3.180</td>
</tr>
<tr>
<td>26</td>
<td>The company has sought to change the product brand or product value in accordance with global environmental considerations</td>
<td>3.040</td>
<td>3.040</td>
</tr>
<tr>
<td>27</td>
<td>The company has sought to cut unwanted product packaging in global environmental problems</td>
<td>3.097</td>
<td>3.097</td>
</tr>
<tr>
<td>28</td>
<td>The company participates in activities aimed at protecting and developing environmental quality</td>
<td>3.423</td>
<td>3.423</td>
</tr>
<tr>
<td>29</td>
<td>The company has attempted to communicate the environmental effects of economic actions to certain groups or the wider community</td>
<td>3.067</td>
<td>3.067</td>
</tr>
<tr>
<td>30</td>
<td>Our company targets sustainable growth for future generations</td>
<td>3.357</td>
<td>3.357</td>
</tr>
<tr>
<td>31</td>
<td>Our company invests in creating a better life for future generations</td>
<td>3.387</td>
<td>3.387</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>25.745</strong></td>
<td><strong>32%</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Index Value</strong></td>
<td><strong>80.453%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
The table above research presents along with the calculation of the mean score of each statement item in all four indicators. This score shows the tendency of respondents' answers in each statement. The highest value that the researcher set in this study is 4 and the lowest value is one and with a percentage value > 75% which means that the opinion of the beneficiary can be said to be good for each indicator used in this research. When viewed from the calculation of the mean score above, all indicators approach the highest value, which means that the community's assessment of CSR programs rolled out by the company is in a good position.

In more detail the researcher presents the discussion of each indicator as follows. The first indicator measurement scale is Social Accountability And Social Investment (SASI). The value index for the SASI indicator measurement scale is at a value of 79.433%. The value index describes the acceptance and good perception of the implementation of CSR programs from the companies concerned by the beneficiaries of those companies. Based on the results of the index value, it can also be seen that the CSR programs that have been rolled out by the sample companies in this study have been considered by the beneficiaries to be able to create a positive impact on the sustainability of beneficiaries and society in general. This can be seen from six question items in this category. Of the six items that are available, the highest assessment is found in the item question about the company's focus related to social responsibility to the community.

The next scale of measuring CSR indicators is the Ethics and Human Resource (EHR). In general, the index value in this indicator is 79.62%. The value index has indicated that the implementation and acceptance of beneficiaries of CSR activities carried out by these companies is quite good. The results of the index value above also indicate that these companies have realized CSR activities in accordance with the applicable law with a fairly good category. Especially about the problem of responsibility to consumers. This means that the company has tried carefully to create environmental security for the beneficiaries around the area of its operation.

The next indicator measurement scale is Corporate Governance and Economics Responsibility (CGER). In general, based on the table above it can be seen that in general stakeholders have perceived that CSR activities carried out by the company have been implemented quite well. This conclusion is drawn based on the index value obtained in this indicator of 77.54%. The lowest perception, although still in good category, arises from CSR activities carried out by the company to the beneficiaries in fair treatment. Beneficiaries have seen that all activities carried out by the company respect the quality of life both from the workforce to the wider community. Assessment of the company's respect for these beneficiaries is derived from an opinion assessment which states that the company has provided interaction space and involves beneficiaries as stakeholders in the existing CSR programs.

The last scale of measuring CSR indicators is Enviroment Protection and Sustainability (EPS). The final result of the calculation of the index value of this indicator is not much different from the results of the calculation of the three index values of the previous indicator which is still in the range of 50% -75%. In this indicator, the index value is 80.45% which means that in general the perception of beneficiaries regarding the implementation of CSR programs by the company at a fairly good level. Beneficiaries based on the highest means scores calculated that the company had done well enough to develop environmental quality. This assessment arises with one strong reason that the company is considered to have been present among the beneficiaries with its various programs aimed at improving the quality and welfare of beneficiaries as company stakeholders.

Next, in more detail the researcher presents a diagram of the results of the research related to the perception of the beneficiaries of CSR activities carried out by the company based on the four scales of CSR measurement indicators, as follows:
In general, the overall indicators are in the range of 50% -75% which means that the overall perception of the welfare of the beneficiaries as stakeholders of the company towards CSR activities that have been carried out by the company is at a fairly good level. Based on the data above, it can also be seen that the highest level of perception by beneficiaries is that the environmental responsibility of the company is considered good enough. Beneficiaries as stakeholders of the company consider that the company has carried out environmental responsibility and future generations. In addition, the difference in index value of one indicator with other indicators is not much different, which means that four indicators on this scale are responded positively by the beneficiaries.

The beneficiary's opinions reflected show consistency of assessment on each indicator. In the first indicator of social accountability and social investment (SASI) the positive response that emerges is that the beneficiary assesses that the company has demonstrated its responsibility to the community through each CSR program that was rolled out. Or in other words, the welfare of beneficiaries as company stakeholders assesses that the company has placed social responsibility as an important part of the company. Based on the second indicator of ethics and human resources (HER), what is meant by social responsibility that has been implemented by the company well is social responsibility regarding environmental issues. This positive response was also established by the company because the welfare of beneficiaries as stakeholders of the company felt that they had been given space and involved in the process of implementing CSR programs. The positive response researchers read from the indicators of corporate governance and economic responsibility (CGER). Because of this, the welfare of the beneficiaries as stakeholders of the company responds to all actions taken by the company through the existing CSR programs is a form of corporate business to help protect and develop the quality of life of the community.

Corporate Social Responsibility (CSR) Index. The second scale that researchers use in this study is the CSR Index built by Prayogo and Hilarius (2011). This scale is used to determine the effectiveness of a CSR program in poverty alleviation. There are six main indicators on this scale namely: effectivity, relevance, sustainability, impact, empowerment, and participant. Researchers use these six indicators to examine six fields at the same time in implementing CSR such as: education, health, economy, environment, infrastructure, and donations.

Based on the table 2 can be seen the implementation of CSR by companies in Indonesia both by category and by field. One piece is charged for the category of participants in the maximum category of 79.020%. Furthermore, in terms of area the highest percentage in the environmental sector is 80.841%.
Table 2 - Implementation of CSR by companies in Indonesia

<table>
<thead>
<tr>
<th>No.</th>
<th>Category</th>
<th>Education</th>
<th>Healthy</th>
<th>Economy</th>
<th>Environment</th>
<th>Infrastructure</th>
<th>Charity</th>
<th>Maximal Score</th>
<th>Mean Score</th>
<th>Maximal Score</th>
<th>Mean Score</th>
<th>Maximal Score</th>
<th>Mean Score</th>
<th>Maximal Score</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Effectivity</td>
<td>3.130</td>
<td>3.163</td>
<td>3.113</td>
<td>3.243</td>
<td>2.990</td>
<td>3.223</td>
<td>18.862</td>
<td>78.44%</td>
<td>4.00</td>
<td>3.223</td>
<td>18.862</td>
<td>78.44%</td>
<td>4.00</td>
<td>3.223</td>
</tr>
<tr>
<td>2</td>
<td>Relevance</td>
<td>2.973</td>
<td>3.157</td>
<td>3.003</td>
<td>3.223</td>
<td>2.953</td>
<td>3.153</td>
<td>18.462</td>
<td>76.925%</td>
<td>4.00</td>
<td>3.223</td>
<td>18.462</td>
<td>76.925%</td>
<td>4.00</td>
<td>3.223</td>
</tr>
<tr>
<td>3</td>
<td>Sustainability</td>
<td>3.020</td>
<td>2.863</td>
<td>2.940</td>
<td>3.153</td>
<td>2.890</td>
<td>3.087</td>
<td>17.593</td>
<td>73.304%</td>
<td>4.00</td>
<td>3.223</td>
<td>17.593</td>
<td>73.304%</td>
<td>4.00</td>
<td>3.223</td>
</tr>
<tr>
<td>4</td>
<td>Impact</td>
<td>2.910</td>
<td>3.103</td>
<td>3.010</td>
<td>3.213</td>
<td>2.983</td>
<td>3.160</td>
<td>18.379</td>
<td>76.579%</td>
<td>4.00</td>
<td>3.223</td>
<td>18.379</td>
<td>76.579%</td>
<td>4.00</td>
<td>3.223</td>
</tr>
<tr>
<td>5</td>
<td>Empowerment</td>
<td>2.997</td>
<td>3.127</td>
<td>3.073</td>
<td>3.257</td>
<td>3.013</td>
<td>3.187</td>
<td>18.654</td>
<td>77.725%</td>
<td>4.00</td>
<td>3.223</td>
<td>18.654</td>
<td>77.725%</td>
<td>4.00</td>
<td>3.223</td>
</tr>
<tr>
<td>6</td>
<td>Participant</td>
<td>3.053</td>
<td>3.173</td>
<td>3.113</td>
<td>3.313</td>
<td>3.083</td>
<td>3.230</td>
<td>18.965</td>
<td>79.020%</td>
<td>4.00</td>
<td>3.223</td>
<td>18.965</td>
<td>79.020%</td>
<td>4.00</td>
<td>3.223</td>
</tr>
</tbody>
</table>

From the diagram above it can be seen that based on the participant category is the highest indicator. This shows that the involvement of the community in the process of implementing CSR is quite good. However, based on field data owned by researchers, the involvement of beneficiaries as stakeholders of this company is only done when the CSR program is implemented. Beneficiaries have not been involved in the planning phase. However, the program was considered effective (78.44%) by stakeholders because the program had relevance (76.93%). So the impact (76.60%) is also good for the community, with one of them being able to empower or empower (77.73%) the community. However, the biggest homework in implementing a program is that sustainability issues that are still legible have the lowest value among other categories, namely 73.30%. Although mathematically the value for sustainability is in a good category, of course this is a separate note in the future.

Based on the data above, the researcher tries to find a cause of contradiction, meaning that the CSR implementation system is not as long as it is free from the top down system. So the results are contradictory. Researchers traced further this matter and found new facts and hypotheses that require further research in the future. All existing programs from the six companies are implemented without involving stakeholders who are beneficiaries of the program in the planning stage. So even though the participant's high value of sustainability is still a bit far behind.

ISO 2600 is a general reference standard that must be met by the company in the CSR implementation process. In this study, researchers want to measure public perceptions of the implementation of CSR through a number of indicators that are established internationally through ISO 2600. In the table below the researchers describe the results of the survey and the calculation of the mean score of each indicator as follows:
Table 3 – Mean Score of CSR Implementation Process

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>Maximal Score</th>
<th>Minimal Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Organizational Government</td>
<td>4.00</td>
<td>3.167</td>
</tr>
<tr>
<td>2.</td>
<td>The Environment</td>
<td>4.00</td>
<td>3.083</td>
</tr>
<tr>
<td>3.</td>
<td>Labour Practice</td>
<td>4.00</td>
<td>3.256</td>
</tr>
<tr>
<td>4.</td>
<td>Fair Operating Practice</td>
<td>4.00</td>
<td>3.200</td>
</tr>
<tr>
<td>5.</td>
<td>Human Rights</td>
<td>4.00</td>
<td>3.250</td>
</tr>
<tr>
<td>6.</td>
<td>Consumer Issue</td>
<td>4.00</td>
<td>3.050</td>
</tr>
<tr>
<td>7.</td>
<td>Community Involvement and Development</td>
<td>4.00</td>
<td>3.340</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>32</td>
<td>22.348</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>100%</td>
<td>69.837%</td>
</tr>
</tbody>
</table>

From the table above it can be seen that the overall indicator gets a good assessment from the stakeholder community. Furthermore, if accumulated in percentage form, the amount can already be included in either category because the range of good categories is in the percentage range of 50-75%. Somewhat different from other measurement scales, on a measurement scale that uses ISO, environmental issues occupy the lowest rating and followed by consumer issues also get a low rating.

Still referring to the diagram above, it can be seen that involving the community in the process of implementing high CSR. It is evident from the seven indicators that there are indicators of community involvement and development getting the best assessment. This further strengthens that currently the implementation of the CSR system no longer uses a topdown system but has implemented a bottom up system. However, even so, this high level of community involvement has only occurred in the implementation stage and has not yet begun from the planning stage.

**DISCUSSION OF RESULTS**

Describes CSR Opinion Stakeholders Through 3 Measuring Scales: KCCSR, CSR Index, and ISO 2600. The main subjects in this study were beneficiaries as stakeholders of companies that received CSR programs from companies. Beneficiaries as company stakeholders in this study are defined as "key drivers" to achieve company reputation (Bussy, 2008). The reputation of the company in this context the researcher means as an assessment or stakeholder opinion on CSR programs that have been implemented by the company. This definition more clearly describes the condition of the beneficiary as a group or individual that has the potential to influence or be influenced by activities carried out by the company (Coombs, 2007). Because of the reciprocal nature of the beneficiaries as stakeholders of the company and the company, this raises the concept of interconnection between the two. So it can be concluded that stakeholders are the main target of every activity carried out by the company (Freeman, 1984; Kriyantono, 2015; Seitel, 2001).

The explanation above explains that the measurement scale of the opinion of the beneficiaries as the company's stakeholders on CSR programs can be done by knowing the stakeholder perceptions of CSR activities carried out by the related companies. In addition, by understanding stakeholder opinion which also includes stakeholder trust and knowledge (Galloway & Aidoo, 2005), it is hoped that it can create a mutually beneficial understanding (mutual understanding) between stakeholders and related companies (Cultip, Center, & Broom, 2011). So with this trust and mutual understanding will bring support for the company. Based on the above understanding, the researcher conducted a form of opinion study to find out stakeholder perceptions of CSR activities carried out by companies in Indonesia as a communication medium to get support from stakeholders from the CSR programs rolled out.

The results of this study indicate that stakeholders have a fairly good perception of CSR activities that have been carried out by companies in Indonesia. This means that there has been a mutual understanding between stakeholders and related companies. In general, the three scales that researchers use to conduct this evaluation study show results in good categories. Of the three scales that researchers use, the KCCSR and CSR Index show that
community members in this context are represented by stakeholders who agree that the company has a high commitment to CSR programs related to environmental issues. However, for the scale that researchers adopted from ISO 2600 the results were no different. On this scale the highest assessment is the attitude of openness of the company with evidence of giving space to the public to actively participate in CSR programs that are being rolled out. This also means that CSR programs that are rolled out by the company have been able to become a medium of communication for companies to be able to engage in community psychology. This statement is strengthened by research findings.

Basically CSR can be an important element for companies to communicate with the community and not infrequently many companies from various research results rely heavily on CSR to establish relationships with stakeholders (Battacharya, et al, 2009; Kriyantono, 2015). This is evidenced by the measurement results of two of the three scales used that the company has actively engaged the community in every CSR program rolled out. Both on the CSR Index scale through the category of participant in all fields and the scale of ISO 26000 with indicators of community involment and development all get the highest assessment by the community at each measurement scale. This shows that CSR is really used by companies as a communication medium. Of course this will help the company to get support from stakeholder. From the research that the researchers did, this was also measured by the companies that were used as the sample of the study in this study. So that it can also be understood that CSR communication patterns rolled out today are no longer fully top down but have become bottom up by accommodating and involving the community in the process. Although there is still a large record in the process, community involvement has only begun in the implementation phase rather than planning.

This should be a separate consideration for the company because the process of bottom-up communication certainly has a significant impact on the overall aspects of the CSR program being rolled out. The CSR process that is bottom-up provides space for stakeholders to be able to express their opinions. Because of this, the corporate governance and economic KCCSR dimensions of the community provide the highest assessment of items of statement that the company has interacted with the community. This bottom-up communication process has implications for the effectivity and relevance assessment on the CSR Index scale which shows that in all fields get a good assessment. Again, this shows that CSR can be used as a medium of communication with the community to get support. Of course, with a note that the company must open a space of participation for the community so that the CSR program that is rolled out as a communication medium runs effectively by finding the relevance of community needs which are then translated into CSR programs. At present, this is a good assessment by the community on the scale of ISO 26000 to be precisely the indicator of human right on the number of good acceptance by the community.

However, even though the three scales used in each indicator, category, and field under study in CSR are in good judgment, there are several indicators that have a low rating compared to indicators, categories and other fields. This can be seen from the acquisition of the value index listed from the KCCSR and ISO 26000 which has the lowest revenue average even though it is still in a good category. Examples of Corporate Governance and Economic Responsibility in KCCSR have the lowest index value among the three other indicators, but the assessment of the community against this indicator is still at a pretty good level. In this indicator, the community considers that with the CSR being rolled out by the company, the company is assessed that the economic social responsibility that has been carried out by the company to direct stakeholders such as investors, employees and customers is quite important but not more than other indicators. This is also supported by the results of the scale in ISO 2600 that the consumer issue is the lowest point, even though it is still in a good category compared to the other seven indicators in ISO 26000.

The next category that gets a low rating that appears from the CSR Index is the sustainability program. Of the six existing fields such as education, health, economy, environment, infrastructure, donations, only two areas with high sustainability programs are in the field of environment and education. Based on the achievement of 3,153 figures for the environmental field and 3.02 for the education sector, this indicator is also perceived by the
public at a fairly good level which means that the company has been able to implement this indicator quite well. However, of course, looking at the other four areas that value towards the sustainability category are still relatively low even though they are still in a good range, this has become a separate homework for program organizers to be able to create CSR programs in every field that has high sustainability. This is also a matter worth considering because it is directly proportional to the sustainability program, so the social legitimacy of the community can also last longer.

Overall, the community's assessment of CSR activities that have been carried out by several companies in Indonesia at a good level or in other words that the CSR program rolled out has been considered effective. This also indicates that CSR is indirectly a good medium of communication and has a significant impact on the relationship between the community and the company. Besides that the implementation of CSR properly will be able to help the dialogue process between the company and the community better to be able to achieve mutual understanding which ultimately gives birth to social support for the company.

Corporate Social Responsibility: A Future Potential Public Relations Communication Activity. The main challenge in this study is to put empirically CSR as a public relations activity in a communication perspective. In addition in this study, researchers are also obliged to be able to describe the potential of CSR as a trend of CSR activities in the future to create the image and reputation of the company. First for the problem of occupying CSR as a study of communication can be seen from the overall results of the opinions of beneficiaries as stakeholders of the company who generally agree that the company has implemented CSR well. This opinion shows that beneficiaries as stakeholders of the company have been able to understand the message in CSR activities.

It should be understood at the outset that CSR in this context is not only a product of the company that aims to create a social welfare for its stakeholders, but also a medium of communication. If CSR is understood as a communication medium, there is a message in CSR. Borrowing the Laswell transmission model, it can be considered a communicator in this communication process is the company represented by public relations as the communication manager, the message that is brought is CSR creates welfare and gives stakeholders benefits through various fields and indicators, the media used is CSR programs, communication are the beneficiaries as company stakeholders, and the effect of communication that emerges is a good opinion of benefiting from the existing CSR programs.

Based on the description above, it can be understood in terms of communication that CSR works well and has the potential to serve as a communication medium for companies to shape the image and reputation of the company. Moreover, CSR as a communication medium has not only fulfilled the communication aspect in the transmission model, but has also led to the two way communication model. This is evidenced from the three sakala used by researchers to find out the opinions of beneficiaries as stakeholders of the company towards all existing CSR activities, showing positive significant results on participant indicators in the CSR Index, community involvement and development at ISO 2600, and ethics and human resources on KCCSR. The three indicators in each scale discuss the company's efforts to provide dialogue space for beneficiaries as company stakeholders. This dialogue space can be interpreted as a form of communication between beneficiary companies as company stakeholders.

This form of communication creates a sense of belonging for beneficiaries as company stakeholders. This high Sense of belonging is able to make stakeholders to the side with the company and provide support. This provides two benefits for the company. First, the company benefits from getting a good image and reputation. Second, the assessment of a good social track record will certainly be able to help companies in the future if they experience a crisis. That is, CSR becomes a communication medium that can provide two benefits at once in one action. Plus, if the implementation of CSR is done appropriately, the public relations function as a communication agent can be done well with two good neighbors that have a big ear. The concept of good neighbor and big ear will be able to help public relations and question the environment and anticipate things that might end the image and cause of crisis. When the overall CSR activities have been carried out properly and
ensure the beneficiaries as stakeholders have been well involved and created of belongings, the next task is to maximize the potential of the medium in order to create an image and a good corporate reputation. is to do publications and media media relations. The purpose of this action is to report publicly on the CSR actions that have been carried out by the company. This aim to convey the company is focused and good tendency to maintain and manage the environment. Of course, the initial prediction of the results of this study will provide benefits for the company. This is a public relations activity in the future by utilizing CSR as a communication medium to predict and manage the environment in order to create an image and reputation for the company.

CONCLUSION

In general, the results of this study indicate that the beneficiaries as stakeholders of the company provide positive value by eliminating the value range of three quarters of the percentage that is on the indicators in each field. This shows that CSR has a high potential as a medium of communication. This argument is supported by data that the value of participation of beneficiaries as stakeholders of companies occupies a high rating on a scale. This means that CSR has been carried out with a bottom-up model by the company. This model is then able to create a system of belongings for stakeholders towards the company.

Furthermore, based on the six existing CSR fields such as economics, education, environment, health, infrastructure, and donations, the highest considered to have been implemented properly by the company is the environment. This result also relates to the type of company that is the object of research is a mining company. Because of this, the results will be in line that for the type of companies engaged in mining, more will be concentrated on environmental problems.

Other findings that the researchers are able to describe as a result of this research are that CSR carried out by this company is a public relations activity that can be used as a way to predict the environment as a reference for composing a preventive action for potential crisis in the company. This is due to the fact that through CSR the company can find out about the situation of stakeholders and how to manage it. Referring to all these things can be taken a big conclusion that in the future CSR can be used as a trend of public relations activities in order to shape the image and reputation of the company and as a media to predict and control the environment as a preventive measure of a crisis that might befall the company. This high participation rate can also be utilized by the company with the concept of community involvement to maintain all the good relationships that have been established between stakeholders and the company. Following up on these results, in the future there are several studies that can be done to complement the results of the research including: (1) Conducting research in the context to compare the practice of implementing CSR in the state-owned and private institutions. This aims to be able to become an input to the CSR regulations in Indonesia. (2) Test Try the Community Involvement concept to convey the message in forming a sustainability program in every existing CSR program. Lastly, (3) conducting a research study on the analysis of CSR and public relations to see the level of awareness of public relations in utilizing CSR as a communication medium.

REFERENCES

country study of CSR website reporting. Business & Society, 4 (44), 415-441.
and sustainability: synergies and inter-relationships. Indian Journal Of Corporate Governance, 7 (1), 14-38.


EMPLOYEE CAREER DEVELOPMENT: A STUDY ON CAREER MANAGEMENT, COMPETENCE, SATISFACTION AND ORGANIZATIONAL COMMITMENT IN A STAR HOTEL OF BALI

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ABSTRACT
Important factors to ensure the success and survival of an organization are human resources who are reliable, capable, skilled and have high morale, especially in the face of global competition and free markets. Quality and service improvement from human resources is by human resource development program, in which there are work technical improvement programs and employee career planning and development. The company has an obligation to help its employees realize their abilities and by integrating individual careers with the company they will benefit. For employees, clear benefits are satisfaction, personal development, and a quality work life.

KEY WORDS
Career management, competence, satisfaction, organizational commitment.

Two things that underlie career development are work performance and work experience. An employee's work performance can be measured through an assessment whose assessment is adjusted to the conditions of the company and should be carried out routinely in a certain period. Identification obtained from the results of the employee's assessment can be classified into the category of very good, good, bad and very bad which will determine the opportunities for employees to develop their careers in accordance with the career path in the organization. Every employee who is assessed will know his ability through the employee's work value. This assessment will support skills and speed in completing employee tasks, so the error rate will decrease. Employee working period usually indicates the employee's work journey, the longer the working period, the more work experience that is owned by an employee, so that the more skilled and the faster the employee completes the task for which he is responsible.

Every employee always expects to be able to occupy a certain position higher than a certain period of time. Career and employee positions can reflect the quality of the employees concerned, which is required to be able to master various knowledge, abilities, skills and experience. Careers are social constructs that are formed by an ongoing process of self-creation, the development of forms and an increase in self-worth (Millward and Kyriakidou, 2004). Therefore the problem of career planning and development in the organization becomes very large, where as good as any career planning by employees without systematic and programmatic career development will be very impossible to achieve in an organization.

According to Nazli (2007), careers must start from the beginning with the support of superiors or mentors and support from the environment both the family environment and the work environment is very helpful for career development. Agarwala (2008) states that skills, competencies and abilities are very important factors that influence individual career choices. Whereas Veldhoven and Dorenbosch (2008) view age and proactive roles as having an important meaning in developing one's career.

Career satisfaction refers to the level of individual affective orientation towards his career (Juang & Klein, 2000). Interest in career satisfaction is intensified by results or behavioral consequences of career satisfaction, such as commitment and desire to leave (Igbaria, Greenhaus, & Parasuraman, 1991). Satisfaction in employees is usually associated with the same structure used to motivate. Expectation theory states that people seek
satisfaction based on their perceptions, attitudes, and beliefs, in order to get desired results that can strengthen or enhance pleasure and avoid difficulties or suffering (Vroom, 1964). Furthermore Vroom (1964), stated that including characteristics or organizational aspects that increase satisfaction are opportunities to progress and tasks related to work that can be enjoyed. Hsu, et al (2003), states that career level models are used to describe a person's career progress which includes opportunities for progress, roles, and tasks that accommodate such progress. Thus a career level model rooted in Super (1957), provides a descriptive framework for examining the satisfaction of work progress. According to Super's theory (1957), that individuals normally move through different levels of work during the course of their career life cycles.

According to Orpen (1994) career management is a policy or rule that is compiled and developed by an organization to improve the career effectiveness of its employees. Career management carried out by the organization as an employee career development activity that aims to increase work productivity. Employees who need self-development will try to reach a position through certain channels by improving the performance of each individual. Apart from the organization, employees also need to conduct career management individually through planning and tactics. Career planning and tactics will help employees achieve certain careers that are tailored to the provision of career paths in the company.

Career development is described as an interactive development of internal career identity formation and significant growth of external careers (Hoekstra, 2010). Career development is an effective way to acquire and develop staff, which is crucial for the role and effectiveness of career management in the hospitality industry. Career development is also felt to be able to gain the development of individual abilities by working in harmony with efforts to improve employee career competencies. Career development is influenced by career motives, work performance and career roles (Hoekstra, 2010). Whereas Kong (2011) argues that career development is influenced by career competencies, hotel career management and career commitment.

LITERATURE REVIEW

Career according to Simamora (2004) is divided into two perspectives namely subjective and objective. Careers viewed from the subjective side are careers that consist of changes in values, attitudes and motivations that occur because someone is getting older. Whereas from an objective perspective, a career is a sequence occupied by a person during his lifetime. Both perspectives are focused on individuals, who assume that people have some degree of control over their destiny, so they can change opportunities to maximize success and satisfaction that comes from their careers.

Effective career management will carry out career development by increasing employee career competencies with the results of increasing employee satisfaction will be achieved later. In today's business or business environment, organizations play an important role in career management systems (Baruch, 2006). As in the tourism industry, hotels can provide effective career management activities such as training, mentoring, performance appraisal and development programs for employees (Kong, 2011). With regard to career satisfaction, career management has various practical activities such as job rotation schemes (Campion, 1994), sponsorship and training careers (Greenhaus, 1990) and performance appraisal (Burke, 2001).

Competence is also defined as the ability to carry out a task, obligation or role, the ability to integrate knowledge, skills, attitudes, personal values, and the ability to build knowledge and skills through experience and learning conducted (Warta Warga, 2009). Kong (2011) stated that an increase in employee career competence requires a good cooperative relationship between managers and employees themselves. So the role and interrelation between management and employees will have a positive impact on the development and improvement of employee competencies.

Career development is closely related to career planning and career management. An understanding of career development in an organization requires an examination of two
processes, including how to plan a career and set career goals and how organizations design and implement career development programs. According to Greenhaus (2010) career development is an ongoing process of individual development through the career stages of an employee. It was also said that career development helps employees in developing tasks, formulating goals and strategies in their careers and lives.

Career development relationships with career satisfaction cannot be separated from the company's efforts to pay attention to the needs of employees themselves. Greenhaus (1990) says that career satisfaction is individual satisfaction that encourages intrinsic and extrinsic aspects of his career, including salary, benefits and opportunities to develop. Employees with the availability of a significant career development program in the company will well demonstrate an increase in job satisfaction and loyalty to the company, which affects the decline in employee turnover rates within the company (Jackson, 2009). The same thing is said by Carson et al (1996), that employees who are satisfied with their careers currently have a high commitment to the company, and will strongly support all new strategies made by the company (Gaertner, 1989). In other words, the higher career satisfaction will create a stronger desire to continue working in a company (Igbaria, 1991).

Employee commitment to the organization has now received much attention in the literature on organizational behavior, especially related to job satisfaction. This is because, job satisfaction is closely related to employee behavior towards their work, organizational commitment is an attitude of employee partiality towards the organization, which is an important behavioral dimension that can be used to measure and evaluate employee strengths in defending and carrying out their duties and obligations in an organization, so that a strong relationship between job satisfaction and organizational commitment has been found through various studies (Luthan, 2005). By knowing the commitment that employees have, the organization can determine the direction of its policies through strong and efficient human capital, so as to create strong competitiveness in the face of increasingly sharp competition.

Hypothesis:
- H1: Career management effect employee career development in star hotels in Bali;
- H2: Career competence effect employee career development in star hotels in Bali;
- H3: Employee career development effect employee career satisfaction in star hotels in Bali;
- H4: Employee career satisfaction effect organizational commitment in star hotels in Bali.

METHODS OF RESEARCH

The population of this study is all permanent employees of hotels who have a level or have starred standards in Badung Regency. What is meant by star hotels are hotels that have standard star product and service facilities, namely 2 stars, 3 stars, 4 stars and 5 stars. The total population in this study is 100 star hotels.

The sample in this study is permanent employees at Star Hotels in Badung Regency. The sample in this study was taken from all starred hotels in Badung Regency, amounting to 100 star hotels, where the samples were taken by two permanent employees from each hotel, so the number of samples obtained was 200 according to the characteristics of the sample. The reason for choosing permanent employees in each hotel as a sample in this study was due to the opportunity for permanent employees to be able to develop a career better compared to non-permanent employees. More specifically, this study aims to gather information about career management, career competence, career development, career satisfaction and organizational commitment.

The sampling method in this study was using the Accidental Sampling method, where in each starred hotel a random sample of permanent employees will be taken according to the characteristics of a sample of 2 employees from 100 star hotels in Badung Regency. So that later a good sample will be obtained and have the same sample characteristics in different hotels.
The data analysis technique in this study uses PLS (partial least square), as an
alternative in the theoretical basis on the design of weak models and or the available
indicators do not meet the reflexive measurement model. (Solimun, 2010). PLS is a powerful
analytical method because it can be applied to all data scales, does not require many
assumptions and the sample size does not have to be large. PLS can be used as a
confirmation of theory, it can also be used to build relationships that have no basis for the
theory to know whether to test propositions.

RESULTS AND DISCUSSION

Testing the hypothesis based on the results of the Path Coefficients (Mean, STDEV, T-
Values) results in the following table:

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Original Sample (O)</th>
<th>Sample Mean (M)</th>
<th>Standard Deviation (STDEV)</th>
<th>Standard Error (STERR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Satisfaction $\rightarrow$ Org. Commitment</td>
<td>0.804305</td>
<td>0.800352</td>
<td>0.041088</td>
<td>0.041088</td>
</tr>
<tr>
<td>Career Competence $\rightarrow$ Career Satisfaction</td>
<td>0.117697</td>
<td>0.123853</td>
<td>0.200426</td>
<td>0.200426</td>
</tr>
<tr>
<td>Career Competence $\rightarrow$ Career dev.</td>
<td>0.829215</td>
<td>0.821422</td>
<td>0.046260</td>
<td>0.046260</td>
</tr>
<tr>
<td>Career manag. $\rightarrow$ Career Satisfaction</td>
<td>-0.006629</td>
<td>-0.002532</td>
<td>0.086835</td>
<td>0.086835</td>
</tr>
<tr>
<td>Career manag. $\rightarrow$ Career dev.</td>
<td>0.113833</td>
<td>0.119775</td>
<td>0.060358</td>
<td>0.060358</td>
</tr>
<tr>
<td>Career dev. $\rightarrow$ Career satisfaction</td>
<td>0.676646</td>
<td>0.659471</td>
<td>0.213188</td>
<td>0.213188</td>
</tr>
</tbody>
</table>

**Primary Data, 2017**

Hypothesis 1: Career management effect employee career development in star-rated hotels in Bali. The results of the analysis showed career management variables (X1) on career development (Y1) acquisition of coefficients of 0.114 with a p-value of 0.000 smaller than 0.05. This acquisition shows that there is empirical evidence to accept the hypothesis that "Career management influences employee career development in star hotels in Bali". The acquisition of a positive coefficient of 0.114 indicates that career management will provide changes and a positive relationship for employee career development in the future.

Hypothesis 2: Career competence effect employee career development in star-rated hotels in Bali. The results of the analysis show career management variables (X2) on career development (Y1) acquisition coefficient of 0.892 with a p-value of 0.000 smaller than 0.05. This acquisition shows that there is empirical evidence to accept the hypothesis that "Career competence influences employee career development in star-rated hotels in Bali". The acquisition of a positive-signed coefficient of 0.892 indicates that career competency will provide changes and a positive relationship for employee career development in the future.

Hypothesis 3: Employee career development effect employee career satisfaction in star-rated hotels in Bali. The results of the analysis show career development variable (Y1) to career satisfaction (X3) acquisition coefficient of 0.780 with a p-value of 0.809. This acquisition shows that there is empirical evidence to accept the hypothesis that "Career development of employees influences employee career satisfaction in star-rated hotels in Bali". The acquisition of a coefficient with a positive sign of 0.780 indicates that career development will provide changes and a positive relationship for employee career satisfaction in the future.

Hypothesis 4: Employee career satisfaction effect organizational commitment in star hotels in Bali. The results of the analysis show the variable career satisfaction (X3) on organizational commitment (X4) acquisition coefficient of 0.804 with a p-value of 0.609. This acquisition shows that there is empirical evidence to accept the hypothesis that "employee career satisfaction influences organizational commitment in star hotels in Bali". The acquisition of a positive coefficient of 0.804 indicates that career satisfaction will give change and a positive relationship to employee organizational commitment going forward.

CONCLUSION AND SUGGESTIONS
From the results of this study it can be concluded that several things include:

- There is a positive significant influence of 0.114 between career management variables on employee career development, from these results it can be said that career management carried out really influences and has a positive impact on employee career development at Star Hotels in Bali;
- There is a positive significant influence of 0.829 between career competency variables on employee career development, which states that the career development of an employee is more likely to be influenced by employee career competency variables at Starred Hotels in Bali;
- There is a significant positive effect of 0.679 from the variable career development on employee career satisfaction. This indicates that career development programs carried out by the company have a good impact on employee career satisfaction at Star Hotels in Bali;
- There is a positive significant effect of 0.804 on employee career satisfaction on organizational commitment, this can mean employee career satisfaction has a significant impact on increasing employee organizational commitment at Star Hotels in Bali.

The suggestions that can be given as feedback in this study include:

- The need to empower and develop career management for employees by the company so that individual employees can measure themselves and evaluate themselves towards employee career development at good Star Hotels throughout Indonesia;
- Counseling and communication programs between employees need to be made with the aim of the company's attention to career competencies so that employee career development can run optimally;
- Study of employee career development needs to be carried out routinely by the company to obtain input on employee career satisfaction in the future;
- Organizational commitment is very important to be able to be fostered and improved, so that the role of the company is needed to be able to accommodate the desires of employees who want to develop and increase commitment and performance for the company.

Research Limitations. This study has several limitations and weaknesses that do come from researchers who are less serious, lack of research budget and lack of ability in quantitative analysis, so this research can be said to be far from perfect. Among others are:

- The use of research objects of Hotels in Badung Regency is considered to be less extensive in the scope of research objects which should use research objects, namely Hotels in all of Bali Province. This is caused by the limitations of researchers both in time, ability and research budget;
- Weaknesses of researchers in the ability of quantitative analysis have an impact on imperfect results, while a more up to date analysis tool can provide more perfect results.

REFERENCES

EFFECT OF SERVICE QUALITY ON PATIENTS’ SATISFACTION IN NURDIN MEDICAL CENTER OF BOGOR REGENCY, INDONESIA

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ABSTRACT
This study aims to determine the relationship of independent variables (Reliability, Responsiveness, Assurance, Empathy and Physical Evidence) to dependent variable (Patient Satisfaction). The method used in this study is questionnaires distributed directly to respondents. The sampling technique is Simple Random Sampling as sample is taken from population randomly without considering the strata in the population. The present study uses 85 outpatient respondents. The findings indicate that: reliability partially had a significant effect on patient satisfaction, responsiveness partially had no significant effect on patient satisfaction, assurance partially had insignificant effect on patient satisfaction, empathy partially had no significant effect on Patient Satisfaction, and Physical Evidence partially had a significant effect on Patient Satisfaction. Reliability Variables, Responsiveness, Assurance, Empathy, Physical Evidence simultaneously had a significant effect on Patient Satisfaction at Nurdin Medical Center Clinic in Bogor Regency.

KEY WORDS
Service, quality, patient, satisfaction.

Today's health has become a main need for the community. For that reason, in order to support health for all citizens, there must be concrete efforts carried out, one of which is providing health facilities for the community, one of which is a health clinic. Clinic is an institution or institution whose main function is to provide health services to the community. The main task of the clinic is to implement health efforts in an efficient and effective manner with healing and recovery efforts carried out in a harmonious and integrated manner with efforts to improve and prevent and implement referral efforts.

Table 1 - Recapitalization of Patient Visits Report for March 26, 2017 - June 25, 2017

<table>
<thead>
<tr>
<th>No</th>
<th>Patient Status</th>
<th>26 March - 25 April</th>
<th>26 April - 25 May</th>
<th>26 May - 25 June</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PT. Anggada</td>
<td>14</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>PT. ASKI</td>
<td>26</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>PT. Citra Abadi Sahaja</td>
<td>12</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>PT. Daehan</td>
<td>181</td>
<td>140</td>
<td>136</td>
</tr>
<tr>
<td>5</td>
<td>PT. GA Indonesia</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>PT. Inkordan</td>
<td>36</td>
<td>31</td>
<td>35</td>
</tr>
<tr>
<td>7</td>
<td>PT. OASIS</td>
<td>6</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>PT. Mitraida</td>
<td>77</td>
<td>62</td>
<td>51</td>
</tr>
<tr>
<td>9</td>
<td>PT. Serena</td>
<td>2</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>PT. Super</td>
<td>278</td>
<td>213</td>
<td>190</td>
</tr>
<tr>
<td>11</td>
<td>PT. Uni Makmur</td>
<td>54</td>
<td>60</td>
<td>66</td>
</tr>
<tr>
<td>12</td>
<td>NMC Staff</td>
<td>44</td>
<td>27</td>
<td>32</td>
</tr>
<tr>
<td>13</td>
<td>General</td>
<td>1,380</td>
<td>1,217</td>
<td>1,115</td>
</tr>
<tr>
<td>14</td>
<td>BPJS</td>
<td>5,027</td>
<td>4,286</td>
<td>4,264</td>
</tr>
</tbody>
</table>

Source: NMC Clinic Patient Visit Data, processed.

Nurdin Medical Center is a private clinic located in Bogor Regency, where health services are provided in the form of outpatient services, inpatient services and Emergency services that include medical support services. In service industry, customer satisfaction is determined by employees who deal directly with customers. To maintain consumers, the
clinic is required to always maintain consumer confidence by paying careful attention to the needs of consumers in an effort to fulfill the desires and expectations of the services provided. According to Handi Irawan (2002), satisfaction in interaction happens is when customers receive service, 70% depend on employee performance. So it can be concluded that the lack of quality of Nurdin Medical Center Clinic services is likely due to a lack of employee performance.

Table 1 shows that the main problem faced by NMC Clinic was services to patients. Based on data obtained from the Clinic administration, the list of patient visits is decreasing. Patient visits in March were quite high in one month but in April and May the number declined. Obviously the patient's decline was caused by a lack of services provided. In addition, there were complaints from patients regarding Nurdin Medical Center Clinic services.

Table 2 – Patient Complaints Data

<table>
<thead>
<tr>
<th>No</th>
<th>Complaint</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Doctor is not cooperative.</td>
</tr>
<tr>
<td>2</td>
<td>The front office section (cashier, registration) and nurse do not smile and not friendly.</td>
</tr>
<tr>
<td>3</td>
<td>The pharmacist always says medicines run out and patients are advised to buy them outside.</td>
</tr>
</tbody>
</table>

Source: Attachments processed.

To improve services that meet patient expectations or satisfaction Nurdin Medical Center Clinic, further studies are needed on the effect of service quality on perceptions of patient satisfaction, so that the results obtained can be used as a basis for making strategies to improve patient satisfaction, especially for planning service improvement in providing service to patients at the clinic.

METHODS OF RESEARCH

This study uses questionnaires distributed directly to respondents. The sampling technique is Simple Random Sampling because the taking of sample members from the population is performed randomly without considering the existing strata in the population where the sample members are selected only for general poly because it is easy to reach and easily obtainable (Cooper & Schindler, 2008). The sample in this study were 85 respondents and the respondents were outpatient of general poly. The basic concepts used in this study are 5 (five) dimensions of SERQUAL from Parasuraman et al in Tjiptono (2007), namely Reliability, Responsiveness (Assurance), Assurance, Empathy, and Physical Evidence (Tangibles). Data analysis techniques used Descriptive Analysis, Multiple Linear Analysis, F Test and t Test.

RESULTS OF STUDY

Validity test is used to measure whether a questionnaire is valid or not. A questionnaire is said to be valid if the question in the questionnaire is able to reveal something measured by the questionnaire. The validity of this research was carried out by conducting bivariate correlations between each indicator score and the total construct score using the Pearson coefficient. If the number is significant from the total number of indicators <0.05, then it can be concluded that each question indicator is valid.

Table 3 – Effect of Service Quality on Patient Satisfaction (R2)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.782*</td>
<td>.612</td>
<td>.587</td>
<td>1.447</td>
</tr>
</tbody>
</table>
Based on table 3 above, the R square value (R^2) is 0.612 which means that the effect of service quality on patient satisfaction is 61.2%, while the remaining 38.8% is influenced by other factors.

Table 4 – Analysis of the Effect of Service Quality on Patient Satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-4.497</td>
<td>1.430</td>
<td>-3.144</td>
<td>.002</td>
</tr>
<tr>
<td>Total X1</td>
<td>.218</td>
<td>0.091</td>
<td>2.393</td>
<td>.019</td>
</tr>
<tr>
<td>Total X2</td>
<td>.153</td>
<td>0.091</td>
<td>1.887</td>
<td>.068</td>
</tr>
<tr>
<td>Total X3</td>
<td>.069</td>
<td>0.081</td>
<td>.858</td>
<td>.393</td>
</tr>
<tr>
<td>Total X4</td>
<td>.073</td>
<td>0.086</td>
<td>.846</td>
<td>.400</td>
</tr>
<tr>
<td>Total X5</td>
<td>.230</td>
<td>0.051</td>
<td>4.488</td>
<td>.000</td>
</tr>
</tbody>
</table>

According to the data Analysis of the Effect of service Quality on Patient Satisfaction (Table 4) was: Reliability (X1) has a significance level of 0.019> 0.05 which means that the Reliability variable (X1) has a significant effect on the variable Patient Satisfaction (Y), so Ho is rejected and Hi is accepted. Responsiveness (X2) has a significance level of 0.096> 0.05, which means that the Response Power variable (X2) does not significantly affect Patient Satisfaction (Y) variable, so Ho is accepted and Hi is rejected. Assurance (X3) has a significance level of 0.393> 0.05 which means that the assurance variable (X3) does not significantly affect variable of Patient Satisfaction (Y), then Ho is accepted and Hi is rejected. Empati (X4) has a significance level of 0.400> 0.05, which means that the Empathy (X4) variable does not significantly affect variable of Patient Satisfaction (Y), so Ho is accepted and Hi is rejected. Physical Proof (X5) has a significance level of 0.00<0.05 which means that the Physical Proof (X5) variable does not significantly affect variable of Patient Satisfaction (Y), then Ho is rejected and Hi is accepted.

DISCUSSION OF RESULTS

Reliability variable partially has a significant effect on patient satisfaction in Nurdin Medical Center, Bogor Regency. The results of this study are not in line with the results of previous research conducted by Ambriani, et al (2014) which states that Reliability has no significant effect on Customer Satisfaction. Then in line with research conducted by Tahir M. Nisar, et al (2018) and Vinita Kaura (2015) which states that reliability has a significant effect on customer satisfaction.

Respondents’ responses as a whole show agree on the variable indicators Reliability with an average of 3.8. Respondents who stated that they did not agree with procedures and services were patients with insurance. Patients with this insurance geographically are patients who live not far from the location but if they want to seek treatment they must show an insurance card or an introduction from each of their companies in collaboration with the Nurdin Medical Center Clinic. Unlike respondents with general patients, respondents needed convincing reliability from the Nurdin Medical Center Clinic. Because financially, these respondents spend their own capital to seek treatment.

The Influence of Response Power on Patient Satisfaction. The Responsiveness variable partially had no significant effect on Patient Satisfaction at the Nurdin Medical Center Clinic in Bogor Regency. The results of this study differ from previous studies conducted by Ambriani, et al (2014) which states that responsiveness has a significant effect on patient satisfaction. Our results are in line with previous research conducted by Utami, et al (2013) which partially shows that responsiveness has no significant effect on customer satisfaction. This research is not in line with research conducted by Tahir M. Nisar, et al (2018) and Vinita Kaura, et al (2015) which states that responsiveness has a significant effect on customer satisfaction.

Respondents’ responses as a whole showed that they agreed on the indicator of the Response Rate variable with an average of 3.66. Overall, responsiveness has no significant
effect on patient satisfaction because it is related to patient care. If the responsiveness is low, then the problem still allows it to be resolved quickly and accurately, so the patient will feel harmed and patient dissatisfaction will arise.

Effect of Assurance on Patient Satisfaction. This variable partially has no significant effect on Patient Satisfaction at Nurdin Medical Center Clinic in Bogor Regency. The results of this study are in line with previous research conducted by Ambriani et al (2014) which states that assurance have no significant effect on patient satisfaction. The present research is in line with the results of research conducted by Utami et al (2013) which states that assurance has no significant effect on patient satisfaction. However, it is not in line with research conducted by Ravichandran, et al (2010), Tahir M. Nasir, et al (2010), and Vinita Kaura, et al (2015) which states that assurance have a significant effect on Patient Satisfaction.

Respondents’ responses as a whole indicate that they agree on the variable guarantee indicator with an average of 3.69. Overall Assurance has no significant effect on patient satisfaction. The patient has a perception that the Nurdin Medical Center Clinic has guaranteed that medical officers have the knowledge, ability and trustworthy characteristics in serving patients, always maintaining the privacy of their patients. So patients generally have no doubt about the assurance provided by the Nurdin Medical Center Clinic.


Respondents’ responses as a whole showed that they agreed on the indicator Empathy variable with an average of 3.7. The statement that disagrees with the empathy statement in giving special attention to the respondent, means to receive complaints about what the respondent feels, and the effort to establish good relations with the respondent. Respondents have a perception that there is an effort to establish a good relationship.

Overall Empathy has no significant effect on patient satisfaction. A good communication relationship is very important and very necessary can be in the form of communication intensity, ease of contact, or even the intensity of visits that need to be maintained. Communication links that can both understand the needs and desires of patients so that patients feel cared for.


Respondents agree on variable indicators with an average of 3.68. Overall Physical Evidence has a significant effect on patient satisfaction. Adequate facilities are very supportive and exist in building patient trust. Secara keseluruhan atas Bukti Fisik berpengaruh signifikan terhadap kepuasan pasien. Fasilitas yang memadai sangatlah penting hal ini merupakan pendukung dan eksistensi dalam membangun kepercayaan pasien.

Effect of Reliability, Responsiveness, Assurance, Empathy and Physical Evidence on Patient Satisfaction. These variables simultaneously have a significant effect on Patient Satisfaction at the Nurdin Medical Center Clinic in Bogor Regency. That is, based on the results of Test F (Simultaneous Test) changes in patient satisfaction are influenced by the independent variables together, because it has a significance level of 0.00 <0.05 which means that Ho is rejected and Hi is accepted, this means the quality of the service consists from Reliability, Responsiveness, Assurance, Empathy, and Physical Evidence have a significant influence on Patient Satisfaction at the Nurdin Clinic in Bogor Regency.
Service quality has a significant influence on patient satisfaction. As stated by Tjiptono (2002: 54) that quality has a close relationship with customer satisfaction. Quality provides an encouragement to consumers to establish strong ties with the company.

CONCLUSION

Based on research conducted by using questionnaire data distributed to 85 (eighty-five) respondents, the conclusions are as follows: Reliability had a significant positive effect on patients, responding variable had a positive and insignificant effect on Patient satisfaction, Assurance had no significant positive effect on patient satisfaction, Empathy had a positive and not significant effect on patient satisfaction, physical evidence variables had a significant positive effect on patient satisfaction. Reliability, Responsiveness, Assurance, Empathy and Physical Evidence variables had a significant positive effect on Patient Satisfaction at Nurdin Medical Center Clinic in Bogor Regency.

REFERENCES

THE INFLUENCE OF SITUATIONAL LEADERSHIP STYLES, COMPENSATION, AND WORK ENVIRONMENT TOWARD LECTURER JOB SATISFACTION

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ABSTRACT
This study aims to analyze the significance influence of the situational leadership styles, compensation and working environment toward lecturer job satisfaction at University of West Nusa Tenggara. This study used casual associative research. The sample was lecturers at the University of West Nusa Tenggara and the researcher took 59 lecturers. The data collection of this study was sensus sampling. The data analysis used multiple linear regression with SPSS 16.0. The results showed that the situational leadership style had significant positive correlation toward lecturer job satisfaction at University of West Nusa Tenggara. Compensation and working environment also had significant positive correlation toward lecturer job satisfaction at University of West Nusa Tenggara. The finding gave emphasis to the importance of maintaining work atmosphere among the leader and others in campus to increase productivity.

KEY WORDS
Situational leadership styles, compensation, work environment, lecturer job satisfaction.

The success of higher education in all aspects is determined by its human resources mainly the role of lecturers, as one of the main components in education system in higher education (Ramayanto, 2015). Job satisfaction according to Robbins (2008) is a positive feeling about other’s work as a result of an evaluation of the characteristics. Meanwhile, Jex & Britt (2002) have stated that job satisfaction is “the level of positive affection of a worker toward job and its situation”. Job satisfaction is related to workers’ attitude toward their works. This attitude takes place in cognitive and behavioral aspects. According to Hasibuan (2001), there are several factors which influence job satisfaction, namely remuneration which is fair and feasible or proper placement of compensation, in accordance with the expertise, difficult and easy job, atmosphere and working environment, equipment which support work implementation, leader’s attitude to lead and the nature of the job whether or not monotonous.

Leadership style is behaviour that is shown when a person affects another’s activities (Hersey & Blanchard, 2002). It can be said that the leadership focused on what is done by the leaders, which is the process by which the leader explains the purpose of the organizations to others. The leadership style which can enhance and give change to the employees in organization is a situational leadership style. This leadership style emphasizes toward the followers and their level of maturity (Ivancevich, Konopaske & Matteson, 2007). In other words, situational leadership style is ways of leadership of the leaders to guide, implement, direct, support the subordinates to achieve goals and utilize all abilities by combining existing situations with regard to the behavior of the leaders and their subordinates.

This research started from the research gap, in which the research conducted by Rusmanto (2014) and Jai Prakash (2010) have revealed that the situational leadership style has no effect toward employee job satisfaction. However, other studies showed that
situational leadership had a positive and significant influence on employee job satisfaction (Chen-Tsang, 2011; Slamet et al., 2013).

In an organization, there are other factors which can affect employee satisfaction. In addition to a leadership style, compensation received by employees is also affect. Robbins and Judge (2008) have stated that compensation plays an important role to determine employee job satisfaction. Compensation is a fixed amount of money paid to employees in return for work performed. According to the previous research conducted by Anas (2013), Dhermawan et al., (2013), and Rizal (2015) showed that compensation has a significant effect on employee job satisfaction. Compensation is one of the motivations for employees to work. The form of compensation such as intrinsic and extrinsic, have a significant effect toward lecturer job satisfaction (Murgijanto, 2015). On the other hand, Rusmanto (2014) and Sari & Ardana (2016) showed that direct compensation has a negative and not significant effect on performances of employee. In line with Muguongo, Muguna & Murithi (2015), it showed that teachers in secondary schools in one of the cities in Kenya were very dissatisfied with all forms of compensation (basic salary and allowance).

Working environment is one of the important factors that may affect employee satisfaction. Sarwono (2005) has stated that working environment is a way that the employees do their daily works. A conducive working environment provides security and allows the employees to work optimally. The previous studies conducted by Anas (2013), Arta & Harsono (2014), Plangiten (2013), and Rizal (2015) have revealed that working environment had significant positive influence toward work satisfaction. Other studies revealed that non physical working environment affect significantly lecturer job satisfaction. Meanwhile, some studies found that a partially working environment did not have significant influence toward employee satisfaction (Mu’at & Juliana, 2012; Dhermawan, et al., 2013; Suryana, 2015).

University of West Nusa Tenggara as one of the private universities in Indonesia, managed by Directorate General of Higher Education recorded in Private University Coordinator 8. University of West Nusa Tenggara was established in November 10, 1999 with the number SK PT 89 DO 2001 on July 15, 2005. This university is located on Tawak-Tawak Street, Karang sukon, Mataram, West Nusa Tenggara, Indonesia. Currently, there are six departments of undergraduate program, as well as six faculties with educational accreditation C (source: UNTB, 2017).

In the early observation, there was a gap related to lecturer job satisfaction at University of West Nusa Tenggara, such as lecturers’ attitude in a way of accepting the duties given by the organization. Meanwhile, there was no discipline in doing the tasks. If this happened continually, it gives impact on the organization output quality. This caused by lack of support from working environment. On the other hand, the salary or compensation received by the private university lecturers in West Nusa Tenggara was low. The foundation have not been able to conduct high payroll system, because its financial factor. In terms of working environment at university of West Nusa Tenggara, physical working environment and non physical working environment include workplace design, lighting as well as the relationship between superiors, subordinates, and co-workers, still indicated quite comfortable, in other words, working environment had not fully created work satisfaction for the employees in campus.

Based on the research gap and phenomenon, this research aims to analyze and seek the significance influence of situational leadership style, compensation, and working environment toward lecturer job satisfaction at University of West Nusa Tenggara.

LITERATURE REVIEW

The Relationship between Situational Leadership and Job Satisfaction. The role of a leader in an organization is very dominant. However, leaders should not ignore the importance of the role of labor or employees. Employees or subordinates are one of the executors of various kinds of work and tasks which surely require continuous encouragement to increase their passion and work spirit (Cahyo, 2016). One of the Situational Leadership
Theories is that proposed by Hersey and Blanchard's, known as the Situational Leadership Model. This theory was originally called the life cycle theory of leadership. Leaders need to change their behavior according to the level of readiness or maturity of the subordinates/followers. The focus of this theory lies in two leader behaviors which are similar to the dimensions of initiating structure and consideration spearheaded by researchers from Ohio State University, namely: a) Task behavior, which shows the extent to which leaders attempt to explain the tasks and obligations of individuals or groups. This behavior includes: telling what to do, how, when and where to do it and who will do it, b) Relationship behavior, which shows the extent to which the leader tries to conduct two-way communication or communication in many directions. This behavior includes: listening, facilitating, and providing support (Marwansyah and Mukaram, 2000).

Luthans (2002) in Path Goal Relationship has stated that leader behavior has an influence on motivation and perception, then effect on job performance and satisfaction. Situational leadership style has a relationship in employee job satisfaction, according to Tiffan in As'ad (2000) job satisfaction is closely related to employees’ attitudes towards his work, working situation, cooperation between leader and employee so that a good and conducive work situation can cause individual satisfaction for each employee. According to Luthans (2002), job satisfaction is a positive feeling that is formed by a person's point of view toward a job. Job satisfaction is a feeling that is carried out by employees towards work and everything related to the job.

One leadership style that can advance employees and provide change in the organization is situational leadership style. In which situational leadership seeks to invite members to change, for good and for the sake of advancing together, this kind of behavior can bring subordinate satisfaction into work (Hartanto, 2008). Several studies, Muttaqien (2014) and Plangiten (2013), revealed that leadership and leadership style had a significant effect on employee job satisfaction. Furthermore, the results of research by Kertirasih, Sujana & Suardika (2018) had revealed that leadership style had a positive and significant effect on the job satisfaction of employees in companies located in Bali.

So that the first hypothesis can be formulated as follow:
H1: Situational Leadership Style influences Job Satisfaction.

The Relationship between Compensation on Job satisfaction. Martoyo (2000) has stated that job satisfaction is an employee's emotional state meet the value of employee compensation from the company and the level of remuneration desired by the employee. The task of lecturers is not only teaching, but also conducting research and community service. Therefore, the lecturers can conduct their duties properly, as stated by Handoko (2004) if compensation is given correctly, the lecturers will be more satisfied and motivated to achieve organizational goals. Therefore, if the lecturers consider that compensation is inadequate, work performance, motivation and job satisfaction can drop dramatically.

Handoko (2001) has stated that compensation can increase employee job satisfaction. According to Triton (2005), compensation is one of the efforts made by management to improve work performance, work motivation and employee job satisfaction. Compensation can be in the form of wages per hour, day, or periodic salary. According to Triton (2005), the purpose of compensation is to improve job satisfaction. The purpose of job satisfaction is to satisfy the employees who finished their jobs because the compensation means appreciate, and also fulfill their physical, social status needs.

A good work compensation system is a system that is able to guarantee the satisfaction of employees which ultimately allows the company to obtain, and employ a number of people with various attitudes and behaviors and work productively for the interests of the company (Putranto, 2012). If a company is unable to provide compensation to what is expected by employee, his satisfaction will be low and can negatively affect the company. Research conducted by Dhermawan et al., (2013), Arta & Harsono (2014), and Darma & Supriyanto (2017) had revealed that compensation has a significant effect on employee job satisfaction. In connection with the results of the study, the second hypothesis can be formulated as follow:
H2: Compensation has an effect on Job Satisfaction.
The Relationship between Work environment on Job Satisfaction. Working environment is one of the factors which influence employee job satisfaction. If working environment gives an uncomfortable impression, employees will feel lazy to work. This is similar as stated by Nitisemito in Sugiyarti (2012), working environment is everything that is around the workers that can affect them in carrying out their duties. Robbins in Fathonah & Utami (2010) have stated that employees will work optimally if working environment is comfortable and supportive. According to Leshabari et al., (2008) a supportive working environment helps workers to perform normal tasks more effectively, utilizing their knowledge, skills, and competencies as well as available resources to provide high-quality services.

A study from Plangiten (2013) revealed that working environment had an influence on job satisfaction. According to Hasibuan (2001), there are several factors that influence job satisfaction, one of which is the atmosphere and working environment. Other opinions also stated that the pleasure of working employees is influenced by several factors in working environment that exist in the organization (Masdani in Anoraga, 2009). A study from Agbozo et al., (2017) concluded that working environment had a significant influence on employee satisfaction. The results of this study emphasized the need for management to improve working environment of employees to increase productivity. So that the third hypothesis can be formulated as follow:

H3: Working Environment influences Job Satisfaction.

METHODS OF RESEARCH

The type of research used is causal associative research which studies the relationship of one or more variables to other variables. The population of this study is all lecturers who teach at the University of West Nusa Tenggara (UNTB). In this study used sensus method as sampling, where all available populations were made as respondents, so that the respondents in this study were 59 lecturers at the University of West Nusa Tenggara (UNTB).

The instrumen testing of this study was based validity and reliability test with using the statistic program namely Statistical Package For Social Science 16 (SPSS 16). The results of validity test from four instrumens of this study show that has a valid with level above the r table value (> 0.30), meaning that the four variables can be further analyzed by the next analysis because all indicators are declared valid. While the reliability test results can be seen that the Cronbach Alpha value in each variable shows the required value that is above the value 0.60, thus the entire statement in the Reliable questionnaire and has met the minimum requirement is 0.60.

![Figure 1 – Hypothesis Model]

RESULTS AND DISCUSSION

In this study using 59 responden as a sample of research collected through questionnaires.
Table 1 – Characteristics of respondents

<table>
<thead>
<tr>
<th>Characteristics of respondents</th>
<th>Amount (person)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 30 year</td>
<td>14</td>
<td>23.7</td>
</tr>
<tr>
<td>30-40 year</td>
<td>25</td>
<td>42.4</td>
</tr>
<tr>
<td>&gt; 40 year</td>
<td>20</td>
<td>33.9</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>30</td>
<td>50.8</td>
</tr>
<tr>
<td>Female</td>
<td>29</td>
<td>49.2</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100</td>
</tr>
<tr>
<td>Level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master (S2)</td>
<td>44</td>
<td>74.6</td>
</tr>
<tr>
<td>Doctor (S3)</td>
<td>15</td>
<td>25.4</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100</td>
</tr>
<tr>
<td>Working period</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5 year</td>
<td>25</td>
<td>42.4</td>
</tr>
<tr>
<td>5-10 year</td>
<td>17</td>
<td>28.8</td>
</tr>
<tr>
<td>&gt; 10 year</td>
<td>17</td>
<td>28.8</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: research result.

Based on Table 1, it can be seen that most of the lecturers at the University of West Nusa Tenggara (UNTB) who became respondents in this study were between 30-40 years old reaching 42.4 percent or 25 people while respondents with age > 40 years reached 33.9 percent or 20 respondents. The table above also shows that the majority of research respondents were dominated by respondents with male gender. While based on the level of education, it can be seen that almost a portion of respondents, namely lecturers who work at the University of West Nusa Tenggara (UNTB), have a higher education level, namely Master (S2) as much 44 people or around 74.6. While the other lecturers is doctor program (S3). Judging from the working period, it can be seen that the majority of respondents, namely lecturers who work at the University of West Nusa Tenggara (UNTB), have a majority of <5 years of service reaching 42.4 percent or as many as 25 respondents. While respondents with tenure of 5-10 years to more than 10 years amounted to 28.8 percent.

The hypothesis testing in this study was conducted using the SPSS 16.0 program to analyze the relationship between the influence of situational leadership style (X1) compensation (X2) and work environment (X3) on job satisfaction (Y) at the University of West Nusa Tenggara. The multiple regression model in this study is shown as follows:

Table 2 – Multiple Regression Results

<table>
<thead>
<tr>
<th>Coefficients*</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>B</td>
<td>Beta</td>
</tr>
<tr>
<td>1 Constant</td>
<td>-.714</td>
<td>-.418</td>
</tr>
<tr>
<td>Situational Leadership Styles (X1)</td>
<td>.361</td>
<td>.165</td>
</tr>
<tr>
<td>Compensation (X2)</td>
<td>.363</td>
<td>185</td>
</tr>
<tr>
<td>Work Environment (X3)</td>
<td>.327</td>
<td>154</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Job Satisfaction Y

Source: SPSS 16.0 analysis.

Based on Table 2 above, a regression equation of the dependent and independent variables can be formed as follows:

\[ Y = -0.714 + 0.361X_1 + 0.363X_2 + 0.327X_3 + e \]

Model feasibility test if the results are significant then this test can be used to predict the model. To see how the regression model is feasible to find out the influence of the situational leadership style variables, compensation and work environment for lecturer satisfaction at the University of West Nusa Tenggara the F test was used.

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Table 3 – Result of Feasibility Test of Multiple Linear Regression Models

<table>
<thead>
<tr>
<th>ANOVA(^a)</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>( F )</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>7.356</td>
<td>3</td>
<td>2.452</td>
<td>7.785</td>
<td>.000(^a)</td>
</tr>
<tr>
<td>Residual</td>
<td>17.322</td>
<td>55</td>
<td>.315</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24.678</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), X3, X2, X1  
b. Dependent Variable: Y  
Source: SPSS 16.0 analysis.

Based on table 3, the above can be obtained by F-test 7.785. The model feasibility test can be seen as a comparison of the F-test > F-table (F-test 7.785) > (F-table with df-3, significant level of 0.05 = 2.76). Because the value of F (test) > F (table) with a significant level of 0.000 is smaller than 0.05. These results indicate that the regression model used can be said to fulfill the feasibility assumption of a research model with the data analyzed.

The coefficient of determination (R\(^2\)) essentially measures how far the ability of the model in explaining the variation of the dependent variable. The results of the calculation of the coefficient of determination (R\(^2\)) variables of situational leadership style, compensation and work environment on job satisfaction in this study are presented in the following table:

Table 4 – Coefficient of determination results (R-Square)

<table>
<thead>
<tr>
<th>Model Summary(^b)</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.546(^a)</td>
<td>.298</td>
<td>.260</td>
<td>.561</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), x3, x2, x1  
b. Dependent Variable: Y  
Source: SPSS 16.0 analysis.

Based on table 4 above, the number R = 0.546 shows that there is a strong correlation or relationship between the variables of situational leadership style (X1), compensation (X2) and work environment (X3), to the job satisfaction of lecturers contributing 54, 6% is a closely relationship, the higher the R value, the closer the relationship.

Proof of the hypothesis that has been compiled is done using regression calculations through the help of SPSS version 16.0. The direction and strength of the relationship between the independent variable situational leadership style, compensation and work environment with the dependent variable job satisfaction in this study can be seen from the t-test value and significance level.

Table 5 – Results of Hypothesis

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situational Leadership Styles (X1)→Job</td>
<td>.261</td>
<td>2.188</td>
<td>.033</td>
<td>Significant</td>
</tr>
<tr>
<td>Satisfaction (Y)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation (X2)→ Job Satisfaction (Y)</td>
<td>.242</td>
<td>2.060</td>
<td>.049</td>
<td>Significant</td>
</tr>
<tr>
<td>Work Environment (X3)→ Job Satisfaction (Y)</td>
<td>256</td>
<td>2.129</td>
<td>.038</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Source: SPSS 16.0 analysis.

From the table above it can be explained that all three independent variables that will prove the significance or failure of each independent variable can be explained as follows:

Effect of Situational Leadership Style on Job Satisfaction. Based on the tests carried out from table 5, that the results of hypothesis testing from situational leadership style
variables show $t$-test of 2.188 with a significance level of 0.033 which is greater than the value of $t$ table ($t (\alpha / 2) (n-2) = t (0.05 / 2) (59-2) = t (0.025, 57) = t$-table 2.002, then $H_0$ is rejected and $H_a$ is accepted, thus it can be concluded that the first hypothesis have a significant influence between the situational leadership style on satisfaction of Lecturers at the University of West Nusa Tenggara, be accepted.

The results of this study support the research of Fonda et al., (2015), Wirda & Azra (2012), Chen-Tsang (2011); Slamet et al., (2013) where research results suggest that situational leadership style influences job satisfaction. Also supporting the findings of Fonda et al., (2015), addressing that situational leadership style has a significant effect both directly and indirectly on employee satisfaction. Rivai (2010) defines leadership as a process of directing and influencing activities that are related to the work of group members. However, the results of this study not support Rusmanto (2014), the results of the study indicate that situational leadership style not affect on job satisfaction. The role of an effective leader in an organization has a very vital role in achieving organizational goals including giving satisfaction to employees through various forms of policy.

**Effect of Compensation on Job Satisfaction.** Based on the tests carried out from table 5, that the results of hypothesis testing from compensation variables show $t$-test of 2,060 with a significance level of 0.049 which is greater than the value of $t$ table ($t (\alpha/2) (n-2) = t (0.05/2) (59-2) = t (0.025, 57) = t$-table 2.002 then $H_0$ is rejected and $H_a$ is accepted, thus it can be concluded that the second hypothesis have a positive and significant influence between compensation on satisfaction of Lecturers at the University of West Nusa Tenggara, be accepted.

This study supports the results of research by Anas (2013), Dhermawan et al., (2013), Muttaqien (2014), Rizal (2015), where compensation has a significant effect on employee job satisfaction. Similarly with study by Arta & Harsono (2014) compensation has a positive and significant effect on job satisfaction. Murgijanto (2015), intrinsic and extrinsic compensation have a significant effect on lecturer job satisfaction. Mu'at & Juliana (2012) stated that compensation significant effect simultaneously. While partially it has a weak or insignificant prediction power.

Based on the results of the respondents data processing, it was found that the compensation received by the lecturers at the University of West Nusa Tenggara was in a fairly decent category. This is reflected in several indicators that are used as benchmarks in this study such as direct compensation and indirect compensation. Judging from the compensation received by employees of the University of West Nusa Tenggara giving monthly salaries and incentives to the lecturers.

**Effect of Working Environment on Job Satisfaction.** Based on the tests carried out from table 5, that the results of hypothesis testing from work environment variables show $t$-test of 2,129 with a significance level of 0.038 which is greater than the value of $t$ table ($t (\alpha/2) (n-2) = t (0.05/2) (59-2) = t (0.025, 57) = t$-table 2.002 then $H_0$ is rejected and $H_a$ is accepted, thus it can be concluded that the third hypothesis have a positive and significant influence between work environment on satisfaction of Lecturers at the University of West Nusa Tenggara, be accepted.

The results of this study support previous research conducted by Annakis et al., (2011), Sardzoska & Tang (2012), Arta & Harsono (2014), Plangiten (2013), Rizal (2015), the work environment has a significant effect on job satisfaction. Likewise with the research of Pangarso & Rengganis (2015), the non-physical work environment has a significant effect on lecturer job satisfaction. While the results of this study are slightly different from the findings of Mu'at & Juliana (2012), where the work environment simultaneously has a significant effect on job satisfaction, but partially no significant effect on job satisfaction. The results of this study are not supported by the research of Dhermawan, et al., (2013) and Suryana (2015), the work environment has no significant effect on job satisfaction. This suggests that job satisfaction can be influenced by many factors other than the work environment. If the work environment is good then there will be no problems with job satisfaction, and if the work environment is bad it will cause job dissatisfaction problems. This is reinforced by the opinion of Frederick Herzberg (1959) in Wirawan (2013) as has been revealed above the factors that
influence job satisfaction include work conditions, work environment, subordinate supervisor relationships, and co-workers relationships.

CONCLUSION

In theory, there are many variables which can affect performance. However, the focus of this research is that performance can be influenced by situational leadership style, compensation and working environment. The results showed that leadership, compensation and working environment could influence the lecturer job satisfaction, so that the findings can contribute to the development of science in the field of Human Resource Management and can be a scientific reference for the future researchers.

In practical terms, this research contributed to the decision making of various parties, especially University of West Nusa Tenggara (UNTB) in knowing the performance of lecturers in campus. Situational leadership style influences lecturer job satisfaction, related to this matter, it is expected that the leadership of the University of West Nusa Tenggara (UNTB) will continue to apply effective situational leadership patterns so that the task for lecturers can be effective. Likewise with the pattern of relationship behavior, it is expected that the leaders of University of West Nusa Tenggara (UNTB) will continue to establish harmonious relations with lecturers so that various potential conflicts that may occur in campus environment can be resolved quickly and peacefully. Compensation affects the performance of lecturers, so it is expected to University of West Nusa Tenggara (UNTB) to provide fair and decent compensation to improve the welfare of the lecturers so that the lecturers become more enthusiastic and to encourage working performance and their performance.

Working environment is a factor that can affect the performance of lecturers so that they become more enthusiastic to do activities on campus. Therefore, it is expected that University of West Nusa Tenggara (UNTB) should pay more attention to their working environment by providing other facilities which can support their performance in order that they are more comfortable in the teaching process and enjoy being on campus environment.

REFERENCES

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STRATEGY OF BEEF CATTLE LIVESTOCK DEVELOPMENT IN GUNUNGKIDUL DISTRICT, INDONESIA

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Faculty of Agriculture, Sebelas Maret University, Indonesia

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ABSTRACT
This study aims to identify the internal and external factors and analyze the alternative strategies which can be applied in developing beef cattle in Gunungkidul District. The method used in this study is a mixed method of qualitative and quantitative to collect the primary data from the respondents and secondary data from relevant institutions, which are BPS (Statistics Indonesia) of Gunungkidul District, Agriculture and Food Services of Gunungkidul District. The research sample was determined by convenience sampling as many as 60 breeder respondents and 12 expert respondents from instances and private sector. The data analysis uses internal and external situation analysis and SWOT analysis. The qualitative SWOT analysis on internal factors results in the identification of strengths and weaknesses which consist of human resources, financial conditions, operational/ production, management, and marketing. The analysis on external factors results in the identification of external factors in the form of opportunities and threats consisting of social, economic, government policy and technology. The quantitative SWOT matrix analysis results in an internal factor of 0.81 (on the x axis) and an external factor of 1.16 (on the y axis). Strategic position is in quadrant I which means as supporting aggressive growth policies (Growth Oriented Strategy), which is using the power to obtain opportunities (SO). SO alternative strategy formulated is the increased population and production, optimizing the potential of human resources potential of breeder and supporting the animal feed waste as well as facilities and infrastructures and improving a good management and technical skills.

KEY WORDS
SWOT analysis, beef cattle, development, strategy.

The development of the livestock sub-sector, especially the beef cattle commodity, has an important role in the regional economy structure. The development of beef cattle commodities is an alternative choice because in reality, this livestock has an important role in improving the community welfare. Thus, some local governments determine beef cattle as one of the superior commodities to be developed. Suryana (2009) states that beef cattle is one of the ruminants which has the largest contribution as meat producers. The increasing demand for beef opens the opportunity for the development of local beef cattle livestock on an agribusiness scale through a partnership pattern. The beef cattle agribusiness system can also alleviate poverty and create job opportunity in rural areas (Sarma, 2014).

Gunungkidul District has the largest beef cattle population in DIY (Special Region of Yogyakarta) with a population of 150,331 from the total population of DIY province as many as 309,018 or 48.65% (BPS DIY, 2017). The territory of Gunungkidul District has a mountainous dry land ecosystem. Therefore, the forage is abundantly available during the rainy season and decreases in the dry season. In the dry season, breeders use rice straw and groundnut straw as the cattle feed (Agricultural Agency of DIY, 2015). This is in line with Wirdahayati’s opinion (2010) that efforts to improve feed, utilization of local feed ingredients and waste of crops which are easily accessed by the breeders, have opened up opportunities for livestock development efforts without depending on the extensive traditional
pattern which only relies on natural pasture. The result of other studies indicates that the use of the following results at certain limits provides a positive response to livestock productivity (Mariyono and Krishna, 2009).

Problems in the livestock sector in Gunungkidul District include problems with the unavailability of food and water for all year, unstable selling prices and narrow land. The maintenance of beef cattle in Gunungkidul District is carried out from generation to generation or traditionally, with the main function is as savings, utilizing agricultural waste, social status and side businesses. The problem which arises is the provision of beef cattle cannot rely on smallholder livestock only. Thus, it is required to do a quick solution which is importing the beef from developed countries whose farming systems are already resilient (Development Planning Agency at Sub-National Level of Gunungkidul District, 2016). Efforts to overcome these problems require development strategies which focus on the right targets. Livestock development in Gunungkidul District uses the approach or concept of "livestock self-sufficiency in Gunungkidul by strengthening profit-oriented based institutions as well as reproduction and maintenance management" (Development Planning Agency at Sub-National Level of Gunungkidul, 2016).

Gunungkidul District as an area for the development of beef cattle livestock is based on several important reasons including the availability of potential natural resources and human resources and its potential to be developed, the existence of animal markets, the sufficient number of livestock, and strategic geographical location. Seeing these conditions, this area still has the opportunity to develop further. This study aims to identify the internal and external factors which affect the development of beef cattle livestock in Gunungkidul District and analyzing the alternative strategies which can be applied in developing beef cattle livestock in Gunungkidul District.

METHODS OF RESEARCH

This research was carried out in March to July 2018 in Gunungkidul District, DIY Province. The research location was chosen intentionally (purposive sampling) because Gunungkidul District has a contribution to the livestock sector, especially beef cattle in DIY Province with a population of 150,331. Since they have animal market, access of supporting infrastructure and facilities, sufficient natural resources and human resources.

This study uses a mixed qualitative and quantitative method to get more comprehensive result. The determination of the sample is done by convenience sampling with 60 respondents of beef cattle breeders and 12 respondents of expert consists of 1 person from the Provincial Agriculture Office, 2 people from the Agriculture and Food Service Office of Gunungkidul District, 1 person from the animal expert, 1 person from Development Planning Agency at Sub-National Level, 1 person from BPTP (Agricultural Technology Assessment Center) Yogyakarta, 2 academics/lecturers, 2 group leaders (breeders) and 2 people from the head of Gapokbitnak, and 2 food vendors and traders.

Sixty respondents from the breeders were used to find out the data of breeder characteristics, management of beef cattle cultivation and the supporting data in order to identify the internal and external factors in formulating the strategy. Meanwhile, 12 key informants or experts are the informants to identify the internal and external factors as well as the assessment of identification results which will be formulated into strategies. The data collection was conducted by identifying and assessing using questionnaire and interview.

Qualitative primary data is described and tested using a SWOT matrix. The SWOT matrix is an important matching tool to help managers developing 4 types of strategies. The four strategies are SO (Strength-Opportunity) strategy, WO (Weakness-Opportunity) strategy, ST (Strength-Threat) strategy and WT (Weakness-Threat) strategy. The quantitative primary data was collected by using a questionnaire and the result obtained is in the form of numbers which then is calculated by the mean method. The details of internal and external factors was obtained and results in the total amount in the form of scores.
The territory of Gunungkidul District is located between 7° 46'- 8° 09' South Latitude and 110° 21'- 110° 50’ East Longitude. It borders Klaten District and Sukoharjo District, Central Java in the north; Wonogiri District, Central Java in the east; Indonesian Ocean in the south; and Bantul District and Sleman District, DI Yogyakarta in the west. The total area of Gunungkidul District is 1,485.36 Km² covering 18 sub-districts and 144 villages with a total population of around 704,026 people, the number of heads of households is 206,708 households, and the population density per district at an average of 473.98 people/km². The population of beef cattle in Gunungkidul District develops every year since it is suitable to be developed in Gunungkidul District. The development of beef cattle population from 2014-2016 were 140,928; 147,195 and 148,856 respectively (BPS of Gunungkidul District, 2016).

The age characteristic of the respondents of beef cattle breeders in Gunungkidul District is between 20-50 years old or 76.67%. This shows that the age of beef cattle breeders in Gunungkidul District is still in the productive age. Angraini and Putra's (2017) research result shows that the productive age of beef cattle breeders in Sijunjung Subdistrict, Sijunjung District, West Sumatra is between the age of 25-55 years old. This shows that the ability of the breeders to develop beef cattle business still have potential, which means that the available power is still strong enough to work.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Respondent (person)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years Old)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 20</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20-50 years old</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>&gt;50 years old</td>
<td>14</td>
<td>23.33</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>57</td>
<td>95.00</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>5.00</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>Level of Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do not graduate the elementary school</td>
<td>1</td>
<td>1.67</td>
</tr>
<tr>
<td>Elementary School</td>
<td>34</td>
<td>56.67</td>
</tr>
<tr>
<td>Junior High School</td>
<td>19</td>
<td>31.67</td>
</tr>
<tr>
<td>Senior High School</td>
<td>6</td>
<td>10.00</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>Experience of being breeder (Years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;5</td>
<td>4</td>
<td>6.67</td>
</tr>
<tr>
<td>5-10</td>
<td>23</td>
<td>38.33</td>
</tr>
<tr>
<td>10-15</td>
<td>21</td>
<td>35.00</td>
</tr>
<tr>
<td>&gt;15</td>
<td>12</td>
<td>20.00</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>Main Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmer/Breeder/Labor</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>Number of Family Members involved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(person/s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>6.67</td>
</tr>
<tr>
<td>2</td>
<td>47</td>
<td>78.33</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>15.00</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary Data processed, 2018.

Based on table 1 the majority of respondents are male as many as 57 respondents (95%), and only 3 respondents are female (5%). It proves that the respondents of beef cattle breeders are dominated by male breeders since beef cattle cultivation requires prime power and heavier handling, feeding, cleanliness of the cage, and marketing.

The level of education of the respondents is mostly elementary school, which are 34 people (56.67%). It shows that most respondents have a low level of education. According to Hoda (2002), formal education is an early indicator which can be used to determine the ability of breeder in adopting new information and innovation as the level of education is very influential on mindset changes. The experience of breeding of the respondents between is
mostly for 5-15 years which is 44 people (73.33%). It shows that the respondents of beef cattle breeders in Gunungkidul District have had enough cattle breeding experience. The longer the breeders run the business, the more experience they get, so that it can be used as a guide in dealing problems in running a beef cattle business (Suresti, 2012). According to Waris et. al., 2015, it is known that the long-term rate of breeding experience has a significant effect on the beef cattle reproductive management insight.

<table>
<thead>
<tr>
<th>Internal Factor</th>
<th>Strength</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resource</td>
<td>Breeders have the unyielding / resilient nature Have sufficient breeding experience</td>
<td>Low motivation to change business orientation to business profit</td>
</tr>
<tr>
<td>Operational/Production</td>
<td>The potential for a large number of beef cattle population/ is the beef cattle base area The business of beef cattle cultivation is easy to do</td>
<td>Business as a side occupation or savings Has a characteristic of traditional with individual housing system and a small business scale The utilization of processing of agricultural waste for the feeding is not optimal Some areas experience a lack of forage in the dry season</td>
</tr>
<tr>
<td>Marketing</td>
<td>The marketing of livestock products is easy through cattle seller The availability of animal markets and access to transportation making it easy to market the beef cattle</td>
<td>The absence of planning in the sale of livestock as it is only based on needs and pricing based on estimation.</td>
</tr>
<tr>
<td>Capital Condition</td>
<td>The capital spent is relatively low</td>
<td>Capital limitation to develop business and the difficult access to Banking</td>
</tr>
<tr>
<td>Management</td>
<td>Group institutions have gone well (most breeders are group members) Regular recording (population) has been done by groups/ some breeders</td>
<td>Cultivation management implementation is not quite well.</td>
</tr>
<tr>
<td>External Factor</td>
<td>Opportunity</td>
<td>Threat</td>
</tr>
<tr>
<td>Economy</td>
<td>The market or demand for beef is still open The availability of credit facilities from banks with low interest</td>
<td>Fluctuation in the price of meat and beef cattle The role of the blantik (cow seller) greatly determines the price of livestock</td>
</tr>
<tr>
<td>Social and cultural</td>
<td>The trend of increasing demand for livestock for religious activities increases</td>
<td>The conversion of agricultural/ livestock land to other sectors</td>
</tr>
<tr>
<td>Government Policies</td>
<td>Government program facilities in the form of livestock assistance and group development Determination of Gunungkidul District as the territory of the Beef Cattle Seed Source</td>
<td>Budget limitations or local government funds to support the development of beef cattle farms The government policy of importing beef cattle seems to be less favorable to the breeders</td>
</tr>
<tr>
<td>Technology</td>
<td>Availability of HPT (Limited Production Forest) processing technology There has been widespread of IB technology and handling of reproductive problem by breeder</td>
<td>Technology application which less efficient</td>
</tr>
</tbody>
</table>

Source: Primary Data processed, 2018.

The main occupation of the respondents is breeders, while beef cattle livestock is a side business. Breeder raise cattle only to their free time after they farming. In addition, the breeders also consider the purpose of livestock as savings. The number of family members involved in the management of beef cattle business is on average of 2 people or 78.33% where the role of the family is more dominant, and does not use external labor which aims to minimize the cost. Mukson et al., (2008) state that the labor in beef cattle breeding business generally still uses family labor and is widely used for food seeking activities which are usually carried out together with the agricultural activities.

The SWOT analysis is qualitatively carried out by identifying the internal and external factors which affect the development of beef cattle breeding in Gunungkidul District, in which
the identification was done according to the condition of the region. The development strategy for beef cattle breeding can be obtained by referring to the identification of the strengths, weaknesses, opportunities and threats of the SWOT analysis. The identification of internal and external factors can be seen in table 2.

In order to support the qualitative SWOT analysis, a quantitative SWOT analysis is conducted as well. SWOT analysis is used to determine the effect of internal and external factor of beef cattle business which are strength, weakness, opportunity and threat. Based on the internal factors, the development strategy of beef cattle livestock consists of strength and weakness identified based on the conditions which occur at the research location. The result shows that the weighted mean of strengths - the weighted mean of weaknesses = 1.71 - 0.90 = 0.81 (x). It can be seen in Table 3. The external factor is the business environment which creates the opportunity and threat faced by cattle livestock in Gunungkidul District. Based on these external factors, it can be identified the opportunity and threat faced in beef cattle business. The result shows that the weighted mean of opportunity - the weighted mean of threat = 2.00 - 0.84 = 1.16 (y). The calculation result can be seen in Table 4. Appropriate strategy in the development of beef cattle livestock (assessment reference for the development of beef cattle livestock is in quadrant I) is by using the power to obtain opportunity as can be seen in Figure 2.

![Figure 2 – SWOT Analysis of Beef Cattle Livestock Development in Gunungkidul District](image)

Alternative development strategy which can be formulated using a SWOT matrix is still a series of the previous stages. The SWOT matrix clearly illustrates the combination of internal factors and external factors so that alternative strategies can be produced. SWOT matrix has four possible alternative strategy cells, which are SO, WO, WT, and ST strategies. The combination of internal and external factors will obtain several alternative strategies which can be applied in the development of beef cattle livestock in Gunungkidul District.

In detail, there are four types of alternative strategies which can be applied in developing beef cattle business in Gunungkidul District, those are: SO strategy or strength-opportunity strategy which is a strategy using internal power in order to be able to take advantage of external opportunities. An alternative SO strategy formulated is an increase of population and production of beef cattle in each sub-district based on the existing potential. The increase of beef cattle population is by looking at the condition of each sub-district area and the availability of resources. Priyanto (2011) explains that the development of beef cattle livestock requires regional basis grouping which is adjusted to carrying capacity as a future development model. The mapping of business development areas (new sources of growth) with both breeding and fattening patterns is needed to support the increase in livestock population. One suggestion which needs to be considered is to concentrate the program on a certain area with intensive supervision. The program must be accompanied by an increase in forage and all supporting things such as irrigation and tillage (Yusdjia et al., 2003).
Table 3 – Internal Strategy Factors for the development of beef cattle livestock

<table>
<thead>
<tr>
<th>No.</th>
<th>Strengths</th>
<th>Weight</th>
<th>Rating</th>
<th>Mean Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Regular recording (population) has been done by groups/some breeders</td>
<td>0.065</td>
<td>3.00</td>
<td>0.20</td>
</tr>
<tr>
<td>2.</td>
<td>Breeders have the nature of never giving up/resilience</td>
<td>0.068</td>
<td>4.00</td>
<td>0.27</td>
</tr>
<tr>
<td>3.</td>
<td>Have sufficient breeding experience</td>
<td>0.057</td>
<td>3.00</td>
<td>0.17</td>
</tr>
<tr>
<td>4.</td>
<td>Have the potential for a large number of beef cattle population/ is the beef cattle base area</td>
<td>0.068</td>
<td>3.00</td>
<td>0.20</td>
</tr>
<tr>
<td>5.</td>
<td>Beef cattle livestock business is easy to do</td>
<td>0.054</td>
<td>3.00</td>
<td>0.16</td>
</tr>
<tr>
<td>6.</td>
<td>The capital cost incurred is relatively low</td>
<td>0.068</td>
<td>3.00</td>
<td>0.20</td>
</tr>
<tr>
<td>7.</td>
<td>Availability of food crop waste as a source of forage feed</td>
<td>0.057</td>
<td>3.00</td>
<td>0.17</td>
</tr>
<tr>
<td>8.</td>
<td>Group organization has been going well (most breeders are group members)</td>
<td>0.060</td>
<td>3.00</td>
<td>0.18</td>
</tr>
<tr>
<td>9.</td>
<td>The availability of animal market and transportation access making it easy to market beef cattle</td>
<td>0.051</td>
<td>3.00</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>0.548</td>
<td></td>
<td>1.71</td>
</tr>
</tbody>
</table>

No. Weakness

<table>
<thead>
<tr>
<th>No.</th>
<th></th>
<th>Weight</th>
<th>Rating</th>
<th>Mean Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Limited business capital and difficulty in accessing capital to bank</td>
<td>0.060</td>
<td>2.00</td>
<td>0.12</td>
</tr>
<tr>
<td>2.</td>
<td>Low motivation to change business orientation to profit/business</td>
<td>0.065</td>
<td>2.00</td>
<td>0.13</td>
</tr>
<tr>
<td>3.</td>
<td>Business as a side occupation or savings</td>
<td>0.051</td>
<td>2.00</td>
<td>0.10</td>
</tr>
<tr>
<td>4.</td>
<td>Have the cracteristic of traditional with individual housing system and small business scale</td>
<td>0.051</td>
<td>2.00</td>
<td>0.10</td>
</tr>
<tr>
<td>5.</td>
<td>The application of good cultivation management is still lacking</td>
<td>0.051</td>
<td>2.00</td>
<td>0.10</td>
</tr>
<tr>
<td>6.</td>
<td>Some areas experience a lack of forage in the dry season</td>
<td>0.068</td>
<td>2.00</td>
<td>0.14</td>
</tr>
<tr>
<td>7.</td>
<td>Utilization/processing of agricultural waste for feed is not optimal</td>
<td>0.054</td>
<td>2.00</td>
<td>0.11</td>
</tr>
<tr>
<td>8.</td>
<td>There is no planning in sales and pricing is based on estimation</td>
<td>0.051</td>
<td>2.00</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>0.452</td>
<td></td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1.000</td>
<td></td>
<td>2.62</td>
</tr>
</tbody>
</table>

Source: Primary Data processed, 2018.

Table 4 – Internal Strategy Factors for the development of beef cattle livestock

<table>
<thead>
<tr>
<th>No.</th>
<th>Opportunities</th>
<th>Weight</th>
<th>Rating</th>
<th>Mean Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The market or demand for beef is still open</td>
<td>0.092</td>
<td>3.00</td>
<td>0.28</td>
</tr>
<tr>
<td>2.</td>
<td>Availability of credit facilitation (KUR) from Bank BRI with low interest</td>
<td>0.074</td>
<td>4.00</td>
<td>0.30</td>
</tr>
<tr>
<td>3.</td>
<td>Facilities of government program in the form of livestock assistance and group development</td>
<td>0.074</td>
<td>3.00</td>
<td>0.22</td>
</tr>
<tr>
<td>4.</td>
<td>Determination of Gunungkidul District as the area of the Beef Cattle Seed Source</td>
<td>0.085</td>
<td>3.00</td>
<td>0.25</td>
</tr>
<tr>
<td>5.</td>
<td>The trend of increasing demand for religious activities increases</td>
<td>0.074</td>
<td>4.00</td>
<td>0.30</td>
</tr>
<tr>
<td>6.</td>
<td>Availability of HPT processing technology</td>
<td>0.096</td>
<td>3.00</td>
<td>0.29</td>
</tr>
<tr>
<td>7.</td>
<td>IB technology has been widespread and handling of reproductive problem by breeders</td>
<td>0.092</td>
<td>4.00</td>
<td>0.37</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>0.587</td>
<td></td>
<td>2.00</td>
</tr>
</tbody>
</table>

Threats

<table>
<thead>
<tr>
<th>No.</th>
<th></th>
<th>Weight</th>
<th>Rating</th>
<th>Mean Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fluctuations in meat and beef prices</td>
<td>0.085</td>
<td>2.00</td>
<td>0.13</td>
</tr>
<tr>
<td>2.</td>
<td>The role of blantik greatly determines the price of livestock</td>
<td>0.070</td>
<td>3.00</td>
<td>0.25</td>
</tr>
<tr>
<td>3.</td>
<td>The conversion of agricultural/livestock land to other sectors</td>
<td>0.066</td>
<td>2.00</td>
<td>0.13</td>
</tr>
<tr>
<td>4.</td>
<td>Budget limitations or local government funds</td>
<td>0.063</td>
<td>2.00</td>
<td>0.13</td>
</tr>
<tr>
<td>5.</td>
<td>Government policy on the importation of beef cattle seems to be less in favor of breeders</td>
<td>0.063</td>
<td>1.00</td>
<td>0.07</td>
</tr>
<tr>
<td>6.</td>
<td>Inefficient technology applications</td>
<td>0.066</td>
<td>2.00</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>0.413</td>
<td></td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1.000</td>
<td></td>
<td>2.84</td>
</tr>
</tbody>
</table>

Source: Primary Data processed, 2018.

The next SO strategy is to optimize the potential of the human resources of the breeders and support for animal feed waste as well as facilities and infrastructures for the development of beef cattle livestock. Breeders in Gunungkidul District have superior qualities which are unyielding and experiences which have been passed down through generations, support for potential animal feed, especially agricultural waste, including rice straw, corn, soybeans, cassava leaves, peanuts, sweet potatoes and supporting animal market facilities
and infrastructure, *Puskeswan* (Animal Health Center) and easy transportation access which greatly support the development of beef cattle. This is in line with Wirdahayati's opinion (2010) that efforts to improve feed, utilization of local feed ingredients and waste of food crops and plantations which are easily accessed by the breeders, have opened up opportunities for livestock development efforts without relying on extensive traditional patterns by relying solely on natural pasture. Another SO strategy is to improve the management and technical cultivation skill in order to increase the productivity of beef cattle. The improvement activities of management and cultivation technical skill are in the form of facilities such as technical guidance, counseling, and technical assistance from the Office which is in charge of the functions of the livestock, *Puskeswan* (Animal Health Center) and counseling center. Alternative strategies for developing beef cattle livestock can be in the form of training for the breeders in terms of management and utilization of appropriate technology in livestock as well as increasing the quantity and quality of beef production (Khusna, et al., 2016). In addition, a research conducted by Putri, et al. 2016) state that optimization of counseling and mentoring program of livestock businesses through counseling program has an important role in transferring new innovation and appropriate technology, particularly for beef cattle livestock.

### Table 5 – SWOT Matrix of Development of Beef Cattle Livestock in Gunungkidul District

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>Strengths (S)</th>
<th>Weaknesses (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S1 Regular recording (population)</td>
<td>W1 Low motivation to change business</td>
</tr>
<tr>
<td></td>
<td>S2 Unyielding nature</td>
<td>W2 Capital limitation and difficult access to Banking</td>
</tr>
<tr>
<td></td>
<td>S3 Breeding experience</td>
<td>W3 Side occupation/ savings</td>
</tr>
<tr>
<td></td>
<td>S4 Beef cattle base area</td>
<td>W4 Traditional system of individual housing and small business scale</td>
</tr>
<tr>
<td></td>
<td>S5 Capital cost is relatively low</td>
<td>W5 Feed shortages during the dry season</td>
</tr>
<tr>
<td></td>
<td>S6 Cultivation is easy to do</td>
<td>W6 The application of good cultivation management is still lacking</td>
</tr>
<tr>
<td></td>
<td>S7 Availability of agricultural waste</td>
<td>W7 Lack of utilization of agricultural waste</td>
</tr>
<tr>
<td></td>
<td>S8 Institutional group running</td>
<td>W8 The absence of marketing planning and pricing is based on estimation</td>
</tr>
<tr>
<td></td>
<td>S9 Availability of animal markets and transportation access</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>External Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities-O</th>
<th>SO Strategy</th>
<th>WO Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>O1 Availability of market or demand</td>
<td>Increase of population and beef cattle production in each sub-district based on existing potential (S1, S2, S3, S4, S5, S6, S7, O1, O2, O3, O4, O5, O7)</td>
<td>Encourage an increase in the orientation of business enterprises and increase the capital for livestock development using Banking facilities and government program facilities (W1, W2, W3, W4, W6, O1, O2, O3, O4)</td>
</tr>
<tr>
<td>O2 There is facilities of Banking credit</td>
<td>Optimization of the potential of livestock human resources and support from animal feed waste as well as facilities and infrastructures for the development of beef cattle breeding (S2, S3, S4, S7, S9, O1, O3, O4, O6)</td>
<td>The increase availability of animal feed by utilizing government program facilities and feed processing technology (W5, W7, O3, O6)</td>
</tr>
<tr>
<td>O3 Government program facilities</td>
<td>Improving good management and technical cultivation skills to increase the productivity of beef cattle (S2, S3, S6, S8, O1, O3, O4, O5)</td>
<td>Expand business networks and improve the marketing capabilities of livestock products (W1, W3, W8, O1, O5, O8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Threats-T</th>
<th>ST Strategy</th>
<th>WT Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 Transfer of agricultural/livestock land functions</td>
<td>Socialization of the benefits and advantages or potential of beef cattle livestock to encourage business interests and climate (S2, S3, S4, S5, S6, S7, S8, S9, T1, T4, T5, T6). Strengthen the institutional position of groups in the form of legal entities or cooperatives for the breeders (S1, S4, S8, T2, T3, T4, T5)</td>
<td>Improving the cooperation network/partnership and increasing the investment with various institution and business owners (W1, W2, W3, W4, W6, T1, T2, T3, T4)</td>
</tr>
<tr>
<td>T2 Fluctuations in meat and beef prices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T3 The role of blantik to determine the price</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T4 Limitations of Regionea Government budget</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T5 Policy for importing beef cattle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T6 Technology application is less efficient</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Primary Data processed, 2018.*

The WO strategy or weakness-opportunity strategy is a strategy to minimize the existing weaknesses in order to be able to utilize an external opportunity. Alternative
strategies which can be formulated are encouraging an increase in the orientation of business ventures and increasing capital for the development of livestock using banking and government program facilities. The change in the orientation of breeder businesses towards businesses to gain profits is still low because of the limited capital. Capital constraint occurs because access to banking is difficult since it requires collateral. Therefore, the government programs facilities are needed to facilitate the access to banking. This is in accordance with Sodiq, et al opinion (2017) that breeders' access to capital has been one of the obstacles to improve breeders' businesses, so that it generally affects the national productivity. The weak capital structure of breeders is caused by the absence of assets which can be used as collateral, therefore revitalization of financing needs to be done through cooperation with various parties. Mukson, et al., 2014 state that the existing capital limitation in breeders is starting to be continuously improved with various beef cattle development programs, which are through food and energy security credit (KKPE), KUPS (Cattle Livestock Business Credit), Graduate Building Rural Area (SMD) and other development program schemes.

The next WO strategy is by increasing the availability of animal feed by utilizing government program facilities and feed processing technology. Lack of animal feed, especially in the dry season is still a serious problem. Therefore, it is necessary to make a special effort to utilize the potential of feed waste using appropriate technology and also need to be encouraged by an integrated breeding system with food crops, plantations and forestry. The combination of the development of beef cattle integrated with agricultural crops and the right strategy in gathering feed ingredients using an efficient cost approach as well as optimum nutritional quality will be able to keep the beef cattle productivity good and even more efficient than maintenance without using agricultural crops (Mariyono and Krisna, 2009). In order to ensure the availability of quality feed throughout the year, breeders need to be given training in feed processing technology such as feed storage technology, as well as agricultural waste-based feed processing technology and agro-industry (Putri et al., 2016).

The last WO strategy is by expanding the business network and improving the marketing capabilities of livestock products. Efforts to increase revenue or result are by improving an efficient marketing system, cutting long marketing chains and expanding marketing networks. Market development strategy is carried out by marketing the product to a wider or far geographic market (Aisyah, 2013). According to Prastiti et al., 2016, alternative beef cattle development strategy is by optimizing the performance of existing marketing network. The strategy of optimizing the performance of the existing marketing network can be utilized by the providers of production facilities, breeders, agro-industry entrepreneurs and traders to sell their products.

The ST strategy or strength-threat strategy is a strategy to optimize the internal strengths in avoiding the threats. Alternative ST Strategy which can be formulated is strengthening the institutional position of group in the form of legal entities or cooperatives for breeders. The function of livestock group felt to be very beneficial for the group members. The government program facilitation or service and the ease of access to banking requires institutional groups which are already running. It is in line with Priyanto statement (2011) that the development of beef cattle business needs to be supported by institutions at the breeder level as well as at the institutional level/ program coordination in addition to capital. With the existence of a solid group, a business which can improve the bargaining position of the products will be formed. The second ST strategy is the socialization of the benefits and advantages or potential of beef cattle livestock in order to encourage business interest and climate. The existence of a beef cattle breeding business profile or agribusiness which is easy to do and able to increase breeders' income must be socialized since there is a reduced interest in raising livestock, especially the younger generation. This is in accordance with the statement from Putri et al, (2016) that at present, livestock has been viewed as an agribusiness system consisting of upstream subsystems (provision of livestock production facilities and seeds), on farm (production), to downstream (post-harvest, and marketing). With such a large potential of livestock business, without being followed by an increase in the quality of its human resources, the current breeders will only be on-farm workers with low income.
WT strategy or weakness-threat strategy is a defensive strategy to minimize the internal weaknesses and avoid the external threats. Alternative strategies which can be formulated are increasing the cooperation networks/partnerships and increasing investment with various institution and business owners. This is consistent with Suryana opinion (2009) that partnership is a collaborative activity between agribusiness actors ranging from preproduction, production to marketing, based on the principle of mutual need and benefit among the parties who work together, in this case the company and beef cattle breeders, to share costs, risks and benefits. This is in line with Sarma statement (2014) that alternative strategy by developing the integration strategy involving breeders, value chain actors and the meat processing industry, can increase the productivity through the transfer of cattle fattening technology, providing support services and sustainable market networks.

CONCLUSION

SWOT analysis showing the total score obtained from the internal factor analysis as the total strength score minus the total weakness score which is 0.81 and the external factor as the total opportunity score minus the total threat score which is 1.16. The appropriate strategy in the development of beef cattle breeding is in quadrant I. The strategy which must be applied in this condition is by supporting the aggressive growth policies (Growth Oriented Strategy), which uses the power to obtain opportunities (SO). SO alternative strategies that can be formulated are increasing the population and production of beef cattle in each sub-district based on existing potential, optimizing the potential of breeders’ human resources and supporting animal feed waste as well as infrastructure for the development of beef cattle breeding, and improving the management and technical skills of the cultivation in order to increase the productivity of beef cattle in Gunungkidul District.

REFERENCES

THE EFFECT OF AGRIBUSINESS SYSTEM APPLICATION TOWARDS SEAWEED FARMERS’ INCOME: A CASE STUDY IN PAHUNGA LODU DISTRICT OF EAST SUMBA REGENCY, INDONESIA

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Faculty of Animal and Agricultural Science, University of Diponegoro, Indonesia
*E-mail: riwansumba@gmail.com

ABSTRACT
The application of the agribusiness system in the management of seaweed business is a factor that determines the success of seaweed business. The purposes of this research: identifying the level of application of agribusiness systems in seaweed farming; analyzing the effect of the application of agribusiness systems on the income of seaweed farmers. This research was conducted in Pahunga Lodu Subdistrict, East Sumba Regency, East Nusa Tenggara. The methods used in this study are qualitative (descriptive) and quantitative. Qualitative Descriptive Analysis is used to identify the level of the application of agribusiness systems in seaweed farming. Quantitative analysis with path analysis is used to analyze the effect of the application of agribusiness systems, namely the upstream sub-system, on farm sub-system, harvest and post-harvest sub-system, and marketing sub-system on the amount of production and its impact on the seaweed farmers’ income. The results showed that the application of the agribusiness system in the upstream agribusiness sub-system, the on farm agribusiness sub-system and the harvesting and post-harvest agribusiness sub-systems were carried out very well, while the marketing agribusiness sub-system had not been done well. Upstream agribusiness sub-system, harvest and post-harvest agribusiness have a significant effect on the amount of production, while the on farm agribusiness sub-system does not significantly affect the amount of production. The marketing agribusiness sub-system and the amount of production have a significant effect on the income of seaweed farmers.

KEY WORDS
Agribusiness system, seaweed farming, production, farmers’ income.

Agribusiness is a new way of seeing agriculture which was carried out sectorally and now it is done intersectionally; or if it was conducted using subsystem, now it’s done using system. Agribusiness system covers 4 things, namely; 1) Upstream agribusiness system that produces production facilities; 2) On farm agribusiness system; 3) Downstream agribusiness system, that concerns processing activities and 4) Trading agribusiness system or product marketing. The four elements of the agribusiness system are closely related and integrated in the system (Saragih, 2007).

East Sumba Regency is in the administrative area of East Nusa Tenggara, which is a large producer of *Eucheuma cottonii* seaweed. The data collected from the Department of Marine and Fisheries of East Sumba (2016), the area of East Sumba which has the potential to be used as seaweed cultivation area is 5,800 ha, but until 2015 the area used for seaweed cultivation is only 347.1 ha (5.79%) of the total potential land area, around 5,452.9 ha of land resources have not been managed yet. In 2015, East Sumba was able to produce 4,524 tons of seaweed with a population of 2,816 people who cultivated seaweed.

The application of agribusiness systems in Pahunga Lodu District has not been able to be implemented properly, it can be seen that there are still a lot of seaweed farmers who face several problems such as:

1. Seaweed production in the farm level for the last 5 years has decreased as a result of the inability of the seaweed farmers to provide good quality production facilities. Seaweed seeds used by farmers are taken from their own production in the previous planting period continuously, thus it causes the quality of the seaweed seeds to
decrease. The nylon rope used has been relatively old, so the rope is easily broken and there are only a number of the farmers who own nylon rope. In addition, many seaweed farmers do not have canoes, so that farmers are having difficulties in planting, maintaining and harvesting the seaweed. These problems are in line with the research done by Wantasen A. S and Tamrin (2012), where seaweed production in Nain Island has decreased due to the repetition use of seeds, so that the seeds have low quality because they carry seedlings that causes the seed endurance reduced. The results of the same study were also carried out by Aluman, et al, (2016), the low seaweed production in Bulagi District, Banggai Regency due to the limitations of the production factors owned by farmers. The limitation of production factors is the limited use of production inputs such as seeds, labour and the number of ropes used to tie seaweed. Sulaeman S's (2006) research results show that the obstacle for seaweed farmers in the production facilities are the availability of canoe boats used for treatment, transportation and harvesting.

- The quality of seaweed produced by farmers is low. Access to technology at the farmer level is very inadequate, seaweed farmers still use traditional post-harvest technology that is in the process of drying seaweed. This is related with the results of research by Hasiru et al (2010), some of the problems faced by seaweed farmers in North Gorontalo District are at the farm level, the problems faced are the poor level of knowledge in cultivation, lack of good quality seeds, poor drying process seaweed and markets that still depend on collecting traders. While at the level of processing, the problem faced is the availability of dried seaweed as a raw material which is not in accordance with the needs, the bad quality of dried seaweed, and there are still a lot of dirt and foreign objects in it.

- Market information regarding the marketing of seaweed at the farm level is still very inadequate and farmer’s dependence is very high on small collectors or middlemen who are around the farmer's environment as the main buyers of seaweed products. This is related with the results of Avrianti et al (2014) research, Seaweed farmers in Wuakerong Village do not have clear information related to marketing of seaweed. As a result farmers do not take part in determining the selling price of seaweed. Farmers are only recipients of prices, but are not price determinants.

The study of the application of agribusiness systems on seaweed farming, has not received much attention. So far, studies on seaweed commodities have only focused on the secular part of seaweed cultivation activities or research studies have not been conducted on the whole of seaweed cultivation activities, starting from upstream activities providing advice on production, cultivation, harvest and post-harvest as well as marketing activities. Most of the seaweed cultivation research only focused on the analysis of production and income, cultivation and marketing of seaweed. Therefore, research is needed on the effect of the application of agribusiness systems on the income of seaweed farmers in Pahunga Lodu District, Sumba Tmur District.

## METHODS OF RESEARCH

This research was conducted in Pahunga Lodu District, East Sumba Regency. Location determination was carried out purposively or done intentionally with consideration that the area was the centre of seaweed cultivation in East Sumba Regency. The number of samples studied was 100 samples. Sample population determination is done by simple random sampling technique. Data collection techniques were carried out through a direct interview process with seaweed farmers using structured questionnaires. To facilitate the respondent in answering the question, an answer is provided with a Likert scale consisting of 4 points. Respondents were asked to give responses to the questions posed with an answer score of 1- 4, that are: very good (4), good (3), bad (2), and very bad (1).

Data analysis methods used are qualitative (descriptive) and quantitative methods. Qualitative descriptive analysis was used to describe the level of application of seaweed agribusiness systems in Pahunga Lodu District, East Sumba Regency. To describe the level
of application of seaweed agribusiness systems, it used a scoring index analysis technique to describe the respondents’ perceptions of the question items. The calculation of the respondent's answer is done by the following formula:

\[
\text{Index value (%)} = \frac{\text{Total Score}}{Y} \times 100
\]

\[
\text{Interval value} = \frac{100}{\text{total score (Likert scale)}} = \frac{100}{4} = 25
\]

Based on the interval value, the interpretation criteria are:
- 1% - 25% = Poor;
- 26% - 50% = Medium Poor;
- 51% - 75% = Fair;
- 76% - 100% = Very Good.

Quantitative analysis is used to analyze the effect of the implementation of agribusiness systems on the amount of seaweed production and the income of seaweed farmers. In this study, the writer used path analysis method with tetra IV software. The formula of path analysis is:

\[
Y = a + b_1X_1 + b_2X_2 + b_3X_3 + ei
\]

\[
Z = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5Y + e
\]

![Figure 1 – Equation model of path analysis](image)

Notes: X1 = the upstream agricultural sub-system, or provision of production facilities (Score); X2 = the on farm agribusiness sub-system (Score); X3 = the harvest and post-harvest agribusiness sub-system (Score); X4 = the marketing agribusiness sub-system (Score); Y = the amount of seaweed production (Kg); Z = the income of seaweed farmers (Rp).

**RESULTS AND DISCUSSION**

The application of agribusiness system in seaweed farming in Pahunga Lodu District, East Sumba Regency is divided into 4 sub-systems, namely the upstream agricultural sub-system, the on farm agribusiness sub-system, the harvest and post-harvest agribusiness sub-system, and the marketing agribusiness sub-system (Table 1).

The upstream agribusiness subsystem related to the provision of production facilities such as seaweed seeds, nylon rope and canoes. Based on the results of the analysis in Table 1, the level of application of the upstream agribusiness subsystem is in a very good category with an index value of 86.8. It means that seaweed farmers are able to provide production facilities such as seeds, nylon rope and canoes in the best quantities and quality.

According to the Ministry of Marine Affairs and Fisheries Republic Indonesia (2005), a good seaweed seeds must have a large thallus, the pigmentation is above 70%, green, not slimy and cannot get dirt in more than 5%. The results of the analysis in Table 1 show that the index value for seaweed seeds quality is in a very good. It is because the number of index value shows of 90.0. Moreover, Nylon rope is also one of good products which have a very good quality. It can be used as a container or place to tie seaweed seeds. The Table 1 shows that the index value of nylon rope is 86.5. Furthermore, canoe is also very important.
for seaweed farmers in supporting farmers in carrying out the process of cultivation, maintenance and harvesting of seaweed. The index value for canoe capacity is in the very good category with a value of 84.00.

Table 1 – Distribution of Respondents and the Average number of Index Value in the Agribusiness System

<table>
<thead>
<tr>
<th>Application of Agribusiness Systems</th>
<th>Skor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Index Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub system of upstream agribusiness or provision of production facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seaweed Seeds</td>
<td></td>
<td>0</td>
<td>40</td>
<td>60</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>Nylon Rope</td>
<td></td>
<td>0</td>
<td>3</td>
<td>48</td>
<td>49</td>
<td>86,5</td>
</tr>
<tr>
<td>Canoe</td>
<td></td>
<td>3</td>
<td>6</td>
<td>43</td>
<td>48</td>
<td>84</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>86,8</td>
</tr>
<tr>
<td>On farm of agribusiness systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weather and Time Conditions Planting</td>
<td></td>
<td>0</td>
<td>0</td>
<td>41</td>
<td>49</td>
<td>79,7</td>
</tr>
<tr>
<td>Seaweed Maintenance Intensity</td>
<td></td>
<td>0</td>
<td>6</td>
<td>17</td>
<td>77</td>
<td>92,7</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>86,2</td>
</tr>
<tr>
<td>Pra- and post-harvest agribusiness systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seaweed Age</td>
<td></td>
<td>0</td>
<td>0</td>
<td>36</td>
<td>64</td>
<td>91</td>
</tr>
<tr>
<td>Post Harvest Technology</td>
<td></td>
<td>0</td>
<td>6</td>
<td>33</td>
<td>61</td>
<td>88,7</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>89,85</td>
</tr>
<tr>
<td>Marketing Agribusiness Sub system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market or Customer</td>
<td></td>
<td>32</td>
<td>45</td>
<td>15</td>
<td>8</td>
<td>49,75</td>
</tr>
<tr>
<td>Seaweed Price</td>
<td></td>
<td>35</td>
<td>43</td>
<td>14</td>
<td>8</td>
<td>48,75</td>
</tr>
<tr>
<td>The average index is</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>49,25</td>
</tr>
</tbody>
</table>

Source: Primary data (2016).
Note: 4 = very good, 3 = good, 2 = bad and 1 = very bad.

The on farm agribusiness subsystem is related to maintenance techniques during the cultivation period which include planting and maintenance activities. Table 1 show the level of application of on farm agribusiness sub-systems are in very good category with an index value of 86.2. It means that seaweed farmers are able to implement agribusiness subsystem very well. The success of seaweed’s farmers in implementing the on farm agribusiness subsystem is due to the factor of farmers’ knowledge about seaweed cultivation which is getting better, through a long experience process owned by farmers. Time and weather conditions during the cultivation process directly affect the quality of the seeds that are cultivated. The analysis results in Table 1 show the time and weather conditions during the cultivation are in very good category with an index value of 79,7.

Conservancy of seaweed is the most important activity that determines the success of seaweed cultivation. The analysis results in Table 1 show the intensity of seaweed conservancy in very good category with an index value of 92,7.

In the harvest and post-harvest agribusiness subsystem, the activities observed are harvesting and drying. Based on the analysis results in Table 1, the level of application of harvest and post-harvest agribusiness subsystem is in the very good category with an index value of 89,85. This shows that seaweed farmers are able to apply the harvest and post-harvest sub-systems very well.

According to Asriany (2014), harvesting time depends on its purpose, if the purpose is to get the seedlings, hence harvesting is done at the age of 25-30 days, whereas if the purpose is for the production with high susceptibility value, hence harvesting is done at the age of 45 days. The analysis results in Table 1 show that the seaweed harvesting age is in very good category with an index value of 91,00. Seaweed farmers in Pahunga Lodu district, East Sumba, cultivate seaweed with the aim of being sold to the market not to produce seeds. Therefore, seaweed harvesting is carried out at the age of 40-45 days.

Post-harvest technology or the process of drying is one of the factors that will determine the quality of seaweed produced. The analysis results in Table 1 show that the seaweed drying technology is in very good category with an index value of 88,7. This means,
most seaweed farmers use post-harvest technology, in this case technology for seaweed processing, with very good quality.

According to Soekartawi (2002), marketing is a system of business activities which is intended to plan and determine prices, promote, and distribute goods and services that satisfy the needs of existing buyers and potential buyers, it also does not end at the time of selling or transaction.

Based on the analysis results in Table 1, the level of application of marketing agribusiness sub-systems is in bad category with an index value of 49.25. This means that seaweed farmers have not been able to implement agribusiness marketing sub-system of seaweed products well. Seaweed farmers in marketing their products depend on the traders. Seaweed farmers do not have sufficient market information, so that it is causing farmers to not be able to control the market or market controlled by the wholesalers.

Following are the results of hypothesis analysis using path analysis methods (part analysis) can be seen in Table 2 below.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Coefficient (B)</th>
<th>T</th>
<th>Sig P</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>Y</td>
<td>174.4045</td>
<td>3.5460</td>
<td>0.0006</td>
<td>Have a significant effect</td>
</tr>
<tr>
<td>X2</td>
<td>Y</td>
<td>101.6779</td>
<td>1.7860</td>
<td>0.0772</td>
<td>No significant effect</td>
</tr>
<tr>
<td>X3</td>
<td>Y</td>
<td>443.6864</td>
<td>9.9000</td>
<td>0.0000</td>
<td>Have a significant effect</td>
</tr>
<tr>
<td>X4</td>
<td>Z</td>
<td>27619.7265</td>
<td>423.0449</td>
<td>0.0000</td>
<td>Have a significant effect</td>
</tr>
<tr>
<td>Y</td>
<td>Z</td>
<td>8631.9572</td>
<td>383.9281</td>
<td>0.0000</td>
<td>Have a significant effect</td>
</tr>
</tbody>
</table>

Source: Primary data (2016).

Based on the results above, the path analysis or part analysis can be drawn as follows:

\[ Y = 174.4045 \times X1 + 101.6709 \times X2 + 443.6864 \times X3 + e \]

\[ Z = 174.4045 \times X1 + 101.6709 \times X2 + 443.6864 \times X3 + 27619.7256 \times X4 + 8631.9572 \times Y + e \]

**The Effect of the Application of Upstream Agribusiness Sub-system (X1) towards Total Production (Y).** The analysis results in Table 2, the variable upstream agribusiness sub-system (X1) has a significant effect on the variable amount of seaweed production (Y). The variable upstream agribusiness subsystem (X1) has a significance value | p | 0.0006 smaller than 0.05. The results of this analysis indicate that the better the level of the application of upstream agribusiness sub-system, in this case the provision of quality production advice, it will cause the greater the average number of seaweed production. The results of this study are in line with the research conducted by Akbar (2014), that capital production facilities have a significant effect on the amount of seaweed production in district Jeneponto.

**The Effect of the Application of On Farm Agribusiness Sub-system (X2) towards Production Amount (Y).** The analysis results in Table 2, variable cultivation agribusiness system (X2) does not significantly affect the amount of seaweed production (Y). The cultivation agribusiness system variable (X2) has a significance value of | p | 0.0772 greater than 0.05.

The main causes of on farm agribusiness systems that have no effect on the amount of production because seaweed is a commodity whose growth depends heavily on weather or climate conditions. Natural conditions that are good for the growth of seaweed, among others, have strong ocean currents, sea water in clear conditions and get high sunlight. The results of this study are in line with research conducted by Wuryaningsing, et al, (2014), which stated that weather and climate with high rainfall followed by strong winds is very detrimental to farmers, because the growth of seaweed is disturbed, seaweed is broken, rope ties become detached and lost causing seaweed production to be not optimal.

**The Effect of the Application of Harvest and Post-Harvest Agribusiness Sub-system (X3) on the Amount of Seaweed Production (Y).** The analysis results in Table 2, harvest and post-harvest system variables (X3) significantly affect the amount of seaweed production (Y).
The Harvest and Post-Harvest variables (X3) have a significance value $|p| < 0.0000$ smaller than 0.05.

In harvesting and post-harvest agribusiness system, there are two significant variables: seaweed harvesting age and seaweed carrying technology or tools. The age of seaweed harvest affects the amount of seaweed production that will be produced. Seaweed farmers in Pahunga Lodu Subdistrict, East Sumba Regency harvested the seaweed when it aged about 40 days to 45 days. The result of this study are similar with the research conducted by Aluman, et al, (2016), which states that harvest age has a positive and significant influence on the amount of seaweed production in Bulagi District.

Seaweed drying technology or tools affect the number of quality products that can be sold in the market. The results of this study are in line with the research conducted by Pandelaki (2012). The process of carrying out the seaweed using tarpaulin, soil and sand is a deficient way to carry out the seaweed, thus it can reduce the quality of seaweed in Bantaeng Regency. The results of research conducted by Anggadireja et. al (2009) states that the quality of seaweed products is strongly influenced by the age of seaweed, weather conditions at harvest, how to harvest and drying methods. With high quality seaweed, farmers will easily get buyers and relatively high selling prices.

The Effect of Marketing Agribusiness Sub-system Application (X4) on Seaweed Farmers’ Income (Z).

The results of the analysis in Table 2 show that the variable marketing agribusiness system (X4) has a significant effect on the income of seaweed farmers (Z). The marketing agribusiness system variable (X4) has a significance value of $|p| < 0.0000$, which is smaller than 0.05. This means that $H_a$ is accepted and $H_0$ is rejected, thus the hypothesis which argues that there is an influence of the marketing agribusiness system to the seaweed farmers’ income are proven. The results show that the better the level of application in the marketing sub-system, the higher the income obtained.

In marketing agribusiness, there are 2 important variables: the place of sale or buyer of seaweed and the price of seaweed, which has a link between the two variables and affect the income earned by farmers. The result of this study is parallel with the research result conducted by Wuryaningsing, et al, (2014), which states that the dependence of farmers by selling dry seaweed to a collector or middleman in Pahawang Island and lack of consumer interest in seaweed, causing farmers' small income and prevent the success of seaweed cultivation. The result conducted by Arvianti (2014), stated that the process of bargaining always occurs between farmers and middlemen, but generally seaweed farmers in Wuakerong Village are always in a difficult position because eventually the middlemen take the role to determine the prices.

The Effect of the Amount of Seaweed Production (Y) on Seaweed Farmers’ Income (Z).

The result of analysis in Table 2 shows that the Amount of Seaweed Production variable (Y) has a significant effect on the income of seaweed farmers (Z). It has a significance value of $|p| < 0.0000$ which is smaller than 0.05. The higher amount of seaweed produced will be directly proportional to the amount of income that will be obtained by the farmers. The results above are parallel with the results of research conducted by Wuryaningsing, et al, (2014), which states that the amount of production significantly influences the income of seaweed farmers in North Maluku. The results of this study are also supported by the results of Budiman et. Al (2011) which argues that the amount of production and selling value at reasonable prices affects the amount of income that will be obtained by the family of seaweed farmers.

CONCLUSION

The application of agribusiness systems in seaweed farming in Pahunga Lodu District, East Sumba Regency is divided into 4 sub-systems: upstream agribusiness sub-system, on farm sub-system, harvest and post-harvest agribusiness sub-system, and marketing agribusiness sub-system. In the upstream agribusiness system, or the provision of production facilities, seaweed farmers have been able to apply it very well with an index value of 86.8. In the on farm agribusiness sub-system, seaweed farmers are also able to
apply it well with an index value of 86.2. In the harvest and post-harvest agribusiness sub-system, the index value is 89.85 which indicates that the farmers are able to apply the system very well. Meanwhile, in the marketing agribusiness sub-system, the application is categorized in a bad level, with an index value of 49.25.

The variables of upstream agribusiness sub-system significantly affect the amount of production and income of seaweed farmers with a significance value of [p] of 0.0006. Meanwhile, the on farm sub-system variables do not have a significant effect on the amount of production and income of seaweed farmers with a significance value of [p] of 0.0772. The variables of harvest and post-harvest, as well as marketing agribusiness sub-system, significantly affect on the amount of production and income of seaweed farmers with both significance value of [p] of 0.0000. Then, the variables of the amount of production have significant effect on the income of seaweed farmers with a significance value of [p] of 0.0000.

REFERENCES

THE APPLICATION OF ORGANIC MATERIALS ON GROWTH OF EDIBLE CANNA (CANNA EDULIS KER) IN TIDAL SWAMP

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ABSTRACT
The research was aimed to evaluate the application of organic materials on growth and development of edible canna plant (Canna edulis Ker) in tidal swamp land. It was conducted in Suka Tani Village, Tanjung Lago Sub-district of Banyuasin from October 2017 to January 2018. Randomized Block Design was used with 6 treatments and 3 replicates. Each experimental unit consisted of 16 plants. The treatments consisted of P₀ (control: without applying any organic matter), P₁ (10 ton ha⁻¹ of cow manure), P₂ (15 ton ha⁻¹ of rice husk ash), P₃ (20 ton ha⁻¹ of of rice husk ash), P₄ (10 ton ha⁻¹ of rice husk), and P₅ (15 ton ha⁻¹ of rice husk). Results showed that the application of P₂ (15 ton ha⁻¹ of rice husk ash) could increase growth and development of edible canna plants. Highest results was found in the parameters of bud initiation time, plant height, flowering time, tiller number, plant fresh weight, plant dry weight, and corm weight.

KEY WORDS
Edible canna, organic matter, tidal swamp.

One of the main constraints for food sufficiency program is the uneven ratio between population growth and food production where the increase in population is much faster. It is even worsen by the decrease in agriculture cultivation areas. Indonesia actually has a potency to develop various kinds of food crops, unfortunately due to limited productive agricultural land, crop cultivation in marginal land has led to the decrease in productivity which in turn decreasing the food supply for the rapidly increasing population.

Food diversity is then needed to lessen the dependency on one specific food crop. While in local farmer level, it is known in term of multiculture and multi-commodities agriculture. Tuber food crops such as edible canna (Canna edulis Ker) has a great potency to be utilized as an alternative food crops. Edible canna corm is known as a safe and healthy local food source, however, it has not been cultivated widely. In South Sumatra, it is only known by the elderly and can be found uncultivatedly in several locations either in upland or in lowland area.

Due to its unpopularity, edible canna cultivation in optimal land has not been commonly found as rice and corn still become the priority crops. Thus, the cultivation of edible canna is more likely carried out in the sub-optimal land, such as in tidal swamp area. Total tidal swamp in Indonesia is around 20.14 millions ha distributed in 17 provinces in which 9.53 millions ha of the total is considered potential for agricultural activities. Total 5.27 millions ha are already used by either government transmigration program with 2.27 millions ha or by local community usages with 3.0 millions ha (Agricultural Land Research and Development Center, 2011).

Tidal swamp is an underused potential agro-ecological area for its large coverage, especially for food crop cultivation (Haryono, 2013). Furthermore, it is categorized into four main typologies based on the physico-chemical soil properties, such as (1) potential land, (2) acid sulphate land (either potential acid sulphate or actual acid sulphate), (3) peat land (peaty land, shallow peat, medium peat, deep peat, very deep peat), and (4) saline land.

Plant productivity can be increased by the addition of organic materials in the soil. The application of organic materials in a significant amount are conducted in the very first step of plant cultivation as it serves as basal fertilizer. The application of organic fertilizer and its
combination is believed will increase both plant biomass and soil nutrient content compared to chemical NPK fertilizer (Das et al., 2007).

Rice husk, rice husk ash and cow manure are the most common organic materials been applied to the soil. Rice husk is usually a waste from rice milling process while rice husk ash is the husks that have been burned to ash. Manure has considerably better properties compared to either organic or inorganic fertilizers though it has slower effect to the plant regarding some changing process that it has to undergo (Suyatno, 2004).

Similar to other plant biomass, rice husk also contains lignocellulose material but with higher silica percentage. The chemical content of rice husk consists of 50% cellulose, 25-30% lignin, and 15-20% silica (Ismail and Waliuddin, 1996). Rice husk ash contains several nutrients with the composition of 0.15% nitrogen, 0.16% phosphorus, 1.85% potassium, 0.49% calcium, 1.05% organic carbon, 68.7% SiO₂ and C/N 36 (Sigit, 1984).

Martanto (2001) stated that rice husk is an organic material containing cellulose, lignin, and hemicellulose, and if being burned it can produce ash with high silica content for about 87% - 97%, and also contain 1% nitrogen and 2% potassium. Furthermore, potassium is needed to strengthen plant body in order to maintain leaves and flowers for not falling down, to regulate transpiration, to maintain enzymes mechanisms, to maintain osmotic potential and water absorption, to stimulate root hairs formation, to harden plant stems, and to stimulate seeds formation while silica is functioned as a growth booster of some gramineae plants, especially if given in optimal concentration dosage.

Research finding by Andayani and Sarido (2013) discovered that cow manure contained 2.33% nitrogen, 0.61% phosphorus (P₂O₅), 1.58% potassium (K₂O), 0.33% magnesium, 26.28% water content, 6.62% organic carbon, 0.65% total N, 10.18 C/N ratio, 11.41% organic content, 3.42% humic acid, and 2.92% fulvic acid. Furthermore, Novia (2015) concluded that the application of 15 ton ha⁻¹ of cow manure on sweet potato showed best results in growth parameters such as fruit bud number, tuber length, tuber weight per plant and tuber weight per plot.

Thus, this research was conducted with the aim to evaluate the application of organic materials on growth of edible canna (Canna edulis Ker) in tidal swamp land.

METHODS OF RESEARCH

The research was conducted from September 2017 January 2018 in Suka Tani Village, Tanjung Lago sub-district in Banyuasin while plant analysis was carried out in the Laboratory of Plant Physiology in Department of Agronomy, Faculty of Agriculture, University of Sriwijaya.

Randomized Block Design was used with 6 treatments and 3 replicates with 16 plants per unit resulting in total 288 plants. The treatments consisted of P₀ = control, P₁ = 10 ton ha⁻¹ cow manure (9 kg plot⁻¹), P₂ = 15 ton ha⁻¹ rice husk ash (13.5 kg plot⁻¹), P₃ = 20 ton ha⁻¹ rice husk ash (18 kg plot⁻¹), P₄ = 10 ton ha⁻¹ rice husk (9 kg plot⁻¹), P₅ = 15 ton ha⁻¹ rice husk (13.5 kg plot⁻¹). Analysis of Variance (ANOVA) and least significant difference test was used for data analyzing.

Land was first cleared from the vegetation and then 18 plots by the size of 3 m x 3 m with 50 cm spaces between each plot were prepared. Planting materials were selected from fresh canna rhizomes with the age of 6-8 months with no defect and free from disease. The application of organic materials was carried out a week before planting according to each treatment dosage. The rhizomes were planted in 10 cm x 10 cm planting holes with 70 cm x 70 cm planting space. Plants were maintained with sufficient water supply and kept free from weed competition. Harvest was perfomed at 5 months after planting by digging the corm from the soil.

The parameters consisted of bud initiation time, plant height (cm), leaf number per clump, flowering time, leaf chlorophyll, tiller number, plant fresh weight, plant dry weight and fresh corm weight per clump.
RESULTS OF STUDY

The analysis of variance indicated that the application of organic materials on edible canna plant showed significant effect on flowering time and non significant effect on the other parameters as seen in Table 1.

Table 1 – Analysis of variance on growth parameters of edible canna

<table>
<thead>
<tr>
<th>Parameter</th>
<th>F-value</th>
<th>Coefficient of variance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bud initiation time</td>
<td>2.61**</td>
<td>12.42</td>
</tr>
<tr>
<td>Plant height (cm)</td>
<td>1.24**</td>
<td>18.48</td>
</tr>
<tr>
<td>Leaf number</td>
<td>0.67**</td>
<td>12.69</td>
</tr>
<tr>
<td>Flowering time</td>
<td>4.30*</td>
<td>3.16</td>
</tr>
<tr>
<td>Tiller number</td>
<td>3.12**</td>
<td>22.80</td>
</tr>
<tr>
<td>Leaf chlorophyll</td>
<td>1.36**</td>
<td>15.93</td>
</tr>
<tr>
<td>Plant fresh weight per clump (g)</td>
<td>1.87**</td>
<td>45.84</td>
</tr>
<tr>
<td>Plant dry weight per clump (g)</td>
<td>1.86**</td>
<td>58.74</td>
</tr>
<tr>
<td>Corm weight per clump (g)</td>
<td>1.87**</td>
<td>50.75</td>
</tr>
</tbody>
</table>

Note: * = significantly difference; ns = non significant.

The application of organic materials resulted non significant effect on bud initiation time. However, P2 showed the fastest bud initiation time with the average of 8 days after planting, while the lowest was in P5 with 12 days after planting (Figure 1).

Figure 1 – The application of organic materials on bud initiation time of edible canna

Figure 2 shows the effect of organic materials application on plant height of edible canna. The highest plant height was obtained from P2 with the average of 87.42 cm while the shortest was 64.38 cm in P4. Figure 3 shows the increase in plant height per week.

Figure 2 – The application of organic materials on plant height of edible canna
Leaf number also showed no significant effect from the application of organic materials. Yet, P3 treatment showed better performance by having more leaf number compared to other treatments with the average of 9.13, and the lowest leaf number was 7.67 in P4 as given in Figure 4. Figure 5 shows the increase of leaf number per week.

Based on the analysis of variance, the application of organic materials showed a significant effect on flowering time of edible canna. Least significant difference then was tested as seen in Table 2. It shows that there is no significant difference between P2 and P3. Despite of non significant results on analysis of variance, treatment P2 shows best result in the parameter of final tiller number per clump with 5 tillers per clump, while the lowest was obtained in both P0 and P4 with 3 tiller per clump (Figure 6).
Table 2 – Least significant difference test on flowering time of edible canna

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Means</th>
<th>LSD 5% = 5.74</th>
</tr>
</thead>
<tbody>
<tr>
<td>P₀</td>
<td>101</td>
<td>a</td>
</tr>
<tr>
<td>P₁</td>
<td>103</td>
<td>a</td>
</tr>
<tr>
<td>P₂</td>
<td>95</td>
<td>b</td>
</tr>
<tr>
<td>P₃</td>
<td>96</td>
<td>b</td>
</tr>
<tr>
<td>P₄</td>
<td>103</td>
<td>a</td>
</tr>
<tr>
<td>P₅</td>
<td>100</td>
<td>a</td>
</tr>
</tbody>
</table>

Means following by the same letter denotes a non significant difference on 5% of LSD test.

Figure 6 – The application of organic materials on tiller number per clump of edible canna

Leaf chlorophyll also showed no significant effect to the application of organic materials based on analysis of variance. However, Figure 7 indicated that P₄ has the highest average of leaf chlorophyll with 16.78 and the lowest was 12.79 in P₂.

Figure 7 – The application of organic materials on leaf chlorophyll of edible canna

Analysis of variance resulted non significant effect of organic materials application on plant fresh weight per clump. Figure 8 shows that P₂ treatment has the highest average of plant fresh weight per clump with 499 g while the lowest is in P₄ with the average of 182 g.

Similar result was also found in plant dry weight per clump, analysis of variance showed no significant difference, however the effect of organic materials application can be seen in Figure 9. It indicates that P₂ has the highest average of plant dry weight with 158 g and the lowest is in P₄ with 42 g.

The application of organic materials also did not give any significant effect on corm weight per clump. The highest weight of corm per clump was obtained in P₂ treatment with 271 g, and the lowest was 77 g in P₄ treatment as given in Figure 10.
DISCUSSION OF RESULTS

Results showed that the application of organic materials did not have any significant effect to most of parameters observed. Only flowering time had shown significant response to the treatments (Table 1). Based on soil analysis, it was found there was high Fe content in the ideal swamp soil (data not shown). Thus, the added organic materials had less impact in improving soil nutrient content. However, the application of organic materials still gave better growth performance compared to control. The increasing trend of plant height and leaf number were also obtained where P₂ showed better performance compared to other treatments (Figure 3 and Figure 5).

Results showed that the application of P₂ treatment (15 ton ha⁻¹ of rice husk ash) showed the fastest bud initiation time with an average of 8 days after planting, followed by
P₃, P₉, P₁, and P₅ while the slowest was P₅ with 12 days after planting (Figure 1). Similar to this, P₂ also showed better performance in plant height and tiller number with 87.42 cm and 5 tillers. This was probably caused by more nutrient supply from the application of rice husk ash as also reported by Nugroho (2009). Based on soil analysis results, nutrients content in P₂ treatment consisted of 0.50% total N, 2.11 mg g⁻¹ P₂O₅, 2.06 mg g⁻¹ K₂O, and 9739.49 ppm Fe with 3.52 of pH. Then it was understandable that despite of high Fe content, the application of rice husk ash supplied more nutrients to the soil. Furthermore, Wahjunie (2003) added that the application of organic materials would improve soil hardening to medium level, increase the stability of soil aggregate, decrease surface sealing, and also increase infiltration rate.

On the parameter of leaf number, the highest leaf number was obtained from P₃ treatment (20 ton ha⁻¹ of rice husk ash) with 9.13 leaves in average. From these results, both P₂ and P₃ showed better performance in vegetative growth parameters. These two treatments used rice husk ash as the organic materials sources. This finding was similar to a study by Dharmaswara (2012) reporting that the application of 1 ton per ha dosage of husk ash would increase vegetative growth components. High ratio of silica for about 87% - 97% alongside with 1% N and 2% K was contained in husk ash as reported by Martanto (2001).

P₂ treatment also showed the fastest flowering time with 95 days after planting followed by P₃ with 96 days (Table 2). Silica content in rice husk ash was believed would increase the capacity and binding ability of P to be more available in soil for plants (Soil Research Agency, 2010). In contrast, P₂ treatment showed the lowest result in leaf chlorophyll with only 12.79 mg g⁻¹. The best result was in P₄ (10 ton ha⁻¹ of rice husk) with 16.78 followed by P₃, P₉, P₅, P₁ (Figure 7). However, the difference among treatments was non significant. Fageria (2009) reported Fe toxicity syndrome in rice was shown by the decrease in leaf chlorophyll, plant height and tiller number. Fe toxicity was commonly occurred in ultisol, oxisol and tidal acid sulphate soil with low pH and high active Fe ratio (Sahrawat, 2004).

Highest results was also obtained from P₂ treatment in both plant fresh weight and plant dry weight with 499 g and 158 g, respectively. Nutrients and water absorption would heavily affect plant fresh weight while the root was the beneficial organ functioning in the absorption process (Rohmah and Saputro, 2016). Research finding by Mehraban et al. (2008) reported that high percentage of the decrease in root dry weight due to Fe toxicity was correlated to the accumulation of Fe²⁺ in plants which in turn would decrease plants’ growth. P₂ treatment constantly gave better results compared to other treatments. The highest corn weight per clump was 271 g resulted from P₂ treatment followed by P₉, P₁, P₅, and P₉, while the lowest was in P₄ with 77 g (Figure 10). Goldsworthy and Fisher (1992) stated that organic fertilizer addition would indirectly encourage root growth in all normal root depths and could even trigger a better tuber formation.

CONCLUSION

It was concluded that P₂ treatment (15 ton ha⁻¹ of rice husk ash) was considered as the best treatment as indicated by having the fastest bud initiation time with 8 days after planting, highest plant height with 87.42 cm, fastest flowering time with 95 days after planting, the most number of tiller with 5 tillers, and highest in all plant fresh weight, plant dry weight, and corn weight with 499 g, 158 g, and 271 g, respectively. Further research was suggested to evaluate more suitable dosage combination of organic materials application on edible canna plant in tidal swamp.

REFERENCES

18. Wahjunie, E.D. 2003. Surface sealing-crusting, the formation and how to control. Introduction to principles of science (PPS702). Doctoral Program of IPB.
PEDIGREE SELECTION TO OBTAINED RICE VARIETIES ADAPTED TO LOW PHOSPHORUS CONDITIONS

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ABSTRACT
To get adaptive varieties in P sub-optimum conditions needs selection method effective. This research aimed to generate rice lines adaptive to P sub-optimum condition through rice lines selection on the availability of the difference P condition. The research was carried out during four seasons from April 2012 to December 2014 in Muara Experimental Farm, Bogor and farmers' land in the Leuwiliang village. The material used breeding populations from IR6008023/Bernas Prima and Gampai/Progol. Selections conducted for an F3 generation without P (P-) and generation F4 to F5 in two selection environments adequate of P (P+) and without P (P-), by used pedigree method selection. The individual selection in F5 to select 40 lines from each population and soil condition, so that resulting totaled 160 breeding lines. The lines evaluated in P+ and P- environment, following an augmented design, with five blocks and five checks. The data showed that the average of grain yield on P+ was not significantly different from the environment of selection but between the population is significantly different, on the contrary of without P was not significantly different both of environment selection nor population. The average yields of the lines which selection on P- significant higher from P+. Most of the selected lines for P- are not different from the selected lines for P +. The pedigree selection method applied to the results of early generation rice crosses up to F4 followed by line selection, can produce adaptive and high yielding lines in the P + and P-.

KEY WORDS
Pedigree selection method, rice lines, selection environment, production environment, optimum, sub-optimum, phosphorus

Rice is a staple food for almost 95% of Indonesia's population. The rate of population growth in Indonesia is high, causing a high demand for national food production, especially rice. The availability of agricultural land is in contrast to efforts to increase rice production. The availability of land both in quantity and quality, such as the fertility of agricultural land decreased due to the use of improper production technology and land conversion. According to Mulyani et al. (2011), the most agricultural land fertile used for various sectors, both agriculture and non-agricultural sectors (industry, infrastructure, and settlements), even irrigation land decreased due to conversion. Therefore, the development of agriculture in the future is to optimize the use of suboptimum lands such as rainfed fields, dry land, and swampland or tidal swamps.

Problems encountered on the suboptimum land include the low nutrient content of Phosphorus (P) (Suharta 2010). Phosphorus is an essential nutrient for plant growth (Vance et al 2003; Balemi and Negisho 2012). Although phosphorus for plants important the availability of phosphorus in the soil is very small because P tends to be bound by other compounds such as Al and Fe (Richardson et al 2009). The availability of nutrients in tropical soils is low, limiting agricultural productivity (Parentoni et al., 2012). The low availability of P especially in developing countries, where access to P fertilization is limited, poses a challenge in the development of crops, especially rice, varieties adaptive to efficiency P are
needed to utilize the P deficiency farm. Efficient plants P is needed to minimize the use of P inputs and to reduce the loss of P from the environment (Richardson et al., 2009). Besides that, the varieties which adaptive to low P condition used in the land with low input P.

Indonesia is one of the countries which having phosphorus deficiency problem. This nutrient deficiency can occur in dryland or irrigated fields. Dryland in Indonesia dominated by Ultisol the main constraint the excess of Al element that can bind P, whereas, in irrigation fields that are inundated by water, the dominant Fe element binds P. So many lands with that conditions in Sumatera, Kalimantan, Papua and parts of Java. Therefore, need rice variety are tolerant of P deficiency (Prasetyo and Surjadi kartika 2006).

Rice breeding for acid soils has been conducted in Indonesia, but emphasized on tolerance to Al and Fe toxicity and not on tolerance to P deficiency (Lubis et al. 2008; Hermanasari et al. 2011; Hairmansis et al. 2013). The breeding process is carried out in the optimum environment resulting in improved yielding varieties only adaptive to fertile land. The potential yields of these improved varieties will decrease when planted on suboptimum land (Wang et al. 2010; Fess et al. 2011; Wissuwa et al. 2009). Therefore, it is necessary to adaptive paddy varieties at suboptimum P condition.

Developing adaptive varieties on the condition low P land has been done both conventionally and molecularly. The selection process using molecular markers will be more effective and efficient (Acquaah 2007). Wissuwa et al., (1998) evaluated the presence of genes that regulate the absorption of P on the condition land less P. The gene is called Pup 1 (Phosphorus uptake 1), in rice plants located on chromosome 12. Chin et al., (2011) reported that Pup 1 significantly increased grain yields on condition low input P. GamuYao et al., (2012) gets a gene for increasing P uptake, called Phosphorus-starvation tolerance 1 (PSTOL1). Pariska et al., (2014) developed several molecular markers to transfer PSTOL1 genes from the Kasalath variety to African Mega varieties. Pup 1 segment introgression into rice varieties from Indonesia (Situ Bagendit and Batur) has been done and successfully obtained some positive lines containing Pup1 segment (Prasetiyono 2010).

One of the efforts to obtain adaptive crops on condition low P is conventionally through the breeding program to get varieties that tolerance to P deficiency. The concept of plant breeding to assemble varieties that are tolerant of abiotic environments is to create new genes recombination by utilizing genetic diversity derived from various genetic sources or introduction of germplasm through the merging of two elders that have properties according to the desired characteristics. The success of the breeding program is the selection method. This method effective for qualitative characters which are control by a monogenic gene, so easily identifiable in the early generations and the selection continued until it reaches genetic purity. This study aims to produce adaptive rice lines on suboptimum land through the selection of rice lines in condition low P and adequate P. Adaptive lines in the suboptimum environment can be utilized by farmers to reduce the use of P fertilizer.

MATERIALS AND METHODS OF RESEARCH

The research conducted during four planting seasons from April 2012 until December 2014 in the experimental farm Muara Bogor and Leuwiliang Village (Bogor Regency). Analysis of soil samples taken from the experiment sites prior to the experiments indicated that the soil at Muara had pH of 5.3 – 5.6, and available P of 3.8 (very low) – 7.1 (low), whereas at Leuwiliang had pH of 4.6 – 4.9 and available P on 1.8 (very low) – 4.3 (low).

Two F2 populations of crosses IR6008023/Bernas Prima (Pop1) and Gampai/Progol (Pop2) were selected from breeding materials available in Indonesian Center for Rice Research (ICRR). IR6008023 is a breeding line tolerant to Al toxicity developed by International Rice Research Institute (IRRI) Bernas Prima is a hybrid rice variety with high yielding capacity, Progol is a traditional variety with big panicle, and Gampai is the traditional variety with high tillering and resistant to blast disease (Lubis et al. 2007; Hairmansis 2016). The F2 populations were cultivated on size 2 x 8 m plots with 20 x 20 cm plant spacing in the soil with P (P+), N and K fertilizer application of 36 kg ha\(^{-1}\) of P\(_2\)O\(_5\), 135 kg ha\(^{-1}\) of Nitrogen.
and 60 kg ha$^{-1}$ of K$_2$O. Fertilizer P and K applied at transplanting time, N fertilizer respectively 45 kg ha$^{-1}$ applied at 0, 4, and 7 weeks after transplanting, Harvest conducted by collecting 3-4 seeds from each plant except for those with very tall or very late maturing.

The F3 populations cultivated with the same method as F2 but in without P condition (P-) with only N and K fertilizer application of 45 kg ha$^{-1}$ N and 60 kg ha$^{-1}$ K$_2$O. Planting population of generation F3 done in dry season at experimental farm Muara Bogor on April until August 2012. The variables measured plant height, panicle weight, and panicle length. Harvest is done by taking a panicle from each plant.

Planting population of generation F4 conduct in experimental farm Muara, in rainy season 2012/2013. A total of 150 panicles planted in a row per panicle along 4 m with a distance between rows of 20 cm and a distance in rows of 20 cm. Each is planted in two different environments optimum of P (P+) and without P (P-). Individual selection based on criteria: plant height, number of productive tillers, panicle length, panicle weight, panicle weight per hill, grain filled and weight of 1000 grains. Research materials were selected based on panicle weight per hill for the next generation.

The F5 generation population grew in the dry season of 2013 at two locations, namely Experimental farm Muara for the optimum of P (P+) and Leuwiliang Village for P suboptimum (P-). Planting is the same as the F4 generation population. The selection conducted based on panicle weight per hill, lines selected in this experiment as a material for the next season.

![Figure 1](image.png)

Figure 1 – The scheme of activity for the formation of F6 rice line from the crossing uses the pedigree selection method (A: IR6008023; B: Bernas Prima; C: Gampai; D: Progol)

The individual selection based on the character of yield to get 40 lines from each population, and soil P condition resulting totaled 160 lines of F6. The breeding schemes of
the lines presented in Fig 1. Selected breeding lines evaluated on P+ and P- following an Augmented design with 5 blocks, 1 x 5 m plots and 5 check varieties including Ciherang, Gampai, Inpari 13, Inpari 30, and IR64 (Peterson,1994; Lestari et al 2016). Transplanting method followed for the cultivation with 20-day seedling age, 20 x 20 cm plant spacing, and intensive management of weed, pests, and diseases. The observation on maturity for plant height, number of productive tillers, panicle length, number of filled grain, 1000 grain weight, weight of panicle and yield.

Data analyzed following augmented design using SAS 9.1, Microsoft Excel 2007 and Minitab 13. The mean for the treatments was determined using the t-test at 0.05 % probability level.

RESULTS AND DISCUSSION

Performance population generation F3, F4, and F5. The average of the height plant, panicle weights, and the panicle length of the lines generation of F3, F4, and F5 of two populations which is select on the environment optimum P and without P are respectively presented in Figures 2, 3, and 4. The averages of the plant height of the generation F4 higher from F3 and F5 generation (Fig. 2). The average of panicle weight and panicle length of the lines generation of F3, F4, and F5 show that Pop 1 populations are always higher than Pop 2 both in the selection environment P- or P+ (Fig. 3 and 4). Differences between generations of selection are thought to be due to differences in the plant season and not by genetic factors.

![Figure 2](image1.png)

Figure 2 – Average plant height of two generations of F4 and F5 populations in environments without P (P-) and adequate P (P+)

![Figure 3](image2.png)

Figure 3 – Average of panicle weight of two generations of F4 and F5 populations in environments without P (P-) and adequate P (P+)
Analysis of variance for yield and yield component in the F6 generation. Analysis of variance for yield and yield component presented in Table 1. The results showed that the block had a significant effect on yield, panicle weight, number of filled grain, 1000 grain weight, panicle length, plant height and days to 50% flowering. The lines observed on each experimental block are different but the same as the varieties of comparison. Then need the adjusted with the block, because using augmented design (Table 1).

Table 1 – Analysis of variance for different traits in rice lines for the F6 generation, evaluated in different availability phosphorus

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>df</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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</thead>
<tbody>
<tr>
<td>Block</td>
<td>4</td>
<td>4.5*</td>
<td>11.2*</td>
<td>4678.6*</td>
<td>7.8*</td>
<td>27.5**</td>
<td>37.6ns</td>
<td>333.7*</td>
<td>51.5*</td>
</tr>
<tr>
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<td>14.4**</td>
<td>4.3ns</td>
<td>10771.5*</td>
<td>6.8ns</td>
<td>30.5*</td>
<td>22.2ns</td>
<td>251.1ns</td>
<td>824.4**</td>
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<tr>
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<td>1.6*</td>
<td>2.3ns</td>
<td>794.1ns</td>
<td>6.7*</td>
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<td>139.4**</td>
<td>595.4**</td>
<td>744.4**</td>
<td>22410.8**</td>
<td>103.4*</td>
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<tr>
<td>Control</td>
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<td>3.3ns</td>
<td>1517.5*</td>
<td>20.3**</td>
<td>16.8*</td>
<td>33.5ns</td>
<td>286.2*</td>
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<td>1.6ns</td>
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<td>9.0**</td>
<td>16.4**</td>
<td>15.0ns</td>
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<td>2.2ns</td>
<td>387.5ns</td>
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<td>6.2ns</td>
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<td>1.0ns</td>
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<td>5.7*</td>
<td>17.5**</td>
<td>17.6ns</td>
<td>242.1*</td>
<td>62.0**</td>
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<tr>
<td>CV (%)</td>
<td></td>
<td>16.9</td>
<td>36.3</td>
<td>21.1</td>
<td>5.4</td>
<td>6.5</td>
<td>41.3</td>
<td>9.3</td>
<td>3.8</td>
</tr>
</tbody>
</table>

* = significant, ** = significantly, ns = no significant at level 5%.
CV (%) = Coefficient Variance.
1 = Yield (t ha⁻¹), 2 = Panicle weight (g), 3 = Number of filled grain, 4 = 1000 grain weight (g), 5 = Panicle Length (cm), 6 = Number of productive tiller, 7 = Plant height (cm), 8 = days to 50% flowering.

Interaction of phosphorus with control had a significant effect for character days to 50% flowering, but no significant effect on yield and the other characters. That means there is no difference in response to phosphorus between varieties of control. The interactions of phosphorus and lines have a very significant effect on all character, excepted panicle weight and the number of productive tillers. That means there is a difference in response to phosphorus or line. The difference of response seen for all observed (Table 1).

The performance of the population F6 generation. The overall data from the yield variable showed that condition of environment adequate P (P+) more high (4.63 t ha⁻¹) than without P (P-) (3.88 t ha⁻¹), but in the production environment P+, the line selected in the P+ selection environment was lower (4.46 t ha⁻¹) from the P- selection environment (4.88 t ha⁻¹), while selection in the production environment P-, the line selected in the P+ environment...
more higher (3.96 t ha\(^{-1}\)) than the P- selection environment (3.79 t ha\(^{-1}\)) (Table 2). Thus, the line selected at P- the condition when planted under P+ conditions then the yield-increasing.

The increasing yield on the condition P+ due to the maximum yield of the select lines at P+ of 8.86 t ha\(^{-1}\) and P- 8.23 t ha\(^{-1}\) more higher than the maximum yield of select lines at P+ of 6.96 t ha\(^{-1}\) and P- of 7.19 t ha\(^{-1}\) if the line is growing in production environment without P. The range of a yield shows that selected lines still have a high diversity. The maximum yield of the selected line at P+ higher than the line selected at P- if planted in the production environment P+. Similarly, if planted in the production environment P-, the maximum yield of the selected line at P- higher than the line selected at P+, except Pop 1 for conditions P-. Overall, regardless of the origins population, in the production environment P+ highest yield of 8.86 t ha\(^{-1}\), obtained from the selected lines of P+ and in the production environment P- highest yield 7.19 t ha\(^{-1}\) was obtained from the selected lines in P-.

The average of the yield of the whole lines on two production environments and two selection environments presented in Table 2. The average of the yield Pop 1 population (IR6008023 / Bernas Prima) grown in P+ environments and selected in both P+ nor P- environments has significant in higher yields than the Pop 2 (Gampai / Progol) population. Selection in the production environment P- indicates that the average population of Pop1 is higher than that of Pop 2 population although it is not statistically different between the two populations and the two selection environments (Table 2).

The selection simulation performed with 10% intensity and high yield criteria in each line group based on the population and origin environment of selection obtained 16 lines or 4 lines from each group. The average of the yield of each selected line group presented in Figure 4. The average of the selected lines on P+ did not differ significantly with the lines selected in P- for Pop 1 populations in the production environment P+, whereas for the Pop 2 population, the average of the selected lines on P+ was significantly higher than that of the lines which selected on P-. Thus, the average of the yield of the Pop 1 population higher than the Pop 2 population. Therefore, in general regardless of population, to obtain high yield lines in the production environments P+ can do in the selection environment P+ nor P-.

Selection on the conditions environment P-, for Pop 1 populations, the average of the selected lines in P+ did not differ significantly with the lines selected at P-, while for Pop 2 population, the average of the selected lines at P+ was higher than on those selected on P-. It is generally seen that to obtain a high-yielding line in the production environment P- can be performed both in the P+ and P- environments. The composition of selected lines for the

---

**Table 2 – The average and range yield of pedigree selection of rice lines for the F6 generation in the different phosphorus condition**

<table>
<thead>
<tr>
<th>Selection Environment</th>
<th>Population</th>
<th>Production Environment</th>
<th>Yield (t ha(^{-1}))</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(P+)</td>
<td>(P-)</td>
<td></td>
</tr>
<tr>
<td>+P</td>
<td>Pop-1</td>
<td>4.63 a</td>
<td>2.21-8.86</td>
<td>4.04 a 2.22-6.96</td>
</tr>
<tr>
<td></td>
<td>Pop-2</td>
<td>4.28 b</td>
<td>2.23-7.66</td>
<td>3.87 a 2.15-6.68</td>
</tr>
<tr>
<td></td>
<td>Rerata</td>
<td>4.46 b</td>
<td>2.56-8.86</td>
<td>3.96 a 2.15-6.96</td>
</tr>
<tr>
<td></td>
<td>Pop-1</td>
<td>5.89 a</td>
<td>2.12-8.23</td>
<td>4.27 a 2.12-7.19</td>
</tr>
<tr>
<td></td>
<td>Pop-2</td>
<td>3.87 b</td>
<td>2.47-5.64</td>
<td>3.31 a 2.05-6.19</td>
</tr>
<tr>
<td></td>
<td>Rerata</td>
<td>4.88 b</td>
<td>2.12-8.23</td>
<td>3.79 b 2.05-7.19</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4.63 A</td>
<td>2.13-8.86</td>
<td>3.88 B 2.05-7.19</td>
</tr>
</tbody>
</table>

1Pop-1: IR60080-23/Bernas Prima and Pop-2: Gampai/Progol.

The values followed by the same letters in each column are not significantly different according to the t-test at the level of 5%. Lowercase letters differentiate the population in the selection environment and between the average of the selection environment and uppercase letters differentiate between evaluation environments.
environment P+ 8 lines respectively from the selection environment P+ and P-, while the environment P- respectively 7 and 9 (Table 3). This state that high yield lines from condition environment P+ or P- can be obtained from the environment selection P+ or P-.

Based on the population of origin, the number of lines selected from Pop 1 more than Pop 2. In the environment, P+ and P- respectively are obtained 13 and 11 lines Pop 1 and then 3 and 5 line Pop 2. Showed that the most of selected line give high yield comes from Pop 1 population (IR60080-23/Bernas Prima) as many as 13 lines at the condition P+ and 11 lines at condition P- (Table 3).

Table 3 – The composition of selected lines with high yield for environment P+ and P- according to the origin

<table>
<thead>
<tr>
<th>Environment</th>
<th>Number of selected lines</th>
<th>Origin</th>
<th>Environment of Selection</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>P+</td>
<td></td>
<td>P-</td>
</tr>
<tr>
<td>P+</td>
<td>16</td>
<td>8</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>P-</td>
<td>16</td>
<td>7</td>
<td>9</td>
<td>11</td>
</tr>
</tbody>
</table>

Population Pop 1 give high yield because of the parent use in this experiment is Bernas Prima as a rice hybrid. Rice of hybrid selected for high yield. One of the mechanism hybrids is collecting dominant gene which impacts positively to yield (Satoto and Suprihatno 2008). IR60080-23 has the superiority of tolerance to aluminum toxicity. Thus, that crosses combine high yield and adaptive to low P conditions. Meanwhile, Pop 2 population is the result of the crossing between local varieties of Gampai with Progol. The superiority from Gampai is tolerance to blast disease with a broad spectrum, whereas Progol is tolerance to aluminum toxicity. Therefore, this cross combine of possibility more adaptive into condition low Phosphorus, but yield potential does not too high. this situation seen from 16 lines select only 3 line in the condition P+ and 5 line in the condition P- (Table 4).

Figure 4 – Average of yield (t ha⁻¹) in the environment P+ and P- of the 10% the best of F6 generation rice lines, crossing IR6008023 / Bernas Prima (Pop 1) and Gampai / Progol (Pop 2), the results of pedigree selection in the environment P+ and P-. Values followed by the same letters are not significantly different according to a t-test at 5% level.

Simulation of selection with the intensity of 10% and high yield for the whole lines without regard selection environment and the origin of the population obtain respectively 16 lines in environment P+ and P-. Selected lines arranged from high until low yield performed on Table 4. In the P+ environment, the lines which selected showed an average yield of 7.35 t ha⁻¹ with a range of 6.53 - 8.86 t ha⁻¹, while in the environment P- 6.13 t ha⁻¹ with a range 5.14 - 7.19 t ha⁻¹. All lines selected for two different selection its higher yield and
significantly different than the best comparison varieties. Shows that the pedigree selection method can produce adaptive and high-yielding lines in the condition of the P+ and P-environments (Table 4).

Table 4 – The average of the yield 10% of the best F6 generation rice lines in the optimum P production environment and suboptimum P obtained from the pedigree method selection

<table>
<thead>
<tr>
<th>Environment production</th>
<th>Ranks</th>
<th>Lines</th>
<th>Yield (t ha⁻¹)</th>
<th>Population</th>
<th>Origin Selection environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>P+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>B14252C-MR-113P-S-5-3-2</td>
<td>8.86*</td>
<td>Pop 1</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>B14252C-MR-101P-S-2-5-5</td>
<td>8.49*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>B14252C-MR-4P-S-1-1-5</td>
<td>8.23*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>B14252C-MR-96P-S-5-4-2</td>
<td>8.07*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>B14252C-MR-220P-S-5-1-1</td>
<td>7.91*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>B14251C-MR-21P-O-3-5-4</td>
<td>7.66*</td>
<td>Pop 2</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>B14252C-MR-132P-O-5-1-3</td>
<td>7.31*</td>
<td>Pop 1</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>B14252C-MR-95P-O-2-3-2</td>
<td>7.26*</td>
<td>Pop 1</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>B14252C-MR-149P-S-2-3-1</td>
<td>7.24*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>B14252C-MR-251P-S-1-4-2</td>
<td>6.93*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>B14252C-MR-241P-S-1-2-3</td>
<td>6.76*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>B14252C-MR-3P-O-4-1-5</td>
<td>6.74*</td>
<td>Pop 1</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>B14251C-MR-259P-S-1-5-1</td>
<td>6.59*</td>
<td>Pop 2</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>B14252C-MR-68P-S-5-4-3</td>
<td>6.55*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>B14252C-MR-136P-S-8-2-3</td>
<td>6.55*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>B14251C-MR-174P-O-1-4-5</td>
<td>6.53*</td>
<td>Pop 2</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>Rata-rata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>B14252C-MR-68P-S-5-4-3</td>
<td>7.19*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>B14252C-MR-152P-S-2-2-5</td>
<td>6.96*</td>
<td>Pop 1</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>B14251C-MR-259P-S-1-5-1</td>
<td>6.68*</td>
<td>Pop 2</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>B14251C-MR-166P-S-1-3-2</td>
<td>6.56*</td>
<td>Pop 2</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>B14252C-MR-113P-S-5-3-2</td>
<td>6.41*</td>
<td>Pop 1</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>B14251C-MR-281P-S-4-5-1</td>
<td>6.19*</td>
<td>Pop 2</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>B14252C-MR-220P-S-5-5-4</td>
<td>6.15*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>B14252C-MR-271P-S-5-1-4</td>
<td>6.10*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>B14252C-MR-3P-O-4-1-5</td>
<td>6.09*</td>
<td>Pop 1</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>B14252C-MR-251P-S-1-4-2</td>
<td>6.04*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>B14252C-MR-220P-S-5-1-1</td>
<td>5.76*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>B14252C-MR-136P-S-8-2-3</td>
<td>5.74*</td>
<td>Pop 1</td>
<td>P-</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>B14252C-MR-101P-S-2-5-5</td>
<td>5.66</td>
<td>Pop 1</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>B14251C-MR-128P-S-8-1-1</td>
<td>5.66</td>
<td>Pop 2</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>B14252C-MR-95P-O-2-3-2</td>
<td>5.48</td>
<td>Pop 1</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>B14251C-MR-98P-O-4-5-2</td>
<td>5.44</td>
<td>Pop 2</td>
<td>P+</td>
<td></td>
</tr>
<tr>
<td>Rata-rata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpari 13</td>
<td></td>
<td></td>
<td>7.35 a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gampai</td>
<td></td>
<td></td>
<td>4.41</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Values followed by the same letter show not significantly different according to the t-test at the level of 5%.
(*) markedly higher than the best comparison varieties Inpari 13 and Gampai based on the LSI test at the level of 5%.

The sequence of lines in Table 4 shows that for the environment the P + and P-, it is not influenced by the selection environment, but the origin of the population is very influential, especially in the P + environment. The situation can see from the 5 top sequence lines in the P + environment derived from the Pop 1 population.

The lines evaluated and obtained through the pedigree selection method were carried out under P+ and P- conditions, followed by individual selection in the F5 generation. The individual selection has done on criteria related to yield, namely panicle size, number of tillers, and yield per hill. The lines selected in the condition P- has high yields and tolerance to low P while from P+ only high yield and it's not tolerance for P-. From 10% selected lines almost the same between condition P+ and P-. Of the 16 selected lines for P+ and P- obtained nine lines performance good in both of environments. Of the six high yield lines for condition P+ obtained three lines selected equal on the environment P-, that is B14252C-MR-113P-S-5-3-2, B14252C-MR-101P-S-2-5-5 and B14252C-MR-220P-S-5-1-1.
This situation shows the selection to get high yield lines can do in environment P+ or P-. The lines with high yields on the different condition environments are present in Table 5. Although selected for both conditions P, the lines are in a different order or rank in P+ and P-. (Table 5). However, there is one line that is in the same sequence for P+ and P-. This line is B14252C-MR-251P-S-1-4-2. They are in order number 10 and the yield a significantly higher than comparison the best varieties. The further emphasizes to get high yield lines on P+ nor P- the selection is conduct on condition environment P+ or P-.

Table 5 – Nine adaptive F6 generation rice lines at optimum P (P+) and P suboptimum (P-) conditions

<table>
<thead>
<tr>
<th>ES1</th>
<th>Population</th>
<th>Lines</th>
<th>Ranks</th>
<th>Production Environment P+ Yield (t ha⁻¹)</th>
<th>Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>P+</td>
<td>Pop 1</td>
<td>B14252C-MR-113P-S-5-3-2</td>
<td>1</td>
<td>8.86* 6.41*</td>
<td>5</td>
</tr>
<tr>
<td>P+</td>
<td>Pop 1</td>
<td>B14252C-MR-95P-O-2-3-2</td>
<td>8</td>
<td>7.26* 5.48</td>
<td>15</td>
</tr>
<tr>
<td>P+</td>
<td>Pop 1</td>
<td>B14252C-MR-101P-S-2-5-5</td>
<td>2</td>
<td>8.49* 5.66</td>
<td>13</td>
</tr>
<tr>
<td>P+</td>
<td>Pop 1</td>
<td>B14252C-MR-3P-O-4-1-5</td>
<td>12</td>
<td>6.74* 6.09*</td>
<td>9</td>
</tr>
<tr>
<td>P+</td>
<td>Pop 2</td>
<td>B14251C-MR-259P-S-1-5-1</td>
<td>13</td>
<td>6.59* 6.68*</td>
<td>3</td>
</tr>
<tr>
<td>P-</td>
<td>Pop 1</td>
<td>B14252C-MR-68P-S-5-4-3</td>
<td>14</td>
<td>6.55* 7.19*</td>
<td>1</td>
</tr>
<tr>
<td>P-</td>
<td>Pop 1</td>
<td>B14252C-MR-136P-S-8-2-3</td>
<td>15</td>
<td>6.55* 5.74*</td>
<td>12</td>
</tr>
<tr>
<td>P-</td>
<td>Pop 1</td>
<td>B14252C-MR-251P-S-1-4-2</td>
<td>10</td>
<td>6.93* 6.04*</td>
<td>10</td>
</tr>
<tr>
<td>P-</td>
<td>Pop 1</td>
<td>B14252C-MR-220P-S-5-1-1</td>
<td>5</td>
<td>7.91* 5.76*</td>
<td>11</td>
</tr>
</tbody>
</table>

1ES = Environment Selection.

**CONCLUSION**

The pedigree selection method applied to the results of early generation rice crosses up to F4 followed by line selection, can produce adaptive and high yielding lines in the P+ and P-. The combination of IR6008023 / Bernas Prima crosses produces lines with high yield potential compared to Gampai / Progol. From this study obtained 12 lines for P- and 16 lines for P+ with higher yields than the best comparison varieties. Five lines with the highest yield for P- are B14252C-MR-68P-S-5-4-3, B14252C-MR-152P-S-2-2-5, B14251C-MR-259P-S-1-5-1, B14251C-MR-166P-S-1-3-2, and B14252C-MR-113P-S-5-3-2, while for P+ are B14252C-MR-68P-S-5-4-3, B14252C-MR-152P-S-2-2-5, B14251C-MR-259P-S-1-5-1, B14251C-MR-166P-S-1-3-2 and B14252C-MR-113P-S-5-3-2.

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Thank you to the Research and Development Agency and the Indonesian Center for Rice Research, Ministry of Agriculture, which has supporting conducting research and scholarship to the writer since studies in Bogor University Indonesia, and colleague technician, the researcher staff in experimental Farm Muara, Bogor. Not forgetting the author’s thanks to the Head and staff of the Technical Implementation Unit (UPT) Leuwiliang, Bogor, so the research went smoothly.

**REFERENCES**

THE EFFECTIVENESS OF DUNALIELLA SALINA AGAINST THE DECREASE MACRONUCLEI AND MICRONUCLEI OF HYBRID GROUPER (EPINEPHELUS FUSCOGUSTATUS X EPINEPHELUS LANCEOLATUS) INFECTED BY IRIDOVIRUS

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ABSTRACT
Cultivation of hybrid groupers (Epinephelus fuscogustatus x Epinephelus lanceolatus), is one of the fish farming activities that have high economic value. Lately the existence of Iridovirus has become a big problem for cultivation. It was a deadly viral disease for grouper hatchery in Asia including Indonesia. Iridovirus may cause mass mortality, especially larvae up to fingerling size. The purpose of this study was to determine the effect of different level of Dunaliella salina against the decrease the number of micronuclei and macronuclei of hybrid grouper. As many as 180 seeds of hybrid grouper with weight 4-5 gram disperse into 15 tanks volume of 16 litres with density of 10 fish/tank. Four treatments were applied with different diets containing powder of Dunaliella salina of K- (0 gr kg⁻¹ diet fed), A (2 gr kg⁻¹ diet fed), B (4 gr kg⁻¹ diet fed) dan C (6 gr kg⁻¹ diet fed), with three repetition. Experimental diet was given twice for 10 days. After 10 days of treatment, the fish tested challenge with Iridovirus for 96 hours. The main parameters observed in this study were the number of micronuclei and macronuclei. Based on the research, most of the hematological parameters such as erythrocytes, Hb and HE significantly increased in Dunaliella salina-treated fish compared with controls (P<0.05). Micronuclei and macronuclei after challenge with Iridovirus in 6 mg/kg Dunaliella salina-treated fish was 10.57-14.58 MN/100 cells and 12.02 MAN/100 cells, which significantly decreased compared with control (P<0.05).

KEY WORDS
Hybrid grouper, Dunaliella salina, Iridovirus, megalocityvirus.

Iridovirus contain linear double stranded DNA genom as genetic material (Chinchar et. al., 2005), icosahedral symmetry with 20-sides capsid that have been infected in a fish, invertebrates and amphibians and identified from more than 20 species of fish in recent years (Hyatt et al., 2000). DNA virus classified as a family Iridoviridae that contains of 5 genera, 3 of them are found in fish (Chinchar et. al., 2005). The complete nucleotide sequence of Iridovirus contains about 90 potential genes and contain of 112,000 base pairs (bp) in length (Kurita, 1998). Iridovirus is a representative of the genus Megalovirus. However Megalovirus is a particular contains viruses associated with a range of diseases with clinical sign from skin lesion to systemic infection, darkening of body colouration and lethargy, anemia, petechiae of gills and enlargement of spleen (Inouye, et. al., 1992). The mortality rates varied from low (0,5-10%), moderate (50%) and death on 24-48 hours after the onset of sign.

One way to find out the health of fish is to observe the status of macronucleus and micronucleus. The macronucleus is a somatic nucleus (not involved in hereditary information transmission from generation to sexual generation), while the micronuclei is a small additional nucleus that is located outside the main nucleus, one form of cell nucleus due to a faulty division process and formed from an ascet or fragmentary fragment chromosome. The criteria of the observed micronuclei are less than 1/3 in diameter of the nucleus, no contact with the nucleus and the same intensity and absorption of colour.
Dunaliella salina is one of the microalgae which have the largest beta-carotene content (especially all-trans-ß-carotene and 9- or 9′-cis-ß-carotene) compared to other microalgae, more than 14% of dry weight (Bhattacharjee, 2016). Carotenoids in Dunaliella salina are a source of Vitamin A and vitamin C of 352,000 IU which can increase the immune system (Talero et al., 2015). Betacaroten have been reported to be immunostimulants in fish (Gourveia et al. 1997, Supamattaya et al. 2005, Raymundo et al. 2005).

Effects of betacaroten on aquatic animals are various: enhance the larval survival and growth (Amar et al. 2004), increase the performance of brood stock (Supamattaya et al. 2005) and larvae (Wyban et al. 1997), increase fish hematological parameters (Nakano et al., 1995) and improve the immune system from various diseases (Amar et al. 2001; Supamattaya et al. 2005).

MATERIALS AND METHODS OF RESEARCH

Dunaliella salina seedlings used as much as 10 liters with a density of 35 x 105 cells/ml which were then cultured in tank on 350 liters of concrete with an initial density of 10 x 104 cell/ml. Harvesting was carried out on day 7 with a density of 47 x 105 cells/ml. A total of 350 liters of culture can produce 53.9 grams of dry weight. Furthermore Dunaliella salina is mashed into a powder.

**Preparation of Dunaliella Salina Powder.** Dunaliella salina is filtered to obtain biomass in the form of paste then are flattened on a tray and dried for about 4 days. The dried paste is smoothened until it changes into powder. A total of 350 liters of Dunaliella salina culture produced 53.9 grams of powder.

**Feed Repelletting.** The amount of Dunaliella salina powder used is 0 gr, 2 gr, 4 gr and 6 gr added in 1 kg of of refined pellet feed. Then added enough water and adhesive material by 1% of the total feed. After all components are evenly mixed, the feed are reprinted using molds, and dried using an oven for 2 days at 40 °C until they are completely dry. Feed is given to the hybrid grouper adlibitum for 10 days.

**Iridovirus Isolation.** Spleen on hybrid grouper crushed and homogenized using PBS solution with a ratio 1: 5. Homogenization was carried out by centrifugation at 3.000 rpm for 15 minutes to separate the pellets from the supernatant. The supernatant obtained was filtered and stored in appendorf at a temperature of -80 ° C.

**Challenge the Iridovirus**

The hybrid grouper used is obtained from BBAP Situbodo with weight 4-5 gram. After the hybrid grouper was acclimatized for 7 days and given food containing Dunaliella salina for 10 days, it was soaked in water containing Iridovirus. The dose used is 1 ml of viral isolate for 10 liters of water.

**Measurement of erythrocyte, hemoglobin, hematocrite, macronuclei and micronuclei.** Total erythrocytes measurement follows the steps: blood sample is sucked with a thoma pipette until a scale of 0.5 is then sucked up with a haem solution to a scale of 101. After being homogenized for 3-5 minutes, the first drop is then removed and the next drop is inserted into the haemocytometer. The total calculation of erythrocytes was carried out in 5 sightings of the haemocytometer.

Hemoglobin levels can be measured by filling a valid tube with 0.1 N HCl up to number 10. Subsequently placed a linear tube between 2 tubes of standard colour. 0.2 ml of fish blood was put into a valid tube, then distilled water and stirred until the colour was exactly the same as the standard colour. Hemoglobin levels are read by looking at the surface of the liquid and matched with numbers on a yellow scale. Hemoglobin levels are expressed in g%.

Hematocrit levels are expressed as% of the volume of blood cell solids that can be measured by inserting a blood sample into a microhematocrit tube up to 3/4 of the tube. Then clogged the end of the tube (marked in red) with critoseal. Then centrifuged for 15 minutes at a speed of 12,000 rpm. Hematocrit levels can be calculated by the following formula:

Calculation of the number of macronuclei and micronuclei according to Kousar and Javed (2015) is done by placing one drop of blood on the object glass and making a smear.
After drying, it was rinsed with methanol, stained using 10% giemsa for 20 minutes and rinsed with distilled water and dried.

RESULTS AND DISCUSSION

The results of the effect of Dunaliella salina on hybrid grouper were shown in Fig. 1. Based on Figure 1, the mean of erythrocytes at a dose of 6 g kg\(^{-1}\) of feed is the highest erythrocytes which is 6.29±0.017 cells/mm\(^3\) and significantly affected compared to other treatments (P<0.05). The high number of erythrocytes is thought to be because carotenoids in Dunaliella salina can induce limfomyeloid tissue in the kidneys to produce the enzyme erythropoietin so that lymphomyeloid tissue can produce more red blood cells. Carotenoid compounds contained in Dunaliella salina can function as red blood cell enhancers, antioxidants, antibacterials and enhance immunity and substitute for damaged cells (Fretes, et al., 2012). Erythropoietin or EPO is a glycoprotein hormone released by peritubular capillary wall cells in the kidneys and serves to control erythrocyte production (Soldatov, 2005).

The various haematology after treatments of some herbal immunostimulants in fish was reported (Harikrishnan et al. 2003; Alishahi et al. 2010). Nakano et al. (1995) reported that carotenoids-treated increased hematological parameters of fish, dietary carotenoids also influenced blood components. Supplementation of dried algal cells caused retardation of growth in black tiger shrimp (Liao et al. 1993) and striped jack (Watanabe et al. 1990).

![Figure 1](image)

Figure 1 – The average of hybrid grouper erythrocyte, hemoglobin and hematocrite. A, B, and C fish groups fed with 2, 4 and mg kg\(^{-1}\) Dunaliella salina, respectively. K diet free from Dunaliella salina. Mean ± SD from 10 fish. Groups with different letter on SD bar were significantly different (P<0.05). Supplementation of the feed with 6 gr kg\(^{-1}\) Dunaliella Salina for 10 days significantly (P<0.05) increases the erythrocytes, Hb and HE of Hybrid grouper

The highest hybrid grouper hemoglobin level was also obtained at a dose of 6 g kg\(^{-1}\) of feed (Figure 2), which was 6.40 ±0.43 g% and significantly affected compared to other treatments (P<0.05). The amount of hemoglobin is generally directly proportional to the number of erythrocytes (Lagler, et al., 1977).
Hematocrit (HE) values and red blood cell counts are general indicators used to determine fish health and describe abnormalities caused by viruses. Hematocrit examination results can also be used as a benchmark to determine fish health. Based on the results of the study, it was found that the highest hematocrit was at a dose of 6 g/kg of feed, and significantly affected compared to other treatments (P<0.05) which was 27.33±0.57 %.

After challenging tests with iridovirus, showed hybrid grouper were not given Dunaliella salina had more micronuclei than those given Dunaliella salina. The direct impact due to viral infection is the increase in ROS (Ractive Oxygen Species). In addition to the innate immune system which is an important factor, ROS is also beneficial for hosts, which can limit viral replication. However, ROS that is too high can cause damage to the cells, causing inflammation (Hui-Wem et al., 2017).

The average of micronuclei of hybrid grouper fish after being challenged with Iridovirus ranged between 10.57-14.58 MN/100 cells. Micronuclei is a abnormality in red blood cells that are formed from chromosomal fragments (chromosomal faults) that experience lag in the anaphase phase and fail to divide in cell division (Figure 3a). The disorder is caused by damage to the spindle thread. After arriving at the stage of cell division, the chromosome fragments form a small nucleus called micronuclei. Sayed, et al. (2017) states that if the amount of free radicals is too much, it can cause core DNA damage and spindle thread disfunction.

Based on Figure 2 The dose of 6 g/kg of feed is the best treatment with the lowest number of micronuclei compared to other treatments, it was 10.57±1.09. In this research, micronuclei significantly decrease in all Dunaliella salina-treated groups (P<0.05). The higher the dose of Dunaliella given, the less the number of micronuclei found. Beta-carotene in Dunaliella salina serves as an antioxidant capable of suppressing free radicals at the onset of macrophage stimulation and avoiding too much ROS.

Figure 2 – The average of hybrid grouper macronuclei and micronuclei

![Micronuclei](image1.png)

![Macronuclei](image2.png)

Figure 3 – Morphology of hybrid grouper macronuclei and micronuclei: (a) micronuclei, (b) macronuclei
Similar to micronuclei, the highest number of macronuclei in hybrid groupers infected by Iridovirus can be found in fish without *Dunaliella salina*. The least amount of macronuclei was found in hybrid groupers which was given *Dunaliella salina* at a dose of 6 g kg\(^{-1}\) of feed, which was 12,02±0,83 cells, and significantly decrease compared to other treatments (P<0.05).

The effectiveness of carotenoid source in fish, in terms function of physiological and deposition is species-specific. The same pathways for the metabolism of carotenoids of fish species not possess; therefore, In fish tissues there is no universal transformation of carotenoids (Kop and Durmaz 2008).

### CONCLUSION

*Dunaliella salina* has an effect on the number erythrocytes, Hb, HE, macronuclei and micronuclei of hybrid groupers infected by Iridovirus. The use of *Dunaliella salina* powder as much as 6 g kg\(^{-1}\) of feed is the effective dose which can reduce the number of macronuclei and micronuclei. However, the optimal dose and mechanism of *Dunaliella salina* is still not completely clear, we suggest to do further studies on dose addition and mechanism of *Dunaliella salina* in as a function of immunostimulant for viruses.

### REFERENCES


RICE SUPPLY CHAIN IN THE ZERO AREA OF RICE PLANTS

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ABSTRACT
This study aims to analyze the rice supply chain in the area of zero rice plants on Banggai Laut, Central Sulawesi, Indonesia. The study uses survey methods based on rice supply chains. The results of the study found that the rice supply chain to Banggai Laut through four stages using land and sea routes between regencies and provinces. The rice supply chain uses 3 to 7 days. The rice supply chain suppliers in four stages consist of farmers - traders - wholesalers - agents - retailers - people. Price gap from farmer to people is IDR 7,000 or almost 100% of the buying price of rice in the small islands of Banggai Laut. This condition causes low access to rice for the people.

KEY WORDS
Supply chain, rice, island region, Banggai Laut.

LITERATURE REVIEW

Food and Agriculture Organization of the United Nation (1992) defines food security as access to every household or individual to obtain food at all times for the needs of healthy living. In general, food security covers 4 aspects, namely sufficiency, access, security, and time (Baliwaty, 2004). With this aspect, food security is seen as a system, which is a series of three main components, namely food availability and stability, food accessibility and food utilization.

Supply chain management is a tool to integrate the efficiency of suppliers, companies, distributors, retailers, so that these tools can produce and deliver products with the right amount, location and time to increase satisfaction in customer service (Indrajid and Djokopranoto, 2002). Chapman et al. (2002) suggested that supply chain risk management focuses on how to understand and overcome chain effects when a large or small accident occurs at a point in the supply network.
Geary et al. (2002) suggest that uncertainty in a supply chain can stem from consumer, supplier, process and control demands. Uncertainty originating from consumer demand and related to lead time, both from suppliers and customers is the sources of dissatisfaction between elements in the supply chain. Therefore, these two sources of uncertainty need to be managed well so that the element relationships in the supply chain remain stable in order to increase or maintain the level of service to consumers.

METHODS OF RESEARCH

This research was conducted by survey method through direct observation to the rice distribution channel in the Banggai Laut region. Banggai Laut is a district in Central Sulawesi that does not have rice production. Rice supply chain analysis is based on the distribution flow based on the initial to the last stage. Analysis of the distribution of rice through land and sea transportation so that it reaches the people.

RESULTS AND DISCUSSION

The population of Banggai Laut is 68,124 people with an area of 725.67 Km² (Statistics of Banggai Laut Regency, 2017). Large population with geographical conditions in the archipelago causes food insecurity (rice). During this time, the community gets rice outside the area. Rice comes from rice producing areas in Central Sulawesi and South Sulawesi. This condition causes high community food dependence on other regions. The following is a rice supply chain in the Banggai Laut region.

![Rice Supply Chain to Banggai Laut](source: Survey data, 2018)

Rice supply chain (transportation) to Banggai Laut through four stages using land and sea routes between regencies and provinces:
- Stage 1: Rice is sourced from rice producing areas in Central Sulawesi and South Sulawesi using land transportation;
- Stage 2: Loading rice in the Luwuk Sea Port to Banggai Laut;
- Stage 3: Rice arrives in the capital city of Banggai Laut;
- Stage 4: Distribution of rice to small islands.

The four stages of the rice supply chain use 3 to 7 days. Suppliers of rice supply chains in four stages consist of farmers - collectors - wholesalers - agents - retailers - people.

<table>
<thead>
<tr>
<th>Suppliers</th>
<th>Price / Liter (IDR)</th>
<th>Price Gap (IDR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Farmer</td>
<td>8,000</td>
<td>500</td>
</tr>
<tr>
<td>2 Wholesaler</td>
<td>8,500</td>
<td>1,000</td>
</tr>
<tr>
<td>3 Big traders</td>
<td>9,000</td>
<td>2,000</td>
</tr>
<tr>
<td>4 Agent</td>
<td>10,000</td>
<td>5,000</td>
</tr>
<tr>
<td>5 Retailers (City center)</td>
<td>13,000</td>
<td>7,000</td>
</tr>
<tr>
<td>6 Retailers (Small islands)</td>
<td>15,000</td>
<td></td>
</tr>
</tbody>
</table>

Source: Survey data, 2018.
The rice needs of the people in Banggai Laut amount to ± 7,460 tons per year. The price of rice (ordinary type) in Banggai Laut is quite expensive because of the length of the rice supply chain. Price gap from farmer to community is Rp. 7,000 or almost 100% of the selling price of rice in the small islands of Banggai Laut. This condition causes low access to rice for the people.

CONCLUSION

The rice supply chain to Banggai Laut through four stages using land and sea routes between regencies and provinces. The rice supply chain uses 3 to 7 days. The perpetrators of the rice supply chain in four stages consist of farmers - collectors - wholesalers - agents - retailers - people. Price gap from farmer to community is IDR 7,000 or almost 100% of the selling price of rice in the small islands of Banggai Laut. This condition causes low access to rice for people.

REFERENCES

THE IMPLEMENTATION OF GMP AND SSOP TOWARDS GIANT SEA CATFISH (ARIUS THALASSINUS) SMOKING PROCESS IN NORTH SEMARANG, SEMARANG CITY, INDONESIA

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ABSTRACT
Giant sea catfish (Arius thalassinus) is a type of fish that has an added value once it is processed into smoked giant sea catfish. One of well-known delicacies from Semarang is “mangut ikan mayung” or smoked giant sea catfish with coconut milk, turmeric and chili. This study was conducted in Tambaklorok, Tanjungmas sub-region and Bandarharjo, North Semarang region, Semarang. Objectives of this study are to describe giant sea catfish (Arius thalassinus) smoking process in UPI and analyze how suitable GMP and SSOP are for giant sea catfish smoking process. The data collection method was survey while the data analysis method was qualitative descriptive. The sampling method was purposive sampling, conducted in 6 (six) UPIs. The finding stated that the producers did not apply either GMP or SSOP in the giant sea catfish (Arius thalassinus) smoking process. They used conventional methods to produce smoked giant sea catfish (Arius thalassinus).

KEY WORDS
Giant sea catfish, UPI, traditional, GMP, SSOP.

Giant sea catfish (Arius thalassinus) is a type of fish that has an important economic value and a chemical composition that varies greatly depending on its sex, age, sexual maturity and habitat as well as the fishing season. This fish provides a lot of benefits for human because it has high protein content and oil but low cholesterol. As an addition, giant sea catfish prevents several diseases such as heart problem, stroke and high cholesterol (Burhanuddin, et.al, 1987).

Giant sea catfish can potentially be used as an alternative type of protein and source of nutrients. Cooking methods determine nutrient content of giant sea catfish. The Ministry of Maritime Affairs and Fisheries (2014) reported that per capita fish consumption in the last five years keeps increasing. Between 2009 and 2013, fish consumption increased 20.83% from 29.08 kgs/capita into 35.14 kgs/capita (Nur Rohmah, et.al, 2015).

Fresh giant sea catfish smells pungent. However, smoked giant sea catfish is not only shiny and yellowish color, but it also has unique flavor and aroma (Ghazali, et. al, 2014). As the result, smoked giant sea catfish is one of the most favorite types of fish for Indonesian and people from foreign countries (Swastawati, 2011).

In Semarang, smoked fish business has a bright future. Tri Setyo, et.al (2013) stated that both smoked fish and its raw material are affordable. Besides that, raw materials for smoked fish business are easy to get because some parts of Semarang are located on the coast and as the result, most of the locals work as fishermen. Smoked giant sea catfish has added value, for example using smoked giant sea catfish as one of the ingredients to cook “ikan mangut” or smoked giant sea catfish with coconut milk, turmeric and chili and “kepala manyung pedas” or spicy giant sea fish head. These two are famous delicacies from Semarang.

Characteristics of fish smoking business in Semarang are it is using conventional methods, a small-scale business with low capital and does not pay close attention to sanitation or hygiene. Most people working in the fish smoking business has low background of education and as the consequence, they prefer using conventional method in their business (Yusroni, 2009).
Based on the elaboration, the researchers are interested in analyzing implementation of GMP and SSOP towards quality control in giant sea catfish smoking process. The objective of this study is to analyze how much influence GMP and SSOP have towards giant sea catfish smoking business in Tambaklorok, Tanjungmas sub-region and Bandarharjo, North Semarang region, Semarang

METHODS OF RESEARCH

Data collection method was survey while data analysis method was descriptive qualitative. The sampling method was purposive sampling in 6 (six) UPI asap in Tambaklorok, Tanjungmas sub-region and Bandarharjo sub-region, North Semarang, Semarang. The samples were smoked giant sea catfish (Arius thalassinus).

RESULTS AND DISCUSSION

Quality Control, GMP and SSOP Implementation and Evaluation. Quality control consists of two parts, GMP and SSOP. GMP and SSOP are applicable for both modern and traditional fishing industry. The key to a qualified and safe product is an effective management system (Masrifah, et.al, 2015). GMP and SSOP evaluation is carried out through direct observation to the fish smoking business and interview using a modified GMP dan SSOP checklist for micro and small-scale UPIs. Article 5 of Peraturan Nomor 24/PERDJPDSPKP/2017 is used as the reference for categorizing SKP. The checklist classified any misconduct taking place during fish smoking process into critical, serious, major and minor misconduct. The researchers calculated total amount of misconduct in the UPIs and compared it to the standardized fish smoking process.

Both the observation, GMP and SOP checklists revealed that there are some misconduct taking place in the smoked giant sea catfish industry in North Semarang.

Based on smoked fish SNI 2725:2013, fish smoking process consists of raw materials, cleaning, scaling and deboning, fish brine, smoking, cooling, packaging and storing. GMP dan SSOP checklist showed that UPI A located in Tambaklorok, Tanjungmas sub-region has poor quality control. The researchers identified 1 (one) critical misconduct in which the toilet is connected directly to the fish smoking area. UPI B located in Tambaklorok as well as UPI C, D, E and F in Bandarharjo has fair quality control. The researchers did not find any critical misconduct but found 4 or fewer serious types of misconduct there. In general, all UPIs in North Semarang region are unable to meet the standardized quality control. The 1996 Food Law number 7 stated that it is mandatory for food producers to run quality control for food and food processing. Chapter II discusses significant influence of quality control towards both consumers and food producers, more particularly to protect their market, maintain customer loyalty and meet their targeted sales or profit.

Implementation of GMP for Quality Control. Table 1 discusses giant sea catfish smoking process in the 6 (six) UPIs.

Table 1 showed that one of the steps of the fish smoking process is fish brine in which the giant sea catfish is soaked into alum water for 5 to 10 minutes. The smoked fish producers believed that alum preserved texture of the fish and removed fish mucus effectively. Nurrahman and Isworo (2002)’s study showed that soaking mackerel tuna in alum water (Al₂SO₄ 14H₂O) helped the fish texture becoming firm and removing its mucus. To remove excess water, fish is placed in plastic container for 10 minutes.

Water in Tambaklorok UPI comes from artesis while that in Bandarharjo UPI is from wells nearby. The water in Bandarharjo UPI turned into brackish water in the dry season but it remains clean and fresh in the rainy season. The smoked fish producers assumed that sea water has seeped into the soil. According to the Ministry of Public Health (2010) drinking water is safe when it meets the physical, microbiological, chemical and radioactive requirements as the mandatory and supplementary parameters.
Table 1 – Giant Sea Catfish Smoking Process in North Semarang UPIs

<table>
<thead>
<tr>
<th>No.</th>
<th>Stage</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Raw Material</td>
<td>Purchasing giant sea catfish from fishermen or traditional market, storing the fish in ice-filled containers and transporting the fish to the UPIs using pedicab, motorcycle/cars. These occur in a relatively short time.</td>
</tr>
<tr>
<td>2.</td>
<td>Cleaning 1</td>
<td>Fish is put in buckets and water is poured on to the bucket to clean it. The water is taken from a well nearby.</td>
</tr>
<tr>
<td>3.</td>
<td>Scaling</td>
<td>Fish gills and intestine are removed. The fish is cut into several large-sized pieces of fish.</td>
</tr>
<tr>
<td>4.</td>
<td>Fish Brine</td>
<td>The fish is soaked into alum water for 5 to 10 minutes to get rid of its pungent smell and mucus.</td>
</tr>
<tr>
<td>5.</td>
<td>Drying 1</td>
<td>The fish is placed into plastic container for drying.</td>
</tr>
<tr>
<td>6.</td>
<td>Deboning</td>
<td>Removing the fish bones and cut it into a fillet.</td>
</tr>
<tr>
<td>7.</td>
<td>Cleaning 2</td>
<td>The fish fillet is placed into buckets and clean water is poured into the buckets to remove the alum.</td>
</tr>
<tr>
<td>8.</td>
<td>Drying 2</td>
<td>The fish is placed into plastic container for drying.</td>
</tr>
<tr>
<td>9.</td>
<td>Skewering</td>
<td>Push skewer on the middle of the fish to prevent it from being damaged during smoking process</td>
</tr>
<tr>
<td>10.</td>
<td>Preparation</td>
<td>Place the fish on flat metal frame.</td>
</tr>
<tr>
<td>11.</td>
<td>Smoking</td>
<td>Smoking process lasts for 15 minutes. Workers should maintain the fire and flip the fish several times so that the fish is cooked evenly.</td>
</tr>
<tr>
<td>12.</td>
<td>Cooling</td>
<td>Smoked fish is placed on flat bamboo frame or plastic container for cooling.</td>
</tr>
<tr>
<td>13.</td>
<td>Packaging</td>
<td>The smoked fish is packed using plastic or bamboo container.</td>
</tr>
</tbody>
</table>

Source: Data Collection, 2018.

Based on the observation, tools the UPIs used during the smoking process did not meet GMP requirement. Yusra (2016)’s study reported unsuccessful implementation of GMP in “UPI ikan” located in Tiga Nagari, Tanjung Raya region, Agam Municipality can be traced back to lacking knowledge on fish as raw materials, smoking process, hygiene and sanitation.

Until recently, the smoked fish producers are still applying traditional smoking process. The process lasts for approximately 15 minutes and during the process the fish is flipped occasionally so that it cooks evenly. It is difficult to control the temperature because the UPIs do not have any smoking chamber. Therefore, a lot of smoke goes to waste. Table 2 summarizes implementation of GMP for the fish smoking process in North Semarang UPIs.

**Implementation SSOP.** Having analyzed implementation of SSOP for the giant sea catfish smoking industry in Tambaklorok, Tanjungmas sub-region and Bandarharjo sub-region, North Semarang, it can be concluded that the fish smoking industry has a poor sanitation and hygiene standard. The industry applied a traditional smoking process that has been passed between generations. In other words, implementation of SSOP in the six UPIs in Tambaklorok and Bandarharjo did not run smoothly. Wulandari (2014) stated that there is a relationship between cleanliness of production utilities and production place, hand-washing habit and shelf life of smoked fish with number of bacteria found on the smoked fish. Susianawati, et.al (2007) investigating implementation of GMP and SSOP to maintain quality of product in salted fish industry in Kendal reported that low background of education and low socio-economic status are closely related to poor implementation of GMP and SSOP in the industry. Table 3 summarized implementation of SSOP in six giant sea catfish smoking industries in North Semarang.

Based on the field observation, laboratory analysis that investigates quality of water in Tambaklorok and Bandarharjo UPIs has not been conducted yet. Wulandari, et.al (2010) stated laboratory analysis is pivotal to decrease number of microbes and identify mineral content on certain body of water.

Most of the utensils in the fish smoking industry are hard to clean. The Ministry of Maritime Affair and Fisheries Decree (2013) stated that all equipments and utensils used during production and those with direct contact to fish should be rust-free, easy to clean, water resistant, non-toxic or should not cause any contamination towards both fish and processed food.
Table 2 – Analysis on Implementation of GMP in 6 (Six) UPIs in North Semarang

<table>
<thead>
<tr>
<th>STAGE</th>
<th>GOAL</th>
<th>PROCEDURE (Kepmen No. 52 A/Kepmen-KP/2013)</th>
<th>CORRECTIVE STEPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Raw Material</td>
<td>To get fresh fish that meets the standardized weight</td>
<td>Fish is transported from the market quickly; Fish is sorted based on its size; Fish is tested for organoleptic; TPC and E. Coli.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Scaling</td>
<td>To remove fish intestines and gills</td>
<td>Removing fish intestine and gills; Fish is cleaned on a clean table, sink or kitchen counter; Scaling should be done carefully to prevent any damage towards the fish.</td>
<td>Removing fish intestine and gills; Fish is cleaned on the floor; Scaling is done carefully.</td>
</tr>
<tr>
<td>Fish Brine</td>
<td>To clean the fish and infuse some flavor to the fish</td>
<td>Fish is soaked in salt water or some spices; Fish brine takes place in a short time and is done in careful manner.</td>
<td>Fish is soaked in alum water for 5 to 10 minutes in order to remove its pungent odor and mucus</td>
</tr>
<tr>
<td>Cleaning</td>
<td>To get clean fish (raw material)</td>
<td>Each fish is cleaned under running water or cold water; The fish is stored in ice-filled container.</td>
<td>The producers did not use running water to clean the fish; The fish is stored in ice-filled container</td>
</tr>
<tr>
<td>Drying</td>
<td>To dry fish from excess water and get product that meets particular specification</td>
<td>Fish is placed on a clean bamboo frame for drying</td>
<td>The fish is dried in a basket; Push skewer on the middle of the fish to prevent it from being damaged during smoking process.</td>
</tr>
<tr>
<td>Smoking</td>
<td>To get rid of harmful bacteria or parasites and get product that meets particular specification</td>
<td>Fish is smoked until it is cooked evenly. Smoking process should pay attention to hygiene and sanitation standards</td>
<td>Smoking process lasts for 15 minutes. The produces flipped the fish several times so that it is cooked evenly.</td>
</tr>
<tr>
<td>Cooling</td>
<td>To decrease fish temperature between 26°C and 30°C</td>
<td>Fish is stored in a closed container at room temperature.</td>
<td>Fish is placed on a clean bamboo frame or plastic container for cooling.</td>
</tr>
<tr>
<td>Packaging</td>
<td>To protect a product during distribution or storing process</td>
<td>Product is stored in a basket to prevent any contamination; Product should be wrapped neatly in a clean packaging</td>
<td>Smoked fish is stored in bamboo/plastic container and the container is covered with a piece of cloth.</td>
</tr>
</tbody>
</table>

Source: Data Collection, 2018.

Table 3 – Analysis on Implementation of SSOP in 6 (Six) UPIs in North Semarang

<table>
<thead>
<tr>
<th>STAGE</th>
<th>GOAL</th>
<th>PROCEDURE</th>
<th>CORRECTIVE STEPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. Quality of water and ice</td>
<td>To use clean and boiled water to make ice cubes; To use clean water, which is water that has met drinking water standards, for fish smoking</td>
<td>Use clean and boiled water for fish smoking industry. Clean water refers to water that has met drinking water standards Water is divided into two types; the first is water used to clean fish and other ingredients and the second is water used to clean kitchen utensils Water does not contain any harmful chemicals or harmful living organism.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Artesian water is used to make ice cube; Ice cube is stored in refrigerator; Water hose is used to get water from the water source The smoked fish producers did not run any analysis on quality of water they used; The producers did not distinguish water they used to clean the fish and other ingredients from that they used to clean the kitchen utensils.
2. Cleanliness of surface that contacts food items

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Production site, including surrounding environment, meets the sanitation and hygiene standard.</td>
</tr>
<tr>
<td>2.</td>
<td>To make sure that all surface that contacts food item is clean and hygienic.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production site is clean and hygienic.</td>
</tr>
<tr>
<td>Production site is free from any pollutant.</td>
</tr>
<tr>
<td>Production site floor is tilted to avoid any puddle.</td>
</tr>
<tr>
<td>Surface of the floor is smooth and easy to clean.</td>
</tr>
<tr>
<td>Production site ceiling is in good condition and easy to clean.</td>
</tr>
<tr>
<td>Surface of production site wall is waterproof and smooth.</td>
</tr>
<tr>
<td>Production site window is in good condition. It shuts properly and prevents water from coming into production site.</td>
</tr>
<tr>
<td>Production site door is in a good condition. It shuts properly.</td>
</tr>
<tr>
<td>Production site electricity (including lamps) works properly.</td>
</tr>
<tr>
<td>Air circulation works properly.</td>
</tr>
<tr>
<td>Sanitation and hygiene prior to and after production has always become a priority.</td>
</tr>
<tr>
<td>Production utilities are clean and hygienic, rust-free, oil-free, and germ-free.</td>
</tr>
<tr>
<td>Food grade detergent is used to clean production utilities prior to and after production.</td>
</tr>
</tbody>
</table>

| There is paved street around the UPIs. |
| The UPIs are closed to the rivers. |
| The UPIs are located in residential area. |
| The producers did not use window mesh to cover the UPI windows or air vent. |
| The UPI buildings are made of food, including their walls and floors. |
| The concrete floor is uneven and thus, is difficult to clean. Burn residue stuck to the floor. |
| Production utilities are not stored in a special container. |
| The UPI doors are made of wood and the producers did not use door mesh to cover the doors. |
| Smoking equipment is made of iron and thus is difficult to clean. |
| Instead of food grade detergent, the producers clean their production utilities using water from nearby wells. |

3. Cross-contaminate-ion prevention

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To prevent cross-contamination from production site and production site workers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>To apply personal hygiene (smoking-free environment, maintaining acceptable noise level, washing hands after using the toilet, not wearing any jewelry, washing hands after touching any object that may potentially be non-hygienic).</td>
</tr>
<tr>
<td>Wearing uniform (head cover, face mask, closed-toe shoes) during production.</td>
</tr>
<tr>
<td>Separating raw materials from processed goods during food preparation, production and storing.</td>
</tr>
<tr>
<td>Creating enough space between raw material storage and processed goods storage.</td>
</tr>
<tr>
<td>Sufficient waste management.</td>
</tr>
<tr>
<td>Clear job assignment among workers.</td>
</tr>
</tbody>
</table>

| The producers are using food waste for fish feed. |
| The workers cleaned all utensils right after production. |
| The workers wore their own clothes during production. |
| The workers washed their hands prior to production. |
| The raw material and processed goods (smoked fish) were stored separately (the producers never stored the raw material for more than one day). |
| The preparation and production were conducted in the same room. |
| The UPIs did not have separate room for each stage of production. |

4. Cleanliness of sink, sanitation system and the toilet

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To make sure worker’s hygiene level.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sink has running water, is not clogged and has a closed-lid waste bin.</td>
</tr>
<tr>
<td>Sufficient changing rooms for production workers.</td>
</tr>
<tr>
<td>Production site has a facility that separates workers’ clothes from their working uniform.</td>
</tr>
</tbody>
</table>

| The UPIs did not have any changing room or sink for washing hands in production area. |
| All waste goes straight to the river. |
| The toilet is very close to production area. The UPIs did not provide any closed-lid waste bin or hand soap. |
6. Protection against contaminants

- All food items (both raw materials and processed food) and surface that contacts food items are free from germ, chemicals and physical contaminant.
- Make sure that air ventilation works well to prevent condensation during production.
- Workers should control and get rid of food items that may cause contamination.
- Store food items and sanitary items in separate rooms.
- Empty close-lid trash bin regularly. The trash bin is placed away from production area.
- Food processing and food storing (both raw materials and processed goods).

| The producers store raw materials, processed food and other ingredients in the same room.
| The UPIs have windows and air ventilation for circulation.
| Trash bins are located away from the producing area (fish smoking area). |

8. Labeling, storing and using toxic ingredients carefully

- Appropriate labeling, storing and use of toxic ingredients to avoid contamination.
- Toxic ingredients should have label and clear description about their content and application.
- Toxic ingredient is labeled and stored into a box with particular label or sticker.

| There are several unlabelled toxic ingredients around the processing area (fish smoking area). |

7. Worker's health examination

- Identify workers who show symptoms of illness, injury or other conditions that may cause contamination.
- Establish internal regulation for sick employees.

| All UPI workers are healthy. |

8. Pest control

- Pest, extermination (including rodents, birds, and insect).
- Pest extermination in UPI and surrounding areas.
- Prevent pests (rodent, bird and insect) from entering fish smoking area.
- Prepare pest extermination process.

| UPI has not administered any pest extermination method yet. |

*Source: Data Collection, 2018.*

The UPI workers did not wear certain uniform to work. The workers in Tambaklorok UPI did not wear any head cover but those in Bandarharjo UPI did. Based on the Ministry of Maritime Affair and Fisheries Decree (2013), production workers should wear clean uniform and head cover at work.

Tambaklorok UPI is located in residential area. The smoking area is far from hygienic. Tambaklorok UPI building, including the air ventilation, is made of wood and bamboo. It does not have any ceiling either. A lot of burn residue and spider web stuck to the roof and building frame making the building dark. It means that the UPI workers hardly clean the building. This may cause contamination because the fish is stored in an open basket. The concrete floor is uneven and the UPI workers patched it with soil. The Ministry of Maritime Affair and Fisheries Decree (2013) stated that UPI must not be built in a residential area, industrial area or any area that may cause contamination to processed goods is prohibited. Production site, including fish smoking area, should meet certain criteria. First, production site floor should be waterproof and tilted making it easier to clean. Secondly, production site wall surface should also be waterproof, strong yet smooth and more importantly, easy to clean. The third is production site door should be made of wood or other materials and easy to clean. In addition, production site ceiling and building firm should be cleaned regularly. Furthermore, air ventilation is important to avoid condensation and provide enough sunlight for production site. However, most of the UPIs in North Semarang have yet been able to meet SSOP requirements.

*UPI A Tambaklorok* toilets are facing the production area directly while *UPI B Tambaklorok* toilets are located outside the building, away from the production area. The
toilets in UPI C, D, E and F in Bandarharjo are located inside the building but separated from the production area. Nurcahya Dewi (2018) and Ministry of Maritime Affair and Fisheries Decree (2013) encourage production workers to pay close attention to their personal hygiene, quality assurance and food safety. Toilet should not face production area and the UPIs should provide enough toilet stalls for all of their workers.

All UPIs do not provide hygiene facilities for their employees. Based on the Ministry of Maritime Affair and Fisheries Decree (2013), production site should have automated hand washing facilities where workers wash their hand prior to and after production. Hand-washing, sanitation and toilet facilities are important since these prevent food contamination during production. Lacking hygiene facilities may cause serious bacterial contamination to processed goods (food).

Food contamination is a serious issue in food production. Biological, physical and chemical factors may cause food contamination. Nurcahya Dewi (2018) explained that cross contamination is to transfer biological or chemical contaminant from sources of contamination to food item. The researchers found chemical that may cause food contamination in Bandarharjo UPI but did not find any in Tambaklorok UPI. The researchers found alum, a chemical substance, in Bandarharjo UPI. Ministry of Maritime Affair and Fisheries Decree (2013) stated that UPI must consult the law and regulation on food and food production prior to using any additional ingredient for production. In addition, the UPI should establish a criterion to avoid biological, chemical and physical contamination based on not only the law and regulation on food and food production but also its product specification.

All of the UPIs did not label their products or ingredients they use properly either. Ministry of Maritime Affair and Fisheries Decree (2013) emphasized on importance of labeling or product description for product traceability.

Some animals, rats, cockroaches, flies, lizard and cats, disturbed the fish smoking process in Tambaklorok and Bandarharjo UPIs. These animals and lack of pest control may cause cross contamination. Ministry of Maritime Affair and Fisheries Decree (2013) stated that food producers should administer pest control method to avoid cross contamination.

CONCLUSION

Based on the finding, it can be concluded that the giant sea catfish (Arius thalassinus) smoking industry in Tambaklorok, Tanjungmas sub-region and Bandarharjo sub-region, North Semarang is running based on traditional method. The smoked fish producers did not use either GMP or SSOP for quality control.

REFERENCES

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THE IMPLEMENTATION OF REGIONAL POLICY IN SUPPORTING THE SUSTAINABLE REGIONAL FISHERY AFFAIRS OF EAST NUSA TENGGARA PROVINCE, INDONESIA

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ABSTRACT
This study aims to produce the ideas about "synchronizing the law of policy" of regional fisheries on an ongoing basis in order to achieve legal certainty from various policy instruments (beleid regels) which can be used as oppressive regulations. This supports the regional institutional policies, maritime agreement to protect and manage the business of capture fisheries, aquaculture, and regional conservation fisheries. This research is a normative legal research which shows an empirical legal aspect and was conducted in 10 regencies. Moreover, the fields of study include; (1) Regional Fisheries Policy; (2) Regional Fisheries Law; related to regional fisheries law and policy. The data were obtained through interviews and documentation. The information and data on legal materials were collected from each SKPD that becomes the research object. The results of the study point out that the Law and Policy of National Fisheries are not in line with the Law of the Regional government which also shows a constitutional conflict with Article 33 paragraph (3) of the 1945 Constitution. The Law and Policy of Regional Fisheries are still narrow and only focus on managing the capture fisheries but not on fishery cultivation.

KEY WORDS
Implementation, law, policy, regional, fisheries.

The policy and law in the field of fisheries is an instrument to protect the regional marine environment that can be used to protect the sustainability of marine and fisheries conservation. The law as a set of norms in its regulation is sometimes less accurate in placing the principle of sustainable fisheries so as to disrupt its legal concept related to the authority to manage capture fisheries, aquaculture, and conservation fisheries. This can be seen from the research of Pello (2012) that the regional policies in marine and fisheries management in East Flores region tend to threaten the preservation of regional fisheries. Pello J (2015) also found that there are central and regional institutions concerned with the management of Sawu marine waters conservation related to captured fisheries; whereas, other institutions require conservation fisheries and some even combine them. These conditions are influenced by various legal instruments that give authority to various national and regional institutions.

At the level of systematic legal regulation, the legal instruments for management policies and legal protection policies require an improvement in order to support a sustainable fisheries system. The inequality in the management of conservation fisheries is obvious if it is connected with capture fisheries and its problems. This happens because the policy and law have fewer roles or is not synchronous with the regulatory material causing a contradiction in the regulation between sub-systems and other sub-systems which have an impact in the implementation and enforcement of the law itself. Likewise, the contradiction in the regulation of legal concepts in legal norms between the elements in one sub-system will lead to the rigidity in the implementation of legal norms.

LITERATURE REVIEW

The Concept of Public Policy. Pressman and Widavsky (in Widodo, 2008: 17) defined public policy as a hypothesis that contains initial conditions and predictable consequences. Public policy must be distinguished from other forms of policy such as private policy. This is influenced by the involvement of non-government factors.
Furthermore, Robert Eyestone (in Agustino, 2008: 6) believed that public policy is "the relationship between government units and their environment". Many people assume that the definition is still too broad to be understood because public policy can cover many things.

Thomas R Dye (in Rangkuti, 2005: 8), on the other hand, described public policy as "whatever government choose to do or not to do". This definition emphasizes that public policy is about the realization of "action" and is not a statement of the desire of the government or public officials alone. Besides that, the government's choice to not do something is also a public policy because it has the same influence (impact) with the government's choice to do something.

Based on the opinions of various experts above, it can be concluded that public policy is a series of actions taken (or not taken) by the government to solve the problems of the public or for the interest of the public. The policy to do something is usually contained in the provisions and/or legislation made by the government so that it has a binding and enforcing properties.

The Stages of Public Policy. The stages of public policy according to William Dunn (in Widodo 2008) are as follows; (1) Agenda preparation; (2) Policy formulation; (3) Policy adoption; (4) Policy implementation; and (5) Policy evaluation.

The Framework of Public Policy. Keban (2004: 31) said that the framework of public policy will be determined by several variables such as (1) the objectives to be achieved; (2) the kind of value preferences which need to be considered; (3) the resources that support the policies; (4) the ability of the actors involved in policy-making; (5) the environments that cover social, economic, political aspects, and so on; and (6) the strategies used to achieve the goals.

The Type of Public Policy. Many experts propose that this type of public policy is based on their respective perspectives. James Anderson (in Luan, 2007) distinguished public policy into four categories: (1) substantive policy versus procedural policy. The substantive policy is the policies that concern with what the government will do while the procedural policy is how the substantive policy be implemented. (2) Distributive policy versus regulatory policy versus redistributive policy. Distributive policy involves the distribution of services or benefits to the society or individuals. Regulatory policy is a policy in the form of restrictions or prohibitions on the behavior of individuals or community groups. Meanwhile, the redistributive policy is the policies that regulate wealth, income, and ownership or rights among various groups in society. (3) Maternal policy versus symbolic policy. The maternal policy is a policy that provides complete resource benefits to the target group while the symbolic policy is a policy that provides symbolic benefits to the target group. (4) Policies which are related to public goods and private goods. Public goods policy is a policy that regulates the delivery of goods or public services. On the other hand, private goods policy is a policy that regulates the supply of goods or services for the free market.

Sustainable Fisheries Management Policy. Sustainable fisheries management is a fisheries management policy which aims to protect fisheries resources in national and regional marine waters in particular. Sustainable fisheries related to the conservation concept of fish resources according to the Government Regulation number 60 of 2007 Article 4, includes (1) Ecosystems conservation; (2) Fish species conservation; and (3) Fish genetic conservation. In addition to that, ecosystem conservation is done through several activities such as (1) fish populations and habitat protection; (2) fish population and habitat rehabilitation; (3) research and development; (4) the utilization of fish resources and environmental services; (5) social economic development; (6) supervision and control; as well as (7) monitoring and evaluation. All these elements are very much needed data and information.

The concept of sustainable fisheries management policy is related to the concept of public policy which involves the “doing or not doing” from the government or other organizations. It is known that public policy is related to the initial conditions and consequences that can be predicted. Besides that, the policy-making is always based on the wishes of many people or organizations related to the efforts to achieve sustainable fisheries management.

The Establishment of Regional Law concerning the Cooperation in Fisheries. Indonesia is a state of law that divides its territory into provinces and regencies/cities. These regions
consist of land and sea areas. In regard to the marine areas, Article 18 (4) of Law number 32 of 2004 stipulates that regions/cities have 4 nautical miles of sea territory. In the context of the authority to manage resources in the sea area, the regions are given the right to participate in carrying out the implementation, exploration, and exploitation of Marine Resources in its territory. The authority, in its application, is not accompanied by the regulations on procedures, mechanisms, and determination of the Regency/city sea area management limits. According to Nuswardani, the management of regional sea areas related to regional legal aspects needs to be linked to the perceptions of the Government, stakeholders, and the public about the determination of maritime boundaries and its management. The program of the District Government in the sea area and the formulation of Regional Regulations is the basis for the establishment of inter-regional cooperation bordering the sea area which acts as a solution to eliminate disputes over the management of marine areas.

Aquatic Conservation Policies and Strategies. According to Dahuri et al., the management of aquatic conservation areas is inseparable from the management of fish resources as a whole. The conservation of fish resources is an effort to protect and conserve fish resources to ensure the existence, availability, and sustainability of fish species for present and future generations. As aquatic, coastal, and small islands conservation efforts, the government has some policies which one of them is the establishment of national target delivered by President Susilo Bambang Yudhoyono in the Convention on Biological Diversity (CBD) Brazil, 2006. In there, the President proclaimed the program of 10 million hectares Marine Conservation Areas in 2010 and 20 million hectares in 2020. The President Declaration Regarding the Coral Triangle Initiative (CTI) at APEC Leaders Meeting in Sydney, 2007 was followed up by the Senior Official Meeting in 6 to 7 December 2007.

The national policy support in the development of aquatic conservation areas is created in a comprehensive and integrated manner which considers a decentralization in its implementation. Policies and regulations that govern the management of coastal areas are getting stronger with the promulgation of Law number 27 of 2007 concerning the Management of Coastal Areas and Small Islands. In regard to fish resources, this Law synergizes with various other Laws, including the Law number 5 of 1990 in concern with the conservation of biological resources and their ecosystems and the Law number 31 of 2004 in concern with fisheries. In connection with decentralization, the Law number 32 of 2004 concerning Regional government is the glue of the relationship between several Laws which are used as the content material in the preparation and implementation of regional policies.

METHODS OF RESEARCH

This research is a normative legal research which also shows an empirical legal aspect. The study was conducted in 10 regencies. Furthermore, the fields of the study include; (1) Regional Fisheries Policy; (2) Regional Fisheries Law; related to regional fisheries law and policy. The data collection techniques were carried out through interviews and documentation. The information and data on legal materials were collected from each SKPD that becomes the object of the research and were analyzed by using descriptive analysis method. The research took place in East Nusa Tenggara Province and Kota Kupang (Kupang City) because this research is related to regional laws and policies in the area of regional fisheries and marine management. In addition to that, the analysis of legal materials and regional policies is qualitative. The data analysis in this research is a descriptive data analysis.

RESULTS AND DISCUSSION

East Nusa Tenggara Regional Regulation number 3 of 2011 concerning the Control of Fisheries Business. The basic consideration for the formation of Regional Regulation number 3 of 2011 in concern with the Control of Fisheries Business emphasizes the utilization of fisheries resources that are fair for the welfare of local people as well as in the framework of preserving fisheries resources. From the aspects of regional law formation, the overall rules regarding the control of fisheries business include: (1) the granting of capture fisheries and
conservation fisheries business licenses; (2) the empowerment of capture fisheries fleets; (3) the coordination of handling criminal acts in the field of fisheries; (4) the information systems and statistical data on fisheries; and (5) guidance and supervision.

Paying attention to the scope of legal material, it is shown that this regulation emphasizes the aspects of capture fisheries followed by aquaculture. The rules concerning capture fisheries include fishing licenses, boat facilities licenses, and fishing gear licenses that must be owned by large fishermen. In details, the legal provisions related to these aspects are as follows:

- Capture fisheries business licenses (Article 5, 7, 8, 9 (SIUP-T, SIPI, SIKPI - T), Permission Management Mechanism (Article 10, 11, 12, 13, 14), the provisions on fisheries law related to the obligations are: obliged to implement the provisions of SIUP-T (Article 15, 16, and the validity period of Article 17, 18, 19);
- The cultivation fisheries business license (Article 6 (SIUP-B, SIKPI-B);
- The extension period of SIUP, SIPI, and SIKPI (Paragraph 4 Article 21-Article 26).

Referring to the 2 main things regulated in this regulation, it can be seen that the regional government of East Nusa Tenggara wants to control the capture fisheries activities related to the regulation of articles about fishing gear and its supporting facilities of 10 GT. In addition, it also regulates the authority of the provincial government to grant fishery licenses related to the use of fishery facilities from 30 GT to 60 GT (Article 62). Indirectly, this regional law also supports the regional government in an effort to increase the fleet of fishing boats and fishing gears. These conditions indirectly threaten the lives of fisheries and various conservation efforts.

Similar conditions also occur in the provision of aquaculture business. This is expected to bridge the disruption to the utilization of fisheries resources in the marine area yet the will of this legal provision emphasizes the cultivation aspect in terms of fisheries resources exploitation policies like seaweed while the cultivation of fast flowing fish species experiences a failure.

Broadly speaking, this regional regulation does not have a direct support to the aquatic conservation. This may arise if the provincial government correctly and firmly implements the provisions of fisheries business licenses and cultivation business licenses as well as those that are primarily concerned with the operation of capture fisheries and aquaculture. It is also expected to successfully reduce illegal fishing and conflicts between fishermen in East Nusa Tenggara.

**East Nusa Tenggara Regional Regulation number 8 of 2009 concerning the Retribution of Fisheries Business Licenses.** The validity of East Nusa Tenggara Regional Regulation number 8 of 2009 concerning the Retribution of Fisheries Business Licenses at the provincial level essentially regulates the object of levies related to the service of licensing levies in the field of fisheries and other related activities (SIUP, SIPI, SIKPI single operations, SIKPI fleet unit operations, and SIPR). All types of those levies are linked with the subject of fisheries business levies namely individuals and business entities that obtain such licensing services in the field of fisheries business. In other words, the two regional regulations above are interrelated legal provisions which regulate fisheries management with closed-access thinking. This strongly demonstrates fisheries exploitation for those who have business requirements in the field of fisheries. If all holders of the fisheries business licenses are legal, it is possible that this legal instrument indirectly hampers the purpose of marine conservation because the regulation does not prioritize the legal aspects of conservation fisheries.

Based on the results of interviews with port informants, the Development Planning Agency at Sub-National Level of East Nusa Tenggara found that there were still a number of regional regulations related to the management of marine conservation, such as:

- Regional regulation number 10 of 2007 concerning Retribution of Regional Resources Utilization;
- Regional regulation number 11 of 2007: The Retribution of Regional Production Sales
- Regional regulation number 12 of 2001: The Retribution of Port Service;
- Regional regulation number 13 of 2001: The Retribution of Fisheries Boats Testing.

The Regional Regulation number 11 of 2007 concerning the Retribution of Regional Production Sales stipulates that the price of fish seeds is set from IDR 150/head to IDR
30,000/head. This regulation supports the aquaculture activities regarding the procurement of fish seeds in the context of aquatic conservation.

The Regional Regulation number 12 of 2001 concerning the Retribution of Port Service chapter VI article 8 paragraph (1) says that this regulation sets the levies which are classified according to the type of service provided, the size of the ship, and the period of usage while paragraph (2) serves that the rate is determined based on the prevailing market rates in East Nusa Tenggara and last but not least, paragraph (3) shows that the structure and size of the tariff is determined with some provisions such as mooring fees for 1/4 eternal x length of vessel x 375 and cost of landing for 1/4 eternal x GT x 150 as well as document service for ships to moor by IDR 35,000/ship.

In fact, this East Nusa Tenggara Regional Regulation does not directly support marine conservation because it emphasizes the aspects of East Nusa Tenggara government services rather than sustainable fisheries. This regulation indirectly supports capture fisheries business to increase fishermen's income but not closing down the possibility of threatening fisheries resources if the fishing equipment owned is not environmentally friendly such as the use of trawlers.

Besides being regulated in 2 separate regional regulations, the legal aspects of fisheries management are still related to other legal provisions that regulate certain parts of the coast which also confirm the aquatic conservation interests especially from the threat of marine pollution.

**East Nusa Tenggara Governor Regulation number 38 of 2010 concerning the Management of Coral Reefs in East Nusa Tenggara Province.** The philosophical foundation for the issuance of this regulation is the belief that coral reefs are important ecosystems that support water productivity including fisheries in the sea. However, in fact, the condition of those coral reefs is increasingly damaged due to some irresponsible activities. Therefore, the management of coral reefs in East Nusa Tenggara Province must be carried out by considering the balance between the utilization and preservation aspects in an integrated and synergistic manner in between East Nusa Tenggara Regional Government and related stakeholders.

In Article 7, it is explained that:

- The utilization of coral reef ecosystems is limited to the interests of conservation, sustainable fisheries, research and development, education and training, and environmentally friendly marine tourism.
- The utilization of coral reef ecosystems for trading can only be carried out through coral cultivation/transplant activities that receive Governor's Approval.
- The natural utilization of coral reefs is not permitted in an aquatic conservation area.

Although the efforts of coral reef management are detail enough, the status of this regulation as a Governor Regulation has a consequence that there is no regulation regarding sanctions for violations. The socialization and enforcement of this regulation have not been carried out well especially at the Regency/city level.

**Legal Aspects at the Regency Level: Kupang City Regional Regulation.** Kupang City Regional Regulation number 21 of 2007 in concern with the Management of Coastal Areas is formed due to several considerations such as that the coastal area of Kupang City has a diverse biological and non-biological natural resources as well as potentially economic environmental services which can be used to improve the welfare of the people especially coastal communities; coastal areas need to be managed in an integrated manner so as to create a balance in supporting the sustainable development with the efforts to utilize, develop, protect, and preserve coastal resources that are environmentally-friendly and responsible through community empowerment.

According to this regulation, the provisions related to fisheries management that is presented in Paragraph 3 in concern with Coastal Zoning Plans particularly in Article 13, confirms that:

- The preparation and determination of RZ are guided by the RS;
- RZ indicates that the allocation of coastal resources utilization is based on its carrying capacity;
- RZ is used to guide the utilization and prevent the conflicts of coastal resources utilization.

In the regional management stipulated in article 13, business actors must have a license with various requirements including activities that may not be carried out including the regional government as confirmed in the provisions of Article 14 as follows: Zoning Plans consist of: (1) a. Allowable activities; (2) b. Prohibited activities; and (3) c. Activities that require permission.

Likewise, the provisions related to fisheries business are also regulated in Article 15:
(1) RZ, as referred to in Article 13 paragraph (1), consists of: Conservation zone; General utilization zone; Certain zone; and Path.
(2) The zones as referred to in paragraph (1) are further elaborated in the Detailed Zone Plan.

By looking at the provisions of this regional regulation, it is still necessary to have a regional legal provision that is related to Kupang City Strategic Plan and also the Mayor's Regulation on the physical buildings program on the coast. However, these provisions have not been established yet so that the legal provisions on the coastal area still considered incomplete and threaten Sawu marine waters conservation. This is important because the coastal law and the development of Kupang City and some of the areas that surround Sawu Sea are very dynamic.

Kupang City does not have a legal provision in regards to fisheries. However, the fisheries conservation is specifically regulated in the coastal regional regulation especially in Part 3 (Conservation) of Paragraph 1 (General) in the provisions of Article 25:
(1) The conservation is carried out with the aim to:
   a. keep the sustainability of coastal ecosystems;
   b. protect the migration path of fish, marine biota, and its habitat; and
   c. protect traditional culture sites.
(2) The conservation areas characterized as a single ecosystem are aimed to protect:
   a. fish resources;
   b. migration path of whales and endangered species;
   c. the place for fish spawning;
   d. certain areas regulated by traditions/customs; and
   e. coastal ecosystems that are unique/vulnerable to change.
(3) Proposing the status of the conservation area as referred to in paragraph
(2) It can be carried out by individuals, community groups, and/or by the Regional Government based on the characteristics of the region supported by scientific data and information.

The regional regulation also regulates the zoning in the sea as shown in the formulation of the provisions of Article 26 of Conservation Area as referred to in Article 25 paragraph (2) that is divided into 3 zones, namely: a. Core zone; b. Buffer zone; and c. Limited use zone. Likewise, the regional conservation areas are regulated in Paragraph 2 concerning Marine Conservation Areas in Article 27. It is said that the Mayors must determine the coastal conservation areas, fisheries asylum, regional marine conservation areas for coral reefs, seagrass beds, beaches, estuaries, and/or mangrove forests.

Based on the explanation above, it is clear that the legal aspects produced by the Regional Government both in provincial and regency/city level do not thoroughly regulate the marine conservation but only capture fisheries. This can occur because the focus of the regional government is on the efforts to increase the revenues from regional fisheries to support regional development especially in physical and infrastructure construction within the regional fisheries business. The law and regulation of regional fisheries itself have not been regulated separately because regional politicians and local governments do not consider this matter to be very important due to the limited understanding of prioritizing regional fisheries regulation. In line with the changes in legal politics in the field of the central government to today’s regional life, the aspect of fisheries is one of the parts that the authority of its legal arrangements is partially withdrawn to be regulated at the provincial level. The legal consequence is that the regency/city regional government is no longer compiling the regional legal instruments but is left to the provincial government and legislature. The thing that
concerns the researchers is that the management and regulation of law cannot support each. As an example, the fisheries production management and marketing is maximized because the interests of the regencies and provinces are not synchronized so that it will create a conflict of interest which ignores the regional fisheries conservation but then highlights the regional capture fisheries.

In connection with the regulation of fishing license (surat izin penangkapan ikan or SIPI) and fisheries business license (surat izin usaha perikanan or SIUP), the Governor of East Nusa Tenggara Province has arranged East Nusa Tenggara Governor Regulation number 51 of 2009 concerning the delegation of authority from the governor to the Head of KPPTSP to sign certain licenses within East Nusa Tenggara provincial government on November 23, 2009.

CONCLUSION

The national fisheries law and policy arrangements are not in line with the regional law which also shows a constitutional conflict with Article 33 paragraph (3) of the 1945 Constitution. The regional fisheries law arrangements are still limited and only regulate capture fisheries management. This is also known to have a little concern on aquaculture. In East Nusa Tenggara, all regions do not have a fishery law instruments in specific considering that the regulating authority has been drawn to the province. The implementation of the new Regional Government Law number 19 of 2015 in replace to the Law number 23 of 2014 does not change the legal provisions concerning the limitation of legal regulation in the municipal area in regards to the authority to supervise the regional fisheries management so that it is likely to threaten the regional conservation fisheries.

SUGGESTIONS

The renewal of regional fisheries regulation requires changes starting from the fisheries law and adjusted to the will of Article 33 paragraph (3) and Article 18 paragraph (5) of the 1945 Constitution and other related legal instruments.

The region also needs to be granted an authority to manage and supervise the regional fisheries in an autonomous manner and manifested through regional fisheries law and regulation based on the authority delegation.

The party from the municipal also needs an authority to supervise the regional fisheries management in an effort to support the implementation of fisheries conservation law in the region and the city.

REFERENCES

ANALYSIS OF FISH SUPPLY CHAINS IN TOMINI BAY AREA, INDONESIA

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ABSTRACT
This study aims to analyze the fish supply chain system in the Tomini Bay region, Indonesia. This research utilized survey methods based on fish supply chains. The results of the study found that there were 3 parts of the fish supply chain, namely fishing boats (fishermen) - fish landing bases (traders) - fish terminals (consumers). The furthest distance in the supply chain is the Fish Landing Base (FLB) Pagimana at 528 Km with a travel time of 11 hours 25 minutes. The closest distance is the Petapa FLB at 75.8 Km with a travel time of 2 hours 1 minute. This distance and travel time are the obstacles to the fish supply chain from Tomini Bay to the fish terminal. This condition causes fish quality loss and has an impact on the low community in the Tomini Bay region.

KEY WORDS
Supply chain, fisheries, Tomini Bay, Central Sulawesi.

Tomini Bay is the biggest bay in the equatorial region with an area of 59,500 km² or ± 6 million hectares, with very large potential natural resources. Tomini Bay’s east borders the Maluku Sea, while the Northeast borders the Sulawesi Sea. In biodiversity distribution area, this area is in the zone of Wallacea, which historically is a separate region of the Asia and Australia Continents. Tomini Bay administratively covers four regencies in central Sulawesi (Muzakir and Suparman, 2016).

Tomini Bay has very large fisheries potential, especially aquaculture and marine capture fisheries. Nevertheless, its potential has not been utilized optimally for the community welfare around the Tomini Bay area. Population poverty rate is 9.20% (Banggai Regency); 18.15% (Tojo Una-Una Regency); 17.16% (Poso Regency); 17.55% (Parigi Moutong Regency). Overall the number of poor people is 14.14% in Central Sulawesi (Statistics of Central Sulawesi Province, 2018).

It is necessary to optimize the management of fisheries resource potential in Tomini Bay. Optimization of fisheries potential management could be done through the concept of supply chain systems. A supply chain system is a tool to integrate the efficiency of suppliers, companies, distributors, retailers, to ensure these tools can produce and deliver products with the right amount, location and time (Indrajid and Djokopranoto, 2002). A good fisheries supply chain system may improve the efficiency and effectiveness of fisheries potential management. Therefore it can improve the community welfare in the Tomini Bay region.

Therefore, this study aims to analyze the fish supply chain. The fisheries supply chain system is believed to be one of the efforts to improve the welfare of the population in the Tomini Bay region.

LITERATURE REVIEW

Supply chain management is the synchronization process of companies, suppliers, and customers to match the flow of materials, services, and information based on customer demand (Krajewski, et al, 2010). A supply chain system is a tool to integrate the efficiency of suppliers, companies, distributors, retailers, to ensure equipment can produce and deliver products with the right amount, location, and time to increase satisfaction in customer service (Indrajid and Djokopranoto, 2002).

Geary et al. (2002) suggest that uncertainty in a supply chain can stem from consumer, supplier, process and control demands. Uncertainty originating from consumer demand and
related to lead time, both from suppliers and customers, are the sources of dissatisfaction between elements in the supply chain. Therefore, these two sources of uncertainty need to be managed well to ensure the element relationships in the supply chain remain stable in order to increase or maintain the level of service to consumers.

Pujawan (2005) stated that supply chain management is a network of companies that work together to create and deliver a product to the end user. These companies usually include suppliers, factories, distributors, stores or retail, as well as supporting companies, such as logistics services companies.

Chapman et al. (2002) suggested that supply chain risk management focuses on how to understand and overcome chain effects when a large or small accident occurs at a point in the supply network.

**METHODS OF RESEARCH**

This study used survey methods through direct observation in fish landing bases in the Tomini Bay region. Tomini Bay region consists of 4 districts, namely Banggai, Tojo Una-Una, Poso, and Parigi Moutong. Supply chain analysis of capture fisheries is carried out in stages based on the fishing line to the final destination.

**RESULTS AND DISCUSSION**

Tomini Bay is the largest fish supplier in Central Sulawesi. Marine capture fisheries production in Central Sulawesi is 174,964 tons and 38.1% of them comes from Tomini Bay. Fish production in Tomini Bay Region is 66,348 tons with the following details:

<table>
<thead>
<tr>
<th>Regions</th>
<th>Production (Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1   Banggai</td>
<td>14,986.40</td>
</tr>
<tr>
<td>2   Tojo Una-Una</td>
<td>9,023.80</td>
</tr>
<tr>
<td>3   Poso</td>
<td>27,358.70</td>
</tr>
<tr>
<td>4   Parigi Moutong</td>
<td>14,979.10</td>
</tr>
<tr>
<td>Total</td>
<td>66,348.00</td>
</tr>
</tbody>
</table>

*Source: Statistics of Central Sulawesi Province, 2018.*

![Figure 1 – Fish Landing Base in Tomini Bay Region (Source: Survey data, 2018)](image-url)
Fish catches in Tomini Bay land at each Fish Landing Base (FLB) port. There are 8 ports in the Tomini Bay region which are spread in 4 districts. Pagimana FLB (Banggai), Labuan FLB and Bahari FLB (Tojo Una-Una), Gebang Rejo FLB (Poso), Petapa FLB, Labuan FLB, Mepanga FLB, Petapa FLB, Paranggi FLB, Mepanga FLB, and Bolano FLB (Parigi Moutong).

There are 8 points of FLB fish suppliers to the fish terminal in Palu City. FLB terminal is the last fish auction place before it is distributed to the market. The distance between FLB and fish terminal is far enough to be the cause of the loss of fish value. Especially if there is a road repair in the coffee plantation area which is the only access to the fish terminal. The normal distance and travel time from FLB to the fish terminal are described as follows:

<table>
<thead>
<tr>
<th>Fish port</th>
<th>FLB to Fish Terminal</th>
<th>Traveling time (Hours: Minute)</th>
<th>Regions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pagimana FLB</td>
<td>528</td>
<td>11:25</td>
<td>Banggai</td>
</tr>
<tr>
<td>Labuan FLB</td>
<td>371</td>
<td>8:13</td>
<td>Tojo Una-Una</td>
</tr>
<tr>
<td>Bahari FLB</td>
<td>265</td>
<td>5:58</td>
<td>Tojo Una-Una</td>
</tr>
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<td>Gebang Rejo FLB</td>
<td>215</td>
<td>4:50</td>
<td>Poso</td>
</tr>
<tr>
<td>Petapa FLB</td>
<td>75.8</td>
<td>2:01</td>
<td>Parigi Moutong</td>
</tr>
<tr>
<td>Paranggi FLB</td>
<td>95.9</td>
<td>2:23</td>
<td>Parigi Moutong</td>
</tr>
<tr>
<td>Mepanga FLB</td>
<td>274</td>
<td>5:54</td>
<td>Parigi Moutong</td>
</tr>
<tr>
<td>Bolano FLB</td>
<td>308</td>
<td>6:38</td>
<td>Parigi Moutong</td>
</tr>
</tbody>
</table>

Source: Survey Data, 2018.

The furthest distance is Pagimana FLB which is 528 Km with a travel time of 11 hours 25 minutes. The closest distance is the Petapa FLB as far as 75.8 Km with a travel time of 2 hours 1 minute. Distance and travel time become obstacles to the fish supply chain from Tomini Bay to the fish terminal, which causes the loss of fish value. Based on the results of the field survey, the marine capture fisheries supply chain system in the Tomini Bay region is described as follows:

There were 3 parts of the fish supply chain, namely fishing boats (fishermen) - fish landing bases (traders) - fish terminals (consumers). Fish supply chains in the Tomini Bay region are inefficient due to distance and travel time, hence reducing fish value. Therefore, a cold chain system is needed to maintain fish quality to ensure there is no quality loss in fish value which causes a decrease in the selling price.
CONCLUSION

Tomini Bay is the largest fish supplier in Central Sulawesi. Fish production in Central Sulawesi is 174,964 tons and 38.1% of Tomini Bay. There are 8 ports in the Tomini Bay region in 4 districts. Pagimana FLB (Banggai), Labuan FLB and Bahari FLB (Tojo Una-Una), Gebang Rejo FLB (Poso), Petapa FLB, Parabi FLB, Mepanga FLB, and Bolano FLB (Parigi Moutong). There are 3 parts of the fish supply chain, namely fishing boats (fishermen) - fish landing bases (traders) - fish terminals (consumers). The fish supply chain in Tomini Bay is inefficient due to distance and travel time which causes the loss of fish value. Therefore a cold chain system is needed to maintain fish quality.

REFERENCES

2. Statistics of Central Sulawesi Province. 2018. Central Sulawesi in Figure 2018, Palu-Central Sulawesi
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MORPHOLOGICAL DIVERSITY OF COTTON GERMPLASM IN DEVELOPING SELECTION METHODS TO BREED SUPERIOR COTTON VARIETY

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ABSTRACT
Cotton fiber supports the textile industry, folk weaving, and Indonesian paper money. The land suitable for the development of cotton should possess a dry climate. Balittas has 945 cotton germplasm accession derived from the introduction which belongs to the species Gossypium hirsutum, G. Barbadense, G. Arboreum, and G herbaceum. It is very crucial to determine germplasm characteristic. The research was carried out at KP. Karangploso, Balittas altitude of 515 masl, climate type D (moderate) Smith Ferguson, rainfall of 1500 mm/year, and type of soil Gleymosol Gleik / Inceptisol. The material used is 85 accessions, planted March 23, 2016. Fertilizer dosage: 97 kg N + 30 kg P2O5 + 30 kg K2O / ha and insecticides (Confidor, Furadan, Organeem). Each accession was planted 10 m in length, 150 cm X 25 cm space. The study aims to analyze the diversity of morphological characters and cotton germplasm categorizing to ensure it can be used as a basis for selecting genetic resources in assembling new superior varieties. The results of quantitative observations at the age of 120 days exhibited high diversity. The featured characters are: budding age, flowering age, blooming age, generative branch length, number of generative branch joint, and generative branch internot length, number of vegetative branches, number of generative branches, generative branch height, canopy width, number of fruit, length of segment, weight of 40 seeded cotton. KK value were 39%, 59%, 34, 24%, 22%, 24%, 67.22%, 22%, 28%, 24% respectively. As the coefficient of diversity> 20%, the assessment result exhibited significantly different character.

KEY WORDS
Cotton, identification, morphological character

The development of cotton was mainly carried out to support the textile industry, folk weaving, and Indonesian paper money. Suitable land for the development of cotton in Indonesia is widely available, especially in Central and Eastern Indonesia, which is dominated by dry land and climates. The main obstacle in developing national cotton has generally been caused by biotic factors such as pests and diseases, as well as abiotic factors in the form of water shortages (drought) causing low national productivity. Lewis (1982) states that plant productivity could be improved in two ways, namely by changing the environment (amelioration) or improving plant genotypes. Nevertheless conducting environmental improvements is very expensive and may generate negative impacts. On the other hand, improving plant genotypes is relatively cheaper, and does not cause negative impacts on the environment. This approach is conducted by assembling superior varieties. The 'Gene pool' with extensive genetic diversity is needed for building superior cotton varieties. Cotton germplasm stored in Balittas to date is 945 accessions originating from introduction through the exchange of varieties with several cotton research institutions abroad, from germplasm banks such as IRCT France, USDA America United, ICAR India, as well as from several cotton management companies. Most of the germplasm is classified as Gossypium hirsutum species, some are included in G. Barbadense, G. Arboreum, and G herbaceum.

However, until recently the collection of cotton germplasm with genetic information for the traits needed for breeders is lacking, therefore it is necessary to explore as much genetic information as possible from each existing accession through germplasm characterization and screening/evaluation activities. In the effort to improve cotton plants, a diverse
population is needed, especially in the nature of breeding purposes. Assembly of varieties to obtain new superior varieties with desirable traits needs to be supported by germplasm with high genetic diversity (Akhtar et al. 2007). According to Bari & Musa (1974). The availability of genetic resources with several characters that have been identified is information regarding the genetic diversity of germplasm. This aspect is crucial as it is very important to distinguish between genotypes required in the development of plant breeding programs (Bennett, 1993). According to Sumarno (2002), germplasm is a collection of genetic diversity of types of organisms. Bermawi (2005) argues that characterization is an activity to obtain morpho-agronomic characteristics or data which aims to distinguish phenotype from each accession. The characterization uses instructions from The International Union For The Protection Of New Varieties Of Plants (UPOV 2002). The following step is determining genetic diversity by grouping germplasm. The grouping method is an indispensable step in the utilization of the germplasm collection (Bozokalfa et al. 2009; Lule et al. 2012). The degree of variation in the genetic material will determine genetic diversity. Grouping germplasm collections is a strategy in the effort to utilize germplasm collections (Bozokalfa et al. 2009; Lule et al. 2012). The success of crop selection in breeding depends on genetic variation from existing germplasm accessions (Akhtar et al. 2007). Germplasm collections need to be characterized to ensure their properties are known as genetic information in the variety assembly program. This study aims to analyze the diversity of morphological characters and grouping of cotton germplasm of the Balittas collection to ensure it could be utilized as a basis for selecting genetic resources in the assembly of new superior varieties.

MATERIALS AND METHODS OF RESEARCH

The research activities were carried out at KP. Karangploso, Balittas with an altitude of 515 masl possessing type D (moderate) climate Smith Ferguson, rainfall 1500 mm / year, and type of Gleymosol Gleik / Inceptisol soil, from January to December 2016. Research material used were 100 cotton germplasm accessions (Table 1), planted on March 23, 2016. The fertilizer dosage used is 97 kg N + 30 kg P2O5 + 30 kg K2O / ha. Insecticides – Confidor, Furadan, Organeem. Each accession was planted in one row for 10 m. Planting distance of 150 cm X 25 cm, one plant per hole. Fertilization was done twice, 1/3 dose of N and all doses of P2O5 and K2O at the time of planting, and 2/3 doses of N on 30 days after planting. Observation of morphological characters referred to the cotton descriptor list from International Union for the Protection of New Varieties of Plants (UPOV 2001).

The results of correlation analysis exhibited a positive or negative correlation between (1) plant height with canopy width, flowering age, and weight of 100 fruits (2) number of epidermis with flowering age (3) budding age with number of fruits and fiber length (4) flowering age with plant height, budding age, and fiber length (5) number of plant/ fruit with weight of 100 fruits (6) weight of 100 fruits with plant height, flowering age, and number of fruit / plant. It indicates that the characters observed above are related to each other. The descriptive Statistics quantitative character of cotton germplasm referred to (Descriptor list) from the International Union For The Protection of New Varieties of Plants (UPOV 2012), as presented in (Table. 3).

Method of germplasm accession grouping utilized cluster analysis with Euclidian distance and average linkage method (Suhartini & Sutoro 2007; Setywati et al. 2009; Furat & Uzun 2010). The variables used in the grouping are variables that are mutually independent. In the initial phase, quantitative character data were analyzed using the Pearson correlation coefficient. If there is a correlation, the observed variables are transformed into the main component variables. The main component analysis was done after the quantitative data is standardized by dividing each variable with its standard deviation, therefore it is within the commensurate range due to different data units (Joliffe 2002; Tresniawati & Randriani 2008). The results of the main component analysis were followed by cluster fingerprint analysis. Data analysis was carried out using Minitab 15 software.
The diversity of cotton germplasm based on morphological characters could be predicted through the value of the Diversity Coefficient (CV) of each parameter observed. Nilasari et al. 2013 and Hadi et al. 2014), argues that to estimate the level of difference in the observed germplasm population, CV Value could be utilized. (Table 3). The results of the quantitative morphological characterization exhibited a high diversity in the number of epidermis on the leaves, flowering age, plant height, and canopy width.

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<tr>
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<th>Accession/Var</th>
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<th>Origin</th>
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<td>KI 120</td>
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<tr>
<td>49</td>
<td>KI 121</td>
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<td>50</td>
<td>KI 122</td>
<td>USA</td>
<td>AMERICA</td>
<td>100</td>
<td>KI 633</td>
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<td>AUSTRALIA</td>
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</table>

The results analyzed by the correlation of quantitative observations are presented in (Table 2).
Table 2 – Correlations between quantitative variables

<table>
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<tr>
<th></th>
<th>TT</th>
<th>LK</th>
<th>JB</th>
<th>UK</th>
<th>UB</th>
<th>JBH</th>
<th>B100</th>
<th>PS</th>
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<tbody>
<tr>
<td>N</td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.523</td>
<td>0.096</td>
<td>0.922</td>
<td>0.007</td>
<td>0.672</td>
<td>0.007</td>
<td>0.189</td>
<td></td>
</tr>
<tr>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.001</td>
<td>0.147</td>
<td>0.697</td>
<td>0.946</td>
<td>0.018</td>
<td>0.193</td>
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<tr>
<td>N</td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.007</td>
<td>0.322</td>
<td>0.643</td>
<td>0.018</td>
<td>0.297</td>
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<tr>
<td>N</td>
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<td>100</td>
<td>100</td>
<td>100</td>
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<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.189</td>
<td>0.388</td>
<td>0.638</td>
<td>0.101</td>
<td>0.193</td>
<td></td>
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</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**

*Correlation is significant at the 0.05 level (2-tailed).

Notes:
TT: Plant Height (cm); UB: Flowering age (hr); LK: Canopy Width; JBH: Fruit/plant; JB: Number of epidermis (mm²); B100: Weight of 100 fruits (gram); UK: Flower bud age (day); PS: % fiber.

CV values of the characters were 65%, 59%, 42%, and 45% respectively. The coefficient of diversity was 20% Alnopri & Hermiati (1992). High diversity values indicate that these characters have a wide variety. This provides an opportunity for breeders to make a selection to choose superior accession. The budding age, number of fruits/plants, weight of 100 fruits and percentage of fiber with CV values of 17%, 14%, 5.3%, and 9.4%. These possess low diversity coefficient as the CV value is below 20%.

Table 3 – Descriptive Statistics of quantitative characters of cotton germplasm

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Std. Deviation</th>
<th>Variance</th>
<th>CV (%)</th>
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<tr>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
</tr>
<tr>
<td>TT</td>
<td>100</td>
<td>118.8</td>
<td>86.2</td>
<td>265</td>
<td>1.24E+02</td>
<td>2.57794</td>
<td>25.77937</td>
<td>664.576</td>
<td>65</td>
</tr>
<tr>
<td>LK</td>
<td>100</td>
<td>161.5</td>
<td>12.5</td>
<td>174</td>
<td>1.42E+02</td>
<td>2.36365</td>
<td>23.63647</td>
<td>558.683</td>
<td>17</td>
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<td>JB</td>
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<td>0</td>
<td>296</td>
<td>4.0376</td>
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<td>62.17734</td>
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<tr>
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<td>40</td>
<td>59</td>
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<td>0.26419</td>
<td>2.64193</td>
<td>6.638</td>
<td>48</td>
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<tr>
<td>UB</td>
<td>100</td>
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<td>51</td>
<td>61</td>
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<td>0.19339</td>
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<td>10.4</td>
<td>366</td>
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<td>3.49925</td>
<td>34.99251</td>
<td>1.22E+03</td>
<td>14</td>
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<tr>
<td>B100</td>
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<td>468</td>
<td>294</td>
<td>762</td>
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<td>101.82665</td>
<td>104.04</td>
<td>5.3</td>
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<tr>
<td>PS</td>
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<td>37.76</td>
<td>16.67</td>
<td>54.42</td>
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<td>0.40043</td>
<td>4.00431</td>
<td>16.034</td>
<td>9.4</td>
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</table>

Valid N (listwise) | 100

The density of epidermis is often used by plant breeders to control the attack of sucker piercing insects. Amrasca biguttula (Empoasca sp.) is the main cotton plant pest in Indonesia, which is very detrimental because it can attack cotton plants starting from young plants to old plants. Great attacks occur if the environmental conditions are dry due to lack of rain. These pests attack the plant by sucking the leaf liquid, the plants attacked the leaves
become curly and curved downward. In heavy attacks the leaves are red-brown, dry, then the expression is influenced by the genes H2, H3, H4, and H5, (Hendrizzi et al., 1984). The density of epidermis on Ballitas cotton germplasm varied from 0 - 587 trichomes per 25 mm². The density of epidermis was calculated using the Robinson method, et al., (1980), 5 mm x 5 mm square was carved on the lower leaf lamina, the number of the epidermis (trichomes) was calculated based the square. The trichome number category per square centimeter (cm²) according to Kartono (1991), is: <121 = no epidermis; 121 - 240 = small number of epidermis; 241 - 360 = medium epidermis; 361 - 480 = large number of epidermis; > 480 = huge number of epidermis. Cotton varieties with epidermis less properties possess high tannin and terpene content. It is capable to reduce Helicoverpa armigera pest attacks up to 50% (Benedict et al., 1992). The diversity of epidermis from 100 accessions observed exhibited a diversity of CV 59%.

Table 4 – Qualitative characteristics of cotton germplasm

<table>
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<tr>
<th>Qualitative Characters</th>
<th>Clustered</th>
<th>Percentage (%)</th>
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<tbody>
<tr>
<td>1. Flower position</td>
<td>Clustered</td>
<td>2</td>
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<tr>
<td></td>
<td>Not Clustered</td>
<td>98</td>
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<tr>
<td>2. Leaf color</td>
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<td>97</td>
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<tr>
<td></td>
<td>Light Green</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Dark Green</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Reddish Purple</td>
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<tr>
<td>3. Leaf shape</td>
<td>Palmate</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Twisted Normal</td>
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</tr>
<tr>
<td></td>
<td>Palmate Normal</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Twisted</td>
<td>1</td>
</tr>
<tr>
<td>4. Nectar</td>
<td>Exist</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>Nonexistent</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Exist/Nonexistent</td>
<td>1</td>
</tr>
<tr>
<td>5. Crown color</td>
<td>Beige</td>
<td>87</td>
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<tr>
<td></td>
<td>Yellow</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Beige/Yellow</td>
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<tr>
<td></td>
<td>Yellow/Purple</td>
<td>8</td>
</tr>
<tr>
<td>6. Spots on the flower crown</td>
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<td>4</td>
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<tr>
<td></td>
<td>Non Existent</td>
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<td>7. Pollen colour</td>
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<td>Yellow Beige</td>
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<td></td>
<td>Purple Beige</td>
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<td></td>
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<td>27</td>
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<tr>
<td></td>
<td>Purple Yellow</td>
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<td>8. Pistil Position</td>
<td>Above</td>
<td>76</td>
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<td></td>
<td>Parallel</td>
<td>24</td>
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<td>9. Petal shape</td>
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<td>10. stem color</td>
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<tr>
<td></td>
<td>Purplish Red</td>
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<td>Prostrate</td>
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<td></td>
<td>Spiky</td>
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<td></td>
<td>Blunt</td>
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<td>13. Fruit skin texture</td>
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<td></td>
<td>Medium</td>
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<tr>
<td></td>
<td>Coarse</td>
<td>15</td>
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<td>14. Fiber color</td>
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<td>2</td>
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<tr>
<td></td>
<td>Light Green</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Brown</td>
<td>1</td>
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</table>
The density of the epidermis is one of the characteristics of a variety of options as accessions resistant to sucker piercing pests, which are the main cotton plant pest in Indonesia. Great attacks occur if the environmental conditions are dry due to lack of rain. Hendrizzi et al., (1984), suggested that the Amasca biguttula attacks plants by sucking in leaf fluid. Attacked plants leaves become curly and curved downward. In heavy attacks the leaves are red-brown, dry, then their expression is influenced by genes H2, H3, H4, and H5. The density of epidermis in Ballitas cotton germplasm varies from 0 - 587 trichomes per 25 mm². The density of epidermis was calculated using the Robinson, et al., (1980) method, a square of 5 mm x 5 mm was carved in the lower leaf lamina, the number of the epidermises (trichomes) was calculated based on existing epidermis in the square.

Germplasm plasma is observed as a qualitative character, carried out if the conditions have met the requirements in accordance with the reference (Suratman & Setyawan, 2000). The results of the observations exhibited a diversity of all characters observed (Table 4). The observation of the character of the 100 accessions observed: 98% is not clustered and 2% are clustered, meaning that the diversity is very low. The color characteristics of the leaf diversity are very low, such as green (97%), light green (0%), green (0%), dark green (1%), and reddish purple (2%). Plant shape characters are compact (35%), cylindrical (5%), and Prostrate (60%).

From the observation of the character of cotton, leaf shape varies, namely: palmate (8%), normal (84%), normal twisting (5%), normal palmate (2%), and twisting (1%). exhibited that the diversity is quite high. Leaf shape is an important character in the classification of varieties. Wilson and George (1982), suggested that the nature of the okra leaf leaves can reduce the egg deposit of Helioverpa armigera, increase resistance to Peptinopora gossypiella, and reduce fruit rot disease. On average the cotton on the leaves has the nectar glands. Out of the 100 accessions observed, only one accession which nectar existence is unclear, 99% exist and 9% of accessions nonexistent. Wilson (1976), suggested that the nectar is one of the important properties for resistance to flower buds and fruit piercer. The color of the flower crowns on 100 accessions was varied: beige (57%), yellow (3%), yellow/beige (1%) and yellow/purple (8%). The crown color of the Gossypium tetraploid species is controlled by the duplication of Y1 and Y2 Hutchison and Silow genes, 1939. In Kohel and Lewis (1984), it is suggested that yellow is all allotetraploid except yellow in G. From this gene Y1 is controlled by Y2 gene according to Stephens (1954 b In Kohel and Lewis, 1984). Y1 gene in sub-genomics possesses chromosome 18 D Y2 gene. The genome is D. The yellow flower crown is usually found in G. barbadense, (Endrizzi, 1975 In Kohel and Lewis, 1984), but often found in Pima cotton (Turcotte and Feaster, 1963 In Kohel and Lewis, 1984). The beige-colored flower crown is found in G. hirsutum cultivars which are controlled by the y1y1y2y2 gene but also found in yellow flower crowns on wild relatives. The spots on the flower crown possess low diversity. The spotted ones were (5%) and no spot(95%). The color of pollen is quite varied which includes: beige (72%), yellow beige (1%), purple beige (0%), yellow (27%), and purple yellow (0%). Harlan (1929) In Kohel and Lewis (1984), suggested that pollen color is controlled by a pair of P and p genes. Whereas the yellow color is dominant in beige. The position of the pistil is above (76%) and parallel (24%). The petal shape diversity is very low: twisted (1%) and normal (99%). The stem color character diversity is very low: reddish green (95%), dark green (2%) and purplish red (3%). Stephens, (1974 a), suggested that the red color of the stem was caused by the presence of anthocyanin substances which pigmentation was expressed on the tissues of the leaf sertan on the base of the flower crown which usually occurs in cotton breed in Asia. The sharpness of the fruit shape, spiked fruit reached (92%), pointy fruit (5%), sharp (1%) and blunt (3%). The fruit skin coarseness exhibited: smooth (3%), medium (82%) and coarse (15%). The variation of fiber color character is also very low, the dominant color is white which reaches 96%, light brown (2%), light green (1%) and brown 1%. Fruit skin texture diversity is smooth (3%), medium (82%), and coarse (15%).

The genetic relationship is an effort to find out the relationship between genotypes in the accession of cotton plants. Furthermore, based on the genetic similarities the character will be classified, by describing the level of genetic variability, used for genetic analysis
based on morphological characters. Prior to carrying out a cluster analysis for germplasm grouping, it is important to determine whether the variables observed are mutually independent. Maji & Shaibu (2012), suggests that if there is a correlation between the variables observed, it is necessary to analyze the main components first, before conducting a cluster analysis. The results of the correlation analysis exhibited no real correlation between the characters observed. Subsequent cluster analysis was carried out using characters that contributed to the diversity of the first six main components because the proportion of diversity reached more than 80% and eigenvalues> 1. Joliffe (1967) gave the limitation that cluster analysis was carried out using characters the proportion of diversity> 80% and eigenvalues> 1. The results of the cluster analysis exhibited that the Balittas cotton germplasm collection was divided into VI levels of similarity that had a relatively high diversity. At the level of similarity I of germplasm is divided into 3 major groups, at the level of similarity II is divided into 4 groups, in similarity III is divided into 5 major groups, in similarity IV is divided into 2 major groups, in similarity V is divided into 2 major groups and in similarity VI is divided into 6 large groups (Figure 1). Grouping based on the country of origin of germplasm consists of Indonesian commercial varieties, United States of America (USA), South America, Europe, Asia, Africa, and Australia with a diversity of 84.90%. Categorized germplasm diversity can be used as an important source of information to assess potential accession. Accession from different groups possess significantly different character, therefore a high diversity of morphological characters in the managed population provides wider opportunities for the improvement of plant varieties. To obtain information on the diversity of crucial agronomic traits, which can later be used as elders selected in cultivation programs. Accessions possessing a genetic distance from different groups can be selected, information on the diversity of morphological characters also opens up opportunities for improved varieties with resistance to biotic and abiotic stresses. Cluster analysis method could be used to determine the characters that contribute to population diversity (Khodadadi et al. 2011). Tresniawati & Randriani (2008), stated that germplasm grouping can describe genetic relationships between accessions. This may provide information regarding character traits from each accession group formed.

![Figure 1 – Dendrogram average linkage, euclidian distance](image-url)
CONCLUSION

The results of the qualitative morphological characterization exhibited diverse characters: low (flower position, spots on the flower crown, pollen color, fiber color, and petal shape), medium (nectar, crown color, stem color, and fruit shape sharpness) and height (position of pistil, plant shape and fruit skin coarseness).

The results of the quantitative morphological characterization exhibited high diversity with CV values: number of leaves (65%) flowering age (59%), plant height (42%), and canopy width (45%).

The results of the cluster analysis indicate that the Balittas germplasm collection is divided into 6 large groups of similarity level and possess relatively high diversity. At the level of similarity I of germplasm is divided into 3 major groups, at the level of similarity II is divided into 4 groups, in similarity III is divided into 5 major groups, in similarity IV is divided into 2 major groups, in similarity V is divided into 2 major groups, and in the similarity VI is divided into 6 large groups (Figure 1). Based on country of origin grouping, germplasm consists of Indonesian commercial varieties, United State of America (USA), South America, Europe, Asia, Africa, and Australia with a diversity value of 88.90%.

REFERENCES

THE EFFECT OF DIALOGIC COMMUNICATION IN SAFE TRAVEL APPLICATION ON DIGITAL DIPLOMACY OF THE MINISTRY OF FOREIGN AFFAIRS OF THE REPUBLIC OF INDONESIA

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ABSTRACT
Along with the development of information and communication technology and the implementation of strategic objectives, the Ministry of Foreign Affairs of the Republic of Indonesia (KEMLU RI) applies digital diplomacy using Safe Travel which involves dialogic communication within it. This research was conducted to analyze the influence of dialogic communication from Safe Travel on digital diplomacy conducted by KEMLU RI. This study used a mix-method approach with data collected through surveys and interviews, then analyzed by a multiple linear regression. The results of the study with 42 respondents from the students of Bakrie University Communication Study Program showed that dialogic communication does not fully affect digital diplomacy. Among the five dimensions of dialogic communication, only dialogic loops and generation of return visits have a positive effect on digital diplomacy while the usefulness of information, the usability interface, and visitor conservation have no effect.

KEY WORDS
Communications, dialogic communications, safe travel, digital diplomacy.

The trend for Indonesian citizen (WNI) to travel abroad in 2018 is predicted to increase. It can be indicated from the increase in the number of Indonesian citizens going abroad from 8.4 million people in 2016 to 9.1 million people in 2017 (Kompas.com, accessed on August 14, 2018). The main factor of this trend is the change in Indonesian people's behavior due to the presence of cheap travel packages (Kompas.com, accessed on August 14, 2018). Another factor is the people's desire to make a pilgrimage to Mecca and work abroad as Indonesian Migrant Workers (TKI).

This trend cannot be seen as an ordinary phenomenon. All parties, particularly the government, must notice several aspects, one of which is the security issue for Indonesian tourists in foreign countries. Information about the security is highly important for those who will travel abroad.

Informing and monitoring the security of Indonesian tourists overseas is not easy because of limited distances and time differences. Conventional media is no longer able to reach the community due to these limitations. However, the presence of the internet provides solutions to these problems.

Entering the 2000s, the internet grew rapidly in Indonesia. In 2017, the survey results of the Indonesian Internet Service Providers Association showed an internet user penetration of 54.68% or 143.26 people of the total Indonesia population (Surabaya.tribunnews.com, accessed on August 14, 2018).

Not only done conventionally, but some of the Indonesian people's activities have also currently been influenced by the internet. Many digital applications emerge to facilitate and fulfil people's needs, such as shopping and transportation. To monitor the Indonesian tourist trend and the rapid number of internet users, the Ministry of Foreign Affairs of the Republic of Indonesia (KEMLU RI) utilizes digital developments to overcome problems likely to be faced by Indonesian citizens abroad.

In line with the strategic steps and focus of Indonesia's foreign politics, KEMLU RI runs its strategies of digital diplomacy. Digital diplomacy is a new concept of public diplomacy involving the use of digital technology and social media to communicate with foreigners...
(Adesina, 2017: 1). **KEMLU RI** has much used digital media to carry out its digital diplomacy strategies, including website and social media (Twitter, Facebook, and Instagram). In the early of 2018, **KEMLU RI** designed again new innovations in realizing digital diplomacy, namely Safe Travel application. Safe Travel is a digital-based application created as a tool to improve the protection of Indonesian citizens travelling abroad (**KEMLU**, 2018: 15). As a public diplomacy tool, Safe Travel allows for indirect communication between Indonesian citizens and **KEMLU RI** parties.

According to Ruben and Stewart (2006: 15), communication is the bridge between individuals and the world, where we study about ourselves and others. The need to socialize is one of the factors driving the rapid change in communication patterns and media. This combination of communication and the internet is often called digital communication. Indirect communication through Safe Travel application brings up dialogues between users and the system. In the practice of communication, dialogues emerging in the digital world are called dialogic communication.

According to Kent and Tylor (1998 and 2002, in Agozzino, 2015: 4), dialogic communication is one approach to build relationship between organizations and the public online in which there is an exchange of ideas and opinions communicatively allowing both parties involved to understand each other and continue to exchange information until both parties are satisfied.

From the above description, the researchers formulated the following statements of problems:

- How does dialogic communication of Safe Travel application affect digital diplomacy conducted by **KEMLU RI**?
- Are there similarities or differences in communication strategy understanding between media users (public) and **KEMLU RI** on the presence of Safe Travel application?

Based on the statements of problems above, the objective of this research was to analyze the effect resulted from the dialogic communication in Safe Travel application on the digital diplomacy of Indonesia’s Ministry of Foreign Affairs.

**LITERATURE REVIEW**

**Public Diplomacy.** According to Cohen (1998, in Adesina, 2017: 2), a diplomacy is a machine of international relations which becomes a method for countries to articulate their foreign policy objectives, coordinate their efforts to influence decisions and behavior of foreign governments and communities through dialogues and negotiations.

Public diplomacy has been defined as a country’s soft power, marketing and branding as well as international public relations by the government (Zhang, 2013: 1314).

As the main difference, traditional diplomacy has traditional approaches based on government-to-government relations while public diplomacy builds relations between governments and foreign publics (Seib, 2009: 773).

**Digital Diplomation as a New Form of Public Diplomacy.** Adesina (2017: 2) described that in the modern era, public diplomacy has changed mainly due to Technology, Information and Communication (TIC). TIC has revolutionized the way people communicate and exchange information and change the political, social and economic landscapes around the world.

Digital diplomacy refers to diplomatic practices through digital technology and networks, including the internet, mobile devices, and social media channels (Potter, 2002, in Adesina, 2017: 3).

Moreover, Hanson (2012, in Adesina, 2017: 3) explains that there are eight objectives of digital diplomacy, covering:

- Knowledge Management. Utilizing knowledge of a department and government so as to be maintained, shared and used optimally to pursue national interests abroad.
Public Diplomacy. Making contact with audiences when they migrate online by utilizing new communication tools to listen to and target important audiences to deliver messages and affect influencers online.

Information Management. Helping gather information flows to support policy making as well as anticipate and respond to emerging social and political movements.

Consular Communications and Response. Making direct communication channels with citizens travelling abroad, which can be managed in crisis situations.

Disaster Response. Utilizing the power of communication technology in responding to a disaster.

Internet Freedom. Creating technology to maintain free and open internet. This is related to the aim of promoting freedom of speech and democracy and weakening the authoritarian regime.

External Resources. Creating a digital mechanism to approach and utilize external skills to advance national goals.

Policy Planning. Enabling effective oversight and international policy coordination and planning throughout the government in response to bureaucratic internationalization.

Communication. Communication is a processing system in which humans engage and interact using symbols to create and interpret a meaning (Wood, 2011: 12).

According to Effendy (2013: 27), there are four functions of communication, namely:

- To change the attitude, referring to changes in individual or group attitudes due to the acceptance of information;
- To change opinion, referring to changes in individual or group opinions due to information received;
- To change the behavior, referring to changes in individual or group behavior towards something due to the acceptance of information;
- To change society, referring to changes in the social level of individuals or groups due to the acceptance of information.

Dialogic Communication as a Strategic Framework for Web-Based Relations. According to Kent and Taylor (2014, in Anderson, Swenson, and Gillkerson, 2016), a dialogue is an orientation that values the sense of sharing and understanding between parties that interact.

Dialogic communication is one of the well-known approaches to Public Relations (PR) practitioners in building relationships between organizations and the public, developed by Pearson in 1998 and extended by Kent and Taylor in 1998 to 2002 (McAllister-Spooner, 2008: 2).

Dialogic communication is an ethical approach arising due to open communication that demands cooperation and negotiation to build a relationship with the public (Pearson, 1998, in Agozzino, 2015: 4). According to Kent and Taylor (1998, in Agozzino, 2015: 4), dialogic communication can facilitate relationships between organizations and the public established by online media.

In building a relationship, Kent and Taylor (1998, in Kampf, Manor, Segev, 2015) suggested five basic principles of dialogic communication as follows:

- Dialogic loops. Focusing on public opportunities to ask questions to organizations and organizations’ opportunity to answer it.
- Usefulness of information. Obtaining information from sources that are reliable, useful and relevant to the public.
- Generation of return visits. Focusing on continually updating information, adjusting information to public needs, and holding a Q&A forum with experts.
- The interface usability. Preferring easy and textual navigation to online graphics contents.
- Conservation of visitors. Avoiding publications that encourage the public not to give feedback or make another visit.

New Media. New media refers to large-scale changes in the production, distribution, and use of media that are technological, textual, conventional, and cultural (Lister et al.,
According to McQuail (2011: 43), new media has main characteristics such as the existence of connections, the facility to send and receive messages and have interactive and open communication at any time and anywhere.

Safe Travel as a Media in the Digital Era. Quoted from the official site of KEMLU RI (www.kemlu.go.id, accessed on August 15, 2018), Safe Travel is one of the digital media utilized by Indonesia’s Ministry of Foreign Affairs to protect Indonesian citizens in foreign countries. Starting from the site www.peduliwni.kemlu.go.id, KEMLU RI expands the mobile application ‘Safe Travel Kemlu’ that was launched in 2017 to be multi-platform (Android, iOS, web, and social media). Both applications were introduced in April 2018.

The features provided by Safe Travel consist of:

- Complete Information on World Countries. Containing information about the country status, access to RI Representative services, list of 130 RI Representatives, local laws and customs, currency, tourism and worship objects, halal culinary, and infographics.
- Emergency Button. In emergency situations, Indonesian citizens in foreign countries can use the Emergency Button feature to send photos, record videos, contact the nearest RI Representative and send important scenes.
- Indonesia Nearby. This feature provides information about other Indonesian citizens nearby the user’s location when travelling abroad. With this feature, Indonesian citizens can each other get acquainted, chat and develop a network of friends to strengthen the community of Indonesian citizens abroad.
- Points and Badges. The application users can also get points and badges after logging in. There will be a reward for those who get certain points and badges.

Users of this Safe Travel application can display their selfie photos and log in to upload or share it to social media such as Facebook so they can still exist with cyberspace friends.

Hypothesis. Based on the literature review above, the researchers then proposed the following hypotheses:

H1: Dialogic loop has a positive effect on digital diplomacy.
H2: Usefulness of information has a positive effect on digital diplomacy.
H3: Generation of return visits has a positive effect on digital diplomacy.
H4: The interface usability has a positive effect on digital diplomacy.
H5: Conservation of visitors has a positive effect on digital diplomacy.

METHODS OF RESEARCH

This research used the post-positivistic paradigm. According to Creswell (2008, in Hesse-Biber and Leavy, 2011: 16), post-positivistic is similar to positivistic. The difference is when researchers cannot really be positive about their knowledge claims at the time of studying social reality. The post-positivistic paradigm tries to make evidence that will confirm or refute a theory even though not in absolute terms (Hesse-Biber and Leavy, 2011: 16).

Based on the research objectives to be achieved, this research used a mix-method approach. According to Sugiyono (2014: 18), a mixed method is an approach that combines quantitative and qualitative methods in one study so as to obtain comprehensive, valid, reliable, and objective data. In this research, the alternative mix method strategy used was a sequential explanatory strategy. A sequential explanatory strategy is a strategy used in mix-method research with a tendency to a quantitative approach. Sequential explanatory strategy characteristics can be seen when data are collected and analyzed quantitatively in the initial phase, then the quantitative data results are followed by data collection and analysis done qualitatively in the second phase (Creswell, 2008: 2011).

The data were collected using surveys and interviews. A survey is a data collection technique in which researchers and data collectors ask questions and propose statements to respondents, both in oral and written forms (Sanusi, 2011: 103). Meanwhile, an interview is a data collection technique presented in a structured, unstructured and semi-structured forms consisting of several open questions related to the topic of research (Hancock et al., 2009: 13). According to McQuail (2011: 43), new media has main characteristics such as the existence of connections, the facility to send and receive messages and have interactive and open communication at any time and anywhere.
In this research, interviews were used to collect additional data to support the questionnaire results. The object of this research was Bakrie University’s students. The population of this research was all the students of the Communication Study Program at Bakrie University. The sampling was conducted purposively. According to Sugiyono (2014: 126), purposive sampling is done in research to take subjects based on the existence of certain objectives.

This research deliberately took students representing the younger generation who had travelled abroad. The sample determination was based on the fact that KEMLU RI targets Millennial and Z generations as Safe Travel application users (Kumparan.com, accessed on September 9, 2018). Millennial and Z generations are people born in the internet generation – a generation who has enjoyed the magic of technology after the internet emergence (Tirto.id, accessed on September 2019) in which they understand enough the use of internet media including travel applications such as Safe Travel.

The data were collected using systematic and structured arranged questionnaires. The questionnaires used a 5 point-Likert scale measurement, covering Very Agree, Agree, Less Agree, Disagree, and Very Disagree. The use of odd interval scale aims to see the tendency of respondents to choose a middle scale.

Variables in this research were divided into two types, namely independent and dependent variables. Independent variable is a variable affecting or occurring due to changes or the emergence of the dependent variable (Sugiyono, 2014: 59). Meanwhile, a dependent variable is a variable affected by or resulted from the independent variable (Sugiyono, 2014: 59).

The survey of dialogic communication (the independent variable) contained five dimensions divided into eleven indicators/statements. The five dimensions were dialogic loops (X1), the usefulness of information (X2), generation of return visits (X3), the interface usability (X4), and conservation of visitors (X5).

On another side, the survey of digital diplomacy (the dependent variable) was taken from the concept of Hanson (2012, in Adesina, 2017: 3). Although Hanson (2012) explained eight objectives of digital diplomacy, this research only used five dimensions divided into thirteen indicators/statements. The five dimensions of digital diplomacy (Y) were knowledge management, public diplomacy, information management, consular communications and response, and disaster response.

The data in this research were analyzed using a multiple linear regression. According to Sugiyono (2014: 299), multiple linear regression is a data analysis technique intended to predict the dependent variable state when it is influenced by two or more independent variables as the predictor factor. The equation of multiple linear regression analysis is formulated as follows:
\[ Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 \]

Where:
- \( Y \) = Dependent variable (digital diplomacy)
- \( \alpha \) = Constant\( a \)
- \( X_1 \) = Independent variable 1 (dialogic loop)
- \( X_2 \) = Independent variable 2 (usefulness of information)
- \( X_3 \) = Independent variable 3 (generation of return visits)
- \( X_4 \) = Independent variable 4 (the interface usability)
- \( X_5 \) = Independent variable 5 (conservation of visitors)
- \( b_1 - b_5 \) = Regression coefficient

**RESULTS AND DISCUSSION**

**Validity Test Results.** The sampling for the validity and reliability tests involved 42 respondents. The validity test was analyzed using SPSS software to process the data collected. By referring to the interpretation of Corrected Item-Total Correlation value, statement items will be considered valid if the validity coefficient is > 0.20. In other words, the statement items can be said useful in showing the right measurement results.

The validity test results obtained from the 42 questionnaires showed that all the 24 statement items were valid because the Corrected Item-Total Correlation value was more than 0.20.

<table>
<thead>
<tr>
<th>Item</th>
<th>Corrected Item-Total Correlation</th>
<th>Item</th>
<th>Corrected Item-Total Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>XA1</td>
<td>.432</td>
<td>YA1</td>
<td>.516</td>
</tr>
<tr>
<td>XA2</td>
<td>.452</td>
<td>YA2</td>
<td>.561</td>
</tr>
<tr>
<td>XB1</td>
<td>.512</td>
<td>YA3</td>
<td>.625</td>
</tr>
<tr>
<td>XB2</td>
<td>.577</td>
<td>YB1</td>
<td>.333</td>
</tr>
<tr>
<td>XB3</td>
<td>.612</td>
<td>YB2</td>
<td>.328</td>
</tr>
<tr>
<td>XC1</td>
<td>.555</td>
<td>YB3</td>
<td>.516</td>
</tr>
<tr>
<td>XC2</td>
<td>.616</td>
<td>YC1</td>
<td>.535</td>
</tr>
<tr>
<td>XC3</td>
<td>.365</td>
<td>YC2</td>
<td>.498</td>
</tr>
<tr>
<td>XD1</td>
<td>.565</td>
<td>YC3</td>
<td>.588</td>
</tr>
<tr>
<td>XD2</td>
<td>.507</td>
<td>YD1</td>
<td>.334</td>
</tr>
<tr>
<td>XE1</td>
<td>.341</td>
<td>YE1</td>
<td>.393</td>
</tr>
<tr>
<td>XE2</td>
<td>.396</td>
<td>YE2</td>
<td>.429</td>
</tr>
</tbody>
</table>

**Reliability Test Results.** As explained previously, the reliability test of this research involved 42 respondents. This test was conducted using Cronbach’s Alpha. Cronbach Alpha is a measure of reliability that has values ranging from zero to one (Hair et al., 2010: 92). If the reliability value is > 0.40, it can be concluded that the questionnaire can be relied upon as a data measuring instrument.

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach's Alpha</td>
<td>.814</td>
</tr>
<tr>
<td>N of Items</td>
<td>24</td>
</tr>
</tbody>
</table>

The SPSS results suggested that the Cronbach’s Alpha value of the 24 statement items reached 0.814, greater than 0.40. Thus, the questionnaire was said reliable.

**Respondents Characteristic Results.** Of the 42 questionnaires collected, it was found that the respondents were dominantly at the age range of 15 to 20 years, with a percentage of 90.5%. Subsequently, the second order was occupied with those whose age was at the range of 21 to 30 years. The students majoring in the Communication Program Study Batch
2016 of Bakrie University were still at young ages because most of them were just finished high school in 2016. They were mostly born from 1997 to 1998.

Viewed from the sex, the majority of the respondents who filled out the questionnaires were women (52.4%) while the rest was men (47.6%).

Lastly, the most underlying motive for the students of the Communication Program Study Batch 2016 of Bakrie University to travel abroad was for holidays (61.9%), followed by the motive of education (26.2%). That is, the trend to travel abroad was mostly driven by the need for recreation.

Table 3 – Respondent Characteristics

<table>
<thead>
<tr>
<th>No</th>
<th>Characteristics</th>
<th>Respondent Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 – 20 years</td>
<td>38</td>
<td>90.5%</td>
</tr>
<tr>
<td></td>
<td>21 – 30 years</td>
<td>4</td>
<td>9.5%</td>
</tr>
<tr>
<td></td>
<td>31 – 40 years</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2</td>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>20</td>
<td>47.8%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>22</td>
<td>52.4%</td>
</tr>
<tr>
<td>3</td>
<td>Travel Purpose (Motive)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>11</td>
<td>26.2%</td>
</tr>
<tr>
<td></td>
<td>Holiday</td>
<td>26</td>
<td>61.9%</td>
</tr>
<tr>
<td></td>
<td>Working</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Settling abroad</td>
<td>4</td>
<td>9.5%</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>1</td>
<td>2.4%</td>
</tr>
</tbody>
</table>

Results of Respondent Knowledge About Safe Travel Application. Table 4 shows the extent to which the respondents knew about Safe Travel application. Seen from the questionnaire results, 54.8% of the respondents knew the function of Safe Travel application as a protective media for Indonesian citizens in foreign countries. Meanwhile, the other 33.3% of the respondents understood the function of Safe Travel application as an information media for Indonesian citizens travelling abroad.

Meanwhile, to find out about the presence of Safe Travel application, 71.4% of the respondents received information from different sources. The other 26.2% of the respondents knew the information about Safe Travel application from media and the remaining 2.4% knew it from the official website of KEMLU RI.

Table 4 – Respondent Knowledge About Safe Travel Application

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>Frequency of Respondents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Application Functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Protecting Indonesian citizens abroad</td>
<td>23</td>
<td>54.8%</td>
</tr>
<tr>
<td></td>
<td>As information media for Indonesian citizens abroad</td>
<td>13</td>
<td>33.3%</td>
</tr>
<tr>
<td></td>
<td>Facilitating Indonesian citizens to contact and get the location of important Indonesian parties abroad</td>
<td>2</td>
<td>4.8%</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>3</td>
<td>7.1%</td>
</tr>
<tr>
<td>2</td>
<td>Sources of Information About Safe Travel Application</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Media coverage</td>
<td>11</td>
<td>26.2%</td>
</tr>
<tr>
<td></td>
<td>KEMLU RI website</td>
<td>1</td>
<td>2.4%</td>
</tr>
<tr>
<td></td>
<td>KEMLU RI activities</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>30</td>
<td>71.4%</td>
</tr>
<tr>
<td>3</td>
<td>The duration of Safe Travel Application Usage</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt; 1 Week</td>
<td>38</td>
<td>90.5%</td>
</tr>
<tr>
<td></td>
<td>1 – 4 Weeks</td>
<td>2</td>
<td>4.8%</td>
</tr>
<tr>
<td></td>
<td>1 – 2 Months</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>3 – 4 Months</td>
<td>2</td>
<td>4.8%</td>
</tr>
<tr>
<td></td>
<td>4 – 6 Months</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
Furthermore, if seen from the duration of Safe Travel application usage, 90.5% of the respondents recognized that they had less than a week in using the application. As for the rest, each 4.8% of the respondents had used the application for 1-4 weeks and 3-4 months.

Results of Identifying Dialogic Communication Dimensions Affecting Digital Diplomacy. The multiple regression analysis was carried out to identify the significant effect of dialogic communication dimensions on digital diplomacy conducted by the Ministry of Foreign Affairs of the Republic of Indonesia (KEMLU RI). The results of the analysis using SPSS are as follows:

Seen in Table 5, the R-value obtained was equal to 0.699 and the R Square was equal to 0.489. This indicates that the independent variables (dialogic communication dimensions) had a correlation of 69.9% with the dependent variable (digital diplomacy) or was said to be weak because the number of R obtained was 0.699 (below 1). Meanwhile, the determinant coefficient value (R Square) of 0.489 indicates that 48.9% of the variance of digital diplomacy could be explained by dialogic communication dimensions and the other 51.1% was explained by other variables.

Table 5 – Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.699*</td>
<td>.489</td>
<td>.418</td>
<td>2.85430</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), X1, X2, X3, X4, X5

Table 6 – F Test Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>280,539</td>
<td>5</td>
<td>56,108</td>
<td>6.887</td>
<td>.000a</td>
</tr>
<tr>
<td>1 Residual</td>
<td>293,294</td>
<td>36</td>
<td>8,147</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>573,833</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Y
b. Predictors: (Constant), X1, X2, X3, X4, X5

Table 7 – Multiple Linear Regression Coefficients of Dialogic Communication Dimensions on Digital Diplomacy

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>20,886</td>
<td>6,396</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X1</td>
<td>.972</td>
<td>.455</td>
<td>.265</td>
<td>2,138</td>
</tr>
<tr>
<td>X2</td>
<td>.693</td>
<td>.392</td>
<td>.242</td>
<td>1,766</td>
</tr>
<tr>
<td>X3</td>
<td>1,188</td>
<td>.367</td>
<td>.439</td>
<td>3,233</td>
</tr>
<tr>
<td>X4</td>
<td>.251</td>
<td>.499</td>
<td>.068</td>
<td>.504</td>
</tr>
<tr>
<td>X5</td>
<td>-.574</td>
<td>.582</td>
<td>-.125</td>
<td>-.987</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Y
By using the F-test results, the researchers tried to see the effect of the independent variables (dialogic communication dimensions) on the dependent variable (digital diplomacy) simultaneously. Table 6 shows that the significance value was less than $\alpha$ (0.05). That is, the independent variables (dialogic communication dimensions) simultaneously had an effect on the dependent variable (digital diplomacy) and could be used to predict digital diplomacy.

Based on the results presented in Table 7, only X1 and X3 had smaller significance values than 0.05, respectively reaching 0.039 and 0.003. This indicates that dialogic loops and generation of return visits had a significant effect on digital diplomacy.

Meanwhile, the variables X2, X4, and X5 obtained significance values of respectively 0.086, 0.617, and 0.330 (greater than 0.05). In other words, the usefulness of information, the interface usability and conservation of visitors did not significantly affect digital diplomacy.

If the numbers are included in the equation, the results will be as follows:

$$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5$$

$$Y = 20.886 + (0.972)X_1 + (0.693)X_2 + (1.188)X_3 + (0.251)X_4 + (-0.547)X_5$$

That is, if the impact of dialogic loop and generation of return visits is better perceived, it will increase digital diplomacy conducted by KEMLU RI. However, generation of return visits can provide higher thrust to digital diplomacy because its coefficient had a value of 1.118, greater than the dialogic loop whose coefficient value was 0.972.

Based on the above findings, the results of the statistical hypothesis testing can be described as follows,

- **Dialogic loop** had a positive effect on digital diplomacy, meaning that H1 ($X_1 \rightarrow Y$) was accepted.
- **Usefulness of information** had no effect on yet had a positive relationship to digital diplomacy, meaning that H2 ($X_2 \rightarrow Y$) was rejected.
- **Generation of return visits** had a positive effect on digital diplomacy, meaning that H3 ($X_3 \rightarrow Y$) was accepted.
- **The interface usability** had no effect on yet had a positive relationship to digital diplomacy, meaning that H4 ($X_4 \rightarrow Y$) was rejected.
- **Conservation of visitors** had no effect on and negative relationship to digital diplomacy, meaning that H5 ($X_5 \rightarrow Y$) was rejected.

**DISCUSSION OF RESULTS**

Overall, the dimensions of dialogic communication are considered capable of predicting digital diplomacy conducted by KEMLU RI. However, of the five dimensions, only two dimensions (dialogic loop and generation of return visits) had a positive effect on digital diplomacy.

**The Effect of Digital Loop on Digital Diplomacy.** The results of the multiple linear regression analysis showed that dialogic loops had a positive effect on digital diplomacy.

*Dialogic loop* focuses on the public opportunity to ask questions to organizations; and organizations have the opportunity to respond to them (Kent and Taylor, 1998, in Kampf, Manor, Segev, 2015). The implementation of dialogic loops in Safe Travel application is applied to the Emergency Button feature. The Emergency Button is a feature used in an emergency. Indonesian citizens abroad can use the Emergency Button feature to send photos, record videos, contact the nearest Indonesian Representative and send important scenes (www.kemlu.go.id, accessed on August 15, 2018). Through this feature, it is very possible for the users to make contact with KEMLU RI to get the answers or information needed.

Meanwhile, in digital diplomacy, there are dimensions of public diplomacy, consular communication and response, and disaster response.
Public diplomacy is the act of making contact with audiences when they migrate online by utilizing new communication tools to listen to and target important audiences to deliver messages and affect influencers online (Hanson, 2012, in Adesina, 2017: 3).

Moreover, the implementation of *digital loops* in Safe Travel application is considered successful in conveying the principles of public diplomacy, consular communication and response, and disaster response (three of digital diplomacy dimensions). Through the *Emergency Button* feature, the users can make contact with KEMLU RI. From these interactions, KEMLU RI can target its goals and deliver messages to Indonesian citizens abroad.

Consular communication and response are activities to create a direct communication channel with citizens travelling abroad in which the communication can be managed in critical situations (Hanson, 2012, in Adesina, 2017: 3). On another side, disaster response is an activity to utilize the power of communication technology in responding to a disaster (Hanson, 2012, in Adesina, 2017: 3).

According to its name, the *Emergency Button* feature can be utilized by the users to report important events, either emergency situations or disasters, experienced during their overseas trips in the form of photos or videos.

However, even though it has been equipped with a digital loop feature, Safe Travel application practically tends not to be used by Indonesian Migrant Workers (TKI). The results of interviews conducted with several Indonesian Migrant Workers in Singapore, namely Novia, Rina Saldiah, and Farida showed that they did not have to bother themselves to make contact with KEMLU RI or the government in Singapore. They just relied on their friendship bond in the community of fellow Indonesian Migrant Workers in Singapore to overcome the problems faced. They also got support from their employers and distributing agents.

*The Effect of Generation of return visits on Digital Diplomacy.* The results of the multiple linear regression analysis showed that *the generation of return visits* had a positive effect on digital diplomacy.

*Generation of return visits* focuses on continually updating information, adjusting information to public needs, and holding a Q&A forum with experts (Kent and Taylor, 1998, in Kampf, Manor, Segev, 2015).

The implementation of *generation of return visits* in Safe Travel application is applied in the features of *Complete Information on World Countries and Indonesia Nearby*.

The feature of *Complete Information on World Countries* contains the country status, access to RI Representative services, list of 130 RI Representatives, local laws and customs, currency, tourism and worship objects, halal culinary, and infographics (www.kemlu.go.id, accessed on August 15, 2018). Through this feature, the users can always update the information needed.

*Indonesia Nearby* is a feature providing information about other Indonesia citizens nearby the user's location when travelling abroad. With this feature, Indonesian citizens can each other get acquainted, chat and develop a network of friends to strengthen the community of Indonesian citizens abroad (www.kemlu.go.id, accessed on August 15, 2018). This feature can be the beginning of the emergence of a Q&A forum between fellow users in which information exchange occurs.

Meanwhile, in digital diplomacy, there are knowledge management and information management dimensions.

Knowledge management is utilizing the knowledge of a department and government so as to be maintained, shared and used optimally to pursue national interests abroad (Hanson, 2012, in Adesina, 2017: 3).

The implementation of *generation of return visits* in Safe Travel application is considered successful in channelling knowledge management functions in digital diplomacy. This is applied to the feature of *Complete Information on World Countries* in which the users can access the database of KEMLU RI’s knowledge as information needed when travelling abroad.
Information management is the collection of information flows to help policy making as well as anticipate and respond to emerging social and political movements (Hanson, 2012, in Adesina, 2017: 3).

As for the information management dimension, the implementation of generation of return visits in Safe Travel application is presented in Indonesia Nearby feature. Through this feature, Indonesian citizens travelling abroad can gather or form forums both offline and online in which their proposals or voices can contribute to the betterment of Indonesia foreign policies.

Table 8 – Social Media of KEMLU RI

<table>
<thead>
<tr>
<th>Social Media</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twitter</td>
<td>The content is more about policies and substance of information delivered in formal language as the audiences are more critical over these. The use of Twitter has both positive and negative responses from the informants.</td>
</tr>
<tr>
<td>Facebook</td>
<td>The content tends to be lighter (tourism, culinary, etc.) and presents more photos or infographics. The use of Facebook tends to get a positive response from the informants.</td>
</tr>
<tr>
<td>Youtube</td>
<td>The content contains video cut-offs of the activities and press conference of the Minister or KEMLU. The use of youtube tends to get a positive response from the informants.</td>
</tr>
<tr>
<td>Instagram</td>
<td>The content tends to be lighter (tourism, information on student exchange learning, country knowledge, culinary, etc.). Message delivery is dominantly visual such as activity photos, posters, videos, and infographics. This content targets millennial youth. The use of Instagram gets a positive response from the informants.</td>
</tr>
</tbody>
</table>

However, the implementation of generation of return visits is biased because KEMLU RI does not focus only on Safe Travel application as a protective media for Indonesian citizens abroad. According to the results of the interview with Aji Nasution, the Head of the Subdirectorate for Media, KEMLU RI does not only focus on Safe Travel application but also utilize social media such as Twitter, Facebook, Youtube, and Instagram.

Aji also stated that each of the social media has a different perspective and language style despite similar disseminated information. The following is the role mapping of each social media used by KEMLU RI (according to Aji) as mentioned in Table 8 above.

The Effect of Usefulness of Information on Digital Diplomacy. Based on the multiple linear regression analysis results, usefulness of information had no effect yet was positively related to digital diplomacy.

Usefulness information is information derived from sources that are reliable, useful and relevant to the public (Kent and Taylor, 1998, in Kampf, Manor, Segev, 2015).

In the researchers’ perspectives, the effect of usefulness of information was invisible because 90.5% of the respondents recognized that they had only less than a week in using Safe Travel application. As a result, they could not experience the actual function of Safe Travel application and skipped information provided by KEMLU RI in the application as a trusted source.

This indicates that the publication of the introduction of Safe Travel application conducted by KEMLU RI is not on target.

As stated by Aji Nasution in the interview, KEMLU RI has run various socializations to introduce Safe Travel application to the public, including:

- The launch in the form of an event which was only done once at Grand Central Mall – West Jakarta.
- Talk shows on BRAVA Jakarta radio.
- Introduction through KEMLU RI social media

The impact of the socialization that has been explained by KEMLU RI is considered not to reach the public who should be the target users of Safe Travel application. This is shown by the facts that:

- 71.4% of the respondents obtained the information of the presence of Safe Travel application from various sources. That is, the respondents knew directly the application neither from the activities nor the communication line of KEMLU RI. In other words, the socialization conducted by KEMLU RI about Safe Travel application has no effect.
Other target users of Safe Travel application should be Indonesian Migrant Workers (TKI). However, the results of the interviews with several TKIs in two different countries showed that they neither use nor even know Safe Travel application.

Novia, Rina Saldiah and Farida, Indonesian Migrant Workers in Singapore, explained that when they had problems in the country, they usually asked for help to their friends in the community of fellow Indonesian Migrant Workers in Singapore or to their employers and agents who distributed them.

Similarly, Siti Nurbayati, Solehah, and Rismayanti, Indonesian Migrant Workers in Taiwan, recognized that they did not know about the launch of Safe Travel application by KEMLU RI, so they never used it. Thus, whenever they were in trouble, they only could share it and ask for help to their community.

The Effect of the Interface Usability on Digital Diplomacy. The results of the multiple linear regression analysis showed that the interface usability had no effect yet was positively related to digital diplomacy.

The interface usability is an easier and more textual navigation than online graphics contents (Kent and Taylor, 1998, in Kampf, Manor, Segev, 2015).

Similar to usefulness of information, the function of the interface usability dimension could not be experienced by the respondents due to the short duration of the application usage. 90.5% of the respondents stated that they had just downloaded Safe Travel application for less than a week. This again shows the lack of impact of the socialization that has been carried out by the Ministry of Foreign Affairs of the Republic of Indonesia.

The Effect of Conservation of Visitors on Digital Diplomacy. Viewed from the multiple linear regression analysis results, the dimension of conservation of visitors had no effect and led to a negative value on digital diplomacy.

Conservation of visitors is an activity to avoid publications encouraging the public not to give feedback or make another visit (Kent and Taylor, 1998, in Kampf, Manor, Segev, 2015).

The implementation of conservation of visitors in Safe Travel application has no effect even potentially decreases digital diplomacy. The researchers consider that this can occur due to several factors as follows:

- No control over what information is available and what the information form is like in Safe Travel application. This is supported by the opinion of Aji Nasution, the Head of the Subdirectorate for Media stating that Safe Travel application is still in the development stage.
- Minimum respondent involvement, viewed from the short duration of the application usage and the application introduction sources which are mostly not from KEMLU RI socializations.

CONCLUSION

Based on the results of the multiple linear regression analysis, only two of five dialogic communication dimensions positively affects digital diplomacy, namely digital loop and generation of return visits. Compared to dialogic loops, generation of return visits can provide more thrust to digital diplomacy, indicated by its greater coefficient. Meanwhile, usefulness of information, the interface usability, and conservation of visitors have no effect on digital diplomacy. Among the dimensions that have no effect, only conservation of visitors has a negative relationship with digital diplomacy.

There is a difference in understanding communication strategies of Safe Travel application between KEMLU RI and the target public. According to KEMLU RI, Safe Travel application has been successfully launched with the support of some socialization as a medium for introducing Safe Travel application.

In contrast, according to the reality in the field, two of the target users of Safe Travel application indicate that the socialization does not impact the communication strategies or introduction of Safe Travel application to the public.

Moreover, students majoring in the Communication Study Program of Bakrie University who fall within Generation Z as one of the target users of Safe Travel application are
considered to newly know about the application. The respondents of this research did not get the information of the application launch or introduction directly from the KEMLU RI communication line.

Additionally, the other target users of Safe Travel application are Indonesian Migrant Workers (TKI). This research involved Indonesian Migrant Workers in two countries (Taiwan and Singapura). However, according to their recognition, most of them neither know nor even use Safe Travel application. They tend to rely on community functions, channelling agents, and their employers as their supporting systems when they face problems while working abroad.

Optimization of KEMLU RI in each of its timelines is still insufficient so as to cause a bias where there is no integration between online and offline communication strategies that should not only be socialized domestically but also globally.

In this regard, KEMLU RI is expected to reconduct analysis of the target mapping of Safe Travel application and rearrange the appropriate communication strategies used for each target user of the application. Digital platform management (Twitter, Facebook, Youtube, Instagram and Safe Travel application) must continue to be developed in terms of contents according to the characteristics of each social media and its target users.

REFERENCES


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ANALYSIS OF SUITABILITY AND CARRYING CAPACITY OF WATERS FOR SEAWEED (EUCHEUMA COTTONII) CULTIVATION BUSINESS IN MANDAR BAY, WEST SULAWESI OF INDONESIA

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ABSTRACT
This research was aimed to analyze the water suitability and environmental carrying capacity for seaweed (Eucheuma cottonii) cultivation business in Mandar Bay of West Sulawesi. The results of this research are expected to be a reference to consideration in the management of sustainable seaweed cultivation business. This research is an explorative research using the method of direct survey and measurement in the field. The data collected were analyzed spatially with geographic information system (GIS) approach and then outlined descriptively. Based on the spatial analysis results (overlay) of the water suitability for seaweed cultivation in Mandar Bay of West Sulawesi, it was obtained that the total water area in Polewali District reached 1,252.66 ha, covering the suitable water area of 65.39 ha and the conditionally suitable water area of 1,187.27 ha. If divided based on the subdistrict area, the water suitability area of the five coastal subdistricts in Polewali District respectively was as follows: 1) Polewali Subdistrict’s suitable water area of 13.16 ha (1.05%) with the water carrying capacity of 2.6 ha, the number of cultivation units reaching 5.2, and the production rate of 3.9 tons per year; 2) Wattang Subdistrict’s suitable water area of 0 ha (0%); 3) Lantora Subdistrict’s suitable water area of 11.3 ha (0.9%) with the water carrying capacity of 2.26 ha, the number of cultivation units reaching 4.52, and the production rate of 3.39 tons per year; 4) Takatidung Subdistrict’s suitable water area of 39.85 ha (3.18%) with the water carrying capacity of 7.97 ha, the number of cultivation units suitable to developed of 15.94, and the current production level of 11.95 tons per year; and 5) Manding Subdistrict’s suitable water area of 1.08 ha (0.09%) with the water carrying capacity of 0.22 ha, the number of cultivation units to be developed of 0.44, and the current production rate of 0.33 tons per year.

KEY WORDS
GIS, land suitability, land carrying capacity, Eucheuma cottonii, seaweed, chemistry.

Polewali Mandar is one of the regions producing seaweed in West Sulawesi. The production of seaweed (Eucheuma cottonii) in Polewali Mandar Regency has decreased (DPK Polman, 2015). This potential needs to get prioritized for its handling so that the opportunity to increase the production of aquaculture in the future will be even greater. An identification of water resource feasibility for the development of aquaculture is highly important in the framework of spatial planning that is in line with its allocation to avoid conflicts of interests of the marine and fishery sector with other sectors. An identification of suitable locations can also be used as an initial indicator of the success of a cultivation business in accordance with the type of commodity and the cultivation technology to be applied (Dahuri, et al., 2001).

Coastal development for seaweed cultivation activities cannot be separated from the water suitability factor. The main factors that become obstacles for the development of seaweed cultivation in Indonesia are the incompatibility of water locations and the unsuitable parameter data of water quality. Besides, the determination of cultivation locations is often based on people's feeling (Hartoko and Helmi, 2004). Determination of water suitability is highly significant to know because it will make certain about the water locations that are suitable for the allocation of cultivation business so that the locations can be utilized as maximally as possible. Furthermore, Hardjowigeno (2001) stated that land suitability is the
feasibility of lands for a specific purpose of use by determining the land value (class) and the land use pattern associated with the potential of its territory so that a more targeted land use for cultivation business and its sustainability can be managed.

One of the alternative analytical approaches used to facilitate people in knowing the water suitability in a large territory or area is by using Geographic Information System (GIS) technology (Hambali, 2012). It is further said that using the spatial analysis with Geographic Information System (GIS), it will be obtained the class of water suitability for seaweed cultivation (Longdill, et al., 2008).

This research was aimed to analyze the water suitability and environmental carrying capacity of seaweed (*Eucheuma cottonii*) cultivation business in Mandar Bay, West Sulawesi. The results of this research are expected to be a reference to consideration in the management of sustainable seaweed cultivation business.

**METHODS OF RESEARCH**

This research was conducted in a seaweed production area of Mandar Bay, located at 119° 22' 03.971" - 119° 17' 34.744" E dan 03°23' 23.616" - 03° 26' 33.581" S Polewali District, Polewali Mandar Regency, West Sulawesi Province, Indonesia from October to December 2015.

This research is a type of explorative research by carrying out a direct survey and measurement in the field using a quantitative approach with hypothesis testing for collecting actual data and information in the research location related to the seaweed cultivation activities in Mandar Bay (Sugiyono, 2008).

The sampling was conducted on 12 stations (Figure 1) using purposive sampling with the consideration of the seaweed cultivation business activities. Each of the observed locations was very likely to represent or describe the state of the waters. According to APHA (1998), prior to undertaking a measurement and sampling, it should first determine the coordinate points using Global Positioning System (GPS).

![Figure 1 – Sampling Location](image)

Biophysical data such as temperature, salinity, brightness, depth, current velocity, pH, dissolved oxygen, COD, BOD, nitrate, phosphate, and pest were obtained through direct observation and measurement. Besides, interviews and questionnaires were also used to obtain the data in relation to the seaweed farmers.

The suitability analysis was done on the basis of limiting parameters according to its utilization in terms of the ecological aspect. The initial criteria include ecological factors such as temperature, salinity, brightness, water depth, current velocity, pH, dissolved oxygen, COD, BOD, nitrate, phosphate (Hartoko and Kangkan, 2009; Anwar and Burhanuddin, 2016; Semedi, et al., 2016). Furthermore, the water carrying capacity was eventually determined by the results of GIS analysis in the form of the locations and water area that were suitable with the required criteria.
Based on the feasibility assessment system according to Bakosurtanal (1996) and DKP (2002), the feasibility for seaweed cultivation is categorized into four classes covering Highly Suitable for the score range of >92 – 115, Suitable for the score range of >69 – 92, Conditionally Suitable for the score range of 46 -69, and Not Suitable for the score range of < 46.0.

The stages in determining the analysis of environmental carrying capacity based on the water capacity for seaweed cultivation using a long line system according to Rauf (2007)’s formula are as follows:

Determination of water suitability area is obtained from the results of suitability analysis using GIS.

Determination of water capacity value uses the following formula:

$$KP_{RL} = \frac{(p_2 \times l_2) - (p_1 \times l_1)}{(p_2 \times l_2)} \times 100 \%$$

Where: $KP_{RL}$ = Water Capacity (%); $p_1^l$ = Length of managed cultivation unit (m); $l_1$ = Width of managed cultivation unit (m); $p_2^l$ = Length of suitable cultivation unit (m); $l_2$ = Width of suitable cultivation unit (m).

Calculation of the carrying capacity of seaweed cultivation uses the following formula:

$$DD_{RL}KP = LPS_{RL} \times KP$$

Where: $DD_{RL}KP$ = Carrying capacity of seaweed cultivation (ha); $LPS_{RL}$ = Suitable water area for seaweed cultivation (ha); $KP$ = Water capacity (%).

Area Determination of seaweed cultivation units uses the following formula:

$$LUB_{RL} = PUB_{RL} \times LUB_{RL}$$

Where: $LUB_{RL}$ = Area of cultivation unit (ha); $PUB_{RL}$ = National standards-based length of seaweed cultivation unit (m); $LUB_{RL}$ = National standards-based width of seaweed cultivation unit (m).

The number of seaweed cultivation units can be determined using the following formula:

$$JUB_{RL}KP = DD_{RL}KP / LUB_{RL}$$

Where: $JUB_{RL}KP$ = Number of seaweed cultivation units (unit); $DDP_{RL}KP$ = Water carrying capacity of seaweed cultivation (ha); $LUB_{RL}$ = Area of one seaweed cultivation unit (m²).

RESULTS AND DISCUSSION

The measurement results of water quality parameters obtained a temperature range of 30.0 – 30.6°C, salinity range of 29.6 – 30.6 ppt, brightness range of 0.5 – 9.6 m, depth range of 0.7 – 15.8 m, current velocity of 3.5 – 8.3 cm/s, pH range of 7.28 – 7.96, DO range of 2.05 – 2.45 ppm, nitrate range of 0.00010 – 0.00315 mg/l, phosphate range of 0.0069 – 0.1607, BOD range of 1.85 – 9.79 mg/l, and COD range of 31.04 – 118.83 mg/l.

The following table shows the spatial analysis results (overlay) of water suitability for seaweed cultivation in Mandar Bay, West Sulawesi based on the determinants of seaweed growth including water depth, brightness, current speed, temperature, salinity, pH and DO, nitrate, orthophosphate, BOD, and COD.

Based on the table, it is shown that the total water area of Polewali District was 1,252.66 Ha covering the land suitability area of 65.39 Ha and the conditional suitability area of 1,187.27 Ha. If divided based on the subdistrict area, the water suitability area of the five coastal subdistricts in Polewali District respectively consisted of Polewali Subdistrict of 13.16
ha (1.05%), Wattang Subdistrict of 0 ha (0%), Lantora Subdistrict of 11.30 ha (0.9%), Takatidung Subdistrict of 39.85 ha (3.18%) and Manding Subdistrict of 1.08 ha (0.09%). In another side, the locations categorized into the class of Conditional Suitable indicated that the locations had quite heavy limiting factors for seaweed cultivation such as lack of oxygen, minimal nitrate and phosphate level, and the occurrence of pollutions. For more details, it can be seen in Figures 2 and 3.

Table 1 – Water Area, Conditionally Suitable Water Area, Suitable Water Area, Water Carrying Capacity, Number of Cultivation Units and Production in Polewali District

<table>
<thead>
<tr>
<th>No</th>
<th>Subdistrict</th>
<th>Water Area (Ha)</th>
<th>Conditionally Suitable Water Area (Ha)</th>
<th>Suitable Water Area (Ha)</th>
<th>Area of Water Carrying Capacity (Ha)</th>
<th>Number of Cultivation Units</th>
<th>Production/Dry (ton/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Polewali</td>
<td>245.05</td>
<td>231.89</td>
<td>13.16</td>
<td>2.6</td>
<td>5.2</td>
<td>3.9</td>
</tr>
<tr>
<td>2</td>
<td>Wattang</td>
<td>126.22</td>
<td>126.22</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Lantora</td>
<td>153.42</td>
<td>11.30</td>
<td>11.3</td>
<td>2.26</td>
<td>4.52</td>
<td>3.39</td>
</tr>
<tr>
<td>4</td>
<td>Takatidung</td>
<td>382.08</td>
<td>342.23</td>
<td>39.85</td>
<td>7.97</td>
<td>15.94</td>
<td>11.95</td>
</tr>
<tr>
<td>5</td>
<td>Manding</td>
<td>345.89</td>
<td>344.81</td>
<td>1.08</td>
<td>0.22</td>
<td>0.44</td>
<td>0.33</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,252.66</td>
<td>1,187.27</td>
<td>65.39</td>
<td>13.5</td>
<td>26.1</td>
<td>19.57</td>
</tr>
</tbody>
</table>

Data after processing, 2016.

It is assumed that the decreased production of seaweed cultivation in Polewali District for the last 2 (two) years was due to the utilization of land that exceeded the capacity of the aquatic environment. If viewed from the level of the utilization of waters in Polewali District, it was found that it exceeded the environmental carrying capacity with the level of water suitability area of 65.39 ha, the water carrying capacity area of 13.05 ha and the cultivation number of 26.1 units. Meanwhile, the level of water utilization reached 595 ha. Here is the more detail explanation if observed from each subdistrict.

Polewali Subdistrict obtained a suitable water area of 13.16 ha (the water utilization level of 60 ha) that could support the management of seaweed cultivation business with a 50 x 100 size-long line method of 2.6 ha in which the number of cultivation units was 5.2 with the production level of 3.9 tons per year.

Wattang Subdistrict obtained a suitable water area of 0 ha (the water utilization level of 25 ha), indicating that this location could not support the activities of seaweed (Eucheuma cottonii) cultivation business.

Lantora Subdistrict obtained a water area of 11.3 ha (the land utilization level of 210 ha) and this region had a suitable water carrying capacity of 2.26 ha with the number of managed cultivation units reaching 4.52 and production level of 3.39 tons per year.
Takatidung Subdistrict obtained a suitable water area of 39.85 ha (the water utilization level of 150 ha) and this region had a water carrying capacity of 7.97 ha with the number of cultivation units suitable to be developed as much as 15.94 and the current production level of 11.95 tons per year.

Manding Subdistrict obtained a suitable water area of 1.08 ha (the land utilization level of 150 ha) and this region had a water carrying capacity of 0.22 ha with the number of cultivation units suitable to be developed as much as 0.44 and the current production level of 0.33 tons per year.

CONCLUSION

Based on the spatial analysis results (overlay) of water suitability for seaweed cultivation in Mandar Bay, West Sulawesi, it is concluded that the total water area in Polewali District is 1,252.66 ha, consisting of the suitable water area of 65.39 ha and the conditional suitable water area of 1,187.27 ha. If divided based on the subdistrict area, the suitable water area of the five coastal subdistricts in Polewali Mandar District respectively is as follows: 1) Polewali Subdistrict’s suitable water area of 13.16 ha (1.05%) with the water carrying capacity of 2.6 ha, the number of cultivation units reaching 5.2, and the production rate of 3.9 tons per year; 2) Wattang Subdistrict’s water area of 0 ha (0%); 3) Lantora Subdistrict’s suitable water area of 11.3 ha (0.9%) with the water carrying capacity of 2.26 ha, the number of cultivation units reaching 4.52, and the production rate of 3.39 tons per year; 4) Takatidung Subdistrict’s suitable water area of 39.85 ha (3.18%) with the water carrying capacity of 7.97 ha, the number of cultivation units suitable to developed of 15.94, and the current production level of 11.95 tons per year; and 5) Manding Subdistrict’s suitable water area of 1.08 ha (0.09%) with the water carrying capacity of 0.22 ha, the number of cultivation units to be developed of 0.44, and the current production rate of 0.33 tons per year.

REFERENCES

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