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POTENTIAL USE OF VIRTUAL CURRENCIES IN MONEY LAUNDERING AND TERRORISM FUNDING IN INDONESIA

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ABSTRACT

Virtual Money emerge as payment instruments in recent years. Based on the report of the Indonesian NRA Team in 2015, virtual currency such as Bitcoin consider as Tindak Pidana Pencucian Uang (TPPU) emerging threat because the use of Bitcoin in Indonesia has been developed as an alternative payment of property transactions, luxury vehicles, beverage and accommodation. The aim of this study is to analyze the potential use of virtual currency in money laundering and financing terrorism in Indonesia. The absence of regulatory and oversight authorities, the use of vulnerable virtual currency is used for illegal transactions, money laundering and terrorism financing. The conditions of such transactions can open up opportunities for fraud and crime in various forms that can harm society. In addition to the virtual currency that has a vagueness underlying asset for its value, speculative virtual currency transactions can pose a risk of bubble that not only harms the public but also potentially disrupts the stability of the financial system.

KEY WORDS

Virtual currency, money laundering, terrorism funding, Indonesia.

Along with the development of science and technological advances that exist today has changed the lifestyle of society, one of them in the field of business transactions. At this time business transactions no longer require sellers and buyers to meet face to face and use cash money to conduct a business transaction, now business transactions can be done using the facilities of the virtual world or the internet. Internet (interconnection networking) is the name for a set of computer networks that connect academic sites, government, commercial, organizations, and individuals. The Internet provides access to telecommunications services and information resources to its millions of users that spread all over the world (Butarbutar, 2014).

Virtual Money emerge as payment instruments in recent years, there are many terms used to call it ie: Digital Currency, Virtual Currency, Crypto Currency and others. This virtual money is money that circulate in Cyberspace. This virtual money applies universally and does not follow certain countries’ currencies and the virtual money market is on demand from its users so that the exchange rate of this virtual money is very volatile and tends to be unstable. Virtual money is considered special because the virtual money is actually does not have any form and not real.

One of the virtual money that circulating in Indonesia is Bitcoin. Bitcoin is a peer-to-peer implementation of the proposal (b-money) by Wei Dai and Nick Szabo's Bitgold proposal. The principle of the system in general has been described in 2008 by Satoshi Nakamoto. Someone who participates in a bitcoin network has a wallet that stores some keystroke keypair.

But Bitcoin according to the Financial Action Task Force (FATF) report may pose a risk of money laundering and illegal expenditure such as for drug transactions, terrorism financing, or illegal (illegal) arms purchases. This risk arises because the use of bitcoin for anonymous transactions for illegal expenditure will be extremely difficult to trace. The FATF notes that the virtual currency has "attracted the attention of various criminal groups", including extremist organizations. Furthermore, the FATF in its report presents a number of interesting cases, but the actual prevalence and extent of exploitation of this technology by
terrorist groups and their supporters has not been very clear at this time and the ongoing information gap will continue to be explored.

According to Sarah N. Welling, money laundering begins with the existence of "illicit money" or "dirty money". (Sutedi, 2008) Money can get dirty in two ways, first, through tax evasion that is obtaining money legally, but the amount reported to the government for tax purposes is less than actually earned. And the second is to earn money through unlawful means, such as the sale of drugs or illegal drug trafficking, gambling, bribery or corruption, terrorism ), prostitution, arms trafficking, smuggling of alcohol, tobacco, pornography, smuggling of contraband alcohol, smuggling of people, and white collar crime ). (Sutedi, 2008)

Money laundering practices are initially made only for money earned from drug trafficking and similar drugs (illegal drugs) or known as illegal drug trafficking. But then, money laundering is made against money earned from other sources of crime as mentioned above. In fact, an internationally funded source of money derived from drug trafficking is not the main one. The main portion of the illicit money comes from tax evasion, flight capital, and irregular or hidden economies that are distinguished from the overly criminal economies. (Perbawa, 2015)

Flight capital includes flight capital for money provided by developed countries in the form of financial aid, which is not spent or invested in the country concerned, but then returned to developing countries such as illegal exported capital. This money is often placed in foreign banks that actually have given credit.

Based on the report of the NRA Indonesian Team in 2015, virtual currency such as Bitcoin is an emerging threat of Tindak Pidana Pencucian Uang (TPPU) because the use of Bitcoin in Indonesia has been developed as an alternative payment of property transactions, luxury vehicles, beverage and accommodation. In fact, in some locations in Indonesia has been available several ATM Bitcoin outlets. Bitcoin is also proven to be used in the transaction of buying and selling customer data online.

The aim of this study is to analyze the potential use of virtual currency in money laundering and financing terrorism in Indonesia

RESULTS AND DISCUSSION

A virtual currency or virtual money has been defined in 2012 by the European Central Bank as "a type of unregulated, digital money, which is issued and usually controlled by its developers, and used and accepted among the members of a specific virtual community. In 2014, the European Banking Authority defined virtual currency as "a digital representation of value that is neither issued by a central bank or a public authority, nor necessarily attached to a fiat money or currency, but is accepted by natural or legal persons as a means of payment and can be transferred, stored or traded electronically" (Zahudia and Amir, 2016)

VCs are digital representations of value, issued by private developers and denominated in their own unit of account. VCs can be obtained, stored, accessed, and transacted electronically, and can be used for a variety of purposes, as long as the transacting parties agree to use them. The concept of VCs covers a wider array of “currencies,” ranging from simple IOUs of issuers (such as Internet or mobile coupons and airline miles), VCs backed by assets such as gold, and “cryptocurrencies” such as Bitcoin. (Dong He et al, 2016).

As digital representations of value, VCs fall within the broader category of digital currencies (Figure 1). However, they differ from other digital currencies, such as e-money, which is a digital payment mechanism for (and denominated in) fiat currency. VCs, on the other hand, are not denominated in fiat currency and have their own unit of account (Dong He et al, 2016).

VC schemes comprise two key elements: (i) the digital representation of value or “currency” that can be transferred between parties; and (ii) the underlying payment and settlement mechanisms, including the distributed ledger system. VC schemes have different levels of convertibility to real-world goods, services, national currencies, or other VCs. Non-
convertible VCs (or closed schemes) operate exclusively within a self-contained virtual environment. Under these systems, the exchange of VCs with fiat currency (or other VCs) or its use in payments for goods and services outside of the virtual domain is significantly restricted. In contrast, convertible VCs (or open schemes) allow for the exchange of the VC with fiat currency (or other VCs) and for payments for goods and services in the real economy. The level of contact between convertible VCs and the real economy is much greater than is the case in closed schemes (Dong He et al, 2016).

![Diagram of Virtual Currency]

Source: IMF staff.

**Figure 1 – Virtual Currency (Dong He et al, 2016)**

Virtual money has several advantages that are (1) Security, unlike conventional counterfeit currency, the cryptographic rules applied to bitcoin keep their owners protected from the same risks. (2) As a global currency, even though each country has its own currency, virtual money remains present and enters it. Virtual money knows no national borders, does not waver due to political conditions in government, and is not affected by anything. (3) As a protector of inflation, the gold of virtual money is considered to be a protected value of inflation that can suppress excessive inflation. (4) As a Savings, virtual money is a new form of community savings that is applied with a system that is not troublesome. In addition to saving virtual money, all the usual financial intermediaries in banks can be eliminated. The holders also do not need to pay service fees and registration.

In the midst of these advantages, Virtual Money was also saved a number of major weaknesses, such as (1) Unstable, virtual money is a currency that is speculative. While there are not enough companies currently offering the purchase and sale of products with virtual money as a means of payment. (2) Very risky lost or stolen, as virtual currency, virtual money is stored in the form of digital file or known as wallet file. But wallet files stored on hard disk electronic equipment are very vulnerable to damage. In addition, the virus that attacks the hard disk can also make the virtual money stored vanish just like that. The digital wallet can also be hacked and stolen through malware.

The result of risk assessment of terrorism crime by the National Risk Assessment Team (NRA) of Indonesia showed that high-risk terrorism funds is transfered through electronic payment system, online payment system, system or New Payment Method, through business activities ; through jewelers / gold and motor vehicles; through the activities of foreign exchange exchange and through the carrying of cash both domestically and across national borders from and abroad by terrorist network (courier) including high risk transaction pattern in Indonesia.

Pusat Pelaporan Dan Analisis Transaksi Keuangan (PPATK) in the 2015 annual report states that the national risk assessment of the Terrorism Financing Crime (TPPT) resulted in several risk mapping including high-risk terrorism financing modes using domestic financing through donations to foundations, misuse of foundations, trading / business activities, as well as through criminal activity. The high-risk perpetrator profile of the individual is the student /
student and for the corporation / entity actors is the non profit organization (NPO). There are 9 (nine) regions that are at high risk of terrorism financing such as DKI Jakarta, West Java, Central Java, Banten, North Sumatra, Nanggroe Aceh Darussalam, South Sulawesi and NTB.

Executive Director of Policy and Supervision Department of BI Payment System Eni Panggabean explained, the current number of virtual currency that reached 1,400, one of them is bitcoin. The bitcoin is one of the largest virtual currency market capitalization. In addition to bitcoin, there is also ethereum, ripple, bitcoin cash, cardano, NEM, litecoin, and so on. According to BI data, the current market capitalization bitcoin reached 246 billion US dollars. The market capitalization of ethereum and ripple is 133 billion and 79 billion US dollars respectively. Thus, until January 13, 2018, total market capitalization of virtual currency has reached 752.542 billion US dollars. The figure is based on data from CoinMarketCap at http://ekonomi.kompas.com/read/2018/01/15/155246226/ingat-mata-uang-virtual-tak-hanya-bitcoin

Below are the dynamics of Bitcoin price in last year.

![Bitcoin international price chart](http://ekonomi.kompas.com/read/2018/01/15/155246226/ingat-mata-uang-virtual-tak-hanya-bitcoin)

**Figure 2 – Bitcoin international price chart (January 29, 2017 - 29 January 2018)**

*Source: coindesk.com*

Until January 29, 2018 the price of bitcoin in the international market is USD 11,694.47. While in Indonesia, bitcoin price at the same time is Rp 155,999,000. Lowest price Rp 6,000,000 the highest price of Rp 297,575,000 rose about 1,161.67% in the past year.

![Bitcoin price in indonesia](http://ekonomi.kompas.com/read/2018/01/15/155246226/ingat-mata-uang-virtual-tak-hanya-bitcoin)

**Figure 3 – Bitcoin price in indonesia (29 January 2017- 29 January 2018)**

*Source luno.com*

The results of Sean Foley et al (2018) research sshowed that 44 percent of bitcoin transactions and 25 percent of bitcoin users were associated with illegal activities. Their findings since April 2017 show that some 24 million bitcoin market participants use the virtual
currency specifically for illegal purposes. Bitcoin users are estimated to make 36 million transactions per year. The transaction value reached the range of 72 billion US dollars. Collectively, the researchers added, they have bitcoin with a value of 8 billion US dollars. One of the reasons bitcoin is so popular among criminals is that this virtual currency allows users not to use their real identity. However, transactions are not entirely anonymous, because every transaction is recorded by blockchain.

Indonesian Finance Minister Sri Mulyani stated that the Government urges people not to use virtual currency or bitcoin in trade and investment transactions. Because as a Bitcoin investment there is no basis and therefore prone to the use of the instrument for money laundering and terrorism financing.

This is reinforced by the Press Release of the Ministry of Finance of the Republic of Indonesia in January 22, 2018 concerning the Warning of the Use of Virtual Currency in Indonesia. That due to the development of virtual currency (cryptocurrency) based on distributed ledger technology, such as Bitcoin, which increasingly prevalent has become the attention of various world financial authorities given the enormous potential risks, not only to the user community but also its impact on the stability of the financial system. Observing the matter and the various polemics that accompany it, the Ministry of Finance hereby affirms that:

1. The use of virtual currency as a transaction tool to date has no formal basis. Referring to Act No. 7 of 2011 concerning Currency, it is affirmed that the currency is money issued by the Unitary State of the Republic of Indonesia and any transactions that have a purpose of payment, or other obligations that must be met with money, or other financial transactions conducted in the territory of the Unitary State of the Republic of Indonesia shall use the Rupiah. Therefore, the Ministry of Finance supports the policy of Bank Indonesia as the monetary authority and payment system for not recognizing the virtual currency as a valid payment instrument, so it is prohibited to be used as a legal means of payment;

2. Given the absence of regulatory authority and oversight, the use of virtual currency is prone to illegal transactions, money laundering and terrorism financing. The conditions of such transactions may open up opportunities for fraud and crimes of any kind that could harm the public; and

3. In addition to the risks arising from owning and / or trading virtual currencies that have uncertain underlying asset values, speculative virtual currency transactions may pose a risk of bubble that not only harms the public but also potentially disrupts the financial system stability.

But the virtual currency, especially Bitcoin already circulating in Indonesia and used in transactions. Bank Indonesia representative of Bali province office identified 44 businesses in the local area receiving virtual currency in transactions, among them using bitcoin. The Head of Bank Indonesia Representative of Bali Province, Causa Iman Karana, explained that 44 of them are engaged in hotel business, vehicle rental services, cafes, and tour packages. The results, obtained after the team from Bank Indonesia Representative of Bali Province, conducted a survey to a number of locations based on information from the community and information that develops in social media.

The central bank currently gives a warning in the form of reprimands and remind the business actors not to use virtual currency as a payment system anymore. But if they still found to do the practice, then the police will arrest them. Bitcoin, is one of the top five virtual currencies in the world such as ethereum, ripple, bitcoin cash, and cardano from a total of about 1,300 digital currencies.

Bank Indonesia has banned the virtual currency because it is not recognized as a valid payment instrument in Indonesia in accordance to Act No. 7 of 2011 concerning Currency. In that rule, the currency is the money issued by the Negara Kesatuan Republik Indonesia and any transactions that have the purpose of payment or other obligations that must be pay with money, or other financial transactions conducted in the territory of the NKRI must use the Rupiah. BI thinks the virtual currency is risky and full of speculation because no authority is responsible for it, there is no official administrator, there is no basis underlying the price of
the virtual currency and the value of trade is very volatile. As a result, vulnerable to risk inflation and prone to be used as a means of money laundering and financing of terrorism so as to affect the stability of the financial system and harm the public.

CONCLUSION

The absence of regulatory authority and oversight make the use of virtual currency vulnerable to be used for illegal transactions, money laundering and terrorism financing. The conditions of such transactions can open up opportunities for fraud and crime in various forms that can harm society. In addition to the virtual currency that has a vagueness considering underlying asset for its value, speculative virtual currency transactions can pose a risk of bubble that not only harms the public but also potentially disrupts the stability of the financial system.

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THE IMPACT OF REVOKING TRADE RESTRICTION ON THAILAND TOWARDS THE PRODUCTIVITY OF INDONESIA’S RICE DURING THE ERA OF ASEAN ECONOMIC COMMUNITY

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ABSTRACT
The establishment of the ASEAN Economic Community are due to a number of reasons, namely the financial crisis in 1997 to 1998. Western countries that are unsympathetic to negotiation, instigated to establish a new trade group on the Southeast Asia region. Furthermore, the competition between China and Japan to become the regional leader in Asia, led both countries to seek regional partnerships with other countries within the ASEAN jurisdiction. There is also the concern regarding the rapid economic growth in China and India, as well as the proliferation of preferential trade agreements.

KEY WORDS
ASEAN, economic community, trade restriction, simulation.

There are four concerns that are of focus for the AEC in 2015, which can be used by Indonesia as a momentum. Firstly, countries in the Southeast Asian region will be under a unified region of markets and production bases. Secondly, the AEC will be established as an economic area with a high rate competition, requiring policies such as competition policy, consumer protection, Intellectual Property Rights (IPR), taxation, and E-Commerce. Third, the AEC will be a region with an equally developed economy, with priority on Small and Medium Enterprises (SMEs). The competitiveness and dynamism of SMEs will be enhanced by facilitating their access to up-to-date information, market conditions, human resource development in terms of capacity building, finance, and technology. Fourth and final, the AEC will be fully integrated into the global economy through a system in order to improve coordination of the member states. Based on the ASEAN Economic Blueprint, the AEC is urgently required to minimize the gap between ASEAN countries in terms of economic growth by increasing the dependency of the member states within the establishment. The AEC can develop a meta-national concept within the food supply chain sector and produce a single trading bloc that can handle and negotiate with exporters and importers from non-ASEAN regions (Ario Baskoro, 2015).

METHODS OF RESEARCH
This research uses the Statistical Analysis System (SAS) software, in order to perform the simulation analysis to later built a statistical model. The model built is a simultaneous equation consisting of seven (7) structural models and two (2) identities. The data that are used in this research are collected from assortments of Time series data from Food Agriculture Organization (FAO) spanning from 1980 to 2013.

Structural equations are representations of endogenous variables and exogenous variables. The model built will produce the sign and the value of the parameter estimator in accordance to the economic theory.
This research is divided into three (3) blocs; firstly, the domestic rice market bloc (Indonesia); secondly, the ASEAN bloc Market and lastly, the global market bloc. The endogenous variables consist of APB RB QIN PB DK DK PITA MTH MUSIC MKIS, and the exogenous variables consist of PPUK PBL APBL RBL IN PND PTH ERTL KU T T ERI PUSA RIN MUSAL MTHL P JAG RUSA RTH DKPITAL PKIS ERKIS.

The structural equation consists of:

\[
\begin{align*}
\text{APB} &= a + b_1 \cdot \text{PB} + b_2 \cdot \text{PPUK} + b_3 \cdot \text{KUT} + b_4 \cdot \text{PJAG} + b_5 \cdot \text{APBL} + e \\
\text{RB} &= a + b_1 \cdot \text{PB} + b_2 \cdot \text{PPUK} + b_3 \cdot \text{RBL} + e \\
\text{PB} &= a + b_1 \cdot \text{PJAG} + b_1 \cdot \text{PND} + b_2 \cdot \text{PBL} + e \\
\text{DKPITA} &= b_1 \cdot \text{PB} + b_2 \cdot \text{PND} + b_3 \cdot \text{DKPITAL} + e \\
\text{MTH} &= b_1 \cdot \text{PTH} + b_2 \cdot \text{ERTH} + b_3 \cdot \text{ERTH} + b_4 \cdot \text{MTSH} + e \\
\text{MUSA} &= b_2 \cdot \text{ERI} + b_2 \cdot \text{PUSA} + b_3 \cdot \text{RUSA} + b_4 \cdot \text{MKIS} + b_5 \cdot \text{MUSAL} + e \\
\text{MKIS} &= a + b_1 \cdot \text{PKISA} + b_2 \cdot \text{RIN} + b_3 \cdot \text{ERKIS} + e
\end{align*}
\]

The identity equation consists of:

\[
\begin{align*}
\text{DK} &= \text{DKPITA} \cdot \text{PND} \\
\text{QIN} &= \text{APB} \cdot \text{RB}
\end{align*}
\]

Where:

- \text{APB} = Rice farmland;
- \text{RB} = Productivity;
- \text{PB} = Price of rice;
- \text{QIN} = Production of rice;
- \text{PPUK} = Fertilizer price;
- \text{KUT} = Agricultural credit;
- \text{PJAG} = Price of corn;
- \text{T} = Interest rate;
- \text{DK} = Rice Demand;
- \text{IN} = Income;
- \text{MIN} = Indonesia’s rice import;
- \text{QIN} = Production;
- \text{ERI} = Exchange rate of Indonesia;
- \text{PWL} = Global rice;
- \text{DKPITA} = Rice per capita demand;
- \text{RIN} = The value of Indonesian trade restriction;
- \text{DEER} = The value of American trade restriction;
- \text{RTH} = The value of Thailand trade restriction.

**RESULTS OF STUDY**

Prior to conducting the simulation analysis, it is necessary to conduct the analysis of model validation by looking at the value of the proportion of the bias (\(U_b\)), the proportion of distribution (\(U_c\)), and Theils’ statistic for Inequality coefficient (\(U_{theil}\)), its value can be seen in the following table:

**Table 1 – Validation of Indonesian Rice Trade Performance Model**

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>(U_{theil})</th>
<th>(U^m)</th>
<th>(U^b)</th>
<th>(U^c)</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>APB</td>
<td>0.0115</td>
<td>0.00</td>
<td>0.01</td>
<td>0.99</td>
<td>Area of Harvest Land (Hectare)</td>
</tr>
<tr>
<td>2</td>
<td>RB</td>
<td>0.0079</td>
<td>0.02</td>
<td>0.02</td>
<td>0.96</td>
<td>Productivity (Ton / Hectare)</td>
</tr>
<tr>
<td>3</td>
<td>QIN</td>
<td>0.0125</td>
<td>0.01</td>
<td>0.01</td>
<td>0.99</td>
<td>Production (Tons)</td>
</tr>
<tr>
<td>4</td>
<td>PB</td>
<td>0.2669</td>
<td>0.28</td>
<td>0.57</td>
<td>0.15</td>
<td>Price of Rice (Dollar)</td>
</tr>
<tr>
<td>5</td>
<td>DK</td>
<td>0.0167</td>
<td>0.01</td>
<td>0.07</td>
<td>0.99</td>
<td>Request of Indonesian Rice (Tons)</td>
</tr>
<tr>
<td>6</td>
<td>DKPITA</td>
<td>0.0169</td>
<td>0.01</td>
<td>0.00</td>
<td>0.99</td>
<td>Rice Demand Per Capita (Tons)</td>
</tr>
<tr>
<td>7</td>
<td>MTH</td>
<td>0.1272</td>
<td>0.14</td>
<td>0.08</td>
<td>0.78</td>
<td>Import From Thailand (Tons)</td>
</tr>
<tr>
<td>8</td>
<td>MUSA</td>
<td>0.1310</td>
<td>0.56</td>
<td>0.10</td>
<td>0.35</td>
<td>Import From America (Tons)</td>
</tr>
<tr>
<td>9</td>
<td>MKIS</td>
<td>0.0959</td>
<td>0.00</td>
<td>0.05</td>
<td>0.95</td>
<td>Import From Pakistan (Tons)</td>
</tr>
</tbody>
</table>

*Source: Processed FAO’s Data.*
It is mandatory that the analysis observes the value of the proportion of the bias (UM), the proportion of regression (UR) the proportion of distribution (UD) and also statistical Theils Inequality coefficient (U). The analysis can be used to evaluate the model's ability to clicking simulation analysis Forecasting (ex ante simulation) If the data shows RMSE, RMSPE and U Theils small as well as the value of R² the greater the model predictions the better. Theils coefficient value (U) ranges between 1 and 0, if U = 0 then the estimation is closer to perfection.

Table 2 – Basic Value of Indonesian Rice Economic Forecasting

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>Simulation Results</th>
<th>Deviation</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Actual Mean</td>
<td>Predicted Mean</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>APB</td>
<td>11278.0</td>
<td>11276.9</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>RB</td>
<td>4.3970</td>
<td>4.4069</td>
<td>-0.22</td>
</tr>
<tr>
<td>3</td>
<td>QIN</td>
<td>5.0048.4</td>
<td>50147.4</td>
<td>-0.00</td>
</tr>
<tr>
<td>4</td>
<td>PB</td>
<td>16.1694</td>
<td>11.2315</td>
<td>0.30</td>
</tr>
<tr>
<td>5</td>
<td>DK</td>
<td>33963.4</td>
<td>34047.8</td>
<td>0.24</td>
</tr>
<tr>
<td>6</td>
<td>DKPITA</td>
<td>0.000170</td>
<td>0.000171</td>
<td>0.01</td>
</tr>
<tr>
<td>7</td>
<td>MTH</td>
<td>6209.9</td>
<td>5621.1</td>
<td>9.48</td>
</tr>
<tr>
<td>8</td>
<td>MUSA</td>
<td>2803.5</td>
<td>3423.0</td>
<td>-31.9</td>
</tr>
<tr>
<td>9</td>
<td>MKIS</td>
<td>1941.4</td>
<td>1941.4</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td></td>
<td></td>
<td>6.02</td>
</tr>
</tbody>
</table>

Source: Processed FAO's Data.

The result of the simulation shows, the actual value and the prediction value, if the comparison of predictive value is not much different from the actual value, in which in this research it ranges from 0.00 to 31.9. The largest is MUSA (Import from America) variable value of 31.9, but the average devaluation value or deviation 6.02 is relatively small, thus it means that the prediction value can be used as the base value of the next simulation implementation.

Table 3 – Simulation on the Elimination of Trade Restrictions on Thailand (RTH = 0)

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>Simulation Results</th>
<th>Change</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Data Base</td>
<td>Simulation</td>
<td>Unit</td>
</tr>
<tr>
<td>1</td>
<td>APB</td>
<td>11276.9</td>
<td>11690.1</td>
<td>-413.2</td>
</tr>
<tr>
<td>2</td>
<td>RB</td>
<td>4.4069</td>
<td>4.3973</td>
<td>0.01</td>
</tr>
<tr>
<td>3</td>
<td>QIN</td>
<td>50147.4</td>
<td>51957.9</td>
<td>1.810.5</td>
</tr>
<tr>
<td>4</td>
<td>PB</td>
<td>11.2315</td>
<td>16.2597</td>
<td>-5.0282</td>
</tr>
<tr>
<td>5</td>
<td>DK</td>
<td>34047.8</td>
<td>33947.8</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>KPITA</td>
<td>0.000170</td>
<td>0.000170</td>
<td>0.00</td>
</tr>
<tr>
<td>7</td>
<td>MTH</td>
<td>6201.1</td>
<td>6244.2</td>
<td>-623.1</td>
</tr>
<tr>
<td>8</td>
<td>MUSA</td>
<td>3423.0</td>
<td>2762.0</td>
<td>661</td>
</tr>
<tr>
<td>9</td>
<td>MKIS</td>
<td>1941.4</td>
<td>1941.4</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: Processed FAO's Data.

The result of the simulation analysis on the elimination of trade restrictions on Thailand (RTH = 0) shows that there is a change in the use of UAS crops in Indonesia, which there is a decrease of up to 413 hectares per year, down 3.66 percent. This is because there is a tendency if trade restriction is abolished within the AEC then Indonesian government would prefer to import rice, however Indonesia does not import rice from Thailand. It imports its rice from Vietnam; as a result the use of land dedicated for harvest in Indonesia is declining. In addition, there is a trend of narrowing harvested land in Indonesia due to its function converted into non-agricultural land. From this simulation, it can be seen that the number of rice imported by Indonesian from Thailand is reduced amounting to 623.1 tons compared to import from Vietnam. The price of Thailand’s rice is higher than that of Vietnam, in 2035 amounted to 2282.62 dollars per ton, compared to the price of Vietnam rice which is 886.2 dollars per ton cheaper.
Table 4 – Implementation of Single Har on the Environment of ASEAN Economic Community PTH = PB

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>Simulation Results</th>
<th>Change</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Data Base</td>
<td>Simulation</td>
<td>Unit</td>
</tr>
<tr>
<td>1</td>
<td>APB</td>
<td>11276.9</td>
<td>11690.1</td>
<td>-413.2</td>
</tr>
<tr>
<td>2</td>
<td>RB</td>
<td>4.4069</td>
<td>4.3973</td>
<td>-0.095</td>
</tr>
<tr>
<td>3</td>
<td>QIN</td>
<td>50147.4</td>
<td>51957.9</td>
<td>-1810.5</td>
</tr>
<tr>
<td>4</td>
<td>PB</td>
<td>11.2315</td>
<td>16.2597</td>
<td>-5.03</td>
</tr>
<tr>
<td>5</td>
<td>DK</td>
<td>34047.8</td>
<td>33947.8</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>DKPITA</td>
<td>0.000171</td>
<td>0.000170</td>
<td>0.00</td>
</tr>
<tr>
<td>7</td>
<td>MTH</td>
<td>5621.1</td>
<td>6190.9</td>
<td>-569.8</td>
</tr>
<tr>
<td>8</td>
<td>MUSA</td>
<td>3423.0</td>
<td>2762.0</td>
<td>661</td>
</tr>
<tr>
<td>9</td>
<td>MKIS</td>
<td>1941.4</td>
<td>1941.4</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: Processed FAO’s Data.

In the process of simulation analysis, the single price variable was implemented for the countries in the ASEAN this is due to the trend of unification in the region of AEC. Numerous results can be observed from the implementation, for example the decline in the use land for the purpose of harvest of up to 413.3 hectares, or 3.66%. A decrease in productivity can also be seen by up to 51.95 tons / hectare, or down by 0.22 percent. The result of the simulation shows that price for crops decreased. The simulation shows that demand for rice has increased to 100 tons per year or by 12.29%. The simulation also shows the same price of rice between Indonesia and Thailand, in which rice imported by Indonesia from Thailand decreased by 569.8 tons per year or 10.14 percent. On other hand, rice imported by Indonesia from America increased by 661 tons or 19.31%. Rice imported from Pakistan did not seem to change.

The analysis of forecast conducted in this research, is with the intention to observe the prospect of the total imported rice from Thailand and Vietnam, as well as the price of rice in Indonesia, Thailand, and Vietnam throughout the year of 2014 to 2033.

**Forecast of Rice Imported from Thailand from 2014-2033.** The result of the forecast on rice import shows an increasing trend up till 2029, but a decline will happen on 2030 till 2033. The decline in rice imported from Thailand is about 3528.39 in 2033

![Figure 1 – Forecast of Rice Imported from Thailand from 2014 -2033](image)

**Forecast of Rice Imported from Vietnam from 2014-2033.** Vietnam, being one of the world’s largest rice producing country in the world should naturally be taken into account in the process. From the figure, it can be inferred that Indonesia will import more as years will come.
The result of the forecast on rice import shows an increasing trend up till 2033 but compared to the price of rice imported from Thailand of about 2282.62 dollars per tonne, 249.62 dollars per tonne more expensive. This can be one of the reasons that Indonesia decides to import its rice from Vietnam rather than Thailand.

Forecast of Thailand’s Price of Rice from 2014-2033. Price is a deciding factor for Indonesia for choosing its import destination, therefore it is necessary to observe and understand the trend price for rice in the southeast Asia region. The price of rice from Thailand increases in 2033 by 2282.62 dollars per ton, 249.62 dollars per ton more expensive compared to the price of Vietnam’s rice.

Forecast of Indonesia’s Price of Rice from 2014-2033. Indonesia is the third amongst the list of the largest rice producing country in the world, in addition the result of the forecast also shows that the tendency for price increase is the highest amongst the other countries in the southeast Asia region.
Indonesia’s price of rice is higher compared to other countries such as Vietnam and Thailand, in 2033 it will reach the price of 4,641.64 dollars per ton. 2,359.02 dollars per tons more expensive compared when to the price of rice from Thailand and 3,755.44 dollars per tons more expensive compared to Vietnam’s rice.

**Forecast of Vietnam’s Price of Rice from 2014-2033:**

There seems to be an increase in the price of rice imported from Vietnam in 2033 that is 886.2 dollars per tons cheaper than the price of rice imported from Thailand that is 2282.62 dollars per tonne.

**DISCUSSION OF RESULTS**

The result of the simulation on the elimination of trade restriction on Thailand (RTH = 0) due to the implementation of single price in ASEAN Economic Community (MEA), there is a change in the use of harvesting area in Indonesia which decrease to 413 hectares per year
or decrease 3.66 percent. This is because there is a tendency with the elimination of restrictions within the ASEAN Economic Community (AEC), the Indonesian government is more likely to import of rice, import destination country of Indonesia rice is from Country Vietnam. As for the reason for the import of rice to Vietnam because the price of rice country of Vietnam more nuts ah compared to Thailand, on the trend in the use of agricultural land in Indonesia has over governance to the designation of non-agricultural, reinforced with h acyl forecasting import rice Indonesia to Vietnam has increased to 2033.

From simulation analysis results in the single application environment ASEAN countries due to the incorporation of the countries in the ASEAN Economic Community (AEC), then there are some things that decrease cropland use covering an area of 413.3 hectares. Or 3.66%. Productivity decreased by 51.95 tons / hectare. Or down 0.22 percent. Rice prices decreased. From the simulation found that demand for rice has increased 100 tons or increased 0.29 percent. With the same price of rice between Indonesia and Thailand, the import of Indonesian rice from Thailand decreased by 569.8 tons or 10:14 percent, but instead import rice Indonesia to the United States has increased throughout large 661 tons or 19:31 percent, this is strengthened by the results of forecasting, where Indonesian price rice was highest in 2033 in comparison with other countries such as Vietnam and Thailand, reaching 4,641.64 dollars per tons. More expensive 3.75 5.44 dollars perton when compared with the price of rice from Vietnam and more expensive of 2,359.02 dollars compared with Thailand.

CONCLUSION

The simulation on the elimination of Thailand’s trade restriction (RTH = 0) resulted in the decrease of the harvested area in Indonesia of about 113 hectares per year or by 3.66%. The number of rice imported by Indonesia from Thailand is decreased to up to 623.1 ton per year.

Simulation p Application of single price for the establishment of the ASEAN Economic Community (AEC), resulting in a decrease in the use of cropland area of 413.3 hectares. a tau 3.66%. Productivity decreased by 51.95 tons / hectare. or down 0.22 percent. price rice has decreased, demand for rice has increased to 100 tons per year or an increase of 12:29 percent. Indonesian rice imports from Thailand decreased by 569.8 tons per year or 10.14 percent, but imports of Indonesian rice to the United States increased by 661 tons per year or 19.31 percent, respectively.

The result of forecast shows that there is an increasing trend of rice imported from Vietnam until the year 2033.

Indonesia’s price of rice is the most expensive compared to other countries like Vietnam and Thailand, in the Year 2033 reached it reaches the price of 4.641.64 dollars per tonne. 3755.44 dollars per tonne more expensive from Vietnam and 2,359.02 dollars per tonne compared to Thailand.

Increasing the import price of rice from Vietnam until 2033 is 886.2 dollars per tonne cheaper than the import price of rice from Thailand country that is 2,282.62 tons.

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ABSTRACT
This study aims to examine the difference between the performance of employees before and after e-government implementation. This research used quantitative approach with questionnaires distributed to 36 employees from the total population of 57 people at the Local Board for Finance and Asset Management in Tanggamus Regency. The results were tested using stepwise method with 3 variables of employee performance. The results show that there is significant difference in work quantity and on time working performance before and after e-government implementation; while, the quality of work does not show any significant difference. Considering Wilk’s Lambda, there is significant difference on the performance of employees before and after e-government implementation. This research suggests that there is the need to improve Standard Operational Procedures related to the process of monitoring and improvement of the quality of work. This research also recommends that e-government can be implemented in all local institutions, especially for public services.

KEY WORDS
E-government, employee, performance, working performance, public service.

Good governance practice is expected to affect better public services. However, to implement the good governance, the government needs to improve its systems and processes (Basu, 2004; Bakry, 2003). In the context of Indonesia, Presidential Instruction number 3, year 2003 on National Policies and Strategies on the Development of E-Government administers all Governors and Regents/Mayors at local government to take the importance steps in accordance with their respective duties, functions and authorities in order to develop and implement e-government (see Foley and Alfonso, 2009; Yildiz, 2007; Moon, 2000).

In the implementation of e-government, the role of employees in each institution cannot be avoided (Burn and Robins, 2003). There might be a correlation between the application of e-government and the performance of employees in the government institutions (Fagan, 2006; Kraemer and King, 2006). In this case, employees’ performance becomes the key for e-government implementation. This is relevant with the concept of ‘government to employees’ where ultimately, e-government application is intended to improve the performance and welfare of employees who work for government institutions as public servants (Meijer, 2007; Indrajit, 2006). Thus the argument is that there is a link between e-government implementation on the performance of government service to public (Schuppan, 2009; Aimee and Carol 2004). In sum, the performance of government’s employees is the subject of the public governance process itself (Taylor and Lips, 2008; Koh and Prybutok, 2003).

Implementing e-government, of course is not only waiting for the readiness of all employees and the community in understanding and using technology, but also through a good planning (see Gronlund, 2005; Gronlund and Horan, 2005; Laye and Lee, 2001). The
government has begun to implement the e-government initiatives in a very simple way. The Local Board for Finance and Asset Management at Tanggamus Regency has implemented Regional Management of Information System Application (SIMDA) for the budget seeking process. The Local Board for Finance and Asset Management at Tanggamus Regency is an autonomous institution led by a Head of the Board, established based on Regional Regulation Number 06, Year 2008. The function of the board is to implement the local leaders’ duties. Thus, the Governor or Mayor/Regent has a direct control to the Head of the Board though local secretary. The implementation of e-government will help the government in improving its public services (Adegboyeja, et al, 2004). According to Dharma (2003: 355), there are 3 dimensions of performance. They are the quantity of work, quality of work and timeliness/on time performance. Thus, it is interesting to see the difference in employee performance before and after e-government implementation through those three dimensions of performance.

METHODS OF RESEARCH

This study employed a quantitative approach since in this study the relationship between variables are causal and the aim of this study is to test the hypothesis among variables of performance. According Creswell (2014), data collection can be done through using research instruments, quantitative/statistical data in order to test the hypothesis that has been set out and to test the relationship between variables which are causal to the object of the study. The type of this study is explanatory research, as Creswell, (2014) said that explanatory study is the study to obtain data from a particular place through questionnaires as primary data.

Population is a generalization area which consists of objects or subjects that have certain qualities and characteristics set by the researchers to be studied and finally to be drawn of conclusions (Creswell, 2014). The population in this study is employees in the Local Board for Finance and Asset Management in Tanggamus Regency which is 57 people in total. However, the number of sample in this study is determined based on Slovin approach, with 36 respondents. Validity and reliability tests with the questionnaire as the main data were conducted. Descriptive statistics and Discriminant Analysis were employed.

RESULTS OF STUDY

Based on the data obtained from frequency distribution method, it can be concluded that generally, there is a positive effect on e-government implementation in the performance of employees at the Local Board for Finance and Asset Management at Tanggamus Regency in all variables which had been set out: the quantity of work, quality of work and on time working schedule. However, there is still the need to know whether all variables provide a significant difference or not. Thus, discriminant analysis method was used to examine the significant effects of the variables. Through the matrix of equality test, it is found that there is 95% of confidence level. Groups, 1 and 2, have similar matrix, with significant value/sig 0.339 which is greater than 0.05 (alpha). The assumption is that the covariance in each group is homogeneous, so further calculations could be continued (fulfilled assumption). In addition, the result can be drawn by looking at the log values of the determinants of each group from log table. The log values of group determinants before e-government implementation was 1.953. However, the log values of determinant group after e-government implementation is 1.869. The results of the two are relatively similar, indicating all variations of each group are equal.

By using the entry/remove method, results indicate that there are two variables having sig which is below 0.05. Variable on the quantity of work is 0,000. It is far from 0.05. Thus, from three variables, there are only two variables which are significant. In other words, the quantity of work and on time working schedule are the most influential variables, bringing changes to employee performance before and after e-government implementation. Furthermore, the number of Wilk’s Lambda is similar to the last digit of step 2 in making the
discriminant model. The Chi-Square number at 68,555 with a high level of significance shows a clear distinction between the two Groups (before e-government implementation and after the implementation). This means that there is a significant difference between employee performance before e-government implementation and after the implementation.

DISCUSSION OF RESULTS

Referring to research findings, in order to see whether there is significant difference between employee performance before and after e-government implementation at the Local Board for Finance and Asset Management at Tanggamus Regency, the situation can be explained through three dimensions of employee performance as follows: first is the comparison of work quantity. Based on data analysis, it can be seen through Enter and Remove variables. There was an elimination of variables which have no significant effect/influence. It is seen that the variable of working quantity has the highest statistic number at 97.035, with significance number at 0.000, meaning the significant number is far below 0.05, proving that there is a significant different between the quantity of work before and after the implementation of E-Government.

Moreover, there is a significant difference in the quantity of work after and before e-government implementation. Findings show that the significant impact on quantity of work leads to the positive outcome on employees’ performance, such as the achievement of job targets, increasing the results of work standards, the achievement of work programs that have been set out, alleviation of the workload, increased output or the results of jobs and several outcome related to the quantity of work. E-government implementation in this case refers the use of an application called the Local Information System (Sistem Informasi Daerah/SIMDA) on Finance which is able to improve good results and job performance in the Fund Disbursement Order (SP2D) since the application of finance includes data processing, management system and electronic working process. Thus, the purpose of e-government implementation in order to improve the quality of service in a more effective and efficient can be achieved.

Second is the comparison of working quality. From the frequency distribution analysis, it is found that there is the difference between quality of work before and after e-government implementation. However, the analysis has not been able to prove whether there is a significant difference in the quality dimensions of employees’ works. To find out this, the strategy was to use Enter/Remove variables, showing there is no significant effect on the quality of work. From the predetermined hypothesis, it has been found that there is no significant difference between the quality of work before and after e-government implementation, meaning that the quality of work becomes a variable that is not examined further. The reason is because the quality of work does not meet the assumption of discriminant (a removed variable).

Quality of work does not give a significant effect or change after e-government implementation. There are several reasons for that: 1) the definition of E-Government which is the electronic-based government and in this case, local government of Tanggamus using an application called SIMDA Finance to change a system of financial administration. Certainly, the readiness of the system is not the only successful determinant factor of E-Government since the human resource is also an inseparable factor in this case. So the failed of the implementation of E-Government in the purpose of improving employees’ performance in the sense of quality of work is due to lack of preparedness of employees at the Local Board for Finance and Asset Management at Tanggamus Regency where previously they used manual system, and turned into electronic systems. This unpreparedness certainly affects the quality of employees because employees as the operator or users of the application system have not understood and do not have a good skill associated with the software connected to nature of the work.

Third is the comparison of on time working schedule. For the entry/remove method, two variables can be included in the discriminant model. They are the quantity of work and on time working schedule. The variable of on time working schedule has the value at sig of F
which is below 0.05, i.e. 0.004. This means that the variable is to be removed. Furthermore, Wilks’ Lambda test of on time working schedule is also included with a significance value of 0.000. This means that the variable of on time working schedule is one of the variables that have significant differences between the two groups. There has been a significant change in the variable of on time working schedule after e-government implementation, comparing with the score before the implementation. Findings show that the significant difference before and after e-government implementation leads to positive aspect of speed and timeliness in performing work in relation to procedures, increasing the level of attendance, achievement of work in more effective and efficient, and other aspects related to punctuality. This means that there has been a significant difference between punctuality before and after e-government implementation.

The use of the application, of course, aims to cut the bureaucracy processes which have been considered as too long in process. The use of e-government on financial application at Local Board for Finance and Asset Management at Tanggamus Regency results on the increase of the speed and timeliness in completing a job. In accordance with the benefits of e-government implementation in more efficient government, coordination can be done through the use of technology. So, the process of financial administration in Tanggamus Regency has been implemented in shorter time.

Fourth is the employee performance comparison. Findings suggest that e-government implementation turned out to have a significant influence in terms of improving employee performance. The policy on e-government implementation significantly increases the quantity of work and on time working schedule, although in terms of quality of work there is no significant difference. However, in general, there has been a noticeable change in performance improvement. Based on Presidential Instruction Number 3, Year 2003 on National Development Policy and Strategy, there are 4 levels of actions that must be done in e-government implementation. However, the Tanggamus Regency does not include the first stage which is the preparation of human resources. E-government implementation system is actually able to increase the performance employees in the Local Board for Finance and Asset Management at Tanggamus Regency. However, ideally, a system built with the aim of facilitating the work of users must also be balanced with the quality of human resources who will operate the system.

CONCLUSION AND SUGGESTIONS

This study concludes: first, there is a significant difference in the quantity of work before and after e-government implementation. This variable is the highest score of significance among other variables. Second, after e-government implementation, the quality of work is a variable that does not show significant difference in the performance of employees in the Local Board for Finance and Asset Management at Tanggamus Regency. Thus, quality of work does not include the variables studied (the removed variable). Third, there is a significant difference in the variable of on time working schedule before and after e-government implementation. Fourth, of the three variables that have been studied, e-government implementation gives a positive effect toward two variables namely the variable quantity of work and on time working schedule. Thus, the implementation of electronic system has a significant effect towards the positive on the performance of employees at the Local Board for Finance and Asset Management at Tanggamus Regency.

This study recommends several actions or efforts to improve the performance of employees in the Local Board for Finance and Asset Management at Tanggamus Regency. First, the system or application built aims to increase the quantity of work and the speed to complete a job but the application was not necessarily able to improve the quality of existing work therein. Thus, there is the need to set up Standard Operating Procedure (SOP) to meet the requirements of existing information technology systems. So, it is expected to be able to improve the quality of work. Second, to further improve the performance of employees in terms of quality of work, there is the need a kind of training and technical guidance on understanding and having skills on specific technicalities related to the use of SIMDA.
Finance applications and administration procedures in Local Board for Finance and Asset Management at Tanggamus Regency. Thus, it is expected that the quality of work of employees will increase and affects the performance of employees.

Third, results suggest that e-government implementation can give a significant influence on the performance of employees in Local Board for Finance and Asset Management at Tanggamus Regency. It is expected that e-government based system can be applied to other local agencies or bodies under the local government, especially, to institutions where government apparatus directly have responsibilities to provide public services.

REFERENCES

AN INTENTIONALISM HERMENEUTIC STUDY ON THE INTERPRETATION OF EDUCATIONAL INVESTMENT

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ABSTRACT
This study aims to know and understand the meaning of educational investment by Yayasan Abdi Masyarakat Madani Balikpapan using an intentionalism hermeneutic approach. In this study, this intentionalism hermeneutic approach was intended to understand the interpretation of educational investment in the form of permanent lecturer scholarships based on the cultural and historical contexts covering “texts” to know the intention or purpose of the informants. This study conducted in-depth interviews with five informants who are the boards of Yayasan Abdi Masyarakat Madani (YAMM-Bpn) and STIE MADANI (Institute of Economic Science MADANI) of Balikpapan in relation to the scholarship program. From the results, it was found some interpretations of educational investment, defining: educational investment as the fulfillment of a rice plate; educational investment as a means to fulfill the need of self-esteem; educational investment as a means to create a moral duty. This study is expected to give a new perspective to the academic community of accounting in understanding the profits derived from the investment. This research also confirms that the profits of educational investment expected by its investors are not directly materialistic, but rather lead to social improvements, in this term referring to the improvements of education quality in Balikpapan City.

KEY WORDS
Educational investment, intentionalism hermeneutics, educational investment profits, qualitative accounting.

A scholarship is an award or grant provided by the government, private parties or particular institutions to targeted individuals or parties that have met the applicable requirements to ensure their continuity of education they pursue. The scholarship of postgraduate education, both domestically and abroad, seems to be booming in Indonesia. Such a scholarship mostly comes from the government of the Republic of Indonesia. Scholarship providers certainly do not carelessly grant the scholarship funds that much. Instead, the scholarship funds have already been prepared and considered carefully so that those funds can be distributed right on the targets. On another side, behind the grant of the scholarship funds, the scholarship providers definitely intend to gain “profits” (returns) from their programs as well. This kind of scholarship program can be said an investment.

Harbison (1985: 7) discussed the aim and meaning of education itself. According to him, education based on the fulfillment of a State’s needs is a philosophy of communist states while education based on the fulfillment of personal needs, desires, wishes, and expectations is a philosophy of liberal states. Pramodyo (2014) affirmed that the philosophies of communist and liberal states are all needed by Indonesia to prepare as best as possible in confronting ASEAN Economic Community (AEC) that has come into force since 2015, integrating all Southeast Asian Countries in various fields, mainly in the economic field, which certainly reinforces the statement saying that educational investment is highly needed in a country.

Moreover, Olivia (2017) stated that the high need of educators, especially lecturers, is reasonable because the growth of the number of lecturers is not directly proportional to the increasing need of education in society. Additionally, Billy (2016) revealed that students intend to have a master education because they want professionally to be lecturers. Malang
is the second largest city after Surabaya City located in East Java, Indonesia. Malang is often referred to as the city of education due to its large number of universities and schools. In total, there are approximately 80 universities in Malang.

Institute of Economic Science Madani of Balikpapan (STIE MADANI of Balikpapan) was established in 1995 under the auspices of Yayasan (foundation) Abdi Masyarakat Madani Balikpapan (hereinafter called YAMM-Bpn). STIE MADANI Balikpapan has been “Accredited B” by the National Accreditation Board with the vision and mission to prepare in short time human resources to be ready to plunge into the working world and to produce independent human resources in anticipating the information system of accounting, including taxation accounting, banking accounting, and computer accounting. YAMM-Bpn tries to seek new prospective lecturers to be placed in the Accounting Department of STIE MADANI of Balikpapan. STIE MADANI of Balikpapan requires permanent lecturers for its Accounting Department because this department still needs many permanent lecturers and dominates the scope of STIE MADANI of Balikpapan. For this effort, YAMM-Bpn intends to allocate scholarship funds to several students who will or are currently studying Master Education of Accounting in several top universities in Indonesia.

Educational investment is related to intellectual investment in terms of value creation. FASB No.6 stated that asset is a possible economic profit gained or controlled by a certain entity as a result of the previous transaction or event. This statement is a reference for a company or organization related to the intellectual investment that is required to fulfill two conditions so that its existence can be recognized as an asset, which is to provide future profits or added values derived from past transactions. If the accounting equation stating that assets include the liability (debt) and equity (capital) of a company or organization is again reviewed, it can be a basis of reference support that the scholarship funds issued by YAMM-Bpn should be recorded in the asset component, no longer an expense like the conventional accounting system we know today.

The reason for the use of Intentionalism Hermeneutics in this study was that the researchers tried to dig the meaning and interpret investment in the form of texts or words obtained from the informants. Sari (2014) raised the interpretation of profits for the medical profession (doctors) using Intentionalism Hermeneutic interpretation as her study approach. Her study tried to find and disclose the meaning of ‘profits’ in the doctor’s profession. The doctor’s profession is closely related to the expensive treatment cost. In addition, Sari (2014) revealed that not all doctors have such a material intention. There are still some doctors who do not put “money” as the embodiment of profits. By having three doctors as the informants, the study successfully discovered four meanings of ‘profits’ in the profession of doctors, namely profits in the form of savings, profits in the form of spirituality, profits in the form of dignity in the eyes of society and profits in the form of inner satisfaction using Intentionalism Hermeneutic approach. The interpretation results of ‘profits’ obtained from this research tend to be qualitative and do not prioritize the element of ‘profits’ in the form of money.

Sari & Triyuwono (2010) studied the interpretation of profits in educational foundations. They, in their study, tried to seek and reveal the meaning of profits from a different point of view namely educational foundation. A foundation categorized as a non-profit company (not prioritizing profit as its main operational goal) necessarily has no profit in its financial statements. However, as time passed, this study found “profits” in the financial statements made by one of the schools sheltered by the foundation. By using the Intentionalism Hermeneutic method, this research disclosed three meanings of profits, namely material profits, social profits and memorial profits. Material profits are still raised to be one of the interpretation results obtained in the study because there is a possibility that an institution keeps trying to gain profit from its business outcomes although the institution is engaged in the non-profit scope.

In the science of accounting, the researchers found a study discussing murabahah using Intentionalism Hermeneutic approach, which was conducted by Ernawati & Ludigdo (2012). Murabahah is a general concept of financing organized by banks and other sharia-based financial institutions in response to the restlessness of society about usury. In this research, Ernawati & Ludigdo (2012) had a purpose to understand the meaning of
murabahah by customers who did murabahah transactions in BMT. The strong reason for
the use of Intentionalism Hermeneutic approach in the research was that the researchers
could understand the cultural and historical aspects of customers in building their
interpretations of murabahah. The results of this research showed that the three informants
interpreted murabahah as selling and buying activities with a periodic system of payment that
is cheap, easy and social oriented. The historical context was indispensable in the study as a
means to know how the customers with their own personal background interpreted
murabahah practiced with BMT. On another side, the cultural context of BMT customers was
highly necessary for the research because it could be used as a means to know how the
customers with their own culture interpreted murabahah practiced with BMT. Sari (2014: 132)
explained that these historical and cultural contexts are used by Intentionalism Hermeneutic
interpreters to find what the authors (informants)’ intentions are contained in texts.

Critical hermeneutics is also used in a study conducted by Aprilianto, Wulandari, &
Kurrohman (2014) analyzing the reality of the use of accounting information by individual
stock investors on the Indonesia Stock Exchange by interviewing brokers, entrepreneurs,
and students. The results suggested that individual stock investors do not fully utilize
accounting information, particularly investors who use technical and non-fundamental
analysis. Meanwhile, Friston & Frith (2015: 129) studied the human communication using
Hermeneutics. Their study showed that Hermeneutics is not only used to interpret the texts
of ancient books but it also applies in verbal and non-verbal communication.

Based on the above studies, it can be concluded that Hermeneutics is a study to
interpret texts. Likewise, Hermeneutics in the field of accounting can also be used to interpret
texts in which the texts intended here are something that can be realized in writing, such as
profits and nominal realization of educational investment whose existence can be recorded in
financial statements. This research aimed to explore the meaning of educational investment
made by YAMM-Bpn using Intentionalism Hermeneutic approach. Educational foundations
are full of social values. The research on the meaning of educational investment in the
educational foundation becomes important because this research provides awareness to the
community that the scholarship provided by YAMM-Bpn is a form of human resource
investment in which the profits gained by the foundation are not only limited to dwelling on
economic reality. Educational investment interpreted using Intentionalism Hermeneutic
approach in this research seems to become a unique renewal because educational
investment is done to meet the intention and purpose of investors, one of which is to gain
profits of the investment.

Theoretically, the results of this research can contribute to the development of financial
accounting and capital markets, especially in the theory of Human Capital emphasizing that
the current human resources have met the criteria to be recognized as assets (investment)
that provide profits (benefits) in the future for a company or organization. Practically, the
results of this research can provide an understanding for the community in interpreting
educational investment along with its profits obtained by YAMM-Bpn so as to provide
awareness to the community that the profits gained from the results of an investment are not
only in the form of materials (money) but also other things that can give meaning to the
investors.

METHODS OF RESEARCH

Interpretive Paradigm as Part of Qualitative Approach. This research used a qualitative
approach because the object in this research is human, not thing. Kamayati (2016: 44)
explained that qualitative research is a research that produces descriptive data in the form of
written or oral words of people and their observed behaviors, which often uses qualitative
data in the form of interviews, observations, and documentation analyzed by researchers.
Moreover, this research used an interpretive paradigm. Interpretive paradigm, according to
Chua (1969: 613), derives from the Germanic philosophical interest in which its application
tends to the emphasis on language, interpretation, and understanding. This paradigm tries to
illustrate that humans are active beings that create their own social reality or world through
the giving of a meaning system, therefore Sarantakos (1993: 35-36) argued that this paradigm seeks to understand the world through common sense which contains a meaning along with the meaning system used by the community to make sense of the life they live. Also, this paradigm sees knowledge not used to explain and predict, but to understand. Meanwhile, Hoper & Powell (1985) defined that an interpretive paradigm also assumes that the social reality cannot be separated from the aspirations of the actors and it does occur socially.

**Intentionalism Hermeneutics as a Research Approach.** Subiyantoro and Triyuwono (2004) described Hermeneutics as a term derived from the Greek word of *hermeneuein* which means “to interpret”. This term has been long known since the 17th century with F. E. D. Schleiermacher as the pioneer. Additionally, Subiyantoro and Triyuwono (2004) explained that Schleiermacher viewed Hermeneutics as a projection of the phenomenon of language and the description of any text using a language with a well-structured discussion. Discussion structures can be used as a means to find the meaning of a sentence. If traced from the perspective of ancient Greek mythology, the word “Hermeneutics” actually comes from the word “Hermes”, that is the name of a god who serves as the Messenger of messages to be conveyed from God to mankind. Hermes is a messenger who is often illustrated as a mediator between man and God and assumes the responsibility of interpreting the messages of God from Mount Olympus into a language that human can understand. Hermes must be able to interpret the God’s messages into languages that human can understand by knowing well the human language (Butler, 1998; Mulyono, 2012: 15-16).

Initially, hermeneutics is only a means used as an effort to understand ancient Greek literature from which the word of hermeneutics derives, which later developed into a methodology used in the effort to explore and interpret the texts contained in the Gospels. The context of Hermeneutics pioneered by Schleiermacher tends to put forward the universal problems in the form of encountering things that are strange and allow for misunderstanding when we try to understand the thought through words conveyed by informants. Rasmussen (2002) stated that there are several philosophers who developed hermeneutics into a code (rules) of exegesis, such as Friedrich Ernst Daniel Schleiermacher; Hans-Georg Gadamer; Paul Ricoeur; and Jacques Derrida. Meanwhile, Sandage, Cook, Hill, Strawn, & Reimer (2008) told that in the age of Schleiermacher, hermeneutics was used as an approach to interpreting texts contained in the holy books. Today, hermeneutics is growing rapidly as Schleiermacher broadened his hermeneutical understanding for the formulation of textual interpretations outside the context of scriptures (holy books) such as the texts contained in literature and he extended hermeneutics to penetrate to the interpretation of any kind of texts. Ricoeur (1981) stated that the concept of “texts” becomes widespread because Schleiermacher does not see texts in the form of writing only but also oral speech. Thus, the concept of hermeneutics by Schleiermacher is better known as “Romantic Hermeneutics” or “Intentionalism Hermeneutics”.

The researchers decided to use Intentionalism Hermeneutics because this research aimed to interpret the texts derived from the interviews. Intentionalism Hermeneutics more emphasized on the interpretation of texts, in which the texts referred to here are something that can be poured through writing. Interpretation is a method used as an effort of understanding texts, focusing on the understanding of words and languages (Rutt, 2006). Human Resource Investment and its profits are components of accounting science that have a certain meaning or reality, in which accounting can be defined as a business language because it is related to the interpretation arising from stakeholders (Riahi & Belkaoui, 1980: 363; Hendriksen & Breda, 1992).

This research was conducted within the scope of *YAMM-Bpn* located in Kapten P. Tendean Street No. 60 (Gunung Pasir), Balikpapan City, East Kalimantan Province. The selection of informants in research is an important thing because the interview data in the form of voices will be then processed in the form of texts (Sarwono, 2006: 209). The data collection of this research used unstructured interview technique, which was by interviewing
5 (five) selected informants to obtain information in order to get the results as expected by the researchers.

The function of Hermeneutics is to interpret the meaning and message of a text as objective as possible accordingly with what is intended by the text (Saidi, 2008). Texts are standardized discourses through language. What has been standardized by writing is a discourse that can actually be expressed in the oral form, but the discourse is written because it is not spoken or said. According to Rosyidi (2010: 147), texts are discourses conveyed through writing. The data analysis process in qualitative research is done after the researchers have completed the process of collecting data by interviewing and recording. The researchers acted as the interpreters. The interpreters proxied the "texts" (data) with the information obtained from the informants through the interviews to know the intents or messages of what they conveyed (the authors' intents). Furthermore, the interpreters should look at and explore the historical and cultural contexts contained in the texts. The process of understanding can begin with the interpreter's own questioning about the texts standing in particular historical and cultural contexts which are intended to extract the authors' intents (Bartholomew, 1996: 121). Hess (1993) supports the frame created by Rahardjo suggesting that in understanding a discourse, there are five elements involved in it, including the interpreter, author intent, and texts that have historical and cultural contexts in it.

The historical context was greatly required in this research as a means to know how the informants with their own personal background interpreted educational investment obtained from YAMM-Bpn. Meanwhile, the cultural context was indispensable in this research because it could be used as a means to know how the informants with their own culture interpreted educational investment conducted by YAMM-Bpn. As explained above, Sari (2010: 132) stated that these historical and cultural contexts are used by Intentionalism Hermeneutic interpreters to find what the authors (informants)’ intentions are contained in texts. After all the contexts were linked and deepened, the next stage was interpreting the texts to discover the meaning of “educational investment” by the interpreters.

RESULTS OF STUDY

Dynasty of the Heart of Educational Investment Sympathizers: Overview of Informants. The first informant named Mrs. Kartini. Mrs. Kartini was born and raised in Balikpapan. She inherited the blood of Banjar tribe from her father named Abdul Wahab, S.H. who is the founder of YAMM-Bpn and the pioneer of the Accounting Academy of Balikpapan (Akademi Akuntansi Balikpapan-AAB) in 1995 in which the status of AAB currently has been raised by Directorate of Higher Education (Dikti) to be STIE MADANI of Balikpapan that we know today. Of her mother, she inherited the blood of Bugis tribe from Makassar. Mrs. Kartini finished her bachelor degree (S1) education in State University of Yogyakarta majoring in linguistics and her master degree (S2) education in the same university majoring in English literary translation. Her educational background that has nothing to do with the world of economics does not lessen the spirit and determination to bring YAMM-Bpn and STIE MADANI of Balikpapan to be better in the future. Mrs. Kartini is one of the initiators of the scholarship program of permanent lecturers for Accounting Department in STIE MADANI of Balikpapan.

The second informant named Mr. Putu. He inherited Balinese blood from his parents. Mr. Putu finished his bachelor degree (S1) education majoring at Economic Teacheship in Mulawarman Univesity, Samarinda. In the university, Mr. Putu also completed his master degree (S2) education majoring in Financial Management. He got his Doctorate (Dr.) by completing his doctoral degree (S3) education majoring at Micro in University of Tujuh Belas Agustus, Surabaya. Mr. Putu’s educational background that is associated with economics makes him trusted as the chairman of STIE MADANI of Balikpapan.

The third informant was Mr. Dimas, who was born and raised in Jakarta whose bachelor degree (S1) education background is Management in Trisakti University and master degree (S2) education background is also Management in University of Indonesia. Mr. Dimas’s educational background that is related to management makes him want to take part
in advancing education in Balikpapan City by becoming a lecturer in Management Department of STIE MADANI of Balikpapan as well as serving as the Assistant Chief I of Academic Affairs. He inherited Javanese blood from his father and Palembang blood from his mother. Mr. Dimas affirmed that there is no special feature or characteristic of the ancestral culture he follows related to education. He stated that the spirit embedded in himself for his education came from his parents. Hereinafter, Mr. Dimas then decided to contribute in developing the world of education through his statement that education is not merely a means of seeking diploma and academic degree but, more than that, education is self-awareness to gain knowledge (to study).

The fourth informant successfully interviewed by the researchers was the older sister of Mrs. Kartini. She is Mrs. Marda, a permanent lecturer at STIE MADANI of Balikpapan who also serves as the Assistant Chief II of Administration and Finance Affairs at STIE MADANI of Balikpapan as well as helps Mrs. Kartini in managing YAMM-Bpn operations. Mrs. Marda completed her bachelor degree (S1) education in University of Muhammadiyah Malang and her master degree (S2) education in Gadjah Mada University and Islamic University of Indonesia, Yogyakarta. Currently, she is undergoing her doctoral degree (S3) education in Airlangga University, Surabaya. Mrs. Marda was the first person known by the researchers in the scope of STIE MADANI of Balikpapan. She got involved in this research implementation while teaching and promoting the education of STIE MADANI of Balikpapan.

The last informant interviewed by the researchers was the Assistant Chief III of Student Affairs of STIE MADANI of Balikpapan. He is Mr. Amin. Mr. Amin’s bachelor degree (S1) education background is Administration of Mulawarman University while his master degree (S2) education background is Economic Science of Brawijaya University. Currently, Mr. Amin devoted himself as a lecturer in the Department of Management at STIE MADANI of Balikpapan with the academic position as an expert assistant. Mr. Amin was born from his father deriving from Kutai and his mother from Bugis Makassar. He has a family background that cares about education.

The cultural and historical contexts of the five informants above show that the informants have a good history of higher education background, supported by the family circumstances that are also willing to deploy themselves to the world of education. Thus, it can be said that the sense of care of higher education owned by the informants is formed by their own family environments. The informants seemed like a rank of “royal dynasty” which put forward the heart in the struggle for education in Balikpapan City by trying any effort, one of which is by promoting educational investment. For them, education is a bridge to a better life. The various ethnic and cultural backgrounds carried in the blood and bones of the informants suggest that all tribes and cultures in Indonesia have similarities in terms of support for good and beneficial education for mankind.

Should-not-be-Empty Rice Plate: Educational Investment as Fulfillment of Institutional Needs. Rice is the typical staple food of Indonesia whose existence now becomes an "addiction" that is impossible not to be met immediately. Talking about scholarship held by YAMM-Bpn, the researchers then interviewed Mrs. Kartini with more to-the-point questions. Here is the statement conveyed by Mrs. Kartini in response to the question:

“Actually the main goal of this scholarship program is to complete the lacking number of lecturers in our institution. Now then, to realize that goal, we try to adjust it to our vision and mission. As an example, for accounting, our target is to become the best accounting center at least in the scope of Balikpapan. As for what the needs of Accounting Human Resources will be like, that is what we will further check off, like we need a linear accounting workforce and so on. That is what we are looking for”.

Mrs. Kartini interpreted educational investment as the fulfillment of the targetted number of permanent lecturers. STIE MADANI of Balikpapan had an unequal ratio between lecturers and students so that such a scholarship program was an alternative means to create full-time lecturers in Accounting Department of STIE MADANI of Balikpapan. Similarly, Mr. Putu gave an explanation as follows:

“As the criteria for the scholarship, the first thing that should be noticed is the academic history. Because, according to the first experience at the beginning of this campus, we also
ever provided this kind of scholarship to those who were a fresh graduate. Indeed, they did their study here. But they did not come back after they completed their study, whereas the goal of the scholarship program was to get feedback from those who received it. Of course, the devotion should be in accordance with Tridarma (Three Functions) of colleges that starts from the teaching of community services because the college reputation depends on all the inside components, whether or not there is development, not only for the students but also the lecturers”.

According to his statement above, Mr. Putu defined educational investment as an investment in a certain period of time, in which “rice” that has been planted must be willing to grow and ready to become “warm rice” for all the academic community of Accounting Department at STIE MADANI of Balikpapan. Meanwhile, Mr. Dimas confirmed Mr.Putu’s statement as follows:

“To make an investment in the educational sector, particularly in a campus, it specifically may be difficult for us to find the educators. It is indeed that the Kopertis (Coordination of Private Universities) of the Ministry is directing every campus to invest their students by financing their study to become lecturers at the campus. It can be a reference. The direction indeed leads to it. Mrs. Mardatillah went far to Java just to seek lecturers/educators. However, at the end of the day, the wisest step is actually to send students to higher education. It could be a reference on how important it is to invest in capital”.

Based on his explanation, Mr. Dimas interpreted educational investment as the fulfillment of educators (teaching staff), which was then replied by Mrs. Marda with the following statement:

“As said by my friend, the point is actually like ‘this is our rice plate, so how should we keep our plate full of rice to eat?’ That is a very simple philosophy language, is not it? If then I am being asked, so how? Yes, it is clear that we already have the rice plate. But if we want to add meat or eggs, it needs supplements. However, to keep our plate full of rice, at least, there should be rice first. The point is how we keep it. The words ‘to keep it’ can mean to keep it up or just to keep it remain because the process may still not improve but at least we have to keep it as follows:

The main objective of the scholarship program held by YAMM-Bpn and STIE MADANI of Balikpapan is to meet the number of permanent lecturers at the Accounting Department of STIE MADANI of Balikpapan in accordance with the demand of Directorate of Higher Education as well as to make an equal ratio between the lecturers and students that can lead to ideal teaching and learning activities in the classroom. If “rice” is parable as an essential and urgent staple food, the informants above can be described as individuals who are concerned with the fulfillment of the targeted number of permanent lecturers who want to engage themselves in STIE MADANI of Balikpapan as a basic need, in which the applicable requirements and provisions remain to be the guidelines for its operation.

Fulfillment of the Need of Self-Esteem: Educational Investment as an Effort to Build Institutional Good Name (Reputation). YAMM-Bpn and STIE MADANI of Balikpapan hold the educational investment in the form of scholarship distribution so that the institution can get a good image of the surrounding community, which can increase the interest of the community to undergo lectures at STIE MADANI. Mrs. Kartini as the financial manager of YAMM-Bpn said that STIE MADANI of Balikpapan also provides scholarships to the students who are deemed worthy to receive it. Here is her statement:

“The first aim of the scholarship for our internal students is to promote our institution. Secondly, all private universities indeed have a particular student admission portion for those who have good achievement but less financially capable, and that is why we also provide such a portion”.

Mrs. Kartini defined educational investment as a form of social awareness. Although STIE MADANI of Balikpapan is categorized as a young educational institution, its determination and willingness to participate and advance the education sector in Balikpapan City are very big. Furthermore, Mr. Putu replied with the following statement:
“Actually, this investment will generate profits or benefits in the future, in which the number of students will increase. The increased number of students that is like a sort of spirals that will go up and up will certainly increase the profit as well”.

From the above explanation, it is clear that Mr. Putu interpreted educational investment as a means to attract public interest. Similarly, Mr. Dimas confirmed Mr. Putu’s statement with the following statement:

“It is not determined by our culture or region, but it tends to the quality of education. We must admit that we are still far behind Java although, yaa sorry to say, if compared to cities in Java region, our city may be more civilized, cleaner because most people here do not throw garbage carelessly, and more disciplined. However, viewed from the education sector, we still hardly meet the targeted quantity, let alone the quality. Above all, with the policy, we hope that all campuses, not only STIE MADANI, can send the native residents of Balikpapan to study in Java, in which after they complete their study, they can come back to Balikpapan and serve as educators to improve the educational quality here. Hopefully, all campuses can implement it”.

Through his review, the researchers obtained that Mr. Dimas defined educational investment as a means to improve the quality of education in Balikpapan. This is supported by the statement of Mrs. Marda that:

“Yes, some students may only look for titles or degree, but at least they have to struggle for it. If we as lecturers only concern on titles, why do not our students just buy for it? All is then finished, right? We want our students to fight for their titles. Titles are actually just the bonus. The most important is that the students have to know first why they look for a title? So that they will find and know about their capability, like ‘oh yaa my bookkeeping in the office is not well arranged’ or etc. They can finally know what mistakes they make”.

Mrs. Marda always gives such directions to her students with the intention that the students she teach have a good motivation related to their study at STIE MADANI of Balikpapan in the hope to create the good image and reputation of STIE MADANI of Balikpapan in the eyes of the surrounding community that STIE MADANI of Balikpapan seriously organize the educational program.

Talking about the scholarship organized by STIE MADANI of Balikpapan, Mr. Amin explained that STIE MADANI of Balikpapan opens opportunities for its students to get the scholarships to support the educational process of those who are academically good but less financially capable. Here is his statement:

“We have to always give spirit to make them more improved in the future. Our main vision is indeed to advance education; one of the ways is by providing the scholarship program that provides the students with the ease, facilities, and infrastructure to study in this campus so as to attract others’ interest to study here, automatically increasing the education sector”.

Mr. Amin interpreted educational investment as a means to obtain a good image from the community as well as to create the campus’ attractiveness so as to make STIE MADANI of Balikpapan better known by the public.

Another aim of the scholarship grant by YAMM-Bpn and STIE MADANI of Balikpapan is to increase the “self-esteem” of STIE MADANI of Balikpapan. Of course, a campus that is capable of holding scholarships on a large scale will be able to trigger curiosity as well as good praise from the academic community and the wider community. STIE MADANI of Balikpapan is not half-hearted in prioritizing its vision and mission to advance the education sector in Balikpapan by organizing continuously the scholarship program so that people will surely put their heart and respect to the campus of STIE MADANI Balikpapan, which also can be interpreted as the rise of the campus’s self-esteem in the eyes of the wider community.

Creating “Moral Duty” from a Sense of Pride: Educational Investment as a Self-Actualization Effort for the Recipient. YAMM-Bpn and STIE MADANI of Balikpapan hope that this scholarship program can create a sense of pride to the recipients influencing on the recipients’ totality in carrying out their devotion or dedication to the education sector within the scope of STIE MADANI of Balikpapan in particular and Balikpapan City in general. The
scholarships are expected to create a sense of desire of the recipients to use all their capabilities to achieve the goal, which we know as “self-actualization.”

The recipients of the permanent lecturer scholarships and internal scholarships from YAMM-Bpn and STIE MADANI of Balikpapan have a common goal with the scholarship providers, which is to advance education. Therefore, self-actualization is naturally one of the interpretations of educational investment that is upheld by scholarship providers so as to create symbiotic mutualism conditions with the totality of the recipients' work and dedication as a form of “moral duty” payment coming from a sense of pride in obtaining the scholarship.

Starting from the research question addressed by the researcher to Mr. Dimas in relation to Return of Investment (ROI) obtained by STIE MADANI of Balikpapan from providing scholarships for its permanent lecturers, we have known together that to make a lecturer focus on his work, he should not only contracted with a good salary and facilities but also idealism. It obviously seemed that Mr. Dimas showed enthusiastic facial expression and hand movements as if he would like to persuade the lecturer candidates funded by YAMM-Bpn to make progress together, devoted to the advancement of education in Balikpapan City. Here is the answer expressed by Mr. Dimas:

“Supposing that you ask on what kind of return will be obtained from the investment, we certainly hope that through the scholarship program contracted with the same vision and mission, the lecturers who receive it can focus on their career. The campus only provides the lecturers with facilities to work while the rest depends on the lecturers themselves. Some of them diligently conduct research while some others eagerly write books. In the end, it will have an effect to the campus because their home base is in the campus. So, the higher the lecturers’ career is, the better the campus reputation will be. Compared to other contracted lecturers, the lecturers whose studies we finance certainly have a stronger motivation. Hopefully, their career later can be brighter than any other lecturer”.

Mr. Dimas put his hope to the researchers as the recipient of the permanent lecturer scholarship program to become a lecturer who can be relied upon by the campus of STIE MADANI of Balikpapan. The scholarships provided are expected to create a sense of belonging the campus of STIE MADANI of Balikpapan, giving impact on the vision and mission of the campus with the personal vision and mission that aspires to have a more advanced and dignified life in the Eyes of God, society, and nation.

Mrs. Marda confirmed the statement expressed by Mr. Dimas above by explaining that the recruitment process through the scholarship mechanism is to create a sense of satisfaction for its recipients. The satisfaction expected by Mrs. Marda is that the scholarship recipients perceive that becoming a lecturer is indeed their passion so as to make them enthusiastic in their career at STIE MADANI of Balikpapan by holding fast Tridarma of colleges.

However, once again, Mrs. Marda has to face the challenge that she should continuously motivate the existing lecturers to do research and devotion to society, even with forcefulness if needed. With her sullen expression as if she worried about today's profit-oriented man, Mrs. Marda gave the following explanation:

“So back again, all lecturers are absolutely able to give a lecture. It is almost impossible if they are not. But, the difficult things for lecturers are to conduct research and devotion. For these two, we often force our lecturers. If any lecturer is not willing to do research and devotion, that is okay but I can make sure that his salary cannot be fixed.”

Mrs. Marda stressed that the lecturers in STIE MADANI as the teaching staffs should not just emphasize about what the organization has given to them, they have to more emphasis on what they have given to the organization instead.

Creating “moral duty” of the sense of pride seems to show the other side of scholarships provided by YAMM-Bpn and STIE MADANI of Balikpapan. With the scholarships, it is expected to create a sense of pride in each recipient who directly also can improve their confidence level in the social sphere. The pride is expected to foster the spirit of self-actualization when the scholarship recipients are devoting themselves to the advancement of education at STIE MADANI of Balikpapan in particular and Balikpapan City in general.
DISCUSSION OF RESULTS

The purpose of this study was to explore the meaning of educational investment held by YAMM-Bpn using Intentionalism Hermeneutic approach. The keyword of this study is educational investment interpretation. Interpretation can be done by looking at the texts resulted from informants’ interviews supported by historical and cultural contexts of each informant to find the author’s intention (Bartholomew, 1996: 121). Thus, there are found 3 (three) meanings of educational investment, namely: (1) educational investment as the fulfillment of a rice plate, (2) educational investment as a means of the fulfillment of self-esteem needs, and (3) educational investment as a means to create a moral duty.

As explained in the previous chapter, the existence of permanent lecturers that are willing to be contracted in scholarship programs is an important and urgent basic necessity like a “rice” plate that should not be empty. In relation to the provision of permanent lecturer scholarships, the fulfillment of permanent lecturers for Accounting Department of STIE MADANI of Balikpapan with a number of requirements determined by the Directorate of Higher Education is the main goal of educational investment conducted by YAMM-Bpn. The informants agreed that this could support the fulfillment of permanent lecturers who are contracted to work for 10 years. Thus, the permanent lecturers can be empowered to participate in advancing education at STIE MADANI of Balikpapan by clinging firmly Tridarma of colleges.

The procurement of such scholarship programs also contributes to the students' learning motivation and enthusiasm of STIE MADANI of Balikpapan, by the provision of internal scholarships from YAMM-Bpn and other scholarships from external parties for students who deserve to get it. Therefore, the provision of such scholarships can form qualified human resources and certainly support the vision and mission determined by STIE MADANI of Balikpapan that is to advance education in Balikpapan City.

Besides, the procurement of such scholarship programs absolutely leads to the sense of pride for the recipients as well as attracts public curiosity and interest. An educational institution that totally organizes and provides wide opportunities for its academic community to experience the scholarships certainly will get a positive response from the community.

The realization of qualified human resources in the campus also produces 'two thumbs up' (good results) from the community as well as creates the image that STIE MADANI of Balikpapan seriously implements education. Of course, it is expected that in the future the community of Balikpapan City, in particular, will pay more attention to education in its own region, especially at STIE MADANI of Balikpapan that the education held in the campus will generate a positive influence on the community around Balikpapan. The increasingly good image of the campus ultimately will also increase public interest to study on the campus, automatically improving the campus’s profit in the future.

The scholarship recipients, in this case referring to the permanent lecturer scholarship recipients and the internal scholarship recipients of STIE MADANI of Balikpapan, certainly feel proud of the scholarships they get. The pride is culminating in the sense of belonging and engaging as part of the academic community of STIE MADANI of Balikpapan which has vision and mission to advance education in Balikpapan City.

The sense of having ‘moral duty’ is expected to become a reference to make the lecturers work totally in their career and to lead the academic community of STIE MADANI of Balikpapan to a better future. Hopefully, the sense of having “moral duty” can encourage the lecturers and students to not just prioritize material things in performing their duties but they have to set targets accordingly with the ideal. Lecturers are educators (teaching staff) of campus or higher education whose main purpose is to run the college Tridarma while students are the ones who are educated by lecturers under campus to explore knowledge, practice their knowledge to the community, and be more aware of social things that require them to get involved.

An institution or organization when dealing with finance must also discuss the accounting side. The accounting discussed in this chapter includes the scholarship budget
along with the expected “profits” from education investment made by YAMM-Bpn and STIE MADANI of Balikpapan. Talking about the real profit and loss, Mrs. Kartini replied as follows:

“From the beginning, if we talk about the loss in terms of the accounting, well honestly it may be true. However, because the philosophical values we got from our parents are very strong in this foundation, we assume that it is fine if we experience losses now but in 5 - 10 years ahead we can make sure that we can already reap the rewards. The losses we get now must have the proportion or size. It is impossible that we always experience losses, isn’t? Frankly speaking, supposing we continuously get into losses, automatically we will not be able to finance operations. At least, we always try to set aside some of our funds to finance our operations every month”.

Mrs. Kartini seemed to want to pour out her heart that this education investment can also be counted as a “loss” in terms of money. However, Mrs. Kartini interpreted it as profits (benefits) that will be reached in the future because Mrs. Kartini viewed the scholarship as the formation of human capital contributing to the vision and mission of STIE MADANI of Balikpapan that is to advance education in Balikpapan City.

Mrs. Kartini as a highly educated leader understands that investment is an effort to develop the organization she is leading. She realizes that investment is not only materials but can also in the form of the fulfillment of the need of lecturers that can support human resources to create sustainability and progress in YAMM-Bpn and STIE MADANI of Balikpapan for the long term. While pointing to the building in front of the room, Mrs. Kartini conveyed her answer as follows:

“To me, to invest should not only in the form of asset investment. Madani tends to make an investment in buildings, land or other similar things as we know in accounting what these things look like, so we can get the point that Oh yaa we can make an investment not only in the form of materials. In other words, we expense something to get more results. So, what kind of results can we get more? It may be seen or measured but it is not in the form of materials. Instead, it may be power. If reviewed more deeply, in the end, the materials actually will follow. That is all according to me personally”.

Mrs. Kartini interpreted educational investment as something that can support the achievement of more results in the future. Moreover, she also interpreted “power” as a profit obtained by STIE MADANI of Balikpapan even though it all requires big cost and sacrifice to get it.

Meanwhile, Mrs. Marda wisely said that YAMM-Bpn as the scholarship funder experiences losses indeed if viewed in terms of money. Here is her explanation:

“If I am being asked, ‘do you experience losses and spend a lot of money for making this investment?’ Well, financially I think so. But if we conduct more research and devotion so as to make our campus and the facilities become increasingly better, people will then be more interested”.

The above statement indicates that the scholarship program, if calculated using the accounting style system, certainly has driven STIE MADANI of Balikpapan to suffer losses due to its money expenditure that is approximately up to hundred million for one scholarship recipient. However, Mrs. Marda thought well of the scholarship investment as an effort to create attractiveness of the campus.

This research is expected to bring positive impacts and implications to the theory, practice, and policy. First, related to the theoretical implication, the results of this research are expected to develop and contribute to human capital theory. The theory confirms that human resources are now recognized as assets, categorized as investments. Human resources expected here refer to permanent lecturers, and the student development is considered as investment owned by YAMM-Bpn and STIE MADANI of Balikpapan because it can generate an increased income in the long term. On the other hand, this research is a research discussing on the field of qualitative accounting so as to provide a new perspective to the further researchers or readers that topics about “investment” can be used as a reference to trigger and continue research with non-positivistic domain so that the world of accounting research becomes richer in discussion subjects. Quite a few researchers know that so far the research on investment in accounting has been concerned about capital
markets and qualitative management calculations that are considered saturated in the academic community of accounting. The researchers want to give a new nuance to the research topics of “investment” by raising and bringing an interpretive qualitative nuance in it.

Secondly, regarding the practical implication, this research is expected to provide a new perspective to the academic community of accounting in understanding the profits derived from the educational investment. As the research results explain in the previous chapter, the profits of educational investment expected by YAMM-Bpn and STIE MADANI of Balikpapan are not directly materialistic, but rather lead to social improvement, which in this case refer to the quality improvement of education in Balikpapan.

Thirdly, in relation to the policy implication, Mrs. Kartini and Mrs. Mardatillah on behalf of YAMM-Bpn and STIE MADANI of Balikpapan stated that the campus always opens wide opportunities to the postgraduate students of accounting who are or will undergo their study in STIE MADANI of Balikpapan to get the permanent lecturer scholarships along with its work contract for 10 years. Hopefully, this kind of scholarship program is mutually beneficial for both the recipients and YAMM-Bpn as the scholarship providers.

CONCLUSION

This research aimed to interpret educational investment using intentionalism hermeneutic approach. As discussed in chapter 2, the researchers acted as the interpreters who proxied the “texts” resulted from the in-depth interviews with the informants by looking at the historical and cultural contexts of the informants to know their intentions. The historical and cultural elements could itself explain the “texts” derived from the interviews with the informants about the meaning of educational investment. As the final result, the researchers found 3 (three) interpretations of educational investment, covering (1) educational investment as the fulfillment of a rice plate, (2) educational investment as a means to fulfill the need of self-esteem, and (3) educational investment as a means to create “moral duty”. These three interpretations can also be referred to as the ‘authors’ intention’ formulated by Rahardjo (2008: 92) in chapter 2 on page 39.

This research is a qualitative research so that the results of this research cannot be generalized to other research objects. Furthermore, this research had limitations in which the number of informants who were willing to be interviewed by the researchers was only 5 (five) people because they had a bit more involvement with this scholarship program.

For further researchers, to develop this research, we personally suggest them to use semiotics approach presented by Ferdinand de Saussure as a form of renewal to the research methodology so as to research results that are fresh and different from this research. In addition, it is also expected that further researchers can raise and discuss the themes related to accounting such as income, debt, capital, burden, and others to be interpreted using Intentionalism Hermeneutic approach to enrich the study of qualitative accounting.

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ANALYSIS OF FUNDAMENTAL FACTORS’ EFFECT ON STOCK RETURN OF PROPERTY: A CASE STUDY OF PROPERTY, REAL ESTATE, AND BUILDING CONSTRUCTION SECTOR OF COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE IN 2012-2016

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ABSTRACT

The purpose of this study is to analyse the impact of fundamental factors on stock return of property, real estate, and building construction companies listed on the Indonesia Stock Exchange for the period of 2012-2016. The samples of this study are 41 property, real estate and building construction companies listed in Indonesia Stock Exchange for the period of 2012-2016. The results showed that debt to equity ratio and price to book value partially have positive significant effect toward the stock return of property, real estate, and building construction companies listed on the Indonesia Stock Exchange.

KEY WORDS
Stock return, property, real estate, Indonesia, business.

The role of capital market in Indonesia economy has economic and financial function. Economically, capital market is one of a long-term fund flows systems, in which can be allocated by the government to the other sectors of investment in order to get return. Financially, capital market can be a media for an individual investor or a company to allocate their investment funds and get the particular return. The growing of capital market shows the trust of investors to invest in Indonesia. Making investment in the instrument of share has more risk than the other instrument of investment, such as obligation, and saving. Investors have to be able to predict the level of expected return and the possibility of balance outcome.

Each of investor in capital market has to get fundamental or technical information about the current investment instruments before investing their funds. Fundamental information is issued by issuer or the administrator of stock exchange. Fundamental analysis is started from the general flow of the company. Next, it will go to industrial sectors, and finally, it is evaluated to the issued stock price. However, technical analysis is based on the data (changing) of the stock price in the past as an attempt to predict the stock price in the future (Halim, 2005). Investors usually use fundamental information because it reflects the situation of a company based on issued financial report. Some financial ratios, cash flows, and the other measured performances will be connected to the stock return. Great result of fundamental indicators is expected to give great response to the market and increase the stock price in capital market.

Several sectors that are traded in Indonesian Stock Exchange are property, real estate, building construction sector, which lately becomes famous because of oversupply in several types of property. According to the growth chart of Property Price Index in 2014 to 2016, there was a fluctuate price in the sector of property, especially in the lease of apartment and hotel. The decline of price was predictably caused by the growth of limited demand compares to the rising of supply. Generally, the decline in 2014 was followed by rising of price in the second quarter in 2015 then it went down in 2016 (Figure 1).

Based on Residential Property Price Index, there was a slowly increase of residential property price. In 2013, there was a high rising of the price due to the increasing price of material building, wages work, and fuel. Nonetheless, in the end 2016, IHPR shows that there was a slow increase in residential property price (Figure 2).
Meanwhile, the movement of property stock price, real estate, and building construction were fluctuative during the period of 2012 to 2016. Table 1 depicts the development of stock return in the sector of property, real estate, and building construction from 2012 to 2016. The average of the lowest stock return was in 2015, which was -11.1%. It generally indicates that the stock price of company sample was down. It is not in line with the raising price of commercial property in 2015.

**Table 1 – The Movement of Stock Return Ratio for companies in the sectors of Real Estate and Building Construction during 2012-2016**

<table>
<thead>
<tr>
<th>Year</th>
<th>Minimum</th>
<th>Maksimum</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>-59.68%</td>
<td>209.09%</td>
<td>42.2%</td>
</tr>
<tr>
<td>2013</td>
<td>-74.86%</td>
<td>1157.58%</td>
<td>34.3%</td>
</tr>
<tr>
<td>2014</td>
<td>-42.05%</td>
<td>208.19%</td>
<td>37.3%</td>
</tr>
<tr>
<td>2015</td>
<td>-66.96%</td>
<td>78.17%</td>
<td>-11.1%</td>
</tr>
<tr>
<td>2016</td>
<td>-87.53%</td>
<td>80.83%</td>
<td>-0.52%</td>
</tr>
</tbody>
</table>

**Table 2 – Average Return on Shares, CR, TATO, DER, ROE, TA and PBV of Property, Real Estate and Building Construction Sector Shares in the period 2012-2016**

<table>
<thead>
<tr>
<th>Ket.</th>
<th>Return</th>
<th>CR</th>
<th>TATO</th>
<th>DER</th>
<th>ROE</th>
<th>TA</th>
<th>PBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>0.42</td>
<td>2.65</td>
<td>0.32</td>
<td>1.02</td>
<td>0.12</td>
<td>Rp4.38</td>
<td>1.77</td>
</tr>
<tr>
<td>2013</td>
<td>0.34</td>
<td>3.54</td>
<td>0.32</td>
<td>1.09</td>
<td>0.14</td>
<td>Rp5.83</td>
<td>1.85</td>
</tr>
<tr>
<td>2014</td>
<td>0.37</td>
<td>2.78</td>
<td>0.31</td>
<td>1.06</td>
<td>0.12</td>
<td>Rp6.91</td>
<td>2.19</td>
</tr>
<tr>
<td>2015</td>
<td>-0.11</td>
<td>3.19</td>
<td>0.28</td>
<td>0.87</td>
<td>0.09</td>
<td>Rp8.11</td>
<td>1.70</td>
</tr>
<tr>
<td>2016</td>
<td>-0.005</td>
<td>3.19</td>
<td>0.28</td>
<td>0.87</td>
<td>0.09</td>
<td>Rp9.22</td>
<td>1.29</td>
</tr>
</tbody>
</table>
Table 2 illustrates that there is difference of movement of financial ration to stock return. The movement of the ratios is in line with the movement of stock return where the decline of return tends to be in line with the increase of PBV, TATO, DER, and ROE. However, the movement of stock return tends to be opposite with the ratio of CR and TA during the period of 2012 to 2016. Based on the explanation above, the researcher takes the title of “Analysis The Effect of Fundamental Factor on Stock Return of Property (Case Study: Property, Real Estate and Building Construction Sector Companies listed on the Indonesia Stock Exchange from 2012 to 2016)”.

THEORITICAL REVIEW

Signalling Theory. Sign or signal (Brigham, 2010) is an action that is conducted by management of the company in order to give hints to the investors about how they observe the prospect of the company. The company, which has great prospect of profitability, will try to avoid salling stock and find another way to get new financial funding. It includes the using of debt, which is up to the target of normal capital structure. The announcement of stocks emission is a sign that the prospect of the company is considered not good. If a company offers a new salling stock more often than the usual, then the price of its share will decrease because issuing a new share means giving a negative sign that can press the price of stocks even it has a great prospect.

Efficient Markets Hypothesis. Efficient Market Hypothesis (EMH) states that well organized capital markets are efficient markets. On the other word, inefficiency can probably happen, but it is relatively small and unusual. In an efficient market, investor will get what they have been invested and the company will receive the stocks and obligations. Efficiency market is created by the competition of investors. They will continually learn the historical financial of the company, how sensitive it is to the economic change, the amount of debt, and what kind of investment that has been done by a company until the information about the company’s share will be collected (Ross et al., 2000). According to Brigham (2010), the theory of the Efficient Markets Hypothesis confirms that (1) stocks are always in equilibrium and (2) it is impossible for the investors to “beat the market” and consistently gets a higer rate of return then what has been justified by the stock risk because the large number of full time professional analysts and the continually observation of the stock movement in each industry.

Ratio Analysis. Financial ratio is designed to resume important information that is probably unclear if only checking financial report of a company (Brigham, 2010). Financial ratio is a relation that is determined from the financial information of a company and used to particulary comparison. Ross et al., (2000) says that by conducted an evaluation toward financial report from external party like short-term and long-term creditor as well as the candidate of investors will find information for determination of lending, financial stability of the company, knowing the competitor of the company, and capability of the company to grow and identify potential targets before investing. A trend of ratio will give a hint wheter the financial condition of a company tends to be great or not. To perform trend analysis, the ratio will be checked from time to time.

Issuer in Property, Real Estate and Building Construction. The issuers in Indonesia Stock Exchange can be classified into several sectors. The sectoral classification system that is used to categorize companies is listed in Indonesia Stock Exchange. It is known as Jakarta Stock Industrial Classification (JASICA). This catorgorization can be used to analyze and evaluate listed companies in Indonesia Stock Exchange. So, it is expected to help making decision in investing. Indonesia Stock Exchange also calculates sectoral index as performance indocator for each industry. JASICA is launched in Desember 28th 1995 with 9 main classifications. They are: (1) agriculture sectors, (2) mining sectors, (3) basic industry and chemical sectors, (4) various industry sectors, (5) consumer goods industry sectors, (6) property, real estate and building construction sectors, (7) infrastructure, utilities and transportation sectors, (8) financial sectors, and (9) trade, service and investment sectors.

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Business Challenges for Property, Real Estate, and Building Construction. The property sector has recorded a deceleration over the past 3 years. Some of the things that led to the retardation include the macro prudential policy of Bank Indonesia, concerned about the rise in tax rates for property, and the weakening of people's purchasing power. Indonesia has a large population, which is over 255 million people in which, 60% of them are in productive age. This creates a huge demand for the property, real estate and building construction sectors. The necessity of new houses that is caused by the growth of population and the urbanization per year reaches 800 thousand units. The prospect of growth in the sector of property, real estate, and building construction is massive. The successful of Amnesty Program can help the sector of property to growth because previously, there is no tax certainty tax, which can make consumer, hesitates to buy a new property. In 2016, Bank Indonesia also lowered the benchmark interest rate to 4.75%, which can give great prospect for the future. Currently, interest rates of House Ownership Credit (HOC) is relatively low if it is compared to the previous years, which is related to the decline in interest rates of Bank Indonesia. The decrease of final Income Tax from 5% to 2.5% in 2016 also increase the profit for developers.

The acceleration of infrastructure projects can become a prospect of development of property in the upcoming years. Several important projects such as Jakarta Bandung High Speed Rail (HRS), Jakarta Mass Rapid Transit (MRT), Light Rapid Transit (LRT), and highway such as trans Java & Sumatera, JORR W2, and others. A fast and great infrastructure construction will create transportation pathway, in which will encourage more people to buy property outside of Jakarta because it is cheaper than leasing in the urban Jakarta. Therefore, it will give positive effect for properties and real estate demand. On the other hand, this sector has growth challenging like the increasing of acquisition price and the difficulty of acquiring new land with an average increase of 10% -20% per year, the decrease of purchasing power, so that it is difficult for the developers to increase the selling price. Business of hospitality in Indonesia is currently going down because of the new regulation that civil servants are not allowed to do activity in the hotel. It can automatically decrease the income in hospitality sector. In 2015, the government has issued the regulation about allowing foreigners to live and buy a land or apartment in Indonesia under the regulation of the Ministry of Agrarian Affairs.

However, this regulation is still considered detrimental for buyers because expatriates cannot obtain the Certificate of Ownership and only have the Right to Use applicable for 30 years with option of extension twice. They can only buy property directly from developers then they are not allowed to rent their property to the third party, and there is minimum price of special property for them. Since 2013, the government has also imposed restriction for loan of property, which is still under construction. Developer will only receive the payment from the bank according to the percentage of accomplishment of the project. Nonetheless, this policy is loosened in 2016, in which the regulation is not imposed for second house buyer.

![Figure 3 – Theoretical Framework](image)

Research hypothesis. Based on the framework, then the hypothesis proposed in this research are as follow:
H1: Current Ratio (CR) has a positive or negative and significant impact on stock returns on the property sector, real estate and building construction.

H2: Total Asset Turnover (TATO) has a positive or negative and significant impact on stock returns on the property sector, real estate and building construction.

H3: Debt to Equity Ratio (DER) has a positive or negative and significant impact on stock returns on the property sector, real estate and building construction.

H4: Return on Equity (ROE) has a positive or negative and significant impact on stock returns on the property sector, real estate and building construction.

H5: Total Assets (TA) has a positive or negative and significant impact on stock returns on the property sector, real estate and building construction.

H6: Price to Book Value (PBV) has a positive or negative and significant impact on stock returns on the property sector, real estate and building construction.

METHODS OF RESEARCH

This research takes the population of all company in property sector, real estate, and building construction that listed in Indonesia Stock Exchange in the period from 2012 until 2016 with the total of 62 companies as the research population. Sample collection technique used in this research is purposive sampling, which members of the sample will be selected in such a way that the established sample may represent the properties of the population (Sugiyono, 2013). The sample criteria in this research are (1) Issuer listed in Indonesia Stock Exchange which can be accessed on www.idx.co.id as the issuer which submit the financial statements and has the completeness of data during the research period. The data of financial statements required in this research are Total Assets, Net Income, Total Equity, Total Debt, Total Revenue / Sales, Fixed Assets, Current Assets, Current Debts, and Book Value, (2) The issuer has done Initial Public Offering before 2012 so the data of stock price reflects the stock price in the market for 5 years to avoid any mistakes in data processing.

Based on the sample collection criteria above, then there are 41 companies in Property Sector, Real Estate, and Building Construction in 2016 as the sample of this research. Type of data used in this research is secondary data which is quantitative and in a form of data panel which combined the data of time series and cross section. Data panel depicts two types of information that are: information of cross section on the difference between subject, and information of time-series which reflects the changes at a certain time. The data obtained from the companies’ financial statements which have been audited and published. The researcher obtained the data through Indonesia Stock Exchange website (www.idx.co.id).

Data collection technique in this research is by documenting which is collecting all the published data from the Indonesia Stock Exchange website. Number documentation on sample companies’ financial statements with the defined criteria and literature review, which is various literature that related with the problems in the research obtained from the books or journals which have been published before.

This research tested the influence of more than one independent variable to one dependent variable, then the research using multiple regression. The steps in estimating the regression model with panel data is done by creating a Common Effect regression, and then creating a Fixed Effect regression, and finally creating a random effect regression. The selection between the Common Effect and Fixed Effect model is done by Chow test or F-test. The selection between Fixed Effect and random effect model is done by Hausman test. The selection between the Common Effect and the random effect model is done by the LM test. To determine the exact model, then this research performed some tests such as F statistical test (Chow test), Hausman test, and Lagrange Multiplier Test. Hypothesis testing in this research was tested based on selected panel data model. Furthermore, the interpretation of data is by looking at Coefficient of Determination (R²), Simultaneous Significance Test (F Statistic Test) and Partial Individual Significance Test (T Statistic Test).
RESULTS AND DISCUSSION

Chow Test. Chow test is done to determine whether the right model of the equation is pooled least square (Common Effect) or Fixed Effect. This is determined from the result of Chi-square probability. The following is the result of Chow Test in this research:

Table 4 – Chow Test Result

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>0.955263</td>
<td>(40,157)</td>
<td>0.5524</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>44.655713</td>
<td>40</td>
<td>0.2825</td>
</tr>
</tbody>
</table>

If the result of Chi-Square probability is < 0.05, then the right model to be used is Fixed Effect. From table 4 above, the value of Chi-Square probability is 0.2595 or greater than >0.05, then the right model is Common Effect.

Hausman Test. The next testing is to test between Fixed Effect and Random Effect by doing Hausman Test. If Hausman Test results the value of Chi-Square probability is <0.05, then the right model is Fixed Effect, and if the value of Chi-Square probability is >0.05, then the right model is Random Effect. The following is the result of Hausman Test in this research:

Table 5 – Hausman Test Result

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>9.440119</td>
<td>6</td>
<td>0.1503</td>
</tr>
</tbody>
</table>

From table 5 above, the value of chi-square probability is 0.1503 or greater than >0.05, so the right model is Random Effect.

Lagrange Multiplier Test. This test is used to find a better model between pooled least square (Common Effect) and random effect. If the Breusch- Pagan count value is <0.05, then the best model is random effect, and if the Breusch- Pagan count value is >0.05, then the best model is Common Effect. The following is the result of Lagrange Multiplier test in this research:

Table 6 – Lagrange Multiplier Test Result

<table>
<thead>
<tr>
<th>Test Hypothesis</th>
<th>Cross-section</th>
<th>Time</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breusch-Pagan</td>
<td>0.685377</td>
<td>0.984689</td>
<td>1.670067</td>
</tr>
<tr>
<td></td>
<td>(0.4077)</td>
<td>(0.3210)</td>
<td>(0.1962)</td>
</tr>
</tbody>
</table>
From table 6 above, the Breusch- Pagan count value (BP) is 0.4077. The value is greater than 0.05, so the best model in this research is Common Effect. From the three panel model above, the use of Common Effect mode; will be analyzed further in this research. 

**Model Estimation Result (Common Effect Model).** Estimation of panel data regression with Common Effect model is showed on table 7 as follow:

<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>-0.460674</td>
<td>1.254406</td>
<td>-0.367244</td>
<td>0.7138</td>
</tr>
<tr>
<td>CR?</td>
<td>0.011655</td>
<td>0.013189</td>
<td>0.083678</td>
<td>0.3779</td>
</tr>
<tr>
<td>TATO?</td>
<td>-0.805384</td>
<td>0.331385</td>
<td>-2.430357</td>
<td>0.0160</td>
</tr>
<tr>
<td>DER?</td>
<td>0.185795</td>
<td>0.078425</td>
<td>2.390858</td>
<td>0.0188</td>
</tr>
<tr>
<td>ROE?</td>
<td>0.833938</td>
<td>0.598002</td>
<td>1.394542</td>
<td>0.1847</td>
</tr>
<tr>
<td>TA?</td>
<td>0.011827</td>
<td>0.043458</td>
<td>0.272156</td>
<td>0.7858</td>
</tr>
<tr>
<td>PBV?</td>
<td>0.145083</td>
<td>0.046556</td>
<td>3.116294</td>
<td>0.0021</td>
</tr>
</tbody>
</table>

R-squared: 0.098574
Adjusted R-squared: 0.071258
S.E. of regression: 0.922579
Sum squared resid: 168.5261
Log likelihood: -270.8007
F-statistic: 3.608653
Prob(F-statistic): 0.002032

Based on the analysis result of multiple regression, then the regression equation is as follow:

\[ Y = -0.460674 + 0.011655 \text{ CR} - 0.805384 \text{ TATO} + 0.185795 \text{ DER} + 0.833938 \text{ ROE} + 0.011827 \text{ TA} + 0.145083 \text{ PBV} \]

Constant a is -0.460674, it states that if the variables X1, X2, X3, X4, X5, X6 and X7 is constant, then the Y variable is -0.460674. Regression coefficient of X1-X7 states that every increase of each independent variable by 1% will impact on the increase of stock returns in property sector, real estate, and building construction in the amount of the regression coefficient with the assumption that other independent variables are constant. The value of Adjusted R² is 0.071258 which implies that the influence of independent variables like Price to Book Value (PBV), Current Ratio (CR), Return on Equity (ROE), Debt to Equity Ratio (DER), Total Asset Turn Over (TATO), and Total Assets (TA) to stock returns on property sector, real estate, and building construction of 7.12%, while the rest can be influenced by other variables that cannot be explained in this research model. The small value of Adjusted R² can be accepted in the panel data which already combined the cross section and time series data.

The next one is testing the level of significance on each coefficient in the partial regression equation. To find the t table, the researcher used the real level (α) = 0.05, and obtained the t table equal to 1.97202. The count value of t for the Current Ratio (CR) variable is greater than the value of t table that is 0.833678 < 1.97202 or significance t (0.025) > α (0.05). So it can be concluded that the Current Ratio (CR) variable partially has a positive but not significant effect on stock return of property, real estate and building construction on the 2012-2016 period. 2) The t value for the Total Asset Turn Over (TATO) variable is greater than the value of t table that is 1.97202 < -2.430357 or significance t (0.025) < α (0.05). So, it can be concluded that the Total Asset Turn Over (TATO) variable partially has a negative
and significant effect on stock returns of property, real estate and building construction on the 2012-2016 period.

The count value of t for the Debt to Equity Ratio (DER) variable is greater than the value of t table that is 2.369066 > 1.97202 or significance t (0.025) < \( \alpha \) (0.05). So it can be concluded that the Debt to Equity Ratio (DER) variable partially has a positive and significant effect on stock return of property, real estate and building construction on the 2012-2016 period. The count value of t for the Return on Equity (ROE) variable is greater than the value of t table that is 1.97202 > 1.394542 or significance t (0.025) < \( \alpha \) (0.05). So it can be concluded that the Return on Equity (ROE) variable partially has a positive but not significant effect on stock return of property, real estate and building construction on the 2012-2016 period. The count value of t for the Total Assets (TA) variable is greater than the value of t table that is 0.272156 \( \leq \) 1.97202 or significance t (0.025) > \( \alpha \) (0.05). So it can be concluded that the Total Assets (TA) variable partially has a positive but not significant effect on stock returns of property, real estate and building construction on the 2012-2016 period. The count value of t for the Price to Book Value (PBV) variable is greater than the value t table that is 3.116294 > 1.97202 or significance t (0.027) < \( \alpha \) (0.05). So it can be concluded that the Price to Book Value (PBV) variable partially has a positive and significant effect on stock return of property, real estate and building construction on the 2012-2016 period.

The research tested the significant testing simultaneously (overall significance) on a regression equation based on hypothesis test. The analysis result which was estimated on table 7 shows that the count value if F = 3.608653 while the value of F table on \( \alpha = 0.05 \) and the free degree (dk) quantifier = 7, n = 205, the free degree (dk) quantifier = 197 is 2.06. So F = 3.608653 > F table = 2.06 implies that H0 is rejected and Ha is accepted on the level of significance \( \alpha = 0.05 \). Therefore, it can be concluded that variables of Price to Book Value (PBV), Current Ratio (CR), Return on Equity (ROE), Debt to Equity Ratio (DER), Total Asset Turn Over (TATO), and Total Assets (TA) together have significant effect on stock return of property company, real estate and building construction on the 2012-2016 period.

DISCUSSION OF RESULTS

Current Ratio (CR) has a positive but not significant effect on stock returns of property, real estate and building construction. CR shows the liquidity of the company between the compositions of the company's current assets with its current liabilities. This research is in accordance with the research of Ariyanti (2016). Total Asset Turn Over (TATO) has a negative and significant influence on stock returns of property, real estate and building construction. TATO indicates the company's efficiency in using its assets to generate revenue. In theory, TATO reflects the company's ability in managing assets efficiently to earn revenue from operational activities, so the higher TATO is expected to bring a positive impact on stock returns. However, research shows that the negative influence between TATO and stock return can be caused by the dominance of large companies in obtaining high stock returns, where large companies usually have difficulties to increase the ratio of TATO easily.

Another factor is the stock return which can also be affected by non-operational profits that are not obtained from the main sales. This research is in accordance with the research of Martani (2009) and Stefano (2015). Debt to Equity Ratio (DER) has a positive and significant effect on stock returns of property, real estate and building construction. DER shows the level of company solvency which measures the total composition of the company's debt compared to its total equity. The result of the research shows that the increase of DER reflects the company's ability in exploiting the debt to get bigger profit per share which also increases the stock return of the company.

This research is in accordance with the research of Nidianti (2013) and Sutriani (2014). Investors can see DER as a guarantee of the size of the company's liability to the lender who provides the loan. The high DER reflects the huge debt value that investors perceive as additional funds that can be used for the company's operations. When the source of debt funds can be managed properly then the company obtain optimal profit. Information of DER changes may affect investors' decisions to invest in companies. Return on Equity (ROE) has
a positive but not significant effect on stock returns of property, real estate and building construction. The result shows that the increase in ROE does not have a significant impact on the increase of stock returns. This study is in accordance with the research of Kohansal (2013), Anwaar (2016), and Kusuma (2016).

Total Assets (TA) has a positive but not significant effect on stock returns of property, real estate and building construction. This study is in line with the research of Absari (2013) which states that Total Assets (TA) has no effect on stock returns. Price to Book Value (PBV) has a positive and significant effect on stock returns of property, real estate and building construction. The PBV shows a comparison between the stock price and the book value of the shares. The result shows that PBV ratio has a positive effect on stock return. The PBV demonstrates the success of management in managing corporate resources that reflects the company's share price at the end of the year. The higher the PBV will give investors an expectation of greater profit. This study is in accordance with the research of Wijesundera (2015), Khotimah (2015), Meesuwan (2015), Djamaluddin (2015), and Moshavegh and Amirhossie (2016).

CONCLUSION AND RECOMMENDATIONS

Based on the result of the research, it can be concluded that the ratio of Total Asset Turn Over (TATO) partially has negative and significant effect on the stock return of property company, real estate and bulding construction which listed on Indonesia Stock Exchange on 2012-2016 period, while Debt to Equity Ratio (DER) and Price to Book Value (PBV) partially has positive and significant effect on the stock return of property company, real estate, and building construction which listed on Indonesia Stock Exchange on 2012-2016 period. Meanwhile the ratio of Current Ratio (CR), Return on Equity (ROE), and Total Assets (TA) partially have no significant effect on the stock return of property company, real estate, and building construction which listed on Indonesia Stock Exchange on 2012-2016 period.

For the researchers who are interested to research and develop this study, some of the recommendations are such as to research other sectors, add the number of the sample issuers, and research other factors, which can influence the stock return of the company but have not been researched in this study. The next study can use other variables like inflation, exchange rate, or other sector of economy macro as independent variable.

REFERENCES


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MARKET AND FINANCIAL FEASIBILITY ANALYSIS: A CASE STUDY ON “PONDOK MARANGGI 17” RESTAURANT

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ABSTRACT
PondokMaranggi 17 is the name of a new restaurant established in the year of 2017, located in Bekasi. The main menu of this restaurant is “Sate Maranggi”. The vision of this restaurant is to be the first choice for those who like Sate Maranggi, especially for those who live in region of Bekasi. In order to achieve this vision, PondokMaranggi 17 has to create the best quality and special taste of food and beverage. This business needs start-up capital amounting to Rp 223,454,600. Projected net profit in 2018 is Rp 91,276,960, and it will increase with average growth of 46.4% per year. The financial feasibility from the point of view Net Present Value, Payback Period, Average Rate of Return, and Profitability Index of this business is very feasible.

KEY WORDS
Business, restaurant, market, profit, growth.

PondokMaranggi 17 is the name of the Sundanfood restaurant began operating in March 2017. It is located in an area Jatirasa/Jatiasih, Bekasi, West Java. ThisSudantraditional nuance restaurant with a modern concept, accentuates “sate maranggi” (maranggy satay) as the main food or menu. This restaurant, as well as, provides some alternative menu options according to the taste of consumers, such as steam coconut milk rice (nasiuduk), grilled chicken, catfish dish (pecellele), and chicken skin satay. PondokMaranggi 17 using good quality raw materials, to ensure that the best quality of food can be achieved. In addition the chili shrimp paste and chili sauce, variations of drinks and good services to be the part of the strategies of PondokMaranggi 17 to make this business success. Furthermore, this Sundan nuance restaurant can be one of the culinary tourism destination for the societies of Bekasi and surrounding areas, especially on weekends and holidays.

The vision of PondokMaranggi 17 is becoming a restaurant favoured by consumers, capable of mastering the markets, and making a profit, as well as being able to maintain the survival of the business.

To achieve these goal and vision, PondokMaranggi will produce excellent quality food, provides various variants of food and beverages, according to the consumers taste, with maranggi satay as its icon. In addition, the room will be arranged in such a way so that consumers can feel comfortable, relax, so happy to be there. PondokMaranggi 17 will also initiate the best service system for the sake of consumers' satisfaction.

The main purpose of this business is to gain profit. However, the profit is just the rewards received, having the business satisfied what the consumers’ needs and desires, which make their life better off. Therefore, PondokMaranggi 17 will put the needs and wants of the consumers being the most important thing in the whole of its business strategies. This article is concern with the analysis of the market and financial feasibility of PondokMaranggi 17.

The data used, in particular the price, is the primary data of the survey results, and it is the current price in the market at that time. The method of determining the level of the market potential is based on qualitative analysis of current market conditions. Whereas, the level of sales is determined based on the capacity of the restaurant, taking into account the market potential at this time and in the future, as well as the selling price which is considered reasonable in the area surrounding the location. Financial feasibility is measured using the
method of Net Present Value (NPV), Payback Period, the Average Rate of Return (ARR), and Profitability Index (PI).

LITERATURE REVIEW

Reviews of the literature in this writing includes three major things, namely, market opportunities and market strategies, financial statements, and financial feasibility of the business. Here’s the short explanation.

Markets opportunities. To find out how the market opportunity for a new product or a new business, first to be analyzed is its market target. Then, setting the product or business positioning in the the market or among other competitors. Furthermore, analyzing the potential demand for these products, either by using the method of consultation with the experts, the methods of experimental test/survey methods, statistical methods (Regression and Correlation, Time Series), as well as methods of Input Output (SuadHusnan, 2016). Then, by consideration of factors that potentially will affect the business, hence sales plan for the future is set. The sales plan had been set, it is not automatically can be achieved, but it needs to be supported by an appropriate marketing strategy. This marketing strategy consists of product strategy, pricing strategy, place strategy and promotion strategy (Scarborough, 2016). The combination of these four marketing strategies in marketing literature commonly referred to as the Marketing Mix.

Financial Report. There are three (3) basic financial reports i.e. balance sheet, income statement and cash flow statement. Seen from the time of occurrence of the financial transaction, there are two kinds of financial statements, namely the Historical Financial Statements and Pro Forma Financial Statements (Scarborough, 2016). Historical Financial Statements are financial statements that are based on financial transactions that have occurred in the past. Meanwhile, the Pro Forma Financial statements are financial statements that are based on transactions that will occur in the future. In other words, Pro Forma Financial Statements is a projection or a financial plan for the future.

Business Feasibility Analysis. To measure the feasibility of financial aspects is usually used what is referred to as a criterion of investment (investment criterions). There are five methods commonly used to assess the financial feasibility of an investment, they are the Average Rate of Return, the Net Present Value (NPV), Payback Period, Internal Rate of Return (IRR), and Profitability Index (SuadHusnan, 2016).

Market Feasibility Analysis. The intended target market puts emphasis more on the lower-middle-class, which is the majority groups living around the site where the business was established. The target market is not only the resident living in the vicinity of housing complex, but also the office workers and factory laborers nearby. Pricing strategies etc., therefore, are devoted especially to reach the lower-middle-class indeed. In line with the above target market, PondokMaranggi 17 wants to be known as a restaurant which has a distinctive flavor of maranggi satay compared to the same other restaurants, affordable prices, and comfortable and clean place to enjoy food. This is the positioning wanted in the market.

Quoted from http://www.antarnews.com March4th 2017, food and beverage industry would be the trigger for growth in non-oil and gas processing industry in the year of 2017, which is targeted to grow 5.3 – 5.6 percent. Furthermore, the Government stated that the food and beverage sector is projected to grow 7.5-7.8 percent in 2017. In line with that, quoted from suara.com March4th 2017, food and beverage industry have an important role in economic growth and have a great contribution towards the gross domestic product (GDP) in Indonesia, and food and beverages industry sectors account for 31.20 percent of the GDP. This sector, therefore, is to be one of the priority sectors, stated by the Government, in encouraging the industrial development as a driving force for the national economic growth.

From a short blurb above it can be concluded that the food and beverage industry is a high-growth industry. For entrepreneurs, this condition they see it as a business opportunity in the field of food and drink, including restaurant.
The famous maranggi satay is in Purwakarta, West Java. Outside Purwakarta, vendor or restaurant maranggi satay is very rare. There are a few widespread restaurants that sold meat maranggi, but in general, it is out of reach of potencial consumers. In the region of Bekasi itself, where the site of PondokMaranggi 17 is, there are no competitors that sell maranggi satay. So, definitely there is no direct competitors. There are, however, indirect competitors, that is other types of satay seller, such as chicken satay, goat satay or other kinds of foods that provide an alternative choice to the consumers. The absence of direct competitors, giving the greater possibility to PondokMaranggi 17 to be successful.

Furthermore, modern lifestyle in which many people or families are no longer they cook their food by themselves, but eating outside the home or in the restaurant or food stalls. Many people tend to choose more practical, quick and no hassle ways to get food, rather than cook it by themselves. In addition, the workers especially in the daytime will choose to eat at the restaurant or food stalls, for their office is far from home. It is the same with the young single workers, they tend to choose to eat outside the home, either because they don't have enough time to cook, or have no skills to cook food. In addition, the emergence of life style trend in which the culinary has become an object of tourism (culinary tourism) and entertainment, especially on the weekends where families enjoy eating out of the home.

The prospective potential consumers for PondokMaranggi is also supported by its strategic location, being in the office or business and industrial area, as well as not far from the housing complex.

Having regard to the factors that affect sales, such as market opportunity put forth above, capacity of this restaurant, 5 years development plan forward, an increasing number of consumers/customers, as well as rising prices and rising costs, then PondokMaranggi 17 projecting its sales as shown in table 1 below:

Table 1 – Sales Projections (2017-2021)

<table>
<thead>
<tr>
<th>Description</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>The value of purchase / consumer</td>
<td>Rp20.000</td>
<td>Rp20.000</td>
<td>Rp25.000</td>
<td>Rp25.000</td>
<td>Rp30.000</td>
</tr>
<tr>
<td>Prospective Consumer</td>
<td>27.000</td>
<td>29.700</td>
<td>32.670</td>
<td>35.937</td>
<td>39.530</td>
</tr>
<tr>
<td>Sales</td>
<td>Rp540.000.000</td>
<td>Rp594.000.000</td>
<td>Rp816.750.000</td>
<td>Rp898.425.000</td>
<td>Rp1.185.900.000</td>
</tr>
</tbody>
</table>

Source: processed data.

Note:
Sales target above is calculated with the assumptions/projections are as follows:
a. Restaurant capacity restaurant (seats available) 50. Open hours: 10.00-22.00 hours = 12 hours
b. Average long of stay per consumers = 2 hours; so one seat in 1 day will be used 12/2 = 6 x seat/person for 50 seats = 50x6 = 300 person/days (full capacity); Full Capacity for 1 year = 300 x 300 (days) = 90,000
c. Projected to be 30% filled, 50 (30% x 300 = 90 person/days; In a year (300 days); (300 x30) = 27,000 people/year
d. Every two years the price will be increased amounting to Rp 5,000
e. Increase of visitors is about 10%, from the previous year.

Marketing Strategy. In achieving the sales targets above, PondokMaranggi 17 will apply marketing mix strategy including product strategy, pricing strategy, place/distribution strategy and promotion strategy.

Product or the main menu which become an icon of the PondokMaranggi 17 is maranggi satay, with a special taste. However, Pondok Maranggi 17 restaurant also provides various types of other foods and a variety of drinks, giving an alternative choice to the taste of the consumers. The menu variety provided will be evaluated periodically, whether to be maintained or to be leaved, without leaving the main menu i.e. maranggi satay.

Pricing strategy applied is low prices; this means that PondokMaranggi 17 will not take a high margin profit. This strategy is in line with the purchasing power of the majority of prospective consumers or its target market, which is lower-middle-class.

The selected location at Bekasi is in the area of business and industry, and it is close to housing residents. So, it is expected that this restaurant would have adequate prospective
consumers. This site is expected to be one of the competitive advantages of PondokMaranggi 17.

Pondok Maranggi 17 restaurant was established recently; it is not known to many people yet, then promotion on social media must be aggressive, banners and brochures are distributed widespread primarily in the area surrounding the location and Bekasi in general.

From the market opportunities described above it can be concluded that this business has a potential possibility to be success, and it is, therefore, feasible.

**Financial Feasibility Analysis.** A projection or a financial plan for the establishment of Pondok Maranggi 17 restaurants includes the start-up capital, source of funding, initial Balance Sheet, and Pro Forma Income Statement.

The start-up capital needed is Rp. 223.454.600. This consists of investment in fixed assets amounting to Rp 101.229.600, and working capital amounting to Rp. 122.225.000. Details of the start-up capital needed and its use can be seen in table 2 below:

<table>
<thead>
<tr>
<th>Table 2 – The Need and Use of Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Fixed Assets:</td>
</tr>
<tr>
<td>Fixed Asset ( depreciated in 5 years) Rp 98.639.200</td>
</tr>
<tr>
<td>Equipment ( depreciated in 2 years) Rp 2.590.400</td>
</tr>
<tr>
<td>Total Fix Asset</td>
</tr>
<tr>
<td>Working Capital, used for:</td>
</tr>
<tr>
<td>Rent Place</td>
</tr>
<tr>
<td>Raw Material (1x production/day)</td>
</tr>
<tr>
<td>General and Administration</td>
</tr>
<tr>
<td>Cash money supply</td>
</tr>
<tr>
<td>Total Working Capital</td>
</tr>
<tr>
<td>Total Funding Needs</td>
</tr>
</tbody>
</table>

Source: processed data.

Source of funding is from the owner itself, amounting Rp 223.454.600 (owners capital). From the profit Projections in table 5 below, it is shown that the net profit of the PondokMaranggi 17 increases from Rp 91,276,960 in the year 2017, to Rp 358,588,290 in 2021, with an average growth of 46.4% per year.

<table>
<thead>
<tr>
<th>Table 3 – Pro Forma Income Statement of PondokMaranggi 17, 2017-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Sales</td>
</tr>
<tr>
<td>Expenses:</td>
</tr>
<tr>
<td>COGS (raw material, etc) - 40% of sales</td>
</tr>
<tr>
<td>Gross Profit</td>
</tr>
<tr>
<td>2. Depreciation:</td>
</tr>
<tr>
<td>- Fix Asset</td>
</tr>
<tr>
<td>- Equipment</td>
</tr>
<tr>
<td>Total expense (2+3)</td>
</tr>
<tr>
<td>3. General &amp; Adm. Expense:</td>
</tr>
<tr>
<td>- Employee Salaries</td>
</tr>
<tr>
<td>- Owner Salaries</td>
</tr>
<tr>
<td>-Electricity &amp; water</td>
</tr>
<tr>
<td>-Hygiene</td>
</tr>
<tr>
<td>-Rent</td>
</tr>
<tr>
<td>-Advertisement Tax</td>
</tr>
<tr>
<td>Total expense (2+3)</td>
</tr>
<tr>
<td>Earning before tax</td>
</tr>
<tr>
<td>Tax 1%</td>
</tr>
<tr>
<td>Earning after tax (EAT)</td>
</tr>
</tbody>
</table>

Source: processed data.

Here, the financial feasibility of Pondok Maranggi 17, can be measured by using the method of Net Present Value (NPV), Payback Period, Average Rate of Return, and Profitability Index. Business Net Cash Flow and Present Value per year can be shown in
Table 6 (Present value work sheet) below:

<table>
<thead>
<tr>
<th>Description</th>
<th>To T1, 2017</th>
<th>T2, 2018</th>
<th>T3, 2019</th>
<th>T4, 2020</th>
<th>T5, 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earning after tax</td>
<td>91,276,960</td>
<td>97,486,960</td>
<td>201,532,460</td>
<td>220,448,010</td>
<td>358,588,290</td>
</tr>
<tr>
<td>Total fixed asset depreciation</td>
<td>21,023,040</td>
<td>21,023,040</td>
<td>21,023,040</td>
<td>21,023,040</td>
<td>21,023,040</td>
</tr>
<tr>
<td>Operasional cash flow</td>
<td>112,300,000</td>
<td>118,490,000</td>
<td>222,555,600</td>
<td>241,471,050</td>
<td>379,611,330</td>
</tr>
<tr>
<td>Investment:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Fixed Asset</td>
<td>(101,229,600)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Working Capital</td>
<td>(122,225,000)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Cash flow</td>
<td>(223,454,600)</td>
<td>112,300,000</td>
<td>118,490,000</td>
<td>219,965,100</td>
<td>241,471,050</td>
</tr>
<tr>
<td>Discount Factor (10%)</td>
<td>1</td>
<td>0.909</td>
<td>0.826</td>
<td>0.751</td>
<td>0.683</td>
</tr>
<tr>
<td>PV</td>
<td>(223,454,600)</td>
<td>102,080,700</td>
<td>97,873,236</td>
<td>165,193,790</td>
<td>164,924,727</td>
</tr>
</tbody>
</table>

Source: processed data.

Note: Terminal Cash Flow (Fixed Assets and Working Capital) is not included in the above Net Cash Flow, because this business will still continue on, it doesn’t close down at the end of the year 2021.

Thus, the financial feasibility of PondokMaranggi 17 can be calculated as follows:

1. NPV = (223,454,600) + 765,811,093 = Rp.542,356,493. It can be concluded that this business is feasible, because the NPV is positive.

2. Payback Period:
   Investment = (223,454,600)
   Net cash flow/benefit of year 1 = 112,300,000
   Net cash flow/benefit of year 2 = 118,490,000
   The Payback Period is 1 year 11.5 months. If the owner wants that his/her capital invested in this business should be back not more than 1 year, 11.5 months, this business is feasible or acceptable. Otherwise, this business is not feasible or unacceptable.

3. Average rate of Return:
   ARR = 193,862,536/127,221,700 = 1.52 (152%). If the owner wants that the ARR is not less than 100%, this business is obviously feasible or acceptable.

4. Profitability Index:
   PI = 540,553,076/223,454,600 = 2.44. PI is higher than 1; thus, this business is feasible.

CONCLUSION

From the point of view of market opportunity this business is feasible. It is projected increase of consumers by 10% per year, as well as increase of sales 22.4%, and profit 46.4% in average per year. Financially, this business is also feasible, either from the point of view of NPV, ARR, PI or Payback Period.

The success of this business, however, is also very depend on the seriousness and work hard, as well as the discipline of the owner and all employees in managing this business. In addition, an external factor, such as the condition of the economy also affects the success of this business. Therefore, the owner needs to be able to read the conditions changing time by time, in order to be able to adjust the business strategies, so the business is able to survive and making profit.

REFERENCES

ABSTRACT
This study aims to analyze and test the influence brand image and fashion consciousness on product purchasing decisions. Data were collected by distributing questionnaire and analyzed through descriptive analysis, classical assumption test, multiple linear regression analysis, F test and t test. The results of multiple linear regression analysis indicate that variable of brand image partially has significant influence on the product purchase decision variable, by showing sig. t (0.000) < α (0.05), fashion consciousness has a significant partial effect on the product purchase decision by showing sig. t (0.000) < α (0.05), brand image and fashion consciousness have significant effect on the product purchasing decision with sig value. F (0.000) < α (0.05), and the probability significance <0.05 is 0.000.

KEY WORDS
Brand image, fashion consciousness, product, purchase decision.

Currently the fashion industry, especially Islamic fashion in Indonesia, has been experiencing a huge market growth. In 2015, Indonesia has become the fifth largest Islamic fashion market in the world with a potential of USD 13.28 billion (Global Islamic Economy Report, 2017) with the average growth of the fashion industry of 10.17% annually (Euromonitor, 2018).

In addition, the development of the Internet and e-commerce industry also shows that the online marketing strategy is an increasingly important aspect for business to grow. In 2017, online trading in Indonesia stood at USD 7.056 billion, with the projected market growth above 20% annually in the next five years (Statista, 2017), with the most frequently purchased product profiles are fashion and accessories, which is 37.6% of total product transactions.

A good fashion brand image is indicated by to what extent the consumers are willing to pay extra money to get a certain brand, while at the same time, the other products with similar quality can be purchased at a cheaper price. As a result, profit margins of goods, especially fashion products, depend on the brand image. For this reason, it is important to manage the brand image value carefully over time (Peter et al, 2007).

Fashion industry in Indonesia has been growing rapidly, not only in domestic scale, Indonesia’s fashion designers have also started reaching the international market. In general, the fashion industry is also considered to have been able to create employment for about 3.8 million people or 32% of the total workforce created from the creative economy. In addition, Indonesia is also a country with a majority Muslim population, that according to the population census in 2010, there are about 87.18% of the 237,641,326 people (source: Wikipedia); the majority Muslim population makes their adherents require to wear Muslim dresses as in Islam it is required for women as well as men to cover their private parts.

Referring to Thomson Reuters in the State of the Global Islamic Economic 2015, the value of spending by the world’s Muslim societies was quite fantastic at around USD 230 billion for clothing in 2014. That number represents 11% of the world’s total clothing spending on average by 3.8 % per year. It is estimated that the number may jump up to USD 322 billion in 2018, reaching about 11.5% of total global spending. Currently, the countries that become the export destination of Indonesian Muslim fashion are United States, Japan, Germany, Korea, United Kingdom, Australia, Canada, United Arab Emirates, Belgium and China.
Table 1 – Consumer Countries of Indonesian Muslim fashion in 2014

<table>
<thead>
<tr>
<th>No</th>
<th>Countries</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Turkey</td>
<td>USD 24.84 billion</td>
</tr>
<tr>
<td>2.</td>
<td>United Arab Emirates</td>
<td>USD 18.24 billion</td>
</tr>
<tr>
<td>3.</td>
<td>Nigeria</td>
<td>USD 14.99 billion</td>
</tr>
<tr>
<td>4.</td>
<td>Saudi Arabia</td>
<td>USD 14.73 billion</td>
</tr>
<tr>
<td>5.</td>
<td>Indonesia</td>
<td>USD 12.69 billion</td>
</tr>
<tr>
<td>6.</td>
<td>Russia</td>
<td>USD 10.92 billion</td>
</tr>
<tr>
<td>7.</td>
<td>Egypt</td>
<td>USD 10.72 billion</td>
</tr>
<tr>
<td>8.</td>
<td>Pakistan</td>
<td>USD 10.52 billion</td>
</tr>
</tbody>
</table>

Source: Ministry of Trade of Republic of Indonesia (kemdang.go.id).

Based on Table 1, Indonesia is in the 5th position as the largest Muslim fashion consumer with a value of USD 12.69 billion in 2014. The data show the importance of developing Muslim fashion business in Indonesia has become the global benchmark for the Muslim fashion industry in the world. Amidst global market competitions, the contributors of the Muslim fashion industry should have strong and superior industry bases from bottom to the top levels. Chairman of Indonesia Fashion Chamber (IFC) Chapter Malang Agus Sunandar mentioned the competition of the fashion industry in Greater Malang region in East Java which has been increasing recently. There have been more fashion choices and alternatives in the City of Malang itself, making the people are concerned with the fashion in the region. According to Sunandar, people in the region now begin to look at several quality fashion products. He also said that the brand labelling by the prominent celebrities who sell their products directly in Malang region has been positive, especially for the fashion style of the community in Malang (malangtimes.com, 2017). Many fashion labels for hijabs, for example, the prominent national figures and celebrities are starting to open their outlets with their own brand labelling in smaller cities outside Greater Jakarta region. One of the labels which belong to celebrities that has opened in the City of Malang is Ria Miranda. Ria Miranda as a prominent figure has great contribution to the hijab fashion, including the trendsetter of the current hijab designers. Ria whose trademark “Riamiranda” is one of the prominent fashion designers whom are considered to influence the trend of Muslim clothing, it has been a hype among Muslim women in the country. Her designs are typically to exploit lines, touches of pastel color and girly feminine with strong characters, which are likely preferred by hijabers (nickname for Muslim women wearing modern and stylish hijabs) (Kompasiana, 2015).

LITERATURE REVIEW

There are some factors forming the brand image described by Keller (2003: 167) as follows:

1. Excellence of Brand Association (Favorability of Brand Association).
   Profitable brand associations in which the consumers believe that the attributes and benefits provided by the brand should meet the needs and expectations of the consumers so that they may have positive attitude toward the brand (Keller, 2008: 58). Profitable associations are brands that are intended to satisfy the consumers’ expectations and needs addressed in the form of convenient, secure, effective, efficient, and colorful products or services provided by the supportive marketing program. Keller describes the reputation of the brand can be assessed through the good or bad of the brand, likes or dislikes by the consumers in relation to the attributes and benefits of the brand. How important the brand association of the consumers’ attitudes and decisions depends on desirability and deliverability.

2. Excellence of Brand Association (Uniqueness of Brand Association).
   The essence of brand positioning is that the brand has the advantage of competing continuously or unique proposition that provides an exciting reason for consumers why they should buy the brand (Keller, 2008: 58). Therefore, a competitive advantage should be
created that can be used as a reason for the consumers to choose a particular brand. Strong and union associations are critical to the success of a brand. Brand associations help to determine the scope of competition with other products and services (Keller, 2008: 58). Creating a unique impression shows a significant difference between other brands as a competitive value and makes the consumers interested in and choosing the brand. The goal of this strategy is to create a strong and unique association which is deeply embedded in the minds of the consumers.


The strength of a brand association depends on how information instills into the consumer’s memory and how the process persists as part of the brand image. When a consumer actively describes the information of a product or service, it will create an association that is getting stronger in the consumer’s memory. The importance of brand associations in the consumer’s memory depends on how the brand is considered; the deeper a person thinks about the information of a brand and relates it to their previous knowledge, the stronger the brand association it has. The power of brand association is influenced by two factors: relevancy to the consumer and the consistency seen by the consumer over time.

Consumers form beliefs about brand attributes and benefits in various ways. Brand attributes are descriptive features that characterize a product or service (Keller, 2008: 57). Brand benefits are the personal value attached to the attributes of the product or service and what the product or service can deliver to the consumers. The power of brand associations is made up of word of mouth (friends, family, colleagues, etc.) or other non-commercial information sources. These associations are derived from information that consumers can get from brand attributes and brand benefits.

- H1: Brand image variable (X1) has partially significant effect on product purchase decision (Y);
- H2: Fashion consciousness variable (X2) partially has significant effect on the product purchase decision (Y);
- H3: Brand image and fashion consciousness simultaneously have significant effect on the product purchase decision (Y).

According to Nam et al., (2007), someone’s fashion consciousness refers to the level of their involvement in style or dress mode. O’Cass and Siahtiri (2013) define fashion-conscious consumers as people who are deeply involved with everything about fashion. Fashion consciousness depicts someone’s consciousness of fashion and ability to choose, dress equally or imitate and be responsive to fashion (Milewski, 2005). According to Wan, Youn, and Fang (2007), many studies have explained that fashion consciousness is a significant construction that defines loyal consumers who are aware of their physical image and appeal.

The decision to purchase a product is a collection of decisions. The buying decision has four structural components as mentioned by Swastha and Handoko (2013: 102) as follows:

1. Decisions about the type of product. The consumers make a decision to buy a product or use the money for other purposes.
2. Decisions about product form. The consumers can take a decision to buy products with a particular form. The decision might concern with the pattern of size, quality, style, and so forth.
3. Decisions about the brand. The customers have to make a decision about which brand to buy. Each brand has its own differences. In this case the company should know how the consumers choose the brand.
4. Decisions about the seller. Consumers have to make decisions on where the radio will be purchased, whether at a department store, an electrical equipment store, a radio specialty store, or another store. In this case, producers, wholesalers and retailers need to know how consumers choose a particular seller.
5. Decisions on the number of products. The consumers make decisions about how many products to buy at a time. The number they buy may be more than one unit.
6. Decision about the time of purchase. Consumers can take a decision about when to make a purchase. This problem will involve the availability of money to buy a radio.
Therefore, the company should know the factors that influence the consumer’s decision in determining the time of purchase. Thus the company may manage the time of production and marketing activities.

7. Decision on payment method. The consumer should make a decision about the payment method of the purchased product, whether by cash or by installment.

![Figure 1 – Model of Hypotheses](image)

**METHODS OF RESEARCH**

This is an explanatory research with non-probability sampling determined through accidental sampling technique. Total respondents were 100 women customers who bought at House of Ria Miranda, Malang, Indonesia. The location of this study was chosen because it is closely related to the topic raised by researchers in conducting this research.

**RESULTS AND DISCUSSION**

The results of this study indicate that brand image variable (X1) partially has positive and significant effect on purchase decision upon the products (Y). The grand mean value obtained for brand image variable of 4.26 indicated that the response from the respondents was very high. The results of this study also prove the opinions from the experts who claim that the brand image has an influence on purchasing decisions. In relation with the brand image, according to Schiffman, Kanuk (2008), purchasing decision is as a close relationship that occurs the selection of two or more alternatives purchasing decision choices, and brand image means that a person can make decisions that there must be some alternative options. The decision to buy may lead to how the process in making that decision is done.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>6.543</td>
<td>2.248</td>
<td>2.910</td>
<td>.004</td>
<td>.746</td>
</tr>
<tr>
<td>Brand Image</td>
<td>.229</td>
<td>.055</td>
<td>.404</td>
<td>4.174</td>
<td>.000</td>
</tr>
<tr>
<td>Fashion Consciousness</td>
<td>.171</td>
<td>.037</td>
<td>.442</td>
<td>4.572</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Product Purchase Decision.

In addition, the relationship of brand image can be formed due to factors such as attractiveness and also similarity or personal resemblance. This is in line with the factors why consumers make purchasing decisions, namely the results of alternative evaluations of different available brands to be used as a reference in the decision-making process.
Table 3 – 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>.797</td>
<td>.636</td>
<td>.628</td>
<td>2.785</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Fashion Consciousness.

The results of this study indicate that the fashion consciousness variable (X2) partially has positive and significant effect on purchase decision to buy products (Y). The grand mean value obtained for the fashion consciousness variable was 3.94, indicating that the responses of the respondents were high.

The results of this study were similar with research conducted by Hassan and Harun (2016) that the results showed that any changes of style, fashion motivation, fashion uniqueness and the source of fashion knowledge are influential towards fashion consciousness. The practical implications of the results of this study may provide insight to people involved in the fashion industry such as designers, retailers and marketers, to understand the market segment, namely the hijabers.

The results of this study indicate that brand image (X1) and fashion consciousness (X2) variables together have significant effect on product purchase decision variable (Y), which was indicated by significant value of F equal to 0.000 (α<0.05) so that H0 is rejected and H1 is accepted. Based on the analysis of the coefficient of determination in Table 4.11, it was obtained the adjusted results of R square 0.628 or 62.8% which means that 62.8% of product purchase decision is affected by independent variables of brand image (X1) and fashion consciousness (X2), while 37.2% of product purchase decision variable (Y) is influenced by other variables.

In addition to the coefficient of determination, it was also obtained the correlation coefficient which has a value of R (correlation coefficient) of 0.797, indicating that the relationship between independent variables of brand image (X1) and fashion consciousness (X2) with the dependent variable of product purchase decision (Y) is strong because it is in the interval of 0.600-0.799.

CONCLUSION

The research results may lead to several conclusions as follows:

- To determine the partial influence of independent variables of brand image (X1) and fashion consciousness (X2) towards product purchase decision (Y), the test was conducted. Based on the test results, it was found that there were two variables that have significant influence on the decision to buy products (Y), brand image (X1) and fashion consciousness (X2).
- Based on the test results, it was found that the fashion consciousness variable (X2) has the largest statistical value of effect. So that the fashion consciousness (X2) variable has the strongest influence compared to other variables, and it has dominant influence to the product purchasing decision (Y).
- The simultaneous influence of each independent variable on product purchase decision (Y) was done by testing. From the results of multiple linear regression analyses, it was obtained that the independent variables have significant influence simultaneously on the product purchase decision (Y), so it can be concluded that the test against the hypothesis that the simultaneous effect of independent variables on the product purchase decision (Y) is acceptable.

REFERENCES

INTENSIFICATION STRATEGY OF RURAL AND URBAN LAND AND BUILDING TAX REVENUE IN TULUNGAGUNG REGENCY

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ABSTRACT
This research discusses intensification strategy (PBB P2) of rural and urban land and building tax revenue in Tulungagung Regency through SWOT analysis. The problem arises as closed list system in Law No 28/2009 on Regional Tax and Regional Retribution as well as the amount of PBB P2 revenue realization during 2014-2017 tends to be below potential number which can be obtained. This research is classified as descriptive research through qualitative approach. The research results show that internal environment affecting PBB P2 revenue in Tulungagung Regency consists of institutional and employee affairs aspects. Alternative strategy for Tulungagung Regency Administration in order to increase PBB P2 revenue includes five alternatives based on their priority sequence – strategy on employee affairs, e-government, institutional, social and legal aspects.

KEY WORDS
Strategy, intensification, land, buildings, taxes, SWOT analysis.

Strategic approach in increase of regional revenue has relevance when there is strategic environment change as the result of fiscal decentralization policy which bears a new paradigm which is more oriented at increase of regional government authority and increase of local taxing power. To support those two things, the central government issues Law No. 28/2009 on Regional Tax and Regional Retribution which regulates transfer of central tax to become regional tax, one of which is Rural and Urban Land and Building Tax (Pajak Bumi dan Bangunan Perdesaan dan Perkotaan / PBB P2). Nationally, land and building tax contribution prior to autonomous region process in 2014 had percentage as much as 21, 23% (Central Bureau of Statistics, 2013). After PBB P2 was officially transferred to regional government and then 100% PBB P2 revenue could be an opportunity and a challenge to regional government to increase the regional revenue and autonomy. To answer the challenge and the opportunity, Tulungagung Regency Administration through Local Revenue Agency (Badan Pendapatan Daerah) used intensification strategy to speed up PBB P2 revenue. However, recapitulation revenue result of PBB P2 in Tulungagung Regency started in 2014-2017 tended to be below the PBB P2 potential number, as shown in the following table:

Table 1 – Percentage of PBB P2 Realization Revenue of Tulungagung Regency toward Potential in the year of 2014-2017

<table>
<thead>
<tr>
<th>No.</th>
<th>Year</th>
<th>Potential</th>
<th>Realization</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2014</td>
<td>23,514,718,388</td>
<td>23,436,249,062</td>
<td>99,66%</td>
</tr>
<tr>
<td>2</td>
<td>2015</td>
<td>24,178,725,736</td>
<td>24,166,771,682</td>
<td>99,95%</td>
</tr>
<tr>
<td>3</td>
<td>2016</td>
<td>25,295,595,264</td>
<td>25,493,683,398</td>
<td>100,78%</td>
</tr>
<tr>
<td>4</td>
<td>2017</td>
<td>27,421,152,222</td>
<td>27,056,181,455</td>
<td>98,66%</td>
</tr>
</tbody>
</table>

Source: Local Revenue Agency of Tulungagung Regency, 2018.

Based on the percentage result above, then the precision of intensification strategy is highly needed in PBB P2 management in Tulungagung Regency. It is essential, therefore, analysis toward factors which could affect PBB P2 revenue is carried out, either factors deriving from internal environment or those deriving from external environment.
The research results of Mc Cluskey and Franzsen (2005), Donovan (2015) and Fahrati, et al. (2017) refer to an agreement that the power of internal environment of organization, such as knowledge and skill aspect of human resources, technical guidance aspect, technology utilization aspect, and relation or communication in the organization is positive energy which can be used to strive for increasing property (building) tax revenue. In line with that, Gaffney (2009) assumes that the excavation of land and building tax has positive contribution toward regional tax revenue. The potential excavation, however, requires a great effort, perseverance, and precise strategy.

Strategy which is able to respond internal and external environment is known as strategy through SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats). The analysis SWOT result gives alternative strategy which can be utilized to increase PBB P2 revenue in Tulungagung Regency.

LITERATURE REVIEW

In this research, there are several concepts which form framework of thinking, namely, regional tax concept, land and building tax, intensification strategy, and SWOT analysis. Related to regional tax, Davey (1988, p.40-49) states that there are five criteria to assess regional tax, those are: sufficiency and elasticity, justice, administrative ability, political agreement, and positive influence. Then, for optimization of intensification strategy of regional tax, Sidik (2002, p.9) states that it can be done through several ways, among them: widen revenue base, strengthen collection process, increase supervision, increase administrative efficiency and surpass collection fee, and increase revenue capacity through good planning.

Concept of strategy according to Bryson (2000, p.4) is a discipline which aims to yield decisions and basic organizational activities, what to do and why to do that. In line with that, Argyris (1985), Mintzberg (1979), Steinter and Miner (1977) in Rangkuti (2014, p.3) agree that strategy is a continuous response, either adaptation to external opportunity and threat, or internal strength and weakness which can affect organization. Referring to that opinion, according to Amir (2011, p.87), internal environment is a factor deriving from resource aspect, either concrete form or abstract form. On the other hand, external environment can be aspects deriving from politics, economy, social, technology, demography, law, and others (Steiss, 2003 p.74).

METHODS OF RESEARCH

The type of this research is descriptive with qualitative approach. Bogdan and Taylor in Moleong (2014, p.4) define qualitative approach is as research procedure which earns descriptive data in the form of written or spoken words from the people and behavior which can be observed. The researcher is a key instrument and data collection technique can be carried out through observation, deep interview with snowball sample technique, and documentation, while data analysis technique is through SWOT analysis.

RESULTS AND DISCUSSION

General Overview of Intensification Strategy at Local Revenue Agency. The collection and management of PBB P2 by Tulungagung Regency Local Revenue Agency have been prepared through strategic plan realized in the form of strategy and policy. Strategy used in strategic plan of Local Revenue Agency in the year of 2014-2017 is to increase regional tax and retribution revenue, one of which is through intensification. Tax intensification is optimization of tax excavation toward taxable object and taxpayer which aims to increase tax revenue, while the policy direction is to give priority to activities to up to date taxpayer and taxable object data base, information technology implementation in regional tax management, and increase of tax collector human resources.
Set of Local Revenue Agency program and activity 2017 Fiscal Year concerning PBB P2 intensification strategy is Tax Revenue Increase and Regional Retribution Program as well as Tax Revenue Security and Regional Retribution Program, along with several activities among them: 1) Performance Increase through Technical Guidance; 2) Establishment of Information System Data Base; 3) SISMIOP Data Base Maintenance; 4) Monitoring and Delivery of SPPT PBB P2; 5) Individual Assessment of PBB P2; 6) Socialization on Regional Tax regulation and Regional Retribution; and 7) Reward giving and Sanction imposition.

Research result through observation, documentation, and interview with snowball sample technique, finds out that the weakness of PBB P2 intensification strategy lies on technical guidance strategy and SISMIOP data base maintenance strategy. Those two strategies are proven not yet to give positive implication toward PBB P2 revenue increase.

Internal Environment Identification. On the one hand, strengths owned by Tulungagung Regency Local Revenue Agency to carry out intensification strategy of PBB P2 derive from institutional aspect. The institutional aspect owns superiority with a number of adequate means and infrastructure facilities (building, cooperation with Bank, car around), the availability of Technical Implementing Unit Agency (Unit Pelaksana Teknis Badan / UPTB) which provides 14 types of PBB P2 services, reward and sanction system, and regional regulation socialization.

On the other hand, weakness is found at employee affairs aspect, that is, the number of employee shortage who has supervisor certificate on PBB P2 taxable object assessment; therefore, keeping up to date the data becomes slow and Sales Value of Taxable Object (Nilai Jual Obyek Pajak / NJOP) becomes below the market price. Moreover, the weakness of on the job training program becomes a problem, because employee rotation is not yet supplied with appropriate position training.

External Environment Identification. Opportunities owned by Tulungagung Regency Local Revenue Agency derive from: 1) Regional Development Aspect: the development of Tulungagung Regency area (economic growth in 2016 was as much as 5,02%, increasing from the previous year as much as 4,99%), assessment realization of individual taxable object in the year of 2015-2017 was always beyond the target; 2) Demographical Aspect: Tulungagung Regency population growth rate in the year of 2010-2016 was as much as 3,40%; 3) E-government Aspect; information and communication technology development; 4) Partnership Aspect: the availability of cooperation opportunities with related stakeholder.

Apart from that, Tulungagung Regency Local Revenue Agency must be cautious about possible threats which happen to PBB P2 revenue intensification strategy which derive from: 1) Social Aspect: the shortcoming of people’s obedience to pay PBB P2; 2) Geographical Aspect: geographical condition of Tulungagung Regency which is very large, the shortage of road access and transportation means in several villages to SPPT delivery and SISMIOP data maintenance; and 3) Legal Aspect: closed list system implementation on Law No. 28/2009.

SWOT Analysis. SWOT analysis result based on the internal and external environment identification toward intensification strategy of PBB P2 revenue in Tulungagung Regency can be seen in Table 2.

Strategy on e-government aspect with optimization of information and communication technology utilization through:

- Relation between agency and technical implementing unit is integrated online for the ease in coordination and cooperation as well as responsibility report, technical implementing unit evaluation, renewal of PBB P2 potential data, arrears, and another problem can be done and checked at real time;
- Optimization of technology utilization through ATM, teller, and e-banking;
- Implementing e-system covering e-SPPT, e-SOP and e-registration;
- Utilizing social media such as Facebook, Twitter, Instagram, as well as official website owned by Local Revenue Agency, and gateway SMS;
- Monitoring online and real time.
### Table 2 – SWOT Matrix of Intensification Strategy PBB P2 Revenue in Tulungagung Regency

<table>
<thead>
<tr>
<th>IFAS</th>
<th>EFAS</th>
<th>Strengths (S)</th>
<th>Weakness (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Institutional Aspect:</td>
<td>Employee Affairs Aspect: employee shortage who has competence certificate as a supervisor in taxable object assessment at SISMIOP maintenance, the weakness of on the job training program.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Very adequate means and infrastructure for PBB P2 service: service building, cooperation with Bank, car around.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The availability of Technical Implementing Unit Agency as prolongation from Local Revenue Agency which owns 14 kinds of PBB P2 services.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The availability of reward giving and sanction imposition.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Regional regulation socialization on PBB P2 has been carried out evenly to the society.</td>
<td></td>
</tr>
<tr>
<td>Opportunities (O)</td>
<td>Strategy S-O</td>
<td>E-government Aspect: optimization of information and communication technology utilization through: 1) relation between agency and between technical implementing unit is integrated online; 2) optimization of technology utilization through ATM, teller, and e-banking; 3) implementing e-system; 4) utilizing social media and gateway SMS; 5) monitoring online and real time</td>
<td>Strategy W-O</td>
</tr>
<tr>
<td>Regional Development Aspect: the development of Tulungagung Regency area (economic growth in 2016 was as much as 5.02%, increasing from the previous year as much as 4.99%), assessment realization of individual taxable object in the year of 2015-2017 was always beyond the target.</td>
<td></td>
<td>Employee Affairs Aspect: sending employees to take a part in training and education program to obtain professional certificate of PBB P2 assessor; holding technical guidance through analysis of training and education program needs; scholarship for employees; remuneration giving, bonus, or achievement.</td>
<td></td>
</tr>
<tr>
<td>Demographical Aspect: Tulungagung Regency population growth rate in the year of 2010-2016 was as much as 3.40%.</td>
<td></td>
<td>Institutional Aspect: implementing coordination and cooperation with related stakeholder and supervision.</td>
<td></td>
</tr>
<tr>
<td>Geographical Aspect: geographical obedience to pay PBB P2.</td>
<td>Strategy S-T</td>
<td>Social Aspect: develop society’s awareness and obedience to pay PBB P2 by increasing socialization and promotion on the benefit and ease of PBB P2 services.</td>
<td>Strategy W-T</td>
</tr>
<tr>
<td>Legal Aspect: closed list system implementation on Law No. 28/2009.</td>
<td></td>
<td>Legal Aspect: law enforcement implementation through sanction imposition.</td>
<td></td>
</tr>
</tbody>
</table>

**W-O Strategy (Weaknesses-Opportunities).** Strategy on employee affairs aspect by sending employees to take a part in training and education program to obtain professional certificate of PBB P2 assessor; holding technical guidance through analysis of training and education program needs; scholarship for employees; remuneration giving, bonus, or achievement. Then, strategy on institutional aspect through coordination and cooperation with related stakeholder, central agency, regional agency, or banking, and carrying out supervision management.

**S-T Strategy (Strengths-Threats).** Strategy on social aspect is to develop society’s awareness to pay PBB P2 by increasing socialization and promotion on the benefit and ease of PBB P2 services. Socialization and promotion can be carried out by Technical Implementing Unit Agency (UPTB) cooperating with Sub district, District/Village, society figure, and religious figure through the utilization of village meeting or discussion and religious holidays to give any information about things concerning duty to pay tax, benefit of paying tax, and benefit of the tax payment application as well as the ease of the availability of PBB P2 services.

**W-T Strategy (Weaknesses-Threats).** Strategy on legal aspect is law enforcement implementation through sanction imposition and law enforcement based on justice principle.

Source: processed data, 2018.
The Priority of Alternative Strategies:

- First Priority: Strategy on Employee Affairs Aspect, considering the main weakness on intensification strategy of PBB P2 revenue deriving from human resources shortage.
- Second Priority: Strategy on e-government Aspect. As an effort to maximize the benefit of opportunities which arise and to anticipate so that the opportunities do not turn out to be threats.
- Third Priority: Strategy on Institutional Aspect, through cooperation with related stakeholder in order to increase employees' performance and increase effectiveness and efficiency of PBB P2 services.
- Fourth Priority: Strategy on Social Aspect. Developing society's awareness to pay PBB P2 is necessary to be done continuously.
- Fifth Priority: Strategy on Legal Aspect. Law enforcement must be carried out to tax payers or tax employees as the form of justice and supervision to minimize any violation.

CONCLUSION

Based on SWOT analysis, it is found out that alternative intensification strategy of PBB P2 revenue in Tulungagung Regency covers strategy on e-government aspect, employee affairs aspect, institutional aspect, social aspect, and legal aspect. Of five aspects on that alternative strategy, employee affairs aspect is the top priority which is necessary to be realized immediately, considering the main weakness in this research deriving from human resources.

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IKHLAS BEHAVIOR AS THE INFLUENCE MODERATOR OF COMPETENCE AND CLIMATE OF SCHOOL ORGANIZATION ON PERFORMANCE OF TEACHERS

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ABSTRACT
This study tries to assess the influence of ikhlas behavior as the moderator of competence and the climate of school organization on the performance of teachers in the city of Palu. This explanatory research uses quantitative (positivist) approach. The population is 988 middle-school teachers in Palu, 286 respondents were obtained through probability sampling. The inferential statistical method used in the data analysis is WarpPLS. The results of this study show that competence and the climate of school organization significantly affect the performance of teachers. Meanwhile, behavior of ikhlas does not moderate the effect of competence on teachers’ performance. It strengthens the influence of the climate of school organization on the performance of teachers.

KEY WORDS
Ikhlas behavior, competence, climate of school organization, performance, teachers.

Ikhlas is a value rooted from religiosity of Islam. It is a product of faith and contemplation about religious teachings, which leads the behavior of people toward the behavior favored by the teaching they profess. Therefore, it can become a positive value used to improve performance. Religiosity, according to Kaye & Raghavan (2002), is a spiritual expression from a person regarding belief system of value, applicable law, and ritual. For a teacher, it is reflected in lasting ikhlas, transferring all knowledge and technology with the basis of ikhlas, expecting the contentment of Allah SWT. Ikhlas must accompany all activities. Not limited to religious activity, it applies during working. Satisfying performance is the expectation of all organizations or institutions. Performance is the result of complex process, coming from both the self of every individual (internal factor) and the organizational strategic effort.

As an organization, the performance of school is determined by the performance of its resources. Educational institution must be comprised of resources with high quality and competitiveness. In the context of educational institution, human resources are educational personnel such as the principal, teachers, clerical workers, and helpers (Daulay, 2004). Teacher is the resource that receives more attention in the improvement of educational quality. This certainly relates with the performance of teachers in every school.

The figure of teachers has become a strategic spotlight in education in Indonesia since teachers are connected with all components in educational system. The current phenomenon is that the condition of teachers nowadays has not met the expectation of the government. Many aspects contribute to the quality of education. Danim (2002) stated that one of the characteristics of educational crisis in Indonesia was the low performance of teachers. Some parts of societies still doubt the skill of teachers that is attached to all aspects regarding the performance of teachers. The belief is based on the low average score of UKG (Assessment of Teacher’s Competence). The phenomena also appear in the city of Palu, especially among teachers of middle school. Only twelve teachers, out of 630, passed the minimum score of 70. However, score of 10 also appeared (Radar Sulteng, August 13, 2012). The
result is far from expectation and quite alarming if it is related to the quality and performance of teachers.

Stern (1910) with theory of convergence stated that the working achievement of individual in an organization is determined by factors of individual and environment. Each individual is a combination or convergence of internal factors (inner capability) and external factors. Competence development is a process of merging and improving all skills needed in achieving the domain of life (Sternberg, 2005). This means that competence is a characteristic of someone leading to skill and ability demonstration resulting in effective performance in certain working areas (Sanghi, 2007).

Levenson (2005) asserted that competence could help improve the average quality at work. However, it is not sufficient for identifying and producing outstanding performances for the organization. Executives must have the ability of using their managerial competence and equipping themselves with other managerial competence for the achievement of their organizational goals. The research by Sanda et al. (2011) showed that executives of small companies in Ghana have managerial competence and behavior to improve the performance of their companies. However, they still exhibit competence and attribute of their organizational behavior. This characteristic does not positively affect their performance to the direction that makes their companies more competitive. It also shows that competence is not enough for superior performance. Tutu and Constantin (2012) similarly stated in their research – Understanding Job Performance through Persistence and Job Competency – that a positive correlation existed between performance and competence, but competence is not enough to predict high-level performance. They suggested a more challenging study from social and psychological perspectives, for instance, by observing altruistic in overcoming difficulties at work.

The research of Done (2011) shows that competence and performance have positive and negative effect, that not all dimensions of individual competence positively affect all performance measurement, and that some of them probably have negative effect. This research also raises a prospect that the impact of competence on performance might not always be preferable.

An external factor that comes to the spotlight and can affect the performance of teachers is the climate of school organization. The main factors in organizational climate, according to Bursalioglu and Ceyda (2012) are people and interaction among groups, interaction between school and environment, balance between the objective of the school and the objective of individual, the success level on the achievement of school’s objectives. School managers and personal characteristics of other professionals are the main effect on the climate of the organization.

Adeyemi (2008) found that a significant relation existed between the organizational climate of schools and the performance of the teachers. This finding implies that the performance of teachers is the function of the climate of school organization. The positive relation in this study means that the performance of teachers will be high if they work in preferable school climate. Meanwhile, Haron et al. (2010) found that the school climate affects counselor’s self-efficacy. It also succeeded in improving understanding about the relation between school climate and self-efficacy of counselors. Effective school climate can improve the performance of counselors in carrying out their duties.

Results of study that supports that organizational climate and performance of teachers correlates each other are the results of Raza (2010). The main objective of this study is to determine the impact of organizational climate on the performance of teachers in public higher educations. The correlation coefficient shows that organizational climate is significantly related to the performance of teachers, with different aspects between the principal and the behavior of teachers. Further, this study also found that teachers in open and autonomous climate performed better than teachers in closed climate did.

The relation between organizational climate and teacher’s performance also appears in the finding of Selamat et al. (2013). The findings show that teachers in middle schools cannot perform their duties since the organizational climate of the school is not conducive. This study also finds that organizational climate becomes an important factor affecting the
performance of teachers. Seen from the dimension of organizational climate, one of the aspects of principal's leadership behavior and teachers' behavior, which are the supporting and the opposing factor, is an important factor in improving the working achievement of teachers.

Duff (2013), in his research trying to assess the climate of school organization, perception of teachers and principal, assessed the extent of the perception gap. This research is a causal comparison using Organizational Climate Description Questionnaire for Elementary Schools (OCDQ-RE) as the instrument of data collection. His findings imply that the perception of teachers on the climate of school organization must also be asked. Knowledge about the climate of school organization is essential in determining and contributing to the success of the school.

Adejumobi and Ojikutu (2013) examined the relation between school climate and the achievement of teachers of middle schools in Lagos State. The multistage cluster sampling that divides Lagos State into six educational districts results in samples of 1,804 students, 238 teacher, and 18 principals. The information is extracted from the respondents using Teacher Job Performance Questionnaire (TJPAQ); Organizational Climate Description Questionnaire (OCDQ). A log-linear model is installed to show the interaction among various variables, and it shows that the performance of teachers is affected by variables of infrastructure availability, class size, leadership style, motivational strategy, and teachers' spirit. This shows that relation between climate of school organization and performance of teachers exists.

On the contrary, a research entitled Educators and the quality of their work environment: an analysis of the organizational climate in primary school published by D Vos et al. (2012) shows that teachers in the study do not experience organizational climate of their schools as something positive in creating a conducive environment for teaching and learning activities.

Researches about competence, climate of school organization, and performance of teachers both in national and international scale have been carried out. Factors affecting the performance of teachers have already been examined. Nevertheless, only some of them relate performance of teachers to spiritual and religious values. Therefore, besides convergence of internal and external factors such as competence and climate of school organization, this study discusses more deeply the influence of competence and climate of school organization on performance of teachers with behavior of ikhlas as the moderator.

Only a few researches focus on behavior of ikhlas, but some of them put something similar to the behavior as their focus. For instance, Pendlebury (2008), in Accuracy, Sincerity and Capabilities in the Practice of Teaching, stated that teaching is not a practice. Instead, educative teaching is a definitive practice with the purpose of enabling communal development through skill improvement since it deals with kindness, accuracy, and sincerity. The objective of educative teaching is to enable pupils improving kindness and truth. It sees that teaching practice can be trusted if it is held by teachers who have kindness.

Gürses et al. (2010), in his research entitled An investigation on teachers to whom positive attitudes were developed by students, found that personal feature of teacher is far more effective than their professional knowledge in the process of developing positive attitude. Several personal characteristics such as rhetoric skill, physical appearance, generosity, sensitiveness, and sincerity affect students positively. This can be interpreted as that ikhlas behavior attached to personal characteristic of teacher can highly influence teaching and learning process.

Ozcan and Balyer (2012), in their research entitled Negative factors affecting the process of mentoring at schools, stated that the lack in knowledge-sharing culture, poor communication, competition, and sincerity made mentoring process negative in result. Further results show that junior teachers, 90.1 percent, need more guidance and counseling. It means that teachers need counseling, sincerity, and behavior of ikhlas to make them more comfortable.

The study of Meurs (2011), Political Skill as Moderator of the Trait Sincerity–Task Performance Relationship: A Socioanalytic, Narrow Trait Perspective, uses narrower approach by observing one of the facets, sincerity, where it is one dimension of honesty.
factors, and modesty is measured through personality according to HEXACO factors. The results show that sincerity relates to performance.

The study that focuses specifically on ikhlas is the study by Chizanah (2011), where it compares ikhlas and pro-social through comparative study based on Caps. The results show that fundamental differences exist between ikhlas and pro-social behavior, despite the facts that both involve cognitive and affective elements and that both carry the discourse of idealism (transcendental closeness on ikhlas and moral integrity on pro-social behavior).

The findings of Chizanah (2011) also show that the scale of ikhlas, some parts of it, overlaps the area of other constructs, but not in overall. Thus, it can be said that a unique area can still be explained by ikhlas. The overlapping area in the construct of ikhlas is the aspect of emotional control. The unique areas within the construct of ikhlas are the transcendental motive, conception of God’s servant, and superiority feeling.

METHODS OF RESEARCH

The main objective of this research is to describe the influence of ikhlas behavior as the moderating variable of competence and climate of school organization on the performance of teachers. This study also tries to draw a description about competence of teachers, climate of school organization, ikhlas behavior, and performance of teachers.

The population of this study is teacher of state junior high school (SMP) in the city of Palu. From 24 state junior high schools in Palu, until 2013, the total of teachers, both state’s employees (PNS) and non-state’s employees, is of 998 people. The sample of this research is 286 people, determined from probability sampling in random manner, where each teacher has the opportunity of becoming the research sample. The instrument of this study is questionnaire used to draw the perception of teachers on competence they have, organizational climate of their school, their ikhlas behavior, and their performance. Particularly for performance variable, questionnaire to be filled by principal as superior is available to assess the performance of teachers.

The methods of analysis are descriptive and inferential analysis. The former gives description on the demography of research’s respondents such as age, sex, education, and length of service. The latter assesses the predetermined hypothesis. The statistical inferential method that is relevant with the objective and the framework employed in this study is Partial Least Square (PLS) using WarpPLS 4.0. The stages are assessing the influence of competence on the performance of teachers and assessing the influence of the climate of school organization on the performance of teachers. The next stage is assessing the role of ikhlas behavior in moderating the influence of competence and the climate of school organization on the performance of teachers.

RESULTS AND DISCUSSION

The result of the descriptive analysis shows that:

For competence variable, the indicator of personal competence has the highest average score, followed by social competence, professional competence, and pedagogic competence.

The variable of climate of school organization is measured from three aspects of principal’s behavior (supportive, directive, and restrictive) and three aspects of teacher’s behavior (collegial, committed, and disengaged). Based on the result of the descriptive analysis, most of the respondents have good perception about the climate of school organization.

The measurement on the variable of teacher’s performance in this research includes planning of teaching activity programs, teaching implementation, and evaluation implementation. Based on the result of the descriptive analysis, the respondents have good perception about the achievement of teachers’ performance.

The construct of ikhlas used in this study includes self-concept as servant of God, transcendental motive, superiority feeling, and emotional control. The recapitulation of the
descriptive analysis of ikhlas behavior variable shows that the respondents have good perception regarding the variable in question.

The hypothetical testing using inferential statistical method gives the following result.

Based on the assessment result of the path coefficient of model with moderating variable as shown by Figure 1, it can be seen that (1) competence variable significantly affects the performance of teachers; (2) climate of school organization significantly affects the performance of teachers; (3) variables of competence interaction and ikhlas behavior do not affect the performance of teachers significantly; (4) variables of interaction of school organization climate and ikhlas behavior significantly affect the performance of teachers.

The result of the analysis of this study shows that the influence of competence on teachers’ performance is positive and significant with the P value of <0.001. The number is lower than 0.05, as regulated by hypothesis testing. Thus, it can be stated that competence of teachers, which includes pedagogic, personal, social, and professional competence, plays role in determining the performance of teachers. The value of path coefficient and the P value of the model above are presented in Table 1.

**Table 1 – Path coefficient and P value**

<table>
<thead>
<tr>
<th>Relation between variables</th>
<th>B</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competence → Teacher’s performance</td>
<td>0.564</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Climate of School Org. → Teacher’s performance</td>
<td>0.164</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Competence* Ikhlas behavior → Teacher’s performance</td>
<td>0.008</td>
<td>0.438</td>
</tr>
<tr>
<td>Climate of School Org.* Ikhlas behavior → Teacher’s performance</td>
<td>0.16</td>
<td>0.001</td>
</tr>
</tbody>
</table>

*Source: Output of WarpPLS, year of 2015 (Enclosure 3).*

This result shows that higher competence owned by a teacher will increase his performance. The relation direction between competence and performance of teachers observed at the value of path coefficient can also be seen. The value of path coefficient of competence on teachers’ performance is of 0.564. The value shows that competence positively affects the performance of teachers. Thus, the result of this study proves that better competence will improve performance. In summary, referring to the finding of Spencer and Spencer (1993), competence can be used to predict performance better. The result also support the finding of Abraham et al. (2001), Murray (2003), Quek (2005), Sanda et al. (2011), Levenson (2005) and Done (2011). In a more specific manner, this study support the result of the previous study regarding the performance of teachers, such as Bisschoff & Grobler (1998), Chung and Wu (2011), Ilanlou and Zand (2011), Kamis (2013), and Richards (2010).

Mastery of competence for a teacher has an important value for the teacher himself, for the school, and for students. Referring, once again, to the finding of Spencer & Spencer (1993), competence is causally related with performance. Thus, pedagogic, personal, social,
and professional competences are expected to predict the behavior of teachers, so it eventually can predict the performance of the teacher.

The finding in the variable of school organization climate shows that its P value is of $<0.001$, which means the climate of organizational school affects teachers’ performance. Besides influence, the direction can also be seen from the path coefficient value, which is of 0.164. The value shows that the climate of school organization positively affects the performance of teachers. It means that performance of teachers will improve if the school has good organizational climate.

Climate is a general concept reflecting the quality of the organization’s life. The quality is observed from many perspectives. One of the concepts and climate measurement is observed from actors of superiors and subordinates. The result of this study shows that the climate of school organization significantly affects teachers’ performance. It means that conducive organizational climate is shaped from three aspects of principal’s behavior (supportive, directive, and restrictive) and three aspects of teachers’ behavior (collegial, committed, and disengaged). Based on the description on the variable of school organization’s climate, most of the principals are high in support, but they are low in giving direction and making restriction.

Besides the behavior of principal, the climate of school organization is also shaped by the relation among teachers, a series of working environment’s characteristics measured directly and indirectly by teachers who are assumed the main power in influencing the behavior of teachers (Gibson et al., 1995).

One of the behaviors of teachers that shape the climate of school organization is collegial. A good cooperation will create a friendly, familiar, respecting, and supportive community, which ensure the teaching and education in the school, especially in creating warm and supportive climate of school organization.

The description of school organization climate dealing with the behavior of a teacher to his colleagues shows that commitment, which is measured from the consequences of teachers such as helping their students, willing to stay after teaching hours to give extra lesson to students in need, voluntarily supports students’ activity after their teaching hours, and listening to students with personal problems, is quite good. Teacher with high commitment will give effective contribution to students (Vikramsinh, 2013). The findings of Smith (2009) show that teachers tend to be committed to their school if they feel support from other teachers.

This study also shows that disengagement rarely happens, which means that conflict does not occur frequently. Reprehensible conducts such as putting pressure to other teacher groups with different opinion, talking inappropriately during school meeting, ignoring opinions of other teachers, or gossiping do not present.

This result is similar to the result of Makewa et al. (2011). Climate of school has a significant influence on academic performance of students in middle schools located in the regency of Nandi-tengah. The study recommends the schools improve their ecology, environment, social climate, and school culture, so they have positive climate, which supports better academic achievement for the students. Organizational climate is significantly related to the performance of teachers, with different behavioral aspects of principals and teachers (Raza, 2010). The result of this study is consistent with the finding of Kelton (2010), which mentions that it is essential to establish supportive behavior of principals and committed and collegial behavior of teachers.

This research and several previous researches have shown that organizational climate is an important factor that can influence the performance of teachers. The finding is similar to the findings of Selamat et al. (2013), Duff (2013), Adejumobi and Ojikutu (2013), and Aladenusi and Ayodele (2014). This study is slightly different from the research of D Vos et al. (2012), which shows that the teachers mentioned in the study do not experience climate that is positive enough for environment conducive for teaching and learning.

Thus, the role of principals and the behavior of teachers highly determine the organizational climate of the school. Principals as leaders of schools are responsible for the smooth flow of the teaching and learning process in the school they lead. Adejumobi and...
Ojikutu (2013), in their research, show that relation between leadership style and working achievement of teachers at schools is significant. Perception of teachers on the leadership of their principal is highly influential to the implementation of their professional tasks because principal is the leader of the school and their direct superior. A good perception of teachers toward the leadership of their principal will stimulate them to work better.

The assessment on the effect of competence on the performance of teacher moderated by ikhlas behavior is an interaction value between competence and ikhlas behavior against the performance of teachers. The measurement result presented in Table 1 shows path coefficient of 0.008 with the P value of 0.483. The P value is greater than 0.05, which means there is no interaction between competence and ikhlas behavior in affecting the performance of teachers. In other words, ikhlas behavior is not the moderating variable of competence and performance of teachers. It can be interpreted that high competence together with ikhlas behavior has not been able to show a positive relation with performance.

Different results are shown in the assessment result on the influence of interaction between climate of school organization with ikhlas behavior and performance of teachers. The results shows path coefficient of 0.16 with the P value of 0.001, which is lower than 0.05. It means that interaction between climate of school organization and ikhlas behavior in influencing performance of teacher exists. This shows that ikhlas behavior moderates climate of school organization and performance of teachers. The positive path coefficient shows that ikhlas behavior strengthens the influence of school organization’s climate in influencing performance of teachers to positive direction. Therefore, better climate of school organization, together with high ikhlas behavior, will improve performance of teachers.

The results of the study on junior high school teachers of the city of Palu show that ikhlas behavior is highly influential in improving the performance of the teachers. In accordance with the result of Gürses et al. (2010), personal feature of teachers is more effective than their professional knowledge in their work accomplishment. Similar results appear from the interview on several teachers and all principals of the schools that become the object of the research that teachers of junior high school must put emphasizes on ikhlas behavior since it brings up the nature of teachers, which are parents for students.

**CONCLUSION**

Based on the findings and the discussions of this study, conclusions that can be drawn are:

Good competence can improve the performance of teachers. Competences of teachers, which are pedagogic, personal, social, and professional competence, have an important role in the achievement of teachers’ performance. The result of this study is that pedagogic competence is perceived as the most important competence in improving the performance of teachers. It means that pedagogic competence, which is measured through arrangement of lesson plan, teaching implementation, and evaluation, gives a real contribution to the performance of teachers.

Climate of school organization positively influences the performance of teachers. The results of the study show that, from external dimension – climate of school organization – supportive behavior of principals is perceived to be important in improving the performance of teachers. Further, the behavior of open and supportive that promotes interactions among teachers professionally also plays a role in creating good climate of school organization.

Behavior of ikhlas is a variable that does not moderate the influence of the independent variable (competence) on the dependent variable (teachers’ performance). Therefore, competence is a variable that is not influenced by the interaction of ikhlas behavior variable. Nevertheless, ikhlas behavior moderates the relation between climate of school organization and performance of teachers. Good climate of school organization will affect performance of teachers, and the influence will be stronger if interaction with ikhlas behavior variable is present. Superiority feeling is the most important factor that reflects ikhlas behavior. It harms the behavior of ikhlas, which means that lower superiority feeling will improve the achievement of ikhlas behavior of teachers.
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EXTENSION AND CONSEQUENCE OF BURNOUT ANTECEDENT MODEL TO JOB SATISFACTION OF COLLEGE LECTURERS WHO CONCURRENT STRUCTURAL POSITION AT PRIVATE-OWNED UNIVERSITY IN ISLANDS OF AMBON, INDONESIA

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ABSTRACT
This research aims to describe and analyze the effects of the role conflict, the intrinsic motivation and an excessive workload to burnout and satisfaction level of college lecturers who concurrent structural position at Private-Owned University (PTS) in islands of Ambon. The result of hypothesis testing through confirmatory factor analysis and path analysis shows that intrinsic motivation and work overload are proven to significantly affect burnout level, and intrinsic motivation, role conflict and burnout are proven to significantly affect job satisfaction level.

KEY WORDS
Role conflict, intrinsic motivation, excessive workload, burnout, job satisfaction.

College Instructors as civitas academica will have a direct contact continuously with another individual, such as colleagues in their periodic meeting with their superiors, their co-workers, another lecturer, administration staff or students in various occasions such as in the class, seminars, counselling and many other events. However, for a lecturer with a high rate of direct contact from these daily routine, they will be more prone to suffer something that well know as “Burnout”, which starts with some symptoms such as emotionally tired (low of emotional source such as compassion, empathy and attention), look down on people, become obnoxious and irritates other people and probably mark himself as incompetent and ineffective lecturer who dissatisfied with what their work.

This convictions are based on some scientific journal, for instance: Cordes and Dougherty (1993) in Low et al., (2001) state burnout is evidently occurs in various kind of job with various kinds of conditions. In line with them, Maslach also states that Burnout is closely related with a profession with service field of work such as a nurse, a teacher (a professor or a college instructor), or any social workers who meet their customers directly. Those professions which prone to burnout became a popular sample to study, some of the researchers who had researched them namely; Dubisky at al., (1992); Moncrief et al., (1997); Babakus at al., (1999); Brashear at al., (2000); Low at al., (2001); Zagladi, (2004) dan Harris at al., (2006). The last conviction is based on the burnout research to some elementary, junior high school and senior high school teachers as well as college instructor in America by Sweeney and Summers, (2002) who proves that not only college instructor but also teachers in general experience Burnout from work. According to those previous researches, college instructors are prone to burnout, both civil servants instructor (PNS) and private college instructor. Nevertheless, in this research the writers are more focused on the college instructor who have structural position at PTS in islands of Ambon.

Burnout that most likely be experienced by the college instructor who concurrent structural position at PTS in islands of Ambon, is undoubtedly caused by unfavorable
conditions for the instructor. One of the conditions is a role conflict which is experienced by the college instructor in islands of Ambon. This phenomenon is in line with the result of empirical research by Dubisky at al., (1992) who determine that role conflict to sales person has an (negative) impact to job satisfaction level. This finding is supported by similar research by Brashear et al., (2000). Another factor which relatively affect burnout to the lecturer is the workload they have to bear. This claim is supported by the research by Shaw and Weekly, (1985) who explains that work overload positively affects perceive pressure. In line with Shaw and Weekly, (1985), Zagladi (2004) find that the workload, especially the excessive one, positively affects burnout, while role conflict does not affect burnout and emotional exhaustion (one of burnout’s dimension) which significantly affect job satisfaction.

The other interesting factor related to burnout surprisingly comes from intrinsic motivation of the instructor. Brewer, 1994 (in Karatepe dan Tekinkus, 2006) explains that intrinsic motivation is one of the best key of the talented front-liner and his research shows that intrinsic motivation has negative impact to burnout (this result is also supported by empirical research Low at al., 2001). Therefore, it can be concluded that intrinsic motivation is a variable that decrease burnout intensity. The research gap used in this research are based on empirical research which are explained below. The first research gap has three references from past scientific researches. The first reference is by Babakus et al., (1999). The second reference is based on scientific research by Low et al., (2001). The last one is a model of conceptual research by Zagladi, (2004). Consequently, an ambivalent result can be seen as a research gap which can be explored further in this research. The ambivalent result refers to the research result by Low et al., (2001) who concludes that the effect of role conflict to burnout is positive. This result is also supported by Babakus et al., (1999) but not by Zagladi, (2004) which has negative effect.

The second research gap is based on a suggestion from past research by Dubisky et al., (1992) to research some element of job satisfaction from various countries. Moncrief et al., (1997) also suggests that future research should be focused on identifying antecedent and another factors as well as their impact as the antecedent of work pressure. Perrewe et al., (2002) dan Boswell et al., (2004) also suggest that future research would base on his research gap namely (1). Add another variables in burnout model. (3). Examining burnout dimension by conducting detailed research on the antecedent as well as the consequences from the burnout model, and Lankau et al., (2005) also suggests to study his research gap to analyze the influence of a mentor and the stress caused by mentoring activity as a significant cause of burnout which mainly related to role conflict and work overload as an obligation.

With the suggestions of those three past researches and the relevance with the current phenomenon, this research attempts to extend the conceptual model as well as the hypothesis which have been developed through scientific research to produce a new conceptual model (Agusty, 2006). The other things that the writers emphasized that the antecedent variables are a construct comprising proxies and have not been proven in an integrated model (never been tested before) especially the relation between work overload variable with the job satisfaction, so there is an originality in this writing, the writers expect to fill the gap of the previous researches, especially in developing the comprehension about burnout and the causality with the antecedent thereof. In general, this research is expected to produce an integrated conceptual model or a new extension approach to the previous model to produce a new comprehension. Based on the introduction above, the outline of the problem are as follows:

1. Does role conflict affect burnout directly?
2. Does intrinsic motivation affect burnout directly?
3. Does work overload affect burnout directly?
4. Does role conflict affect job satisfaction directly?
5. Does intrinsic motivation affect role conflict directly?
6. Does intrinsic motivation affect job satisfaction directly?
7. Does work overload affect job satisfaction directly?
8. Does Burnout affect job satisfaction directly?
THEORETICAL REVIEW

According to Cordes and Dougherty (1993) in Babakus (1999) and Low (2001) that burnout consists of three dimensions which depicts psychology syndromes namely: Emotional exhaustion, depersonalization, and diminished personal accomplishment. The relation between the service givers and the receivers, according to Maslach (1980), is an asymmetric relationship. Emotional exhaustion symptom is identified by the drained energy, the deterioration of emotional source such as compassion, empathy and attention, which eventually cause a feeling of inability to give a good service to people. Depersonalization is an attitude, feeling as well as a negative perspective to service receivers (Maslach, 1996). This negative reaction is reflected in their attitude such as looking down on clients, cynical attitude towards clients, obnoxious and inhume in their relationship with clients, or even ignoring the clients need (Maslach, 1982, 1993). Reduced personal accomplishment is indicated by the tendency to give negative evaluation towards him, especially anything related to work. Hence, those three dimensions are selected as burnout indicator.

Luthans (2002) defines role conflict as a position where we have an expectation to improve from the norm we developed. Further, Luthans (2002) describes role conflict through three main dimensions namely: Individual conflict with his own role, wherein this conflict occurs between the individual himself with his expectation of the job role. Intrarole conflict, wherein this conflict is caused by the contradiction of how a certain role must be performed. Interrole conflict, wherein this conflict is caused by the different requirements from two or more roles which have to be carried out at the same time. The indicator of role conflict which were used in this research were; (1) the relationship with the superiors, co-workers and staff, (2) the relationship with students, (3) the competition to seize structural position, (4) competing for certain course to teach and the schedule and (5) performing another role as a structural official at the same time.

Work overload is a part of the whole workload concept. Basically work overload is consisting of four dimensions which is one of the main causes of burnout (Gibson et al., 1996). The four dimensions are as follows: Quantitative overload, Qualitative overload, Quantitative underload, Qualitative underload. The indicator used to measure work overload are (1) perform various kind of education activities, (2) perform various kind of researches, (3) perform various kind of community services, (4) perform various another activities for the sake of improvement and (5) perform another role other than college lecturer namely structural staff or official.

According to Herzberg, (1996) in Robbins, (2002) who extends Maslow’s hierarchy theory of needs, he extends the theory into two factors about motivation. The first factor is motivation factor also known as satisfier or intrinsic motivation and the other one is maintenance factors also known as disatisfier or extrinsic motivation. The satisfier factor also known as motivator is a factor to push someone hard enough to get a reward from himself (intrinsic), namely: Achievement, recognition, responsibility, advancement, the work itself and the possibility growth. Research indicator from intrinsic motivaton are; (1) having an interest in the work itself, (2) getting a recognition, (3) having a chance to learn something new, and getting a quick functional promotion is more certain if he do some functional position, (4) having a sense of responsibility and (5) have a motivation to improve the institution where he works.

Job satisfaction is some kind of feeling wanted by any employee. Job satisfaction can be defined as the different between the reality faced and the emotional condition of employee at work, both the good and the bad one. According to Robbins, (1996), job satisfaction refers to the general attitude of an individual to his job; therefore one with a high job satisfaction will show a positive attitude towards his job. In relation to this research, the job satisfaction factors are as follows, (1) The job is matching with the will and the skill of the employee. (2). There is an opportunity to get promotion, functional promotion or a better position. (3). Satisfying payment, honorarium and another benefits. (4) The support from co-workers, and superiors. (5). A good prestige related to a good reputation of his workplace has.
The conceptual frames established in this research follows the way of thinking of the research model by Babakus et al., (1999), developed with the current phenomenon by adding motivation intrinsic variable which refers to Low et al., (2001) and Karatepe and Tekinkus, (2006) as well as adding work overload variable which refers to Zangladi, (2004).

![Diagram](image-url)

**Figure 1 – Frames of Relationship Path between Variables**

**METHODS OF RESEARCH**

*Types of Research.* Having been viewed from the purpose that will be achieved, this research was categorized into an explanatory research since it tried to explain a causal relationship between role conflict excessive workload and intrinsic motivation variable (anteseden variable). Burnout and working satisfaction and its influence are through hypothesis test (Sugiyono, 2009). An approach in this research includes in the quantitative research, in which it would be conducted an empirical study and assessment based on the existing theory. This research model was survey research model using questionnaire under the condition of getting individual opinion data of the respondent (Jogiayanto, 2008) as well as conducted hypothesis test.

*Location and Time.* This research was conducted at 6 (six) Private-Owned Universities (PTS) in the region of Ambon island which resides under the Kopertis Region XII (Maluku, North Maluku, Papua and West Papua). This research was undertaken at the end of February until the end of May 2011 with a time horizon of one-shot study or cross-sectional, in which the data was only once collected in a time period (Sekaran, 2006;177).

*Population and Sample.* The target population of this research was all lecturers who concurrently occupy a structural position at Private-Owned University (PTS) in the region of Ambon. While the sample population of this research consisted; (a) a lecturer who temporarily occupies structural position at 6 (six) Private-Owned University (PTS) in the region of Ambon island that has undertaken that structural duty for at least 1 (one) year and (b) a lecturer who is not certified yet. The reason to “limit” that sample population was to make the writers maintain their consistency with the postulate of the research hypothesis so that an individual who became analysis unit in this research was possible and proper to be drawn as a research sample (Sugiarto, Siagian, Sunaryanto and oetomo, 2001).

Sampling method of this research used Probability Sampling method since the number of population was known exactly by 126 lecturers. While sampling determination technique used was Multistage Cluster sampling technique. The research result conducted at the office of Kopertis Region XII shows that among the sample population (126 lecturers), those who actually have been certified were 21 lecturers and total questionnaire not coming back were 3 questionnaires so that the size of end sample to be analyzed was 102 respondents.

*Source of Data and Data Collection Technique.* The data of this research was primary and secondary data. Primary data collection was conducted using field research with data collection technique through spreading and filling a questionnaire and attending an interview.
Analysis Method. In accordance with this research purpose, data analysis method was quantitative analysis, it was technically conducted in 2 parts of data analysis, i.e. validity and reliability test. While analysis technique used was using descriptive statistic analysis and inferential statistic analysis covering confirmatory factor analysis and path analysis.

RESULTS AND DISCUSSION

The Result of the Path Analysis. The Estimation of the entire path coefficient modeled in this research is depicted in table below.

Table 1 – The Summary of Path Coefficient

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Beta coefficient</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Motivation</td>
<td>Role Conflict</td>
<td>-0.227</td>
<td>0.022</td>
</tr>
<tr>
<td>Role Conflict</td>
<td>Burnout</td>
<td>0.112</td>
<td>0.206</td>
</tr>
<tr>
<td>Work overload</td>
<td>Burnout</td>
<td>0.466</td>
<td>0.000</td>
</tr>
<tr>
<td>Intrinsic Motivation</td>
<td>Burnout</td>
<td>-0.196</td>
<td>0.022</td>
</tr>
<tr>
<td>Role Conflict</td>
<td>Job satisfaction</td>
<td>-0.183</td>
<td>0.029</td>
</tr>
<tr>
<td>Work overload</td>
<td>Job satisfaction</td>
<td>-0.053</td>
<td>0.589</td>
</tr>
<tr>
<td>Intrinsic Motivation</td>
<td>Job satisfaction</td>
<td>0.357</td>
<td>0.000</td>
</tr>
<tr>
<td>Burnout</td>
<td>Job satisfaction</td>
<td>-0.327</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Source Primer data, treated in 2011.

The table above explains that not all of the eight paths in the hypothesis model are significant. The dominant factor of burnout is work overload, while intrinsic motivation is the dominant factor of job satisfaction. In particular, both these dominant path became interesting as they will determine how an organization work. For further information, the result of the whole path analysis is depicted in the following figure.

Model Accuracy. Hypothesis model accuracy from the research data measured from the relation from two coefficients of determination (R^2) from the three equations. The first to third equation can be determined from R^2, is 0.051, R^2 is 0.365 and R^2 is 0.458. The result of model of accuracy:

R^2 model = 1 - (1 - R^2) (1 - R^2) (1 - R^2) = 0.673 or 67.3%

The 67.3% of model of accuracy calculation result explains that the contribution model to comprehend structural relationship from the five researched variables is 67.3% and the
remainder are defined by other variables that are not in the model. This result also shows that coefficient of determination is well enough, as a result, this model is suitable to use and further interpretation is possible to be conducted. In order to express the extension to burnout model (as the topic of this research), the accuracy or the viability of this research also use trimming theory. With the use of trimming model, the insignificant path will be ignored, so that it will yield a new conceptual model supported by empirical data as a result (Solimun, 2005). The recommended conceptual model after the test of trimming model is depicted below.

![Figure 3 – The Result of Path Analysis after Trimming](image)

*The Result of Hypothesis Testing.* The decision making to test the hypothesis uses significant value (p-value) with the criteria: if p-value > 0.05 then H_0 is accepted or H_a is rejected and the path coefficient is not significant, and if p-value < 0.05 then H_0 is rejected or H_a is accepted and the path coefficient is significant.

Testing of Hypothesis a: Hypothesis H1 states that role conflict has a positive value and significant to burnout level suffered by a college lecturer. The result of t-test to path coefficient in this relationship is 0.112, which is insignificant (p-value = 0.206), consequently it can be concluded that the research data does not support the hypothesis H1 or in the other words, role conflict does not affect positively and significant to the burnout level suffered by the lecturer.

Testing of Hypothesis b: Hypothesis H2 states that role conflict has a negative value and significant to job satisfaction of a college lecturer. The result of t-test to path coefficient in this relationship is -0.183, which is significant (p-value = 0.029), consequently it can be concluded that the research data supports the hypothesis H2 or in the other words, role conflict affects negatively and significant to the job satisfaction level of the lecturer.

Testing of Hypothesis c: Hypothesis H3 states that work overload has a positive value and significant to burnout level suffered by a college lecturer. The result of t-test to path coefficient in this relationship is 0.466, which is significant (p-value = 0.000), consequently it can be concluded that the research data supports the hypothesis H3 or in the other words, work overload affects positively and significant to the burnout level suffered by the lecturer.

Testing of Hypothesis d: Hypothesis H4 states that work overload has a negative value and significant to job satisfaction of a college lecturer. The result of t-test to path coefficient in this relationship is -0.053, which is insignificant (p-value = 0.569), consequently it can be concluded that the research data does not support the hypothesis H4 or in the other words, work overload affects negatively but insignificant to the job satisfaction level of the lecturer.

Testing of Hypothesis e: Hypothesis H5 states that intrinsic motivation has a negative value and significant to role conflict of a college lecturer. The result of t-test to path coefficient in this relationship is -0.227, which is significant (p-value = 0.022), consequently it can be concluded that the research data supports the hypothesis H5 or in the other words, intrinsic motivation affects negatively and significant to the role conflict of the lecturer.

Testing of Hypothesis f: Hypothesis H6 states that intrinsic motivation has a negative value and significant to burnout level of a college lecturer. The result of t-test to path
coefficient in this relationship is -0.196, which is significant (p-value = 0.022), consequently it can be concluded that the research data supports the hypothesis H6 or in the other words, intrinsic motivation affects negatively and significant to the burnout level of the lecturer.

Testing of Hypothesis g: Hypothesis H7 states that intrinsic motivation has a positive value and significant to job satisfaction of a college lecturer. The result of t-test to path coefficient in this relationship is 0.357, which is significant (p-value = 0.000), consequently it can be concluded that the research data supports the hypothesis H7 or in the other words, intrinsic motivation affects positively and significant to the job satisfaction of the lecturer.

Testing of Hypothesis h: Hypothesis H8 states that burnout has a negative value and significant to job satisfaction of a college lecturer. The result of t-test to path coefficient in this relationship is -0.327, which is significant (p-value = 0.001), consequently it can be concluded that the research data supports the hypothesis H8 or in the other words, intrinsic motivation affects negatively and significant to the job satisfaction of the lecturer.

Based on the rest result of intrinsic motivation to role conflict experienced by a college lecturer, there is a significant negative effect from intrinsic motivation to role conflict. Consequently, the better intrinsic motivation of a college lecturer, the lower role conflict level or it is able to be reduced to the lower level if the lecturer has a high intrinsic motivation. The result of the analysis data proves that the biggest contribution of intrinsic motivation comes from the institution where the lecturer works, which 97.1% of respondents agree with this. The second best contribution comes from the interest of the work itself, which 93.1% respondents support this statement. The third best contribution comes from a perception which the workload is fun and challenging (94.1%). Those three factors have proven to have an influence to reduce role conflict experienced by the lecturer (negative effect). According to test result there is a stimulant to role conflict such as an obligation to multitask, not only they have to perform the Three Principle of Higher Education, but also they have to perform their job as structural officer, they are expected to make an accurate and quick judgment, while the bad relationship between co-workers because of the competition for structural position just make it worse. This research result is in line with Low et al., (2001) who states that the higher the intrinsic motivation, the lower the role conflict level. Hence, this research result justifies the important meaning of intrinsic motivation, especially in reducing role conflict level.

The other test result is intrinsic motivation affects burnout level of a college lecturer. Evidently, intrinsic motivation has a significant negative effect to burnout. Thus, a high level of intrinsic motivation will reduce burnout level. There are some indications to comprehend the contribution of dominant burnout experienced by a college lecturer concurrent with structural position at a PTS in islands of Ambon such as; 36.3% respondents state that they are very exhausted after they have finished their job of the day, 40.2% respondents state that they are not satisfied with what they have achieved. 23.6% respondents state they have worked too hard while 21.6% respondents state that they do not give enough attention to their main job because of exhaustion (physically and emotionally) and 17.7% respondents state that they do not have enough time to finish all of the given workload.

Based on the analysis result, the entire dimension of burnout level is negatively affected by intrinsic motivation. This research result also supports Low et al., (2001) who explains the higher intrinsic motivation, the lower the burnout level. This research also supports Karatepe dan Tekinkus, (2006) who describe intrinsic motivation have a significant negative effect to emotional exhaustion. The last test result from intrinsic motivation variable is about its effect on job satisfaction level. The intrinsic motivation affects the job satisfaction level of college lecturer in islands of Ambon.

The intrinsic motivation also significantly affects job satisfaction of the lecturer. This substantially means that motivation is related to lecturer interest to job and his perception to the job itself which is fun and challenging makes the lecturer satisfied because they feel as “someone who give contribution” which will attract support from co-workers and superiors. This result also supported by Low et al., (2001) who emphasized previous research by Sigh et al., (1994) and Babakus et al., (1999) who states that high intrinsic motivation level affects job satisfaction positively. While Karatepe dan Tekinkus, (2006) believe the same thing that
intrinsic motivation has a significant positive effect to the job satisfaction. These findings also reinforce the importance of intrinsic motivation, not only for reducing the effect off role conflict as explained before, but also it is "significant" to reduce burnout level as well as improving job satisfaction.

Role conflict in this research model is indicated with the conflict in the relationship with superiors, co-workers, administration staff, students and the other similar conflicts such as competing with co-workers to get the structural position, competing for the course to teach and the difficulties in concurrent another position. The research result shows that role conflict does not affect burnout level. This result is also reinforced by interviewing a number of respondents who state that most of the lecturers do not really exhausted and have enough time, although they have to perform two roles at once. This result is contradict with Babakus et al., (1999) in the role of emotional exhaustion in sales force attitude and behavior relationship who explains that role conflict positively affect burnout. This result also does not support Low et al., (2001); Bhanugopan, (2006). The most recent empirical studies also give a supportive result, namely Hamwi et al., (2011) who study role conflict and burnout to 136 employees of advertising company in South America, shows a result that role conflict has a positive effect to emotional exhaustion. However, this result is not relevant with Zagladi, (2004) who states that role conflict does not affect emotional exhaustion (one of the dimensions of burnout).

Nevertheless based on the analysis, the intrinsic motivation also has a significant negative effect to job satisfaction of the lecturer who concurrent structural position at a PTS in islands of Ambon. Moreover, if the decision made by the lecturer in his capacity as structural officer are rejected often, his job satisfaction level will decrease because he is marking himself as failed person and feeling "does not have much contribution" especially in his workplace. The other example of role conflict is the suitable extra benefits that should be earned (i.e. extra payment or other benefits), while the lecturer who has two obligations, as a lecturer and structural officer, however, 44,1% respondents say that their payment and benefits are not suitable or too low, only enough for their normal daily needs. This conflict will definitely reduce their job satisfaction level. Another example of role conflict such as bad relationship between co-workers because of the competition to get structural position, also reduce job satisfaction level because they do not get support to work from them (16,7% respondents support the statement). This research result is relevance with Dubisky et al., (1992); Moncrief et al., (1997); Babakus Emin et al., (1999); Brashear et al., (2000); Melenie et al., (2006); Harris et al., (2006) who state role conflict has negative effect to job satisfaction.

The research result shows that work overload have a significant positive effect to burnout. Hence, the higher the workload level, the lecturer are more prone to burnout. Based on a direct observation, there is a phenomenon wherein a college lecturer concurrent with structural position at a Private-Owned University (PTS) in islands of Ambon have more workload compared to the lecturer in a big PTS, especially the head of the faculty and the secretary thereof. They express that they are disturbed by the workload which are not actually their responsibility.

This research result is relevance with Shawn & Weekly, (1985) who states that work overload affects perceive pressure; Zagladi, (2004) justifies that work overload has a positive effect to emotional exhaustion and Bhanugopan, (2006) that describe role overload has a positive relationship with all of the dimensions of burnout (emotional exhaustion, depersonalization and reduced personal accomplishments). This result also supported by most recent empirical research by Henkens dan Leenders, (2010) and Izquierdo et al., (2010) that explain all of the dimensions of burnout are affected by excessive workload.

Furthermore, the research result shows that work overload does not affect the job satisfaction level of the lecturer. The reason is that work overload is more expressed by factors related to their role (as a lecturer and structural officer) which already match with their will and their skill, as well as the payment, benefits, support and their relationship with co-workers and superiors. This is a new finding (originality) because there are many previous research, such as Shaw James B., and Weekly Jeff A., (1985); Zagladi, (2004) and
Bhanugopan, (2006), however, none of them ever research about the relation between variables with job satisfaction especially to use sample as college lecturer. This finding is expected to give a contribution to conceptual model development in this research, so that a new model is eventually suggested based on this model.

The research result of burnout influence towards job satisfaction of a lecturer shows that burnout negatively affects job satisfaction or in the other words, the higher burnout level the lower job satisfaction level of a lecturer who is concurrent structural position at Private-Owned University (PTS) in islands of Ambon. Based on the result of the interviews, 36,3% respondents state that they feel very exhausted from work, they do not satisfied to work for the next day because they still physically and emotionally tired. This has caused the lecturer cannot effectively perform their duties.

Another finding based on data tabulation, 40,2% respondents states that they are dissatisfied with what they achieve wherein 33,4% of them express that they do not get necessary support from co-workers. Moreover, 41,3% respondents state that they have excessive workload and they work too hard for that. These findings show that the lecturer already experienced burnout (they are obliged to do an excessive workload and they try too hard to carry them out within the given time, exhausted, and eventually give a minor attention to their main duty). As for the consequences, this will affect job satisfaction, where the monthly check and benefits are lower compared to other people with the same position at a bigger PTS, while there is an unfair promotion that involves insider threat. This result is relevant with the previous research such as; Babakus et al.,(1999) who describes burnout have a negative effect to job satisfaction, Low et al., (2001) that states the higher the level of burnout, the lower job satisfaction level. In addition, by using the same research sample (Lecturer of PTS') by Zagladi, (2004) states similar result that a high level of emotional exhaustion negatively affects job satisfaction and Kuruzuizum et al., (2008) that proves the strong involvement of depersonalization to job satisfaction.

The Implication of Research Result. The implication of the model not only has answered the problem and the purpose of this research but also has solved the research gap as well as the originality of this research which will be explained below.

The research result shows that intrinsic motivation affects role conflict, burnout and job satisfaction level. This finding reinforces the other past researches such as Sigh et al., (1994), Babakus et al., (1999), Low et al., (2001), Karatepe and Tekinkus, (2006).

Role conflict does not affect burnout level but affects job satisfaction level. This finding also has answered research gap related to the ambivalence of empirical research study of the influence of role conflict to burnout level by Babakus et al., (1999), Low et al., (2001), Zagladi (2004) and Hamwi et al.,(2011). While the finding about role conflict affecting job satisfaction level supports the research result by Dubisky et al., (1992), Moncrief et al., (1997), Babakus et al., (1999), Brashears et al., (2000), Lankau et al., (2006) and Harris et al., (2006).

Work overload affects burnout level but does not affects job satisfaction level. The finding about work overload affecting burnout level is relevance with the research result by Shawn & Weekly, (1985), Zagladi, (2004), Bhanugopan, (2006), Henkens and Leenders, (2010) as well as Izquierdo et al.,(2010). Furthermore, it is necessary to emphasize this research about the quality of the relationship between workload and satisfaction level is evidently an original result or the originality thereof, as a response of Lankau’s et al., (2005) suggestion. Researching the causality between the two variables, the writers prove the extension of burnout antecedent model and its consequences to job satisfaction level have been conducted.

This last part of research result shows burnout affects job satisfaction level. These findings reinforce the other past researches by Babakus et al., (1999), Low et al., (2001) Zagladi, (2004) and Kuruzuizum et al., (2008).

The managerial implication as a consideration to make a better policy for PTS superiors in islands of Ambon based on these research findings are as follows:

This research explains intrinsic motivation of the lecturer concurrent with structural position at a PTS in islands of Ambon is in a good level. Therefore for the superiors at PTS in
islands of Ambon should maintain it to open a better opportunity to career development, give wider authority of obligation and the chance to get an achievement to improve the PTS itself. This kind of policy will certainly reduce the high level of role conflict and burnout, as well as improving job satisfaction level.

The research result finds that the lecturer at PTS in islands of Ambon do not suffer from an excessive workload, but there might be a slight chance that this low level of work overload still cause burnout. The superiors of PTS in islands of Ambon should take these findings seriously by giving a policy such as more flexibility in arranging teaching schedule or academic consultation with their student. It is recommended to support this policy by giving a better benefits to the lecturer who is concurrent structural position.

This research also shows the lecturer who concurrent structural position at PTS in islands of Ambon does not experience burnout but this low level burnout still affect their job satisfaction. This kind of policy gives a better chance to the lecturer to use their skill effectively in doing their role; they will also give more significant feedback to create a better culture in their workplace which will certainly reduce the burnout level.

Research Limit. The writers have faced several research limits during the research. The research limits of this research are as follows:

The research sample only involves PTS lecturer who is concurrent with structural position in islands of Ambon and cannot be generally applied to another lecturer, especially in Kopertis XII Region.

This kind of research, in order to comprehend the perception and the attitude of the respondents by using questioner as a technique to collect data, the question should be managed well to get a relevance answer.

This research designed in a form of cross-section is unable to comprehend the change of a number of aspects related to the content of this research, so that it might be irrelevant for longer periods of time.

This research is limited to the extension of variables thereof to produce a new model. Other variables such as commitment, performance and the will to stay or giving in to resign can be used to develop this research even further.

REFERENCES

DEVELOPING STUDENT FINANCIAL INFORMATION SYSTEM WITH THE BASIS OF CROSS-PLATFORM DESKTOP APPLICATION

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ABSTRACT
This study aims to develop student financial information system so that it can be applied in SMAN 1 Panggul. The electron framework is applied to student financial application with the basis of cross-platform desktop application. Based on the research findings, it can be concluded that if we can develop a website then it is not impossible if we want to create a desktop application. With the advancement of the technological era, we need to think twice in order to minimize the time and the effectiveness of something in order to work more functionally and flexibly. This study presents a comparison between two development types of cross-platform for desktop application: object-oriented solution and web-based solution.

KEY WORDS
Information system, application, cross-platform, web solutions.

Currently, information technology is growing so rapidly. The existing information system runs according to the level of user needs. What is meant here is computer-based information technology which is lately growing very fast, both hardware and software. However, based on the reality in daily life, the delay in receiving information is still occurring. Thus, decision-making is often too late. This will certainly disrupt the course of an institution or organization. One of the factors causing the information delay is the lack of organized information processing (Laudon and Laudon, 2016). In the world of agency work, computerization has many benefits. One of them is useful for SMAN 1 PANGGUL. Administration Staff of SMAN 1 PANGGUL is the section that process data related to student financial data.

In the processing of information systems, especially the collection of student financial data, constraints often occur. Processing information system should be handled effectively and efficiently. However, because of many processes are still done manually, then whenever the report of student financial data is required, they must first find the necessary data from piles of papers or archives and type them then. Incoming and outgoing data is also not well-organized. In addition, the author wants to have an experiment on the sophistication of today’s technological world that runs very rapidly. It means that the author will apply some advanced java script technology (Huang, 2006).

System Analysis. The system that will develop in the research of this final project is a web-based desktop application (Leff and Rayfield, 2001). The system will run on PC and notebook. This system is developed to facilitate the financial staff (administrative staff) in processing the transactions of student financial payment and clarifying any details of the student financial reports at school SMAN 1 Panggul. The information system to be used is offline. The application is using the basis of cross-platform desktop application in which in its scope it can run on a number of OSs including Windows, Linux, and Mac.

Problem Analysis. Student financial report is a report that is needed by each school in which the report records all student funding activities, (Revsine, 2001). As the times progressed, the information system, carried out by taking notes on the paper then making the
archive, raises many obstacles. It is because the staffs will have difficulty looking for one by one sheet of financial records that are all archived in the data cabinet. Information system carried out in the traditional way is less effective for longer use. Therefore, the development of student financial information system application is expected to facilitate administrative staff (financial staff) in doing their jobs.

Functional Needs Analysis. Functional needs are needs that contain processes that will be carried out by the system (Setyawan and Wandyatmono, 2009). There is a major need that the system needs in order to run smoothly. This need is the core requirement of a system. If these needs are not met then the system cannot run properly.

Non-Functional Needs Analysis. Non-functional needs are complementary features that support the performance of a system and it has an indirect effect. The following is non-functional needs that exist within the system:

- Hardware needs;
- Software needs;
- Brain ware needs;
- Information about the system.

![Use Case Diagram](image)

**Figure 1 – Use Case Diagram**

**Table 1 – The Use Case Scenario of Student Financial System**

<table>
<thead>
<tr>
<th>Identification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use Case Name</strong></td>
<td>Student financial system</td>
</tr>
<tr>
<td><strong>Objective</strong></td>
<td>The admin manage the financial system</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>In this use case, the admin manages some matters that include payments, expenses, and financial reports</td>
</tr>
<tr>
<td><strong>Actor</strong></td>
<td>Admin / Administrative Staff</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Main Scenario</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actor Action</strong></td>
<td>System Action</td>
</tr>
<tr>
<td>-</td>
<td>1. Displaying the main menu of the system page</td>
</tr>
<tr>
<td>2. Selecting a menu</td>
<td>3. Running the execution command of the selected menu</td>
</tr>
<tr>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Final result:</strong></td>
<td>Admin back on the main page</td>
</tr>
</tbody>
</table>

**Table 2 – Data User Scenario**

<table>
<thead>
<tr>
<th>Identification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use Case Name</strong></td>
<td>Data User</td>
</tr>
<tr>
<td><strong>Objective</strong></td>
<td>It contains all student financial reports</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>This use case contains data user namely student and admin data</td>
</tr>
<tr>
<td><strong>Actor</strong></td>
<td>Admin / Administrative Staff</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Main Scenario</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actor Action</strong></td>
<td>System Action</td>
</tr>
<tr>
<td>-</td>
<td>1. Displaying user</td>
</tr>
<tr>
<td>2. Performing CRUD of data user</td>
<td>3. Saving the action</td>
</tr>
<tr>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Final result:</strong></td>
<td>the system saves every running command</td>
</tr>
</tbody>
</table>
### Table 3 – Payment Scenario

<table>
<thead>
<tr>
<th>Identification</th>
<th>Use Case Name</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Payment</td>
<td>It contains all the inputs of student payment</td>
</tr>
</tbody>
</table>

| Description | This use case contains all inputs of student payment consisting of school fee, incidental, acceptance of new learners, mandatory savings, voluntary funds and other funds. There is also discount (school operational assistance) for students on certain types of payment |

<table>
<thead>
<tr>
<th>Actor</th>
<th>Admin</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>The Main Scenario</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Actor Action</th>
<th>System Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Admin selects the payment menu</td>
<td>2. Displaying the payment menu</td>
</tr>
<tr>
<td>3. Admin selects the type of payment</td>
<td>4. Displaying the type of payment</td>
</tr>
<tr>
<td>5. Admin search for the number of the student who is paying</td>
<td>6. Showing the student numbers</td>
</tr>
<tr>
<td>7. Input the amount of the payment and give a discount to students who get a special discount</td>
<td>8. Saving the payment process</td>
</tr>
</tbody>
</table>

**Final result:** the system saves the data of payment process

### Table 4 – Expense Scenario

<table>
<thead>
<tr>
<th>Identification</th>
<th>Use Case Name</th>
<th>Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>It contains the all outputs of expense from student funds</td>
</tr>
</tbody>
</table>

| Description | This use case contains the expenses of the payment, among others, development, acceptance of new learners, learning & extracurricular activities, tests & exams, consumable purchases, power & service subscription, sanitation and rehabilitation, monthly payments, funds for underprivileged students, school maintenance, purchase & maintenance of computer and other expenses. |

<table>
<thead>
<tr>
<th>Actor</th>
<th>Admin</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>The Main Scenario</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Actor Action</th>
<th>Actor Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Selecting the expense menu</td>
<td>2. Displaying the expense option</td>
</tr>
<tr>
<td>3. Selecting the type of expense</td>
<td>4. Displaying the expense form</td>
</tr>
<tr>
<td>5. Filling the expense form</td>
<td>6. Systems saves the expense process</td>
</tr>
</tbody>
</table>

**Final result:** the system saves the payment process

### Table 5 – Financial Report Scenario

<table>
<thead>
<tr>
<th>Identification</th>
<th>Use Case Name</th>
<th>Financial Report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>It contains information about all financial statements</td>
</tr>
</tbody>
</table>

| Description | This use case contains information on all student financial reports including balance sheets, profit-loss, journal books, ledgers, and school financial reports |

<table>
<thead>
<tr>
<th>Actor</th>
<th>Admin</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>The Main Scenario</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Actor Action</th>
<th>Actor Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Selecting the information of financial menu</td>
<td>2. Displaying the menu of report options</td>
</tr>
<tr>
<td>3. Selecting the payment menu that will be selected</td>
<td>4. Processing the action</td>
</tr>
</tbody>
</table>

**Final result:** the system records every activity of the admin
At this stage, system design will be carried out based on use case that has been developed before. The design starts from the creation of activity diagram, sequence diagram, class diagram, to the design of application interfaces.

*Activity Diagram.* Figure 2 is an activity diagram of report. The process starts when the admin login first and the system will display the main menu of the application of student financial information system. Admin must select one of the options from the main menu of the report, among which are the financial report, cash flow, balance sheet, income report, ledger and journal book. The database will display data from the menu.

![Figure 2 – Activity Diagram of Report](image1)

![Figure 3 – Activity Diagram of Payment](image2)
Figure 3 is the activity diagram of the payment. The process starts when the admin must login first and go into the main menu. Then, the admin chooses a payment menu consisting of acceptance of new learners, incidental, school fee, voluntary funds and mandatory savings. Admin inputs student’s number and the database will process it. The system will display the payment form that will be inputted by the admin. The database stores the process if it has been completed. Then, there will be a successful payment notification. But, if it is failed to save, it will return to the payment menu.

Figure 4 is an activity diagram to organize the data users, the process starts when the admin login. If it is successful, it will go directly to the main menu and if it is failed it will repeat the login process. After the main menu, admin will select the menu of edit, upload and delete data users. After selecting one of these menus, the database will process and store every action that has been performed. If is success, then the process is successful and done. But if it is failed, it will go back to the main menu.

Figure 5 is an activity diagram that manages the expense data. The process starts when the admin selects the expense menu. One of them includes school activities, acceptance of new learner activity, learning activity, maintenance activity, etc. After that the admin inputs the nominal amount and the program will execute and then save it.
Sequence Diagram. Sequence diagram is a diagram that describes the behavior of the object in the use case by describing the life line of objects and the sent and received messages between the objects. The following is a sequence diagram of the developed system:

![Sequence Diagram of Financial Report](image1)

![Sequence of Payment](image2)
Entity Relationship Diagram (ERD). Entity Relationship Diagram (ERD) is a graphical representation of an information system that shows the relationship between people, objects, places, concepts or events within a system, (Li and Chen, 2009). ERD is a data modeling technique that can help define business processes and it can be used as a relational database, (Song et al., 2007). The following is the ERD of the student financial system at SMAN 1 Panggul.

Main Display and Login Feature. When the app starts up, a browser will appear, some of which are: a login feature will appear in the navigation bar. Login will be successful if the username and password are inputted correctly. If it is wrong, the login will be failed. Figure 4.1 shows student financial information system application (SFISA) with the basis of desktop app running on windows OS and Linux OS.

When the application is running, the username and password that have been previously registered must be entered; the username and password that has been filled in the page admin.html bios. If it is a wrong input, then it cannot process the login. The following is a script for login.html as front-end and login.js as back-end.
A.S.I.K.S <br/>

Aplikasi Sistem Informasi Keuangan Siswa</div>

<input id="username" name="username" type="text" placeholder="Username" />
<div>
</div>
</div>
</div>
</form>
<form id="recoverform" action="#" class="form-vertical">
<p class="normal_text">Enter your e-mail address below and we will send you instructions how to recover a password.</p>
<div class="controls">
<div class="main_input_box">
<span class="add-on"><i class="icon-envelope"></i></span><input type="text" placeholder="E-mail address"/>
</div>
</div>
<div class="form-actions">
<span class="pull-left"><a href="#" class="flip-link btn btn-inverse id="to-login">« Back to login</a></span>
<span class="pull-right"><input type="submit" class="btn btn-info" value="Recover" /></span>
</div>
</form>
</div>

</div>
</body>
<script>window.$ = window.jQuery = require('jquery');</script>
<script>require('bootstrap')</script>
<script src="./../../js/js/login.js"></script>

Code login.js

```javascript
const p = require('path');
const knexpath = p.resolve(__dirname,'./','knexfile');
const knexfile = require(knexpath);
var knexConfig = {
client: 'mysql',
connection: {
host: '127.0.0.1',
user: 'root',
password: '',
database: 'siks'
}
};
var knex = require("knex")(knexConfig);

const {webContents} = require('electron');

const electron = require('electron')
const path = require('path')
const app = electron.app
const url = require('url')

$(function($) {
```
var form = $('form#login-form');

$('input[name=\"username\"] , input[name=\"password\"]').on('focus', function(){
  $('#.help-block').addClass('hide);
  $(".form-group").removeClass('has-error');
});

form.on('submit', function(e){
  e.preventDefault(), e.stopImmediatePropagation();
  var formData = new FormData($('form#login-form')[0]);
  var gUsername = $('\[group=username\]').get(0),
  gPassword = $('\[group=password\]').get(0),
  username = formData.get('username'),
  password = formData.get('password'),
  buttonSubmit = $(this).find('button[type=\"submit\"]');
  buttonSubmit.button('loading');
  gUsername.removeClass('has-error');
  gPassword.removeClass('has-error');
  var usernameErrorMsg = '';
  var passwordErrorMsg = '';
  var triggerError = function(message, owner) {
    let wrapper = (owner == 'username') ? gUsername : gPassword;
    wrapper.removeClass('has-error');
    wrapper.find('.help-block').removeClass('hide').text(message).css('font-style', 'italic');
  };
  if(username == '') triggerError('Username cannot be blank.', 'username');

  knex('biodataadmin').where({
    username: formData.get('username'),
    password: formData.get('password'),
    status: 'aktif',
  }).then(function(rows){
    let tmp = false;
    $.each(rows, function(i, e){
      tmp=true;
      id=e.id;
    });
    if(tmp){
      let navigateUrl = url.format({
        pathname: path.join(__dirname, 'pembayaran.html'),
        protocol: 'file:',
        slashes: true
      });
      window.location.href = navigateUrl;
      localStorge.setItem("iduser",id);
      localStorge.setItem("namauser",formData.get('username'));
    }else{
      alert("Username / Password Salah.");
    };
  });
  buttonSubmit.button('reset');
});

Payment Feature. The payment feature is the space where all income processes from the school financial of SMAN 1 Panggul is carried out, which includes the data of school fee payment, incidental, acceptance of new learner, mandatory saving, voluntary fund, and other funds. The type of expense can also be managed via through account code page. In addition, the nominal amount of payments from each different student can be managed through the settings page. There is also the edit and delete function as the delete and change functions of payment data.
Source Part to Display Payment Data:

```javascript
var retrievekodeAkun = function() {
    if(table.find("tbody").length != 0) {
        table.find("tbody").empty();
    }
    knex('kodeAkun')
        .then(function(rows) {
            let tableRows = "";
            $.each(rows, function(i, e) {
                tableRows += '<tr>
                    <td>+' + (i+1) + '</td>
                    <td>' + e.id + '</td>
                    <td>' + e.kelompok + '</td>
                    <td>' + e.kategori + '</td>
                    <td>' + e.kodeAkun + '</td>
                    <td>' + e.namaAkun + '</td>
                    <td>
                        <button type="button" id="edit" class="btn btn-primary btn-mini" data-toggle="modal" data-target="#modal-edit-kodeAkun" data-id=""+ e.id + "> Edit</button>
                        <button type="button" id="delete" class="btn btn-danger btn-mini" id=""+ e.id + "> Delete</button>
                    </td>
                </tr>
            })
            table.append($('<tbody>').append(tableRows));
        });
};
```

Source Part to Delete Payment Data:

```javascript
(btnId == "delete") {
    knex('pembayaran').where('id', btnDataId).del().then(function(resp) {
        rekamAktifitas(localStorage.getItem("namauser") + " telah melakukan hapus data (kode pembayaran: " + btnDataKode + ")" + "pembayaran");
        retrievepembayaran();
    });
}
```

The Part of Source Code to Edit Payment Data:

```javascript
(btnId == "edit") {
    knex('pembayaran').where('id', btnDataId).then(function(response) {
        if(response.length > 0) {
            var pembayaran = response[0];
            modalEdit.find("form").attr('id', 'form-edit-pembayaran');
            modalEdit.find("form input[name="id"]").val(pembayaran.id);
            modalEdit.find("form input[name="cicilan"]").val(pembayaran.cicilan);
            modalEdit.find("form input[name="jumlahBayar"]").val(pembayaran.jumlahBayar);
            modalEdit.find("form input[name="jumlahPD"]").val(pembayaran.jumlahPD);
            modalEdit.find("form input[name="keteranganPembayaran"]").val(pembayaran.keteranganPembayaran);
            modalEdit.find("form input[name="namaPenyumbang"]").val(pembayaran.namaPenyumbang);
            modalEdit.find("form input[name="kodeTransaksi"]").val(pembayaran.kodeTransaksi);
            modalEdit.find("form select[name="userId"]").val(pembayaran.userId);
            modalEdit.find("form select[name="jenisBayar"]").val(pembayaran.jenisBayar);
            modalEdit.find("form select[name="jenisKas"]").val(pembayaran.jenisKas);
            modalEdit.find("form select[name="bulan"]").val(pembayaran.bulan);
            modalEdit.find("form select[name="piutangDiskon"]").val(pembayaran.piutangDiskon);
            jumlahPDnominaledit();
            modalEdit.data('id', btnDataId);
            modalEdit.modal('show');
        }
    });
}
Part of Source Code to Insert Payment Data:

```javascript
form.on('submit', function(e) {
  e.preventDefault();
  knex('kodeAkun').where('kodeAkun', formData.get('jenisBayar')).then(function(rows){
    $.each(rows, function(i, e) {
      idakun=e.id;
    });
    knex('pembayaran').insert(
      {userid : formData.get('userId'),
       kodeAkunId : idakun,
       id : formData.get('id'),
       jenisBayar : formData.get('jenisBayar'),
       jenisKas : formData.get('jenisKas'),
       cicilan : formData.get('cicilan'),
       bulan : formData.get('bulan'),
       jumlahBayar : formData.get('jumlahBayar'),
       piutangDiskon : formData.get('piutangDiskon'),
       jumlahPD : formData.get('jumlahPD'),
       nominal : formData.get('jumlahPDnominal'),
       keteranganPembayaran : formData.get('keteranganPembayaran'),
       namaPenyumbang : formData.get('namaPenyumbang'),
       kodeTransaksi : formData.get('kodeTransaksi'),
       tglPembayaran : formData.get('tglPembayaran')
    })
  });
});
```

**Expense Feature.** In the SFISA expense feature, the system records and stores all transactions and school expenses with the options listed on the Account Code page. The similar thing applies to edit and delete buttons which are used to change and delete data from payment.

**Account Code Feature.** The following features contain codes of SFISA’s various assets, incomes, fees, receivables and debts that are still interconnected with income, expense, and financial report pages.

**User Feature.** The following features contain pages from admin and student users. User data contains data from student and admin (financial staff) in which the data serves as a complementary data from payment pages and SFISA expenses.

**Financial Report Feature.** The journal report is a systematic and chronological record of financial transaction that occurs in a company. The journal is a record of debiting and crediting the effect of the transaction with the required explanations within the transaction.

**Ledger Report.** The ledger is a collection of interconnected accounts (estimates) that constitute an entity compiled and grouped according to the accounts of the company’s financial reports. The ledger source is the journal that has been created before. After the transactions are recorded in the journal, the next step is to move all the journals into their respective accounts in the ledger.

**Feature of Profit and Loss Report.** Profit or loss is the result of periodical calculation. The following income is derived from the termination of the liquidated activity. In the following report, we can see whether the school is experiencing loss or gain.

**Feature of Balance Sheet Report.** The balance sheet is prepared after all journals are posted in the ledger and before journal entries are made. The preparation of accounts in the trial balance is based on an arrangement in which it will facilitate the preparation of financial reports.

**SFISA Navigation Bar Feature.** The following feature is a function of the navigation bar that consists of a profile (complete data from the admin that is currently logged in) and record activity (a page that records all activities that the admin does such as adding payment data, deleting, altering or changing, with the aim that any data changes can be recorded for instance, an error can be minimized by knowing the log activity).
CONCLUSION

Based on the research findings, it can be concluded that if we can develop a website then it is not impossible if we want to create a desktop application. With the advancement of the technological era, we need to think twice in order to minimize the time and the effectiveness of something in order to work more functionally and flexibly. This study presents a comparison between two development types of cross-platform for desktop application: object-oriented solution and web-based solution. JavaFX refers to the Java programming language that has the slogan “write once, run anywhere”. On the other hand, Electron is a web-based technology that is currently used in many companies such as Microsoft, Facebook, Slack, and Docker. Electron combines node.js with chromium and uses JavaScript, HTML5, and CSS to create desktop applications. Two versions of the same application were developed using JavaFX and Electron frameworks. The application is used to compare the technology based on the criteria described in the section 4.3. This comparison aims to find the differences among the solutions and find its benefits and drawbacks.

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ANALYSIS OF MEDICAL AND PARAMEDIC SERVICES’ EFFECT ON TREATMENT AWARENESS THROUGH SATISFACTION OF TUBERCULOSIS PATIENTS IN KENDARI, INDONESIA

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ABSTRACT
The study aims to know and analyze the influence of medical personnel and paramedics’ service quality on service satisfaction as well as to examine the effect of service satisfaction on the awareness of TB patients to get treatment in Kendari. The study is expected to be a source of information in the implementers of TB control programs, i.e. to provide satisfactory and effective service for patients. The results of the study suggest a positive and significant influence between the services of medical personnel to patient satisfaction; it has a path coefficient of 0.531 and CR of 2.830 with a probability level of 0.005. The influence of paramedic service to patient satisfaction shows a path coefficient of 0.002 and CR of 0.02 with a probability level of 0.984; this shows a positive but not significant influence. The effect of patient satisfaction on the awareness of treatment shows a path coefficient of 1.261 and CR. 2.09 with a probability level of 0.009; this shows that patient satisfaction has a positive and significant effect on the awareness of treatment.

KEY WORDS
Quality, satisfaction, service, health, patients.

Health development is an effort to fulfill one of the basic rights of the people, namely the right to obtain health services in accordance with the 1945 Constitution Article 28 H paragraph (1) and Law Number 23 of 1992 on Health. Health development should be viewed as an investment to improve the quality of human resources, which among others is measured by the Human Development Index (HDI). In HDI, health is one of the main components besides education and income. Throughout the years, Indonesia has made significant progress in improving the health of the population. Indonesia’s Demographic and Health Survey (IDHS) data showed infant mortality decreased from 46 (IDHS, 1997) to 35 per 1,000 live births (IDHS, 2002-2003) and maternal mortality decreased from 334 (IDHS, 1997) to 307 per 100,000 live births (IDHS 2002-2003). Life expectancy increased from 65.8 years (Susenas, 1999) to 66.2 years (Susenas, 2003). However, in an effort to improve quality health services, new problems and challenges arise as a result of socio-economic changes as well as changes in the global and national strategic environment. Global challenges include the achievement of Millennium Development Goals (MDGs) and the implementation of decentralization in the health sector in the national scope. The implementation of health decentralization is based on the health for all paradigm, which means that health services as a public service must be accessible to all levels of society. Health decentralization makes the health sector a local government’s affair that must be accountable to the public. One of the problems faced in the health sector is the double burden of disease. The illness suffered by the community are mostly contagious or infectious diseases such as pulmonary tuberculosis, acute respiratory infections (ARI), malaria, diarrhea, and skin diseases, and at the same time an increase of non-communicable diseases such as heart and blood vessel disease as well as diabetes mellitus and cancer.

Pulmonary tuberculosis (TB) is still a public health problem in Indonesia, where the results of Household Health Survey (HS) indicate that pulmonary TB is the third leading cause of death after cardiovascular disease and respiratory disease in all age groups and is the first leading cause of death in the class of infectious diseases. The pulmonary TB control program using Directly Observed Treatment, Short Course Chemo Therapy (DOTS) strategy
has been implemented in Southeast Sulawesi Province and Kendari since 1995, but the conversion rate in 2006 in Kendari only reaches 70% and 79.4% so that many new pulmonary tuberculosis and positive Acid Fast Basil (AFB) patients who experienced BTA conversion failure remained positive at the end of intensive phase treatment.

Failed conversion happens due to laboratory errors, as an example the 3% laboratory errors in 2006. In addition, the medical and paramedic factors contribute to the failure of the conversion at the end of the intensive phase. Of the 30 medical personnel who handle AFB positive, 9 people or 17% have not been trained. Meanwhile, from 15 paramedics who handled AFB positive, no one has ever attended the training.

On the other hand in the treatment of AFB positive, condition and perception of the patient is very decisive. Although trained medical and paramedical personnel are supported by adequate infrastructure, low patient’s active role will simply leave positive AFB conversion high.

The role of doctors (medical personnel) is most dominant in the health care unit, especially in diagnosis and therapy. The Health Law Number 23 of 1992 explains that medical personnel is obliged to comply with professional standards and respect the patient in performing their duty.

Paramedics (nurses) is a noble profession in the field of health. Nursing services according to WHO Expert Committee on Nursing (Aditama, 2006) are combination of health sciences and art of caring, a humanistic combination of science and nursing philosophy. Paramedics should be able to make efforts to promote and maintain health and prevent disease.

The availability and quality of facilities and infrastructure of the health care unit is crucial to the successful rehabilitation and healing of the disease. Insufficient infrastructure doubled with inadequate quality will cause the failure of disease healing. As a result, patients are not satisfied with the services provided by the health care unit.

The concept of satisfying the needs of consumers is the main pillar of today’s business, both manufacturing companies and service companies. The industry and services are very diverse. One of the service industry offered is hospital either by the government or private.

Kotler and Armstrong (2001) say that the marketing program consists of intangibility, inseparability, service variability, and perishability. In relation to the health service unit, the products are the form of preventive, diagnostic, and therapeutic services. These should consider the patients’ complaints, i.e. what services must be given to eliminate and cure illness, extend life span, and reduce disability.

The function, quality, and benefits of a product are the focus of consumer attention. Consumer needs are increasing and based on a higher level of criticality; they tend to demand personal services involved in the development of a product (Hadiati and Ruci, 1999). This is the basis for thinking to keep meeting the needs and expectations of customers in all changes so they will not turn to substitution products.

The service quality concept of Bromeer, Ruyter, and Peters (in Zaid, 2004) suggests that the quality of services offered by a company will affect the level of customer loyalty that leads to the level of satisfaction. Many studies adapted findings obtained by Parasuraman et al. and they always connect the service quality to customer satisfaction. Oliver (in Djati and Dharmawan, 2005) defines satisfaction as an attitude toward the outcome of the transaction.

The level of satisfaction according to Cronin and Taylor (1992) is a gap between what consumers expect before buying product or service with the feeling after they evaluate the purchase. A level of expectation smaller or equal to what one feels for the performance of the product purchased will create a level of satisfaction, and the vice versa, if customer expectations are greater than the actual product performance, then dissatisfaction follows.

Based on the above explanation, the subject matter and purpose of this study is as follows:

1. Does the service quality of medical personnel have a positive and significant effect on satisfaction?
2. Does the service quality of paramedics have a positive and significant effect on satisfaction?
3. Does satisfaction have a positive and significant effect on treatment awareness?
   The study aims to:
1. Examine and analyze the effect of service quality of medical personnel to satisfaction of TB patients
2. Examine and analyze the effect of service quality of paramedics to satisfaction of TB patients
3. Examine and analyze the effect of satisfaction to treatment awareness of TB patients

LITERATURE REVIEW

According to Zeithaml in Zaid (2004), service quality is defined as the degree of difference between consumer expectations and consumer perceptions. Consumer expectations of a service offered are influenced by word of mouth communication, i.e. anything heard or received by the customer through another person consisting of:
1. Personal needs, i.e. the level of a person needs toward a certain product or service company.
2. Past experience, i.e. experienced customer has in using a product or service of a particular company.
3. External communication, i.e. the information submitted by the company to the public.

Experts in the field of service management have conducted many studies to know in detail the dimensions of services that affect the quality, including determining which dimension is the most decisive in the quality of certain services. According to Van Looy et al. (in Jasfar, 2005), an ideal dimension of service quality model must meet several conditions, such as the following:
1. The dimension must be a comprehensive unit, meaning it can explain the overall characteristics of the perception of quality because of the differences of each proposed dimension.
2. The model must also be universal, meaning that each dimension must be general and valid to share the spectrum of services.
3. Each dimension in the proposed model should be free.
4. The number of dimensions is limited.

According to Gonroos, the quality of service from the point of customer valuation is distinguished on the following three dimensions.
1. Technical or outcome dimension, which is related to what is given by consumers. This dimension is synonymous with what is called as competence by Parasuraman.
2. Functional or process related dimension, which is related to the way services are delivered or presented.
3. Corporate Image, which is related to corporate image in the eyes of consumers. This dimension is the same as credibility by Parasuraman.

Johnston et al. undertook research in the United Kingdom (Britain) and proposed eighteen dimensions of service quality with their respective definitions, as shown in the notes put forward by Van Looy et al., as follows:
1. Access, i.e. an easily accessible location, including the ease of finding the surrounding streets and the clarity of the route.
2. Aesthetics, i.e. the extent to which service packs are available to satisfy consumers.
3. Attentiveness or helpfulness, i.e. personnel contact, the extent to which they wish to help the consumers.
4. Availability, i.e. the availability of service facilities, staff, and goods for consumers.
5. Care, i.e. caring, attention, sympathy, and patience shown to consumers.
6. Cleanliness or tidiness, i.e. cleanliness, neatness, and regularity of physical products in the service package.
7. Comfort, i.e. the comfort of the environment and service facilities.
8. Commitment, i.e. workers’ commitment to the task.
9. Communication, i.e. the ability of service providers to communicate with consumers.
10. Competence, i.e. expertise and professionalization in service delivery.
11. Courtesy, i.e. respect in the provision of services, especially with regard to staff contact in connection with the consumers and their property.
12. Flexibility, i.e. the willingness of workers to change the service or product, in accordance with the expectation of consumers.
13. Friendliness, i.e. the warmth and familiarity of service providers, especially staff contacts.
14. Functionality, i.e. the ability of the service or the suitability of product quality, either in the form of service facilities or goods.
15. Integrity, i.e. honesty, fairness, trust given by service companies to consumers.
16. Security, i.e. the safety and security of consumers and their role in the service process.
17. Reliability, i.e. reliability and consistency of performance of service facilities, goods, and staff.
18. Responsiveness, i.e. speed and accuracy of service delivery.

Parasuraman, Zeithaml, and Berry perform special research on several types of service industries. Prior to grouping into five dimensions, the three researchers identify the ten factors assessed by consumers and the factors that determine the quality of services, i.e. access, communication, competence, courtesy, credibility, responsiveness, security, understanding, and tangible.

Furthermore, Parasuraman et al. conduct a focus group discussion, both users and service providers. The results show a very strong relationship between communication, competence, courtesy, credibility, and security which are then grouped into one dimension, namely assurance. Similarly, they find a very strong relationship between access and understanding, which is then combined into one dimension, empathy. Finally, Parasuraman proposes five dimensions of service quality. These five dimensions are reliability, responsiveness, assurance, empathy, and tangible (physical products).

Based on what is stated by Parasuraman, the measurement of service quality in this study is Tangibles (X1), Reliability (X2), Responsiveness (X3), Assurance (X4) and Empathy (X5).

Oliver in Umar (2003) states that customer satisfaction is defined as an after-purchase evaluation, where perceptions of alternative performance of products or services selected meet or exceed expectations before purchase. If perceptions of performance cannot meet expectations, then dissatisfaction happens. Kotler (2000) defines satisfaction as the level of one’s feelings after comparing the performance of the product (or outcome) that he feels with his expectations. Thus, the level of satisfaction is a difference between perceived performance and expectations. According to Spreng, Mackenzie, and Olshvsksky (1996), customer satisfaction is the feeling perceived by customers from the performance of companies that meet their expectations. However, from the perspective of consumer behavior, customer satisfaction then becomes something complex. Behavior after purchase or use will lead to a dissatisfied or unsatisfied attitude, so consumer satisfaction is buyer’s expectations toward the product or service compared with perceived performance.

J. Paul Peter and Jerry C. Olson (2000) confirm that consumer satisfaction is an important concept in consumer marketing and research. It is a common opinion that if consumers are satisfied with a product or brand, they are likely to continue to buy and use it and tell others about their pleasant experience with the product. If they are not satisfied, they tend to switch brands and appeal to producers, retailers, and even tell others. Band in Musanto (2004) affirms that customer satisfaction is a level where the needs and expectations of the customer can be fulfilled which will result in repeat purchase or continued loyalty. According to Tjipnton (1997), customer satisfaction or dissatisfaction is a customer response to products or services, which match or mismatch previous expectations.

Umar (2003) uses the 6 commonly used concepts to measure satisfaction, as follows:
1. Overall customer satisfaction, i.e. by asking customers about their level of satisfaction of the services concerned and asking them to assess and compare with the overall level of satisfaction for the services they receive from competitors.
2. Dimensions of customer satisfaction, which is done through four steps. First is identification on the key dimensions of customer satisfaction. Second is to ask the customer to assess the services of the company based on specific items such as the speed of service or the friendliness of the customer service staff. Third, we ask customers to assess competitor services based on the same specific items. Fourth, customers have to determine the dimensions they think important in assessing overall customer satisfaction.

3. Confirm expectations, i.e. satisfaction is not measured directly, but is concluded based on the suitability or disagreement between customer expectations and the actual performance of services the company sells.

4. Interest in re-purchase, i.e. customer satisfaction is measured by whether they will re-purchase the same services or not.

5. Willingness to recommend, in which it is an important measure, especially for services that are relatively taking long time, such as higher education services.

6. Customer dissatisfaction, which can be reviewed, for example in the case of complaints, warranty fees, negative word of mouth, and defections.

Kotler (2001) suggests measuring customer satisfaction using the following methods:

1. Customer satisfaction surveys, i.e. companies respond directly to measure customer satisfaction by conducting regular surveys. They send questionnaires or call the latest customer samples to find out how they feel about various aspects of company performance.

2. Complaint and suggestion delivery system, i.e. customer-centered organizations make it easy for customers to submit suggestions or complaints. Such a system not only helps the company to act quickly to solve its problems, but also gives the company many good ideas to improve its products and services.

3. Attentive front line personnel, i.e. employees who have direct contact with customers can be excellent sources of information about customer satisfaction. They are the first to know what pleases the customer and what is disappointing. Front-line employees can find the problem quickly, which prevents continuing disappointment.

4. Analysis of customer defection, i.e. companies must contact customers who have stopped buying, or those who have switched to a competitor, to learn why this is happening.

Tsiros and Mittal in Zaid (2004) used two measures of consumer satisfaction, namely (1) pleased with product performance and (2) satisfaction with product performance. Then, Jamal and Nasser in Zaid (2004) gave three items of measurement, namely (1) completely satisfied by product performance, (2) conformity of product performance with expectations based on information, and (3) amazing product performance. In addition, Zaid (2000) also provides different measurements on customer satisfaction, namely (1) suitability; and (2) conformity with expectations.

Based on the information, this study uses the approach of satisfaction indicator from Kotler (2000) and Tjiptono (1997), i.e. speed of service, hospitality, and service assessment.

According to Kozier (2010), compliance or awareness of treatment is the behavior of individuals (such as taking medicine, obeying diet, or making lifestyle changes) as recommended. The level of compliance can be seen from taking into account every aspect of recommendation to comply with the plan. Sarafino (in Yetti et al., 2011; in Tritiadi, 2007) defines compliance or awareness as how patients follow the suggestions given by the doctor. Sacket (in Neil Niven, 2000) defines patient compliance as the extent of patient behavior in accordance with provisions provided by healthcare professionals. Patients may not adhere to goals or may simply forget or misunderstand the instructions given. Then, Taylor (1991) defines treatment awareness as a behavior that indicates the extent to which individuals follow health or disease-related advice. Delameter (2006) defines adherence as an active, conscious, and collaborative involvement of patients on behavior that supports their own health. La Djabo (2004) states that treatment awareness is very influential on the recovery of pulmonary tuberculosis patients. According to Kozier (2010), factors affecting compliance are (1) the patients’ motivation to heal, (2) the level of lifestyle changes needed, (3) the
perception on the severity of health problems, (4) the value of reducing the threat of disease, (5) the difficulty of understanding and performing specific behaviors, (6) the extent of the disease or the course of therapy, (7) the thought whether the programmed therapy will be helpful or unhelpful, (8) the complexity of the therapy, (9) the proposed side effects, (10) certain cultural heritages that make compliance difficult, and (11) the level of satisfaction and quality and type of relationship with health services. Based on the theory presented, the indicator in this study according to La Jabo (2004) and Koziier (2010) is regular treatment, invite others to seek for treatment, and inform the treatment.

From the literature review, the hypotheses proposed in this study are as follows:

Hypothesis 1: There is a positive and significant relationship between quality of service of medical personnel and the satisfaction of TB patients.

Hypothesis 2: There is a positive and significant relationship between quality of service of paramedic and the satisfaction of TB patient.

Hypothesis 3: There is a positive and significant influence between satisfactions of TB patients to treatment awareness.

The hypothetical relationship between the quality of service and the treatment awareness through satisfaction can be seen in the following figure:

Figure 1 – Hypothetical relationship between service quality, satisfaction, and treatment awareness

METHODS OF RESEARCH

Study Site and Time. This study was conducted at the community health service unit in Kendari serving TB patients. Data in this study included respondents’ opinion on the quality of medical personnel, paramedics, and patient satisfaction. This study was done for 2 months. Data was collected using questionnaires followed by interviews with respondents including patients, medical personnel, paramedics and laborants. Likert scale with score interval 1 to 5 was used. The research instrument was first tested to know the validity and reliability. The validity test showed valid because the correlation coefficient shown was smaller than the significance 0.05, while the reliability test showed a result smaller than 0.60 then each variable was declared reliable. Furthermore, results of questionnaire and interviews were analyzed using SPSS and AMOS.

Population and Sample. Population in this study was all patient of AFB TB Positive in Kendari undergoing treatment at the Health Service Unit serving TB patients. Sampling was done by proportional random sampling, by determining the number of samples to be taken at each TB Treatment Center proportionally. Determination of the sample at each TB treatment center was done randomly, based on the list of patients available to the Health Service Unit serving the TB patient. Determination of the number of samples from the population was done by following the criteria of the analytical equipment used, i.e. SEM. The sample size used, according to Hair et al. in Ferdinand (2005), is 100-200, and the minimum sample size was five observations for each parameter estimated. Thus, the minimum sample size in this
study was 5 x 8 = 40, but to meet the appropriate sample size criteria, the sample size determined in this study was 120 respondents.

Data Analysis Method. The analysis used to answer the hypotheses in this study was Structural Equation Model (SEM) using AMOS 5.0 program package. Before the hypothesis testing, first a factor confirmatory analysis to see the dimensions used to form factors or constructs was done.

RESULTS OF STUDY

The Effect of Service Quality of Medical Personnel toward Patient Satisfaction:

Table 1 – Path Coefficient (Standardized Regression) Relationship between Variables

<table>
<thead>
<tr>
<th>PATH</th>
<th>PATH COEFF</th>
<th>CRITICAL RATIO</th>
<th>PROB</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPTM → KP</td>
<td>0.531</td>
<td>2.803</td>
<td>0.005</td>
<td>Significant</td>
</tr>
<tr>
<td>KPMM → KP</td>
<td>0.002</td>
<td>0.020</td>
<td>0.984</td>
<td>Not Significant</td>
</tr>
<tr>
<td>KP → KB</td>
<td>1.261</td>
<td>2.609</td>
<td>0.009</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Note: KPTM - Service quality of medical personnel; KPMM - Service quality of paramedics; KP - Patient satisfaction; KB - Treatment awareness.

Table 1 shows the path coefficient for the effect of service quality by medical personnel service to satisfaction, which is 0.531 and CR 2.830 with a probability level of 0.005. This shows that the first hypothesis is accepted. The ability of medical personnel in carrying out their responsibilities is greatly contributes to a good assessment of the quality of care by TB patients. Low capability of the medical personnel may affect the healing process of the patients.

The Effect of Service Quality of Paramedics toward Patient Satisfaction. Table 1 shows a path coefficient (standardized regression) for the effect of service quality of paramedics toward patient satisfaction, which is 0.002 and CR 0.02 with a probability level of 0.984. The results indicate that the second hypothesis is rejected—the paramedic services has a positive but not significant effect to satisfaction; many factors affect this, among them is the fact that the responsibility of healing the patient is generally still the responsibility of medical personnel. Any actions to be performed to patients should be consulted to the medical personnel. As such, paramedics may feel that their responsibility is not as big as the medical personnel, and they leave things more to the medical personnel. For example, patients in a critical situation are generally more relieved if medical personnel help them. Another thing that causes the insignificance of paramedic services is the limited available personnel and training. Of the 36 existing health facilities in Kendari, only one paramedic assigned to TB service while the number of patients is high, not to exclude mutation of paramedics to other regions.

The Effect of Satisfaction toward Treatment Awareness. Table 1 shows the path coefficient on the effect of satisfaction to treatment awareness, which is 1.261 and 2.609 with a probability level of 0.009. This shows that the third hypothesis is accepted. This shows that satisfaction has a positive and significant effect toward treatment awareness, marked by the willingness of patients to take the medicine. The better the service received by the patients, the higher their satisfaction, which leads to better treatment awareness—and the vice versa. The patients’ psychological commitment to health care, their rationality, and the word of mouth they make can shape the cooperative behavior toward treatment.

CONCLUSION AND RECOMMENDATIONS

Based on the analysis and findings, some conclusions can now be drawn on the quality service off the medical personnel and paramedics, satisfaction, and treatment awareness of TB patients in Kendari, as follows:

There is a positive and significant influence between the quality services of medical personnel to patient satisfaction, which means that the first hypothesis is accepted. This
indicates that the ability of medical personnel in handling TB cases in Kendari is satisfying for the patients.

There is a positive but not significant influence between the quality services of to patient satisfaction, which means that the second hypothesis is rejected. One of the reasons is the fact that the responsibility of healing the patient is generally still the responsibility of medical personnel. Any actions to be performed to patients should be consulted to the medical personnel. As such, paramedics may feel that their responsibility is not as big as the medical personnel, and they leave things more to the medical personnel. The other thing that causes the insignificance of paramedic services is the limited available personnel and training.

Satisfaction has a positive and significant effect toward treatment awareness, marked by the willingness of patients to take the medicine. The better the service received by the patients, the higher their satisfaction, which leads to better treatment awareness—and the vice versa.

In general, the service quality of medical personnel and paramedic services affects positively the awareness of TB patients to get treatment. This shows the service quality can be accounted for. The number of patients was 338 people with a cure rate of 330 people or 97.3%. Therefore, the ability of medical personnel and paramedics in giving service is satisfying for the patients leading to better treatment awareness.

**Recommendations:**

Further studies on the same topic are suggested to test on health personnel taking care of TB patients in more advanced places.

This study confirms that there is a positive but not significant effect of paramedic abilities to patient satisfaction and treatment awareness; thus, we recommended further research to see if there is a direct effect of service quality to satisfaction and treatment awareness of TB patients.

Further research is expected to elaborate more literature review so the research indicators can be more complex.

Further research must develop a model by adding some moderating or intervening variables so the results can be more complex such as sociological characteristics of the community as well as the type, quantity and quality of health information.

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ERP IMPLEMENTATION EFFECT ON INTERNAL CONTROL OF CORPORATE BANKING IN INDONESIA STOCK EXCHANGE LISTING IN 2014-2016

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ABSTRACT
Enterprise Resource Planning (ERP) is a single data entry system that provides many benefits for the company, one of them an increase in internal controls. This study aims to determine the factors that affect the internal control of companies using ERP implementation variables as independent while the size of the company and leverage as control variables. The samples used were banking companies listed in Indonesia Stock Exchange in 2014-2016. The results showed that ERP implementation has no effect on the company's internal control, while the size of the company's control variables showed significant results.

KEY WORDS
Control system, firm size, leverage, internal control, business.

This study discusses the implementation of Enterprise Resource Planning (ERP) of the company's internal controls in financial reporting aspects. ERP is defined as an information system that integrates all business processes and business units within a company by using a single data entry (Hamilton, 2002). This study used a sample of the banking company has a complete data and listing on the Indonesia Stock Exchange from 2014 until 2016. The selection is done by the banking company banking sector companies have more risk (eight primary risk) compared to companies in other sectors. Events in Indonesia several years ago experienced the Century Bank as a failed bank with systemic impact and provide information that internal control is important. Azhar Maksum (2005) states that there are still many companies in Indonesia which although already gone public, assume that the internal controls as part of good corporate governance as an accessory and not just the basic needs of the company. Research on companies of this sector is still rare in Indonesia that are expected to contribute to the development of similar research. 2014 to 2016 have been selected as relevant to the years covered by the study. More consistent results of the research into the expectations of researchers to increase the number of samples to three years.

Sarbanes Oxley Act (2002) requires companies to report on the effectiveness of internal controls in the financial statements as part of the overall effort to prevent and reduce fraud in the financial reporting process. Internal control is one way that companies use to reduce agency costs (Jensen and Payne, 2003). Abdel-Khalik (1993) and Barefield et al (1993) proved that a high internal control can reduce agency cost. Research carried out by Doyle et al (2006) explains that a weak internal control indicate earnings management behavior are higher. Deumes and Knechel (2008) found that conscious companies to report internal control reports though when there are no requirements as required by the Sarbanes Oxley Act. Good internal controls can improve the performance of the company in an effort to achieve good corporate governance. The importance of internal controls responded to the company one of them with the ERP implementation.

ERP implementation in Indonesia in recent years has increased significantly. Companies with complexity and high business risks tend to take precaution by implementing ERP as their information systems. ERP is claimed able to simplify business processes so that the company's internal control will increase. In addition, the ERP also provides advantages by providing data in real time and easy access. This will impact on the speed and accuracy of decisions.
This study tested that a company's internal control related to the ERP implementation, the size of the company and leverage. Internal control is measured by the natural logarithm of the frequency number of meetings held by the audit committee within one year. ERP implementations in companies measured using dummy variables to give a score of 1 on the companies that have been implemented and a score of 0 for no. Company size measured by the natural logarithm of total assets and leverage is calculated by dividing total debt by total assets. Researchers divided the ERP implementation as independent variables, firm size and leverage as control variables and internal control as the dependent variable.

The sample in this study a number of 111 banking companies during the three-year period 2014 to 2016. Data were obtained from the official website of Indonesia Stock Exchange and the company's website. In this study, researchers only focused on companies that consistently publish annual report and the financial report as well as the discount data completeness. Companies that do not have the completeness of the data will be removed from the population.

The results of this study contributes to the literature and is something that is important so that it can be used as a discussion by the various parties, especially related to ERP and internal control. ERP implementation is thought to enhance the company's internal control. On the other hand, the adoption of this system accommodates the misinformation that is no longer confined to one area of the company but will be disseminated throughout the company's business environment (Lynn and Madison, 2000). The high costs in the implementation of this system must be properly considered and reviewed by the company to deliver its intended results.

**LITERATURE REVIEW**

*Agency Theory*. Birth of agency theory motivated by a wide range of theories about the relationship of the difference of interests, one of which the theory of the game (game theory). Scott (2014) states that to understand what is in the interests of management in its financial reporting duties, it is necessary to consider a theory called the theory of games (game theory). Game theory is an approach used to define the circumstances in various interests (Von Neumann and Morgenstern, 2007). Game theory explains how a decision is taken by using analyzes involving several different from a rational approach. In this condition occurs dependencies between various interests and needs solving problems as possible.

Game theory helps to know how the interested parties (stakeholders) the company agreed to take a decision with a variety of consequences (Arifah, 2012). This theory explains the best decision can be taken in the condition in which a wide variety of different interests.

Agency theory is when one of the parties concerned to act as an agent, working for someone, representatives, while others act as a major part of the problem (Ross, 1973). Agency theory is a condition in which one party called the principal using the services of another party, called the agent in order to commit an act or work for the principal purpose. The problem that sometimes occurs in these conditions is any divergence of interest between principal and agent so that the expected results are not the same as the objectives agreed upon at the beginning.

Management as the party that controls the company has more information than the owners. As a consequence, ERP implementation is done in the hope the owners are able to provide the information they want and less of actions or things done by management that hurt the company, one of which earnings management.ERP implementations also provide benefits in terms of improving the company's internal control. Internal control is a good company will encourage companies to achieve good corporate governance.

*Signalling Theory*. Signalling theory explains how the company provides a signal to the users of financial statements with information about what has been done policy management for the benefit of the owner. ERP implementation is a signal that the company that will better internal controls. Signal theory can be used to avoid information asymmetry with respect to the implementation of Good Corporate Governance. Signal theory benefit the company
regarding the implementation of good corporate governance is better so as to create a good corporate quality (Subramaniam et al., 2009).

Asymmetry of information is a condition where a party obtaining information by an amount more than the other parties. This resulted in the incompatibility decision, causing a risk for the company. Investors, creditors and external parties are basically using information provided by management to make a good decision-making investment and financing decisions. Therefore, the quality of information provided by the company plays an important role to determine the company's future. One of the signal to improve the quality of information is to establish a committee which signifies that the company is better in terms of supervision.

Impact of ERP as part of the internal control. Powers and procedures is an important aspect and not in spite of the company's internal control system. Therefore, the necessary division of authority within the company related to its operations. The division of authority is done with the hope that the decision is obtained quickly and accurately so that the activities of the company can be run properly and will eventually have an impact on the increase in value of the company. Indra Bastian (2002) explains that it should be made a system that regulates the distribution of power to provide otoriasasi implementation of each transaction in the organization.

The ERP system is an information system package that integrates information and information based processes within and outside the functional areas of an organization. Integration means that the system incorporates data from the various divisions of the company for later use division to share data and communicate with each other. ERP also provides benefits for the company to present the data in realtime. When companies want a quick in taking decisions, the ERP is present as one of the solutions.

Some research on ERP and internal controls have been carried out and the results were mixed. Morris (2011) Explains that after the directives issued by SOX, companies that implement ERP showed a rise in the improvement of internal control. The increase was reflected in internal control over at least the internal control weaknesses disclosed when the company has implemented ERP. While Doyle (2006) revealed that many factors that are determinant internal control. Specific aspects owned company into something unique so that the selection control procedures should be adjusted, not limited by the ERP implementation.

Hypothesis. The development of this hypothesis will be explained as follows:

ERP system is a package that integrates information systems and information-based process information from within and outside the functional areas in organization. The integration in this case is to combine all the information sourced from the company's divisions are then collected and used together for interested parties. ERP change the traditional communication systems company, where the traditional system, the design of the system is fragmented and each system is designed as a solution for specific operational issues rather than as part of an overall corporate strategy (Hall, 2002). ERP is also used to control all of the company's resources. In addition, ERP systems help generate management information that is real time and used to make decisions that affect the survival of the company.

Morris (2011) stated that based on the decision of SOX, companies that have been implemented ERP proven to improve internal controls, compared with companies that do the implementation. Improved internal controls visible from fewer reports of internal control weaknesses reported by the companies that have implemented ERP.

H1: Implementation Enterprise Resource Planning (ERP) effect on the company's internal control.

The size of the company is one of the important factors that affect the internal control (Chen et al., 2009). Large companies would have the potential to be difficult to implement the monitoring because it has a larger agency problems (Jensen and Meckling, 1976).

Large-sized companies are expected to take action assessment and risk control more effectively. The surveillance was in line with management responsibility to the stakeholders associated with the ownership of the company bigger and broader. Management should be such as creating and implementing internal controls in order to reduce the various risks
inherent in the company. Risk to be borne by the company with the larger sizes such as financial risk, reputation, operational, regulatory and risk information (KPMG, 2001).

H2: Firm size effect on the company’s internal control.

Companies that have a number of major long-term debt on the liabilities would have a greater financial risk (Goodwin and Kent, 2006). Jensen and Meckling (1976) in Purbawati (2011) stated that it needed more monitoring costs when the company’s leverage ratio is high. This is because the transfer of wealth from lenders who tend to be high thus increasing the agency cost (Chen et al., 2009). Companies with high leverage are required to run the system of corporate governance including good internal control.

H3: Leverage effect on the company's internal control.

Conceptual Framework. The conceptual framework of this research is as follows:

METHODS OF RESEARCH

Population and Sample. The population in this study is banking sector companies listed on the Indonesia Stock Exchange from 2014 until 2016. Sampling using purposive sampling with criteria published financial statements and annual reports as well as a complete display data for research purposes.

Variables, Operational Definitions and Technical Analysis. The independent variable in this research is the implementation of ERP, measured by a dummy variable, a score of 1 for companies that have ERP and 0 for no. Using a control variable firm size measured by the natural logarithm of total assets and leverage is calculated by dividing total debt by total assets. While the dependent variable is the internal control and measured by the natural logarithm of the number of meetings held by the audit committee within one year.

This study using multiple linear regression analysis to determine the effect of the implementation of Enterprise Resource Planning (ERP) of the company's internal control. Multiple linear regression model in this study are as follows:

\[ IC = a + \beta_1 ERP + \beta_2 Size + \beta_3 Lev + e \]

Where: IC - Internal control; a - constants; \( \beta \) - The regression coefficient; ERP - ERP implementation; Size - company size; Lev - leverage; e - error.

RESULTS AND DISCUSSION

General overview of the subject of research. The subjects were banking companies listed in Indonesia Stock Exchange from 2014 until 2016. The number of samples obtained by purposive sampling is as follows:

Table 1 – Criteria for sampling

<table>
<thead>
<tr>
<th>No.</th>
<th>Criteria</th>
<th>amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Banking companies listed in Indonesia Stock Exchange 2014 to 2016</td>
<td>129</td>
</tr>
<tr>
<td>2.</td>
<td>Banking companies that do not have complete data</td>
<td>(18)</td>
</tr>
</tbody>
</table>

Number of samples 111

Source: Secondary data is processed.
Description of the research results:

Table 2 – Descriptive statistics

<table>
<thead>
<tr>
<th>Source: Output SPSS version 21.0 (secondary data processed).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table 2 – Descriptive statistics</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>ERP</td>
</tr>
<tr>
<td>Size</td>
</tr>
<tr>
<td>Leverage</td>
</tr>
<tr>
<td>Internal Control</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
</tr>
</tbody>
</table>

Based on the results of descriptive statistics above, the company with the largest size is Bank Mandiri while the company with the smallest size is Bank Artos Indonesia. Then, the company with the highest leverage level is the Bank Pembangunan Daerah Banten and the lowest is Bank Dinar Indonesia. Finally, the company with the highest level of internal control is of BRI Agroniaga while the lowest is the Bank Artos Indonesia.

Analysis of models and hypothesis testing:

Table 3 – Normality test

<table>
<thead>
<tr>
<th>Source: Output SPSS version 21.0 (secondary data processed).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table 3 – Normality test</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

Based on the above normality test, obtained significance value of 0.372. This value is greater than 0.05, which means that the research data are normally distributed.

Table 4 – Heteroscedasticity test

<table>
<thead>
<tr>
<th>Source: Output SPSS version 21.0 (secondary data processed).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table 4 – Heteroscedasticity test</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
</tr>
<tr>
<td>ERP</td>
</tr>
<tr>
<td>Size</td>
</tr>
<tr>
<td>Lev</td>
</tr>
</tbody>
</table>

Based on the above output obtained significance value of ERP variables for 0.072, 0.378 and lev size by 0.387. The third significant value has a value of more than 0.05. Thus it can be said that there is no heteroscedasticity.

Table 5 – Multicollinearity test

<table>
<thead>
<tr>
<th>Source: Output SPSS version 21.0 (secondary data processed).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table 5 – Multicollinearity test</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
</tr>
<tr>
<td>ERP</td>
</tr>
<tr>
<td>Size</td>
</tr>
</tbody>
</table>

Based on the above output is known that variable has a value of VIF 1.112 ERP, size has a value of 1.109 and 1.023 lev. If the VIF value smaller than 10 can be concluded that there is no multicollinearity. Thus, it was concluded that there is no multicollinearity in this study.
Based on the above output obtained Durbin-Watson value of 1.851. Then the Durbin-Watson table for \( N = 111 \) and \( K = 3 \) is the value of the upper limit of 1.746. 1851 dw value more than the upper limit value (du) 1746 and less than \((4 - du)\) by 2253 so it was concluded that no autocorrelation.

### Table 7 – Multiple Linear Regression Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficients</th>
<th>t</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-362.747</td>
<td>-2.928</td>
<td>.004</td>
</tr>
<tr>
<td>ERP</td>
<td>-4090</td>
<td>-2.58</td>
<td>.797</td>
</tr>
<tr>
<td>Size</td>
<td>2.03</td>
<td>6813</td>
<td>.000</td>
</tr>
<tr>
<td>Leverage</td>
<td>- .417</td>
<td>- .372</td>
<td>.711</td>
</tr>
</tbody>
</table>

**Source: Output SPSS version 21.0 (secondary data processed).**

Determinant coefficient (R square) statistical test results in this study show the number 0.565. This suggests that the independent variables and control variables in research (ERP, company size and leverage) is able to explain the dependent variable (internal controls) of 0.565 or 56%. While the rest is explained by other variables outside the research model.

Regression model formed from this test are as follows:

\[
IC = -362.747 - 4.090ERP + 0.203 \text{Size} - 0.417 \text{Lev} + e
\]

Based on the results of the partial test (t test) on a significance value of each independent variable and variable control of the dependent variable. ERP implementation independent variables showed significant value of 0.797 whose value is greater than the level of significance in the study of 5% (0.05). This means that statistically, ERP implementation in the banking company did not significantly affect internal controls. As for the control variables firm size showed significant gains against the internal control and leverage variables showed no significant results.

Then for simultaneous testing (test f) obtained significance value of 0.000. This value is below the significance level of 5% of research which means that simultaneous, ERP implementation, the size of the company and leverage effect on the company's internal control.

This study rejects the hypothesis (H1) who stated that the implementation of ERP effect on the company's internal control. The results of this study contrast with a study conducted by Morris (2011) which states that companies that have implemented ERP fewer reported internal control weaknesses. In addition, the results of this study are also not supported by Carlos et al (2013) which states that companies investing ERP benefit by the availability of internal information that can be used to improve internal controls.

On the other hand, the results of this study are consistent with a study conducted by Doyle (2006) stated that many factors affect the company's internal control. Hassabelnaby (2012) in his research concluded that ERP implementation does not significantly influence the capability of the company includes variable operating capability as part of the internal control procedures. The survey conducted by Deloitte on 64 companies in the Fortune 500 states that as many as 25 percent of companies that have made a failed ERP implementation of internal controls over setelah implementation period (Hall and Singleton, 2007). Their rationale and specific conditions in the enterprise requires the company to face the different internal control risk. ERP implementation is not necessarily able to improve internal controls on certain types of company. Brown (2005) states that kompentesi users
play an important role in a system. High competence enables a well-managed system. A good system but is not supported by the knowledge, skills, motivation and readiness user will result in something that is not optimal.

Top management support in the period before and after the implementation process is a very important thing (Plant and Willcocks, 2007). Management must be able to convince all the elements within the organization to switch from a manual system to the system better through ERP. ERP implementation will change the company's business system so that the required resources are qualified in terms of the operation. This system should be supported by the commitment of employees ranging from top level to the bottom level.

Factor Training is also a matter of concern. The training provides an understanding of the user about what the duties and responsibilities of each. Hall and Singleton (2007) stated that training costs can be higher than the cost of implementing the system of having to learn a new procedure that is often forgotten in the budgeting process. The composition of the team members in the implementation of ERP is also worth considering. Companies that perform ERP implementation must impose the responsibility of all parties, not just at one particular division. Supriyadi (2005) states that the ERP will provide a close link between departments so that it takes coordination.

ERP implementation is not solely dependent on the quality of the systems and technologies that exist in the system. Not an increase in the company's internal control is one proof that there are other factors that influence factors. Companies sometimes to ascribe the failure of ERP implementation in the improvement of internal control is purely due to the ERP system itself. Whereas, in the implementation process is a very important thing to consider.

Furthermore, to test the variable size of the company is to receive two hypotheses (H2) which states that the size of the company's influence on the company's internal control. These results are consistent with research conducted by Andarini (2010), which conducts research on the company go public in Indonesia. Companies with a large size will be more focus on good corporate governance than companies with smaller size. The major asset owned also encourage companies to manage risk through increased internal control so as to optimize the performance of the company. Great company is also a benchmark and spotlight stakeholders so that a good internal control are considered capable of providing added value in the eyes of the public company.

Otherwise the results obtained for testing variables leverage, This study rejects the hypothesis of three (H3) which stated that the leverage effect on the company's internal control. The leverage ratio measures the extent to which the debt that the company can generate an asset for the company's survival. Jensen and Meckling (1976) in Purbawati (2011) states that it takes a greater monitoring costs when the company's leverage ratio is high. Companies with relatively high debt will reduce the activities that are considered unnecessary and are not optimal (Chen, et al in Andarini 2010). Companies with relatively high debt would take a decision to consider more things and tend to be more cautious because of their cost.

CONCLUSION

This study examined the effect of ERP implementation of the internal control of the company. The sample used is a banking company listing The Indonesia Stock Exchange from 2014 until 2016, with the number of 111 companies. Based on the hypothesis testing, the result that the ERP implementation in the banking company does not affect the internal controls. While testing of the control variables obtained results that affect the size of the company's internal control, while leverage has no effect.

This study has several limitations. Future studies are expected to increase and expand the sample is not limited to the company's banking sector to find out the results of research carried out on the object when a wider and different. Future studies are also expected to increase the number of years of observation in order to obtain better results and maximum.
REFERENCES

ABSTRACT
Solidarity of rural communities is a form of social capital which needs to be maintained, developed, and preserved in all aspects of village life. One of the social capital in the implementation of village development is independence and participation of village communities. In Pulau Buaya Village, there are two institutions that maintain, develop and preserve community participation in the village. These are adat (customary) and religious institutions. "Gotong royong (mutual cooperation) is associated with customary or religious activities, even the sick endeavor to participate in an activity". Failure in participation results in expulsion from the life of the village community (social sanction) hence causes embarrassment, disturbed self-esteem in the eyes of members of the village community. No matter how small the activity conducted by village government is, the participation shown is false participation. Activity participation was due to money or counter-achievement. Thus empowerment of social capital at the village level requires local institutions that ensure social capital need to be involved in various village policy formulations. Therefore the village government needs to involve local institutions (religion and adat) to empower social capital in the village.

KEY WORDS
Empowerment, social capital, local institutions, village, community.

The government of Jokowi and Jusuf Kalla has launched the village development as a motor of national development with the motto of "Desa kuat Indonesia hebat; Desa hebat, Indonesia hebat" (Great Strong Indonesian Village; Great Village, Great Indonesia). To make Indonesia strong and powerful, it must build the village into a strong and powerful village. (Sudjatmiko and Zakaria, 2015). Policies which pays more attention to rural areas are also reasonable because most of the Indonesian population inhabit rural areas. Therefore some authors have suggested that village development should start from the village level (Chambers, 1987); change should start from the bottom - from the village (Ife and Tesoriero, 2008). A number of reasons were put forward to substantiate this argument, among which the villagers knew what their needs were.

The Indonesian government is aware of this. Therefore, various policies for the process of accelerating village development have been established. After Law No. 6 of 2014 (Law 6/2014) on the Village, followed by Government Regulation No. 43 of 2014 (PP 43/2014) amended by PP 47/2014 on Implementation of Law 6/2014, Ministerial Regulation (Permen) Desa, Regions and Transmigration No. 3 of 2015 on Village Guidance, Ministry of Marine and Fisheries No. 10 of 2014 on Guidelines for the Implementation of National Program for Self-reliance Empowerment of Marine and Fisheries. There are more government policies on village development and governance. All these policies position villages as the subject of development, not as objects of development.

Giving village government and communities more roles to take part, take their own initiative to do whatever they need with the support of their own funds, funds from the central government through the State Budget (APBN), provincial and district / municipal governments through the Revenue Budget and Regional Expenditure (APBD) and third-party funding sources is a good step. However, the condition of villages and villagers who tends to be
powerless caused all parties involved worried about the ability of the village government and communities.

A number of the following studies indicate that village government and communities need to be empowered to carry out their assigned tasks. (1) The people of the villages of Pulau Buaya and Uma Pura, formerly known as gotong-royong or mutual cooperation (Pul serang) values, are now almost extinct (Djaha, 2003). The low level of participation is due to the fact that village governments are less involved in the village policy-making process (Tamunu and Djaha, 2013), unaccountable village governments (Holbala, 2015) in managing village finances; (2) All Village development programs and activities are expected to be sustained in a sustainable way by utilizing the natural resources and resources available in the village. The results of Boymau's (2014) study indicate that the limited authority of the village made the village lack sufficient space to develop programs and activities in a sustainable manner in optimally utilizing village resources. The limitation of authority caused by the many original authorities that have been lost due to the hegemony of the state, the village autonomy which should have been transferred has not been conducted by the Regent; (2) Preparation of village development planning has not been in accordance with the priority of community needs, potential, and value of local wisdom in the village (Tamunu, Djaha, 2014); (3) Development of transparency and accountability system in the implementation of Village Government and Development has not been well implemented (Holbala, 2015); (4) Empowerment of village social institutions and adat institutions has not been undertaken by district and village governments (Djaha, 2006; 2007); (5) The empowerment of community participation in village policy making through village consultation is not ignored by the village government (Tamunu and Djaha, 2014); (6) Improvement of quality and capacity of human resources of village communities has not been done by village and regency government (Djaha, 2007); (7) Public control room given in schools for the implementation of School Operational Assistance (BOS) funds through Technical Guidance (Juknis) Implementation of BOS has not been obeyed by the school and the community itself has not had the courage to correct the mistakes of the school on the grounds of teacher service on the students (Djaha, 2012).

All the results of the above-mentioned research indicate that villagers have not been empowered in the planning, implementation, monitoring and development stages in the village. Therefore, a government effort to empower the village community is necessary to review the appropriate empowerment strategy. The determination of appropriate strategies should be based on an appropriate analysis of the strengths, weaknesses, opportunities, and threats that villagers are currently facing and facing, not based on logical/rational and theoretical analysis of bureaucrats or academics without accurate data and information from the village.

Social Capital. Fukuyama (2005: 21) provides social capital restrictions as a set of values or norms brought by group members within the community that enable cooperation among them. If community members believe that other members are trustworthy and honest, then they will trust each other. Trust is like a lubricant that makes the community or organization more efficient. The norms that produce social capital include the values of honesty, fulfillment of obligations, and take place mutually.

Robert Putnam (1993) defines social capital as a value of mutual trust between members of society on their leaders. Social capital is defined as a social institution that involves networks, norms, and social trusts that encourage social collaboration (coordination and co-operation) for the common good. It also implies that there is a need for social networks ("network of civic engagement") - the social ties/networks that exist in society, and the norms that drive community productivity. Putnam explains the meaning of horizontal association, not only that it gives the desired outcome but also undesirable outcomes.

Social capital with respect to elements such as trust, cohesiveness, altruism, mutual cooperation, networking, social collaboration has a great influence on economic growth through various mechanisms, such as increased sense of responsibility for the public interest, widespread public participation in the democratic process, society and the decline in violence and crime (Suharto, 2005b). The World Bank classifies social capital into six dimensions: (1)
network/relationships and groups in society, (2) solidarity and trust in society, (3) mutual cooperation, (4) communication and information, (5) cohesion/community members, (6) policy and empowerment in society. The real form of social capital in the form of social relations/interaction, customs and local customary values, tolerance, willingness to hear (empathy), honesty, local wisdom and local knowledge, social networking and social leadership, trust, togetherness and loyalty, community participation, community independence.

The objectives of empowerment social capital are as follows: (1) The empowerment of autonomy, social capital becomes a force for the community to be self-reliance and ability to manage its own interests; (2) Empowerment in terms of cooperation, social capital helps communities to manage social risks and can increase the capacity of communities to prevent or respond to shocks; (3) Empowerment social networks, with social capital, community elements helping each other and managing risks based on informal relationships.

Local Institution. Esman and Uphoff (1988) argue that local Institutions / Organization is one of the important elements in rural development. This shows that without the existence of local institutions, bureaucracy, and participants, the infrastructure cannot be built or maintained. Public service cannot be done while the appropriate technology will not be maximally deployed and the government will not be able to maintain the information flow needed by the community. Based on its founding manner, there are two kinds of institution. The first is an institution that grows and develops spontaneously within the community itself, then the second is an institution that is formed by the government in the implementation of development programs.

Darling (1977) explains that indigenous people factor is the main determinant of development. Steive (1977) has proposed the implementation of the Minimum Package Project (MPP) program by the World Bank, USAID and SIDA in Etopia who prefer to create a new organization instead of utilizing existing traditional organizations that ultimately fails is an example of how important indigenous/local organization in the development success itself.

Stive exhibits that local institutions still play an important role in village development. Therefore Imron Ali and Riyadi Soepraptosuwondo (2002) recommend that (1) in the context of village development the government should use local institutions as the spearhead of development that implements various development programs. So the government no longer needs to establish new institutions or implementing groups, because existing local institutions are much more aware of the life of the local community; (2) The government should prioritize the development pattern based on the strength or self-reliance of the community by making the traditional local institutions that have been rooted in the life of the community as the basic implementation.

METHODS OF RESEARCH

This article is part of a research on island village empowerment strategies conducted in Desa Pulau Buaya, Alor Nusa Tenggara Timur Regency (2016). This paper focuses on 'Empowerment social capital and local institutions' which is expected to be done by community actors in rural development. (Eko, 2004: 256). Social capital is understood as the value used as the basis of strength in working together (community). The value in question is solidarity (loyalty due to a similar situation) which encourages the members of the community to be involved in various activities in the village together. Such social capital needs to be maintained, maintained/protected as village development capital. All parties are responsible in this regard including the Government, Provincial Government, Regency Government, Village Government and local institutions located in the village. This paper focuses on local institutions as parties who are expected to maintain and empower social capital. The local institutions referred to are adat institutions and religious institutions.

The method used in data collection is Focus Group Discussion (FGD) by presenting the village government (village head, Chairman of BPD), LPMD chairman, customary leaders, religious leaders, village community representatives, youth groups and women's groups. Data were analyzed by pattern matching/categorization.
RESULTS AND DISCUSSION

Pulau Buaya is a village whose territory covers one island called Pulau Buaya. Its boundaries are surrounded by sea. This island village is located in Northwest Alor Regency with 2.11 Km² or 211 Ha and is the third smallest area (1.95%) after Desa Lewalu Village (1.02%) and Lefokusu Village (1.37%) from Northwest Alor Regency with 107.95 Km² or 1,795 Ha area.

Regency Capital (Kalabahi) distance from the village is 40 Km, while the Northwest Alor Regency Capital (Kokar) is 10 Km. Transportation method used from both cities requires land and sea transportation or sea transportation only. Visitors hailing from Kalabahi mostly use land transportation (Bemo –small car/taxi- or motorcycle) to the new O’a Mate Village. Then they cross watery region using the motorboat, and vice versa. Visitors hailing from Kokar are able to use land and sea transport. They can also go directly using motor boat directly from Kokar to Pulau Buaya. Travel time varies according to road conditions. Similarly, the sea travel time is highly dependent on the state of currents and wind.

Based on Northwest Alor Regency data in the Year 2015, there are 1,221 inhabitants, inhabiting an island with an area of 2.11 km² with a population density of 278.67 inhabitants / Km². There is more female population (642 inhabitants) than male population (579 inhabitants). There are 263 households with an average member of five-person in each household.

Empower Social Capital through Religious Institution. All villagers are Muslims. In the middle of the village stands a magnificent mosque built by the villagers themselves. The mosque was built by self-reliance villagers who rely on community participation. All building materials were brought by the villagers. Each head of the family shares a certain amount of burden. Community participation in the construction of the mosque is very high. Community's willingness is sincere. Sincerity based on the belief that the activity is considered a form of 'worship'. In addition, for people who are not engaged in work, will be punished by embarrassment as a result of social sanctions from other members of the community in the form of verbal assault.

In addition to involvement in providing building materials and energy, there is also involved in the provision of food and beverages. Arrangements to provide food and drinks are done according to each tribe / Kabila. Every day the labors are provided with food twice at breakfast and lunch. Each tribe / Kabila is competing to provide the best food and drink for the people involved in mosque construction. Sincerity provides the best food for workers is also based on 'worship value'. Each member of tribe / Kabila comes provides with their respective ability. Some bring rice, corn rice, 'corn katema', or cassava / sweet potato. An interesting matter to be noted is that varied types of food are not a source of slander, but it is complimentary. There is no 'shame' among mothers for providing a variety of foods, but the embarrassment arises when not bringing food to the active site during meal time. The acceptance of each other's highly varied existence is a very high-value social capital in the village community grown through local institutions.

Solidarity capital is also shown through the development of Madrasyah Ibtida'iyah (MI) and Masrasyah Tsanawiyah (MTs). Both schools were originally built by self-reliant villagers, therefore community participation is quite high. The high participation is also supported by the value of 'worship'. The community believes that sending their children to the correct understanding of religion is a parent's obligation so that any support requested by the school/teacher, the parent complies with it.

Social capital in the form of solidarity is also evident in religious events such as circumcision, mass circumcision, and marriage. Specifically, both types of religious activity are already mixed with the customs. However, community solidarity in both events is closer to the value of gotong-royang. Foodstuffs and animals brought by one family/tribe to provide the party will be 'recorded'. There are officers (officiates with special duty) appointed by the party organizers to pay attention to the amount of rice and the size of the animals brought by the tribes in the village. It is this officer who reports to the party organizer about the presence of
all tribes in giving support during the party. The family who organizes the party then listens and records it - formerly only with memory, without a note - if at any time the tribe in question organizes circumcision or marriage events, the family/tribe will provide food (rice and animals) which was equal or more than the amount they previously received.

_Empower Social Capital through Adat (Customary) Institution._ Adat is understood as a rule (deeds) that are commonly obeyed or performed since time immemorial; habits or ways (behavior) that has become a habit. customs are understood as all rules (actions) that have become a habit for generations. Many social capital values are the practice of village customs. There is even custom in religion, meaning that in the religious events such as mass circumcision and marriage possess enforced rules that are obeyed from generation to generation.

In the wedding ceremony (akad nikah) involves a series of customs that need to be obeyed such pre-marriage (proposal, the evening event tablig), the ceremony itself, and bride procession to the groom’s house. The series of weddings that have become the traditions of the community of Pulau Buaya involve all families residing in the island. This is because all villagers of this island are still related by blood/family relationships. Large or small events almost always involve all households in the village.

In addition to customary marriage, the tradition of building a house also involves families who have a kinship (genealogical). The construction of houses involving all families with very high blood relation is the development of 'Rumah Adat' (Customary House) or 'Rumah Suku' (Tribal house). Each tribe is involved in constructing the tribal house. Failure to do so would bring shame and the disruption of self-esteem in the family. Social sanction in society effectively deters villagers from evading various activities both religious and in every custom activity.

_Community Participation in Village Development by Village Government or High-Level Government._ Development carried out by religious institutions and customary institutions in the villages, the participation of the community is very high. Should the development initiated by the Village Government, or the upper-level government (district, province, central government), the participation of the community is low. There are many examples of cases that prove this. A number of case examples of community participation in development initiated by religious and adat institutions have been previously mentioned. The following are examples of cases of community participation in government-initiated development.

There are a number of cases experienced by the district or provincial officials who visited the village of Pulau Buaya. These employees often have difficulty in crossing to the Pulau Buaya. There are a number of motorboat owners are reluctant to accept a ride, even with monetary offers. These boat owners do not like the government. The reasons vary; Some say because the government often makes promises but rarely fulfilled. Especially promises during the campaign ahead of the election of regents and vice-regents. The village chief of Pulau Buaya also acknowledged this community statement. Regent candidates have campaigned in Pulau Buaya. The community asks for help for the coastal erosion of Pulau Buaya. The candidate replied that the villagers only need to visit regency office to request 100-200 sacks of cement directly and forgo bureaucracy. After the candidate is elected a regent, Pulau Buaya community visited the regent official house and convey the intent. The Bupati then asked the community to submit it to the office to be processed. The people were disappointed and returned to the village without bringing the results as promised.

Another case is when the government programmed _Jambanisasi_ (building a toilet in villages) in 2015 with village funding from the 2015 State Budget. There are 260 households in the village, but only 67 houses possess toilets. A total of 193 houses that do not possess toilet facility. Several houses residents use the toilet facility together, but most use the coast which disturbs the surrounding. All building materials - stone, sand, cement, wood, iron, zinc, nails, and others - are provided by the village government in cooperation with a third party. It is expected that the work will be completed self-reliance by the community. In reality, it didn’t occur as expected. Finally, the village government reallocated funds for hired labor. Wages prepared for hired labors are deemed inadequate, requiring participation from homeowners, at least providing food and drink. A number of people welcomed the labors well, but there
were still a number of households who refused on the grounds that the workers had been paid. Until the end of 2015, there are 14 houses that do not complete the work of the toilet because the residents of the house do not participate in the work. Everything is left to the hired labor. Pulau Buaya Kaur Village Government explained that villagers participation in the completion of government programs no longer self-supporting but had to be paid for.

In 2016 the government programmed the construction of road concrete in the village for 800 meters. The work was completed with participation, but all were paid with village funds. The activity was conducted smoothly. Without payment, the construction would not be finished (Kaur Village Government of Pulau Buaya, August 2016). Explanation of the head of this affair is also recognized by the Village Head and Chairman of BPD Pulau Buaya. Amin, a villager also admitted it. Described by this citizen that now everyone counts economically. Villagers used their time optimally. A day's fishing would result in Rp.100.000 or more. Should the government offers jobs with wages below than that, the public does not accept. Minimum wages in the village is Rp.75.000.- per day. Since the daily worker is paid for that amount, the village government offers a 'borong' (taking the entire stock) system so that a working group of 10 people completes a 100-meter rebate concrete at a price of Rp 30,000,000. It is completed within 5 working days. This is the condition of the participation of the villagers of Pulau Buaya in completing the village government program.

CONCLUSION AND SUGGESTIONS

One of the main supporting values of development in the village is social capital (in the form of values of solidarity, participation, mutual cooperation), in addition to economic capital, human capital, and other capital. The values of social capital need to be maintained. One strategy of empowering rural communities (social capital) can be done through empowerment the role of local institutions that exist in villages such as religious and customary institutions.

With regard to the empowerment of social capital through local institutions can be put forward several recommendations:

1. Social capital in the village is still very strong to mobilize villagers in various activities in the village. In order to ensure the successful implementation of village development, the government should take advantage of local institutions as the spearhead of development that implements various existing development programs. The government no longer needs to establish new institutions or implementing groups, because existing local institutions are much more aware the local community;

2. The government should prioritize the development pattern that relies on the strength or self-reliance of the community by making local traditional institutions that have been rooted in community life as a basic implementation.

3. If the village government runs itself and ignores local institutions in the village, a sign of the destruction will be experienced in the village.

REFERENCES


CONSUMER LEGAL PROTECTION AGAINST HOUSING DEVELOPERS: 
AN EXAMINATION OF SALE AND PURCHASE OF FLATS BEFORE COMMENCEMENT 
OF CONSTRUCTION PROCESS

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ABSTRACT
This paper aims to examine the importance of the law on consumer protection in Indonesia in the case of buying flats/apartments from developers who sell the properties before they develop them. There is a phenomenon where flat developers can market and sell units of flats/apartments to public even though the construction of flats has not been implemented and many legal requirements in terms of administrative, technical and ecological have not been fulfilled. This paper found that many developers sell units of flats/apartments when they have not fulfilled all the requirements including legal aspect from the government. Findings also show that although developers and consumers have a binding agreement in selling and buying flats/apartments, in this case, consumers are often in a weak position and incur losses compared to developers. This paper also highlights that there is still the absence of sanctions for developers who violate the regulation, although the law on consumer protection is enforced through regulating on the marketing of the units of flats/apartments. It is therefore, suggested that developers have to comply with the guideline of selling and buying of the units of flats/apartments based on the Decree of the Indonesian Minister of Public Housing. Thus, for developers who sell the units of flats/apartments improperly may be subject to criminal or imprisonment penalties. For instance, imprisonment or penalties result from making a binding agreement on selling and buying which have not fulfilled various requirements from the government. It is therefore asserted that the government and developers need to socialize the obligations of developers to consumer base Government Regulation Number 88 (2014), on the units of flat/apartment and on consumer rights. On the other hand, consumers should pay attention to legal aspect in buying a unit of flat/apartment. Thus, in terms of law, this paper suggests the need for revision of Law Number 20 (2011) and Law Number 1 (2011) to establish a regulation on sanctions for developers who sell units of flat/apartment in violation of all requirements.

KEY WORDS
Consumer, legal protection, developer, consumer, flat, apartment, regulations.

A settlement or housing is a primary need for human beings. However, settlement and housing cannot only be seen as a necessity of life, but also as the process of creating a good living conditions with an identity in society1 In the case of Indonesia, the country still provides a very limited portion of regulating in its constitution for giving a decent living and prosperity which are imperatively regulated in Article 28H, paragraph 1, of Indonesian Constitution of

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Lynne C. Manzo, "On uncertain ground: being at home in the context of public housing redevelopment", on the journal of International Journal of Housing Policy, 14:4, 389-410, in 2014, argues that "home is a site where people feel most in control of their lives; and home is a secure base around which identities are constructed and she investigates how people’s attachments to home-places have significant social, psychological and emotive consequences, as well as political and economic consequences".
1945. The constitution states that everyone has the right to have a prosperous living, materially and immaterially, to live and to receive a good and healthy living environment. In relation to the rights, the country has responsibility to ensure the fulfillment of the right to have a decent and affordable home/resident.

To meet the needs of housing/residence, the development of flats is an alternative solution to providing housing and settlement, especially in urban areas where population in the areas continues to increase. The reason is that the development of flats can reduce the use of land, create more open spaces and be used as a way to rejuvenate the city from slum areas.

The essential problem of providing housing/settlement is about the provision of area or land as the center of its operational activities. In reality, the provision of land based on its availability is increasingly limited, both in terms of quality and quantity. At the same time, land utilization or construction activities for various purposes are increasing. Recognizing this reality, the Indonesian Government develops the concept of residential development that a location or plots of land can be shared together in Multi-storey flats where each unit can be owned separately. Thus, the idea of flats can give benefits of: 1) supporting concept of layout related to improvement of city development in vertical direction and to upgrade scum areas; 2) improving maximization of land resource of the city; 3) supporting development of settlement in high densely populated area.

In fact, Indonesia has a legal instrument in the form of laws that specifically regulate flats, namely the Law of the Republic of Indonesia Number 20 Year 2011 on flats (Undang-undang Rumah Susun/UURS). Based on the law, flats are defined as multilevel buildings, constructed in an environment divided into functionally structured sections; each unit can be owned and used separately, especially for shelters which are equipped with shared parts, 2

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2 Raquel Rolnik, on the journal "Place, Inhabitation and Citizenship: the right to housing and the right to the city in the contemporary urban world", in the International Journal of Housing Policy, 14:3, 293-300, in 2014, saying that there is a clear connection of how 'location' is an essential element of the right to adequate housing, as it is the most straightforward link between housing, inhabitation and citizenship.

3 Concerning the term of apartment, Adrian Suledi in ibid, P. 275, considering that flats can be called apartments. The term of apartment in Dutch is called appartement or apartment. Apartment in English is called apartment, while in French it is called appartement. When the terms are translated into Indonesian, it can be interpreted as part of residence/living in the form of rooms, chambers, or in Dutch is called kamer or vertrek. In addition, there are other terms in the Dutch language that flat or flatgehouw can be translated as a house/building that is usually occupied by people as a independent residence.

4 Arie S. Hutagalung, on the book of "Condolocations and Their Issues, Revised Edition", published by Legal Firm. University of Indonesia, Jakarta, in 2007, pp. 3. The Government considers the necessary to develop the concept of housing development that can be shared in a multi-storey building, where the units can be separately owned either horizontally or vertically. Such development is in accordance with the needs of today's society, especially the urban community. Suhadi, on the book of "Legal and Social Aspects of Flats", published by Badan Penerbit Fakultas Hukum Universitas Negeri Semarang, in 2017, pp. 27 and pp. 34 said that the development of flats has now become a trend in both developed and developing countries in an effort to meet the housing needs for urban residents. The development of flats is implemented in order to increase the efficiency and effectiveness of the use of urban land which is increasingly limited, on the other hand, the urban population is growing rapidly. In addition, the development of flats occurs as an effort of the government in creating residential which is feasible for its inhabitants. Public Communication Center at Ministry of Public Works and People's Housing of the Republic of Indonesia, "Backlog of Housing Achieve 5.8 Million Units," at https://www.pu.go.id/berta/view, accessed on 1st March, 2018. Head of Research and Development Agency (Balitbang) the department of Public Works (PU) Hendrianto Nostosegondo revealed that the needs of homes which have not served (backlog) currently reached at 5.8 million units. Although national population growth trends to decline from around 1.98 percent annually in 1980 - 1990 to 1.4 percent annually in 1990 - 2000, but the growth of urban population in 1990 - 2000 was still quite high at 3.5 percent per year.

5 Arie S. Hutagalung, on the book of "Tebaran Pemikiran Seputar Masalah Hukum Tanah/Spreading Thoughts on Land Law Problems", published by Indonesian Institute for Legal Empowerment, Jakarta in 2005, pp. 281. The development of flats is significantly considered an alternative solution to resolve the problem of housing and settlement needs in urban areas whose population continues to increase. Since the development of flats/apartments can reduce the use of land, this situation makes the urban open spaces more spacious, and the development of flats can therefore be used as a way to city rejuvenation from slum areas. The construction of such housing is in accordance with the need of today's society, especially the urban community by using a condominium system, which is a system of ownership of buildings in which there is a unit which can be used separately and individually owned. Although there is also joint ownership of shared parts, shared objects and land. While Eddy Marek Leks (Chairman of the Working Group), in "Analysis and Evaluation of Legislation Regulations on Public Housing," National Center for Legal Counsel of the Ministry of Justice and Human Rights, 2013, pp. 64. Life in big cities in Indonesia is increasingly uncomfortable due to the increase of the density of the population, lack of green areas and open spaces. Therefore, environmental problems in residential areas generally arise as a result of high levels of urbanization and industrialization and the impact of less controlled use of resources and technologies.


7 Government Regulation of the Republic of Indonesia Number 4 Year 1998 concerning Flat.
common objects, and common area/land. The law introduces a new ownership entity as a property right, that is, the property rights of an apartment unit (Hak Milik atas Satuan Rumah Susun/HMSRS), consisting of individual rights over units of flat/apartment and of collective rights to land, objects and common parts which constitute an inseparable unit with others.

Actors in the development of flats, hereinafter used are developers have promoted, marketed or sold flat/apartment units, although the building construction has not been completed yet. Indeed, marketing activities by developers prior to the development of flats can be practiced under the provisions of Article 42 paragraph (1) of the law on flat/UURS. However, to be able to sell before finishing the development of flats, developers must meet several important requirements such as legal certainty of space designation and legal certainty of land rights. Besides regulated in the UURS, selling flats prior to the development of the flats are also discussed in the provisions of Article 42 (1) of Law Number 1 Year 2011 on Housing and Settlement Area of Law Number 1 Year 2011, stating that flats which are still in the process of development/construction can be marketed through a system of preliminary sale and purchase agreement in accordance with the provisions of legislation and law.

However, rules and regulations related to the marketing of flats are still very limited in Indonesia, whereas basic information about legal aspect of land and building hold by developers becomes very important issues for consumers. In reality, the promotion and marketing of apartment/flat units are carried out by developers are not meeting with all requirements to sell the units to consumers prior to development, for instance, the developers have not met legal requirement of the local government. As a result, the construction project or development of flats/apartment is requested to be temporarily or permanently terminated. This problem certainly would potentially harm consumers who make purchases in advance of units of flats/apartments.

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8 Indonesian law uses the term "flats". There is another term which is also often used, namely "condominium," as Adrian Sutedi, Op.cit., pp. 139 says that a condo is a form of housing function in which a particular part of real estate, generally privately owned apartments, while the use and access to facilities such as aisles, heating systems, elevators are under law associated with private ownership and it is controlled by the association of owners. This term is often used to refer to the unit itself replacing of the word "apartment". Currently, there are many apartments/condominiums are sold to consumers using the words selling apartments or selling condos. Condominium is a legal term used in the United States and in parts of Canada. In Australia and the province of British Columbia in Canada is called a strata title. In England, the syndicate of co-ownership is used. In England and Wales, it is the same as commonhold, a form of ownership introduced in 2004.

9 Arie S. Hutagalung, "Kondominium dan Permasalahannya/Condominium and its Problems", Op.cit., pp. 9. A law on flat called Undang-Undang Rumah Susun (UURS) revokes and declares no applicable to previous Law on Flats, namely Law Number 16 of 1985 on Flats (Statute Book of Year 1985 Number 75, Supplement to Statute Book of the Republic of Indonesia Number 3318). However, UURS declares that all laws and regulations which are the implementing regulations of Law Number 16 Year 1985, regarding Flats shall remain valid as long as they are not contradictory or have not been replaced by the new implementing regulations under UURS.

10 Erwin Kallo, in "Panduan Hukum untuk Pemilik/Penghuni Rumah Susun (Kondominium, Apartemen dan Rusunami)", the Legal Guide for Owners /Residents of Flats (Condominiums, Apartments and Rusunami)", published by Minerva Athena Pressindo, Jakarta, in 2009, pp. 23-24 argues that recently many marketers or property agents are offering residential unit selling with a pre-selling pattern or selling strategy by offering residential units of flats through various property exhibitions, either individually or jointly to consumers. While the physical buildings offered by the developers are usually still in the form of a picture of building and on the brochure information.

11 Hendra Kusuma, on Detik Finance, "Deddy Mizwar asked Meikarta Project to be stopped," https://finance.detik.com, accessed on 1 March, 2018. Lippo Group as a development agent is requested by the Vice Governor of West Java to temporarily suspend the development project of Kota Baru Meikarta, in Cikarang, Bekasi. The reason is that, in the Regional Regulation (Perda) Number 12 of 2014 on Management of Development and Development of Metropolitan and Growth Center, development of area in regency / city that become part of metropolitan must get recommendation from West Java Provincial Government. The development area of Kota Baru Meikarta includes the metropolitan area that will be developed in West Java Provincial Government so that it requires the recommendation of West Java Provincial Government. As a result of not having the recommendation, the Meikarta area development project was asked to be temporarily stopped. Zulfik Suhendra on Detik Finance with the title "This reason Deddy Mizwar only gives Meikarta 84 Ha Recommendation", at https://finance.detik.com, which was accessed in February 16, 2018. The Provincial Government of West Java has recommended only 84.6 hectares for land development project of Kota Baru Meikarta. The West Java Provincial Government has recommended to the Bekasi Regent for the use of 84.6 hectares of land in Cikarang, West Java for the Meikarta development project. The recommendation has been given to the Bekasi Regent because the Regent is applying but the extent is only 84.6 hectares, not 500 hectares. Luthfi Febryka Nola, "Legal issues in pre-selling apartment practice.", in brief legal magazine, research center of the Indonesian parliament’s expertise agency ISSN Vol. IX, No. 18/I/Puslit/September/2017, www.puslit.dpr.go.id., accessed in March 27, 2018. Other examples related to the marketing of flats prior to development are Kalibata City Apartments, where the developer has conducted marketing apartment for 25 floors at the time the permit has not been fully obtained. For safety reasons, the Jakarta Provincial Government only issued permits for 20 floors. Finally, developers could not fulfill the promise to do development for 21 to 25 floors so that there were a dispute between developers and consumers who have already booked the units. Another example is in 2016, when Bintaro Icon Apartment was also sealed by the South Tangerang City Police Force because it did not have a permit to construct/build (IMB) when the marketing of the units had been conducted since July 2013.
Based on potential various problems which could occur in the marketing of flats before the development/construction of the flats, it is clear that there is the weakness of the regulation on the marketing or selling the units of flats or apartments by developers, Law Number 20 Year 2011 and Law on Governing of Housing and Settlement Areas, Law Number 1 Year 2011. On this basis, this paper examines the consumer protection law towards developers who conduct marketing before the development/construction of flats. Thus, this paper is intended to examine how consumer legal protection works for the actions of developers who conduct marketing and selling flats/apartments before the development of the units are undertaken and before developers meet with all the requirements including legal aspect such as on legal administration, technique and ecology.

RESULTS AND DISCUSSION

Buyers as Consumers Unit Flats. Flats based on the Indonesian law on flat/UURS are multilevel buildings constructed in an environment divided into functionally structured sections, either horizontally or vertically and are units that each can be owned and used separately, especially for shelter which are equipped with shared parts, common objects, and common ground. Flats consist of apartment units, which are apartment units whose main purpose is used separately with main function as residential and have means of connecting to public road. Buyers or consumers make purchases of apartment units as products marketed by developers or business entities engaged in marketing.

Referring to the Article 1 of Law Number 8 Year 1999 on Consumer Protection (UUPK), a consumer is defined as each user of apartment unit built by the developer. As consumers, buyers of apartment units have several rights. Apartment buyers are entitled to the convenience, security and safety of housing units. The buyer is also entitled to the right, clear and honest information and then to vote and get the apartment units in accordance with the exchange rates, conditions and promised warranties. In addition, buyers of apartment units

As a result of the sealing, consumers are restless and postponed the payment of installments until the licensing process was completed.

The Indonesian law uses the term "flats". Moreover, there is another term that is often used, namely "condominium," as Adrian Sutedi, Op.cit., pp. 139. A condominium is a form of right to use housing in which a particular part of real estate, generally privately owned, while the use and access to facilities such as aisles, heating systems, elevators are under law associated with private ownership and the condominium is controlled by the owner associations, depicting the ownership of all parts. This term is often used to refer to the unit itself in place of the word "apartment". There are a number of the developments of flat/apartment which lead to massive approach to consumers, through selling flats/ apartments/condos. Condominium is a legal term used in the United States and parts of Canada. In Australia and the province of British Columbia in Canada is called a Strata Title. In Quebec, the syndicate of co-ownership is used. In England and Wales the same as Common-hold, a form of ownership introduced in 2004 and unusual in some places. Compare to Arie S Hutagalung in the Condo and the Problem, Op.cit., pp. 3. Condominium comes from a Latin word consisting of the word "Con" which means together, and the word "Dominium" which means ownership. In subsequent developments, the condominium has the meaning of a building property consisting of parts which each of them constitutes a union that can be used or occupied separately, and individually owned.

Arie Hutagalung, “Tebaran Pemikiran Seputar Masalah Hukum Tanah (Spreading Thoughts on Land Law Problems)”, Op.cit., pp. 77. Individual apartment units are owned by the owners themselves, whereas the collective rights shall be used and managed jointly as they concern to the common interests. Association of Owners and Residents of Flats (P3SRS) by legislation is given the status as a legal entity in which the organizational structure, rights and obligations are regulated in its articles of association and bylaws. Thus, Association of Owners and Residents of Flats/P3SRS can act on behalf of owners and occupants of the flats/apartments and with its authority can bring rules of order and peace to the environment of flats/apartments.

Black’s law dictionary of free online legal dictionary 2nd addition defines a product as follows: 1) a product that is in its finished stage is usually at the end of a production cycle. It is usually what a user needs or wants. 2) In terms of law where a product should be a good distributed commercially by having tangible personal property, the result of a fabrication or production process, and passed through the distribution channel before the consumption of the good. 3) Marketing for a good or service should provide exactly what the buyer wants or need and the profit margin must be justifiable for it to be in production. 4) Finished product, usually at the end of the production cycle, is usually what is needed or desired by the user. Sudjana and Elysatsi Gultom, on the book of “Trade Secret in the Perspective of Consumer Protection”, published by Keni Media, Bandung, in 2016, pp. 27. Kotler defines a product is anything that can be offered to market in order to get attention, to be bought, used, or consumed and it can satisfy the wants or needs of people. Tan Kamelo on the book of “Practice Protection for Consumers in Indonesia as a Result of Foreign Products in the National Market”, paper addressed education and training of trade law management, by Ministry of Industry and Commerce RI Regional Office of Ministry of Industry and Trade of North Sumatera Province. The institution defines production is any activity aimed to produce goods and services. In a broader sense, production is any action aimed to create or add value to a good.

Eddy M. Leks, on the book of “Practical Property Law Guide—Understanding the Problems of Land Law, Housing, and Development”, published PT Gramedia Pustaka Utama, Jakarta, in 2016, pp. 118-119. The law of flat/UURS provides convenience to developers on public housing in the form of incentives such as facilities in land procurement, facilities in land

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are entitled to compensation, compensation and/or reimbursement, if the apartment units received by buyers are not in accordance with the agreement or not as the units should be.

Requirements for Housing Development. Flats are built by developers as business actors. The developer may be either an individual or a business entity, whether in the form of a legal entity or not. The development of flats undertaken by developers must follow several stages in accordance with the provisions of legislation, namely, technical planning, implementation, and technical supervision. In addition, in line with those stages, some other requirements in the development of flats should also meet administrative, technical and ecological requirements.

Unlike the development of regular housing, the development of flats requires stricter on technical and administrative requirements because flats have specific form of building and context. The administrative requirements which must be fulfilled is in the license to develop flats/apartments including the status of land rights and building permits/plan for constructing permit (izin Mendirikan Bangunan/IMB). In this regard, developers of flats and environment must follow the plan for area/land function and utilization. License is obtained from Regents or Mayors, but especially for Jakarta Province, the plan for function and utilization must be obtained from the Governor of Jakarta. The application for the permit to build the flats/apartments is submitted by the developer with enclosing requirements of the land certificate, the certificate of district/municipality plan; the picture of the site plan, the picture of architectural and design plan showing a clear vertical and horizontal appearance of flats/apartments. Other requirements to be attached are the picture of structural plan and its calculation which clearly show the shared areas, common objects and common ground, images of the plan for general utility, installations and their equipment, for instance, network of clean water distribution, gas, and electricity.

If the developer wants to build a flat which is located on a lease area or land, the developer must attach a written agreement on the utilization of the land. After obtaining permission from the local government, the developer is obliged to request an approval from the local government concerning the fact which shows clear borders of each unit of flat/apartment, shared and joint area/land along with a description of the proportional comparison value (Nilai Perbandingan Proporsional/NPP). The development of flats is, therefore, carried out based on the calculation and determination of the coefficient of the building floor and the basic coefficient of the building which is adjusted to the capacity and support of the area referring to the spatial plan of the region.

Technical requirements in relation to the structure, safety and security of the building, environmental health, the comfort, and others related to the design of the building such as completeness of the infrastructure and environmental facilities. Technical requirements consist of building arrangements which are requirements of the designation of location, and intensity and architecture of buildings, the reliability of the building such as the requirements for safety, health, comfort, and convenience. Thus, the construction of flat must be planned by means of structure, component and use of construction material which fulfills the safety construction standard. In the technical aspect, flat must be completed with the interest of daily activities for dwellers, either inward or outward with provision of track, vehicle road, and parking lot.

In addition to administrative and technical requirements, developers must also meet the ecological requirements through the assessment for environmental impact. The ecological requirements include the harmony and the balance of environmental functions. This means...
that density of building must reckon the eligibility of optimizing of effectiveness and efficiency of land itself, as fitted to the function by heeding harmony and safety of surrounding environment accompanied by the analysis of environmental impacts as required in the provisions of laws and regulations.

**Consumer Legal Protection on Flats.** Legal protection covers a wide range of subjects. They are: protected subjects, protective objects and actions which can be raised if consumers feel disadvantaged. Legal protection essentially aims to achieve the legal objectives, legal certainty, justice and benefit\(^\text{19}\). Fundamentally, legal protection relates to the provision of services to public. According to Pound (1965), law is a tool for social engineering. There are three kinds of interests which are protected, namely, public interest, social interest, and private interest. In relation to public interest, the state has a role as the guardian of the public interests\(^\text{20}\).

Protection of consumer's rights is essential where business actors and consumers according to the *laizes faire* paradigm are considered to have an equal position in the principle of freedom for having contract, but in reality this paradigm is not always in place. Consumers are often in a weaker or unequal position\(^\text{21}\), compared to business actors. This reality leads to the need for consumer protection, specifically through consumer protection law\(^\text{22}\). Thus, the Law on Consumer Protection is an effort for a way and process ensuring the existence of legal certainty for protecting consumers\(^\text{23}\).

Consumer legal protection is utmost important in a vibrant development of flats followed by more apartment units offered to consumers. The marketing department of flat developers offers apartment units through various strategies in the midst of strong business competition in the free market. Developers focus on a rapid process of selling the units of flat in order to have the return of investment soon\(^\text{24}\). In order to achieve that interest, developers conduct promotion by introducing or disseminating information related to flats. This phenomenon can lead to vulnerability in legal protection for consumers of the units of flat/apartment\(^\text{25}\).

Every consumer is entitled to have access to information related to the units of flat/apartment that are marketed or promoted by developers. This basic right is the right of every human being where people are entitled to obtain information as part of human right and as one of the realization of the welfare in accordance with the country's ideals and national philosophy, based on *Pancasila* and Article 28 F of the country's Constitution 1945, stating that everyone has rights to seek and obtain information. In relation to this right, Article 14 of the Law Number 39 Year 1999 on Human Rights stipulates that everyone is entitled to obtain necessary information to develop his/her personal and social environment. In addition, the law also affirms that everyone has the right to seek information with all types of available facilities.

\(^{21}\) Henry Chambell Black, Black’s Law Dictionary, West Publishing Co., St. Paul-Minnesota, 1990, pp. 1193 defines equal as ‘alike, uniform, on the same plane or level with respect to efficiency, worth, value, amount or rights. Word “equal” as used in law implies not only identity but duality and used of one thing as the measure of another.
\(^{25}\) Sudaryatmo, on the book of “Hukum & Advokasi Konsumen/Legal & Consumer Advocacy”, published by Citra Aditya Bakti, Bandung, in 1999, pp. 55. In the construction of apartments, developers need to have assurance that the built apartment will be sold. Then, they conduct the marketing of units of flat/apartment on a punctual basis (pre-project selling), by having buying and selling agreement between consumers and developers. This method is taken by the developer with consideration of market certainty of obtaining cheap funds. However, from consumer protection side, this is very vulnerable. The increasingly widespread marketing is followed by the practice of selling unfinished units of flat/apartment, which are carried out with preliminary engagements or buying and selling agreement. The practice of marketing of flats is increasingly widespread, even before the accomplishment of the building; even it is when flats and apartments are still planned and still at the stage of land clearance. This is based on economic considerations: (i) for developers, it is to facilitate the acquisition of cheap funds and market certainty; (ii) for buyers or consumers is to lower the selling price of the house because the prospective buyer pays in advance.
To protect consumers of the units of flat/apartment, the consumer protection law requires developers to have good intentions in conducting their business activities, including in selling their flats/apartments. They are obligated to provide true, clear and honest information regarding the condition and assurance of flats/apartments and to provide explanations of the use of flats and maintenance services. Developers are obliged to treat or serve consumers properly and honestly. The quality of apartment units built and marketed by developers must be guaranteed under the applicable quality standards. Referring to the provisions of Article 7 of Law on Consumer Protection/Undang-Undang Perlindungan Konsumen/UUPK, developers are obliged to have good intention in conducting the development of flat/apartment project and to provide the correct, clear and honest information about the condition of the flat, the period of completion and the handover of the flats physically to consumers.

In relation to promotion and marketing, the Indonesian Law on Consumer Protection can also be applied to provide legal protection for consumers of flats/apartments by arranging various restrictions against developers in order not to perform certain acts. With reference to the provisions of Article 9 paragraph (1) letter j and k at the law, the developer is prohibited to offer, promote, and advertise the units of flat or apartment improperly and to offer something that contains undefined promises. Related to this prohibition, referring to the provisions of Article 62 paragraph (1) of the Law on Consumer Protection against the developer may be imposed sanction if the developer is committed a violation with the maximum imprisonment of 5 years or a fine which is no more than Rp 2.000.000.000,00 (two billion rupiah) or $ 142.857 USD.

Developers as the main business actors are prohibited from offering, promoting, and advertising the units of flat/apartment incorrectly using excessive words without a full description. Developer should also not offer anything containing an uncertain promise. The article 8, Paragraph (1) at letter f of the Law on Consumer Protection highlights that the developer is prohibited to trade flats/apartments which are not in accordance with the promise stated in the advertisement or promotion27. Thus, developers must be responsible for units of flats/apartments as advertised28.

In offering the units of flat/apartment which are intended for selling, the developer is prohibited for offering and making false or misleading statements about the price of the units of flat/apartment, the function of flats, conditions, liabilities, guarantees, rights or compensation for the units of flat/apartment, and also for offering discounted or attractive prizes. In addition, developers in offering apartment units through orders are prohibited from failing in keeping agreements as promised and failing in keeping promises of services. This is related to the principle of the power of contract-binding.

To provide legal protection for buyers of flat/apartment units, Article 42 of the Law on Flat/UURS determines that if developers want to sell the units before the development of the flat/apartment is carried out, they must comply with several requirements, namely, the certainty of the designation of space/area indicated by the letter of city plan approved by the local government, certainty of land rights as indicated by land title certificates, certainty of the ownership status of flat/apartment, where the certainty of ownership status between Satuan Rumah Susun/SHM of apartment units and the certificate of the ownership of building or Sertifikat Kepemilikan Bangunan Gedung/SKBG of apartment units should be explained to prospective buyers28. Other requirements that must be fulfilled by the developers to be able

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26 Rosmawati, on the book of "Pokok-Pokok Hukum Perlindungan Konsumen/Principles of Consumer Protection Law", published by Prenada Media Group, Depok in 2018, pp. 27. Advertising on media can be divided into three types: (i) oral media; (ii) print media, such as newspapers, magazines, brochures, leaflets; and (iii) electronic media, such as television, radio, computer or the internet.

27 Jerry J. Philips in the book of "Product Liability in a Nederland 3 rd", West Publishing Co. pp. 4. Product liability of the liability of manufacturer, processor or non-manufacturing seller for causing negative impacts to person or buyers of property or third party, caused by a product which has been sold.

28 Agus Yudha Hermoko on the book of "Hukum Perjanjian Asas Proporsionalitas dalam Kontrak Komersia/Law of Principle of Proportionality in Commercial Contracts", published by Kencana Prenada Media Group, Jakarta in 2013, p. 123-124. The binding force of contract can be understood as binding on contractual obligations, that is the content of the agreement or the achievement that must be made by all parties. The binding power means that the contract is on contents or contractual achievement. Basically, a binding appointment is based on the principle of Pacta Sunt Servanda, so it needs to be given the
to sell the units before the development of flats is to hold the permit for the development of flats through the IMB and collateral for the construction of flats from the guarantor institution through supporting letter from bank or non-bank.

Selling and buying of flats which have not been built or are still in the stage of development can be conducted through making a binding sale and purchase agreement/Perjanjian Pengikatan Jual Beli (PPJB). PPJB is achieved through ordering a unit to be purchased, which is then stated in the preliminary agreement or an agreement of selling and buying 29. The process of buying and selling flat/apartment units before the construction finished can be done by having PPJB which written in front of notary. PPJB based on Article 42 Paragraph (1) of Law Number 1, Year 2011 is an agreement for selling and buying a house which is still in the process of building between a prospective buyer of flat/apartment and a developer who is known by official authorities.

Selling and buying the units of flat/apartment units shall be conducted based on a law as Article 1457 of the Civil Code which determines that selling and buying is an agreement among parties: one is to provide the physical of flats/apartments and the other party is to pay. 30 In the concept of buying and selling, it is not only to take an object but also to give the object. As long as the transfer of the unit of flat/apartment has not occurred, this means that there is no selling and buying transaction so that the flat does not belong to the buyer. The agreement to sell and to buy indicates the presence of two parties, in which one party commits the act for selling, while the other party commits the act for buying 31.

A binding sale and purchase agreement or Perjanjian Pengikatan Jual Beli/PPJB pursuant to the provision of Article 43 and Article 44 of the Law of Flat/UURS 32 shall be performed after fulfilling the certainty requirements of land ownership status, ownership of license certificate, the availability of public facilities and utilities for at least 20%, including the condition of the apartment units built and sold to consumers through media promotion, the location of flats, the form of apartment units, the specifications of buildings, the price of the units, infrastructure, facilities and utilities of flats and the time of transferring the units of flat/apartment. The process of buying and selling after the flats are built, there must be the selling and buying certificate/Akta Jual Beli (AJB). Developing/constructing flats/apartments is finished if there are several certificates, namely, the certificate of feasible function, letter of ownership of flats/apartments or SKBG of flat/apartment units.

Every consumer or buyer of the units of flats/apartments is entitled to legal protection, i.e. all efforts to ensure the legal certainty of protecting customers. Protection on the buyer of flats can increase the awareness, ability and independence of consumers in protecting themselves. Consumer protection creates a protection system containing elements of legal certainty and information disclosure as well as access to information. In addition, consumer protection aims to raise business awareness on the importance of consumer protection so that business transaction grows in honest and responsible attitude.

Consumer legal protection on the case of buyes of units of flat/apartment refers to Article 2 of the Law on Consumer Protection/UUPK, particularly related to the principles of consumer protection law and the legal certainty principle 33. Based on that principle, both the

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31 Ibid., pp. 29. There are two concepts of transition rights as regulated in the Law of Flat/UURS, namely: (i) buying and selling committed by developers to the public or users; and (ii) buying and selling which is done by the owner to other buyers.
32 The provisions on the same requirements have also been regulated in Article 42 of Law Number 1 Year 2011, on Housing and Settlement Area. In doing marketing, developers use mass media. Newspaper media is still the most favorite for promotion for developers. Buyers of the units of apartment have rights as consumers, such as: the right for information; the right for security and comfort; and the right for indemnification.
33 Soerjono Soeckanto, on the book of "Pengantar Penelitian Hukum/Introduction to Legal Research", published by UI Press, Jakarta in 2010, pp. 45. Paton argues that the principle of law is an essential element of the rule of law. The principle of law is at the heart of the rule of law, for it is the broadest foundation for a rule of law. This means that the rule of law can ultimately be restored to these principles. This principle of law is worth mentioning as the reason for the existence of the rule of law, or it is the legitimate ratio of the rule of law. The principle of law is not exhausted by the existence of a rule of law, but it will still exist and will give extend of further rules. Therefore, Paton calls it as a means by which the law is alive, growing and developing and it also shows that the law is not merely a collection of rules.
developers and the interest of buyers must obey the law and obtain justice in the implementation of consumer protection, and the state guarantees on the legal certainty. With the principle of legal certainty, developers perform their duties in honest attitude and they have the intention to implement it wholeheartedly.

With regard to the marketing of units of flat/apartment followed by bundling agreement of selling and buying between developers and buyers, the Law provides protection for the buyers in the form of Decree of the State Minister for Public Housing Number 11/KPTS/1994 on the Guidance on Assembly of Selling and Buying of the units of flat/apartment. Thus, in the process of selling and buying agreement, every developer of the flat/apartment must obey the Ministerial Decree.

Selling and buying the units of flat/apartment should be conducted in the presence of notary for writing land certificate/Pejabat Pembuat Akta Tanah/PPAT after all conditions of transaction have been fulfilled by all parties. The transaction with binding agreement is required as a guarantee for both parties; this agreement is seen from the point of selling and buying agreement that buyers will pay the unit in accordance with the time agreed in the agreement. For the buyer, the binding agreement provides assurance where the unit of flat/apartment will not be sold to another party by the developer and the unit will be handed in to the buyer within the agreed time. The selling and buying binding agreement is an agreement in which the seller binds to sell the unit to the buyer and the buyer binds himself/herself to pay the price of the unit bought. Although there exist a selling and buying agreement, as long as the unit of flat/apartment has not been given to the buyer, the property right on the item is still on the side of seller.

To ensure the implementation of a binding sale and purchase agreement or Perjanjian Pengikatan Jual Beli/PPJB in accordance with the prevailing rules, the Government exercises control and supervision officially at all government levels: Ministers at the national level; Governors at the provincial level; and Regents/Mayors at the district/city level. Control is needed to ensure the development of the flat/apartment, including control to marketing processes. Control or supervision is practiced through several stages, namely: monitoring, evaluation, and corrective actions in accordance with the provisions of legislation.

A binding sale and purchase agreement or Perjanjian Pengikatan Jual Beli/PPJB includes an object to be traded, management and maintenance of shared area, common objects, and common lands which are the duty of all residents and the developer. Regarding the object to be traded, the flats/apartments must have the necessary permits, such as location permit, proof of land ownership and payment, and building permit. Regarding the management and maintenance of shared parts, common objects, and common ground which is the responsibility of all residents, prospective buyers must be willing to become a member of PPRS.

Regarding the liability of the developer, prior to conducting the initial marketing, the developer must report all related marketing to Regents/Mayors with a copy to the Indonesian Minister of Public Housing. The report shall be accompanied by several documents. They are: (1) a copy of the permit letter of principle; (2) a copy of the location permit; (3) proof of land acquisition and procurement; (4) a copy of the building permit letter; (5) the picture of design of flats/apartments which has been approved by the local government. If within 30 days since the date indicated on the receipt of the report has not received any answer from the relevant agency, such a bid may be proceed. Developers are obliged to provide all documents related to housing construction, such as (a) the land title certificate, (b) the site plan, (c) draft of architecture plan containing the site plan and cross-section with its details which show clear limit in vertical or horizontal direction of flat, (d) the picture of the structure plan and its calculations, (e) draft of structure plan which shows clearly mutual-part, mutual-object, and mutual land, (f) draft of the network, installation, equipment plan and accessories.

Another obligation for developers to undertake is for completing the construction of building in accordance with the agreed standard, preparing the agreement of selling and buying the units of flat/apartment/ certificate of selling and buying/Akta Jual Beli (AJB) which is signed by both parties in the presence of the Notary/ Official for Writing Land Certificate/Pejabat Pembuat Akta Tanah/PPAT on the stipulated date; and/or Notary/PPAT.
will arrange the acquisition of the certificate of the units of flat/apartment on behalf of buyers. Developers are also obligated to deliver the units of flat/apartment, including public and social facilities perfectly on the specified date.

If developers have not been able to complete the units of flat/apartment at the specified/agreed time, they shall be granted a period of 120 (one hundred and twenty) calendar days to complete the construction, as from the date of the plan to hand in the units. If they still cannot fulfill the promise so the Agreement on Binding for Selling and Buying/Perjanjian Pengikatan Jual Beli/PPJB will be cancelled legally. The cancellation of PPJB does not need to be proven or sought by a court decision or an arbitration body. Developers are obliged to refund the payment received from buyers with additional cost for penalty and monthly interest, according to the prevailing of bank interest rate. Consumer legal protection of the units of flat/apartment can be done by tightening and enforcing rules of making PPJB. This can strengthen the position of consumers as parties who are often in a weak position. Thus, the PPJB’s role is to make a balance interests between developers and consumers. This relates to the idea of fairness through impartiality of business contract. To protect consumers of the units of flat/apartment, there are also legal instruments which can be applied to developers, namely Government Regulation No. 88 of Year 2014 on the Development of Housing and Settlement Areas. Based on the regulation, the Government, Ministers, Governors, and Regents/Mayors in accordance to their authorities can be advisors for developers and also to public as the stakeholders of the development of flats or apartments. Thus, assistance and coaching are conducted through three different levels: National level with Ministers; Provincial level with Governors; and at District/City level with Regents or Mayors.

Assistance and coaching can be conducted on several aspects such as control and supervision. Control can focus on a house, housing, settlement, and residential area. Control is carried out on licensing, monitoring, and arranging on housing and settlement area at local government of regency/city where in the Capital city of Jakarta, it should be at the government of province. In addition, supervision is carried out through monitoring, evaluation and correction activities in the implementation of housing and settlement areas. Monitoring activity is an activity to conduct observation and recording of housing and residential area. Evaluation activities are activities to assess and measure the results of the implementation of housing and residential areas. Correction activities are activities to provide recommendations on the improvements from the results of the evaluation on housing and residential areas. Each developer should also understand laws and regulations on flats and consumer protection; therefore, it is necessary to socialize the legislation by the Minister to the Governors and/or Regents/Mayors. Socialization is conducted by disseminating information on laws and regulations including norms, standards, procedures and criteria not only to local governments but also to developers and consumers as stakeholders of flats/apartments. The reason is that society as consumers are in need of socialization of the legislation related to the flat. Thus, in generally consumers require mentoring and empowerment as well as need for information and communication services.


35 Government Regulation Number 88 Year 2014 on the Development of Housing and Settlement is intended as a regulation for implementing the provisions of Article 11 of Law Number 1 Year 2011 on Housing and Settlement Area and Article 12 of Law Number 20 Year 2011 on Flats. Article 12 of Law Number 20 Year 2011 on Flats mandates for further regulation with the government regulation on the state responsibility for the administration of flats whose development is carried out by the government. On the other hand, Article 11 of Law Number 1 Year 2011 concerning Housing and Settlement Area shall instruct further regulation with the government regulation on the State responsibility for the implementation of housing and settlement areas whose guidance is implemented by the government.

36 Under the provisions of Article 2 Paragraph (2) Letter a, the stakeholders are, among others, private, financial institutions, developers, contractors, academicians of higher education, and society in general.
Moreover, each developer should have a detailed socialization or explanation to the buyer if the developer wants to sell the units, for example there is a rule that property development of flats/apartments is obliged to manage flats in the transition period, not later than one year since the first times of the units of flat/apartment hand them to buyers. Within one year, the developer is obliged to establish the association of owners and tenants of flats/Perhimpunan Pemilik dan Penghuni Satuan Rumah Susun/P3SRS, where the residents have the authority to choose their own P3SRS management. Buyers should also get a detailed explanation of the area management fee/Iuran Pemeliharaan Lingkungan (IPL) with all its components, such as parking, water and electricity. The obligations of developers need to be monitored by the government. So for ensuring the compliance of developers with all rules, it is not excessive for the government to exercise its authority to control, supervise and guide which is regulated in Law Number 20 of 2011. The law states that by complying with all rights and obligations to be fulfilled by developers, these are connected with the granting of a license to build/ IMB and certificate of Feasibility Function/Setifikat Laik Fungsi (SLF) as referred to in Article 39 paragraph (3) of Law Number 20 of the Year 2011. The provisions of
the law actually have opened the authority i.e. the government to play a role in providing consumer protection through licensing.

The authority of both the Central Government and the Local Government explained above should be a form of consumer law protection by lawmakers in very strategic and solid, protection which start from preventive actions in overcoming the problems that arise in order to guarantee the implementation of housing and residential areas including flats when consumers are dealing with developers. Without any government assistance to buyers, then any case of injustice of consumers as the flat/apartment’s buyers will be difficult to overcome.

CONCLUSION

It has been explained that flat/apartment developers can conduct marketing and selling the units of flat/apartment even though the development has not been implemented. However, the practice cannot be proceeding if developers failed to meet all the requirements. The fact is that developers sell units of flat/apartment before fulfilling all legal requirements, although developers and consumers engage in the binding agreements of selling and buying flats/apartments. This paper argues that in this situation consumers are in a weak position and incur losses. Therefore, each developer has to socialize and give a detailed explanation to consumers in the process of selling and buying the units of flat/apartment. In terms of consumers, since they are in a disadvantage position in the marketing process of the units of flat/apartment in the case of the buildings have not been finished or there is no completion of development, they should pay attention to the legality of the development of the units marketed.

Consumer protection law in the context of flat is practiced in the aspect of promotional and marketing advert of the units of flat/apartment. But, this paper argues that in the context of Indonesia, there are no sanctions for developers who violate the law. This paper suggests the ideas of strengthening and enforcing the law on flat. The first is that developers are obliged to comply with the guideline of selling and buying the units of flat/apartment under the Decree of the Minister of Public Housing. The second is that developers, who offer, promote, advertise the units of flat/apartment incorrectly may be subject to imprisonment or fine penalties. The third is that developers who make the agreement of binding for selling and buying/PPJB which are not in accordance with what is marketed and agreed with buyers; or has not fulfilled the requirements of the land ownership status, the ownership of the permit for develop flats/apartment/IMB, the availability of public utilities and facilities with at least twenty percent; and other aspect which are agreed in the agreement may be subject to imprisonment or a fine.

Therefore, with regard to the legal instruments governing marketing prior to development of flat/apartment, there is the need of a revision of Law Number 20 of the Year 2011 and the Law Number 1 Year 2011 to regulate sanctions for developers who offer, promote, advertise apartment units incorrectly either in the form of criminal sanctions for imprisonment or criminal penalties. Prevention in the form of preventive measures can also be carried out by the government in carrying out supervisory and coaching functions through the extension of licensing requirements by requiring all aspects to ensure that consumers are properly protected according to propriety and fairness. The sanctions for developers are a rule in the legal instrument which can ensure that they must have good faith by fulfilling all requirements for selling the units flat/apartment preceded by the Agreement on Binding for Selling and Buying/Perjanjian Pengikatan Jual Beli/PPJB. Thus, this paper suggest for further research and advocacy on the revision of Law Number 20 of the Year 2011 and the Law Number 1 Year 2011 for Flat, in more protecting consumers in the process of selling and buying flats/apartments.

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EFFECT OF LEADERSHIP AND WORK ENVIRONMENT TOWARD ORGANIZATIONAL COMMITMENT WITH JOB SATISFACTION AS INTERVENING VARIABLES

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ABSTRACT
The aim of this study is to analyze and to know the significant effect of leadership, work environment to job satisfaction and organizational commitment of elementary school teachers in Batukliang subdistrict. The sample of this research are teachers with civil servant status (PNS) at education institution of elementary school in Batukliang sub-district spread over 45 elementary schools with 200 teachers (excluding school principals). Sampling technique in this research is using purposive sampling. Data analysis done using path analysis with Structural Equation Modeling with AMOS-20. The research results showed that leadership and work environment have a significant effect on satisfaction of elementary school teachers in Batukliang sub-district.

KEY WORDS
Leadership, work environment, job satisfaction, organizational commitment, teacher.

Staff’s organizational commitment in several cases influenced by whether or not they satisfy with the salary, the job, the supervision quality and relation with other staff members. Sutrisno (2009) argue that job satisfaction is one of employee attitude that related to the working environment, cooperations between the staff members, amount of reward and psychological aspect during work. Sopiah (2008) conclude that job satisfaction can be identified as an emotional response of an employee towards the job and working condition. The emotional response could be formed in satisfaction or disappointment, if the employee is emotionally satisfied with their job then job satisfaction is achieved and vice versa. Job satisfaction could be achieved after their expectations and actual condition are compared. Furthermore, Robbins and Judge (2008) acknowledge that job satisfaction commonly driven by several factors such as; job desk, supervision, salary, promotion opportunity, and between employees relations.

On the other hand, according to Luthan (2006) job satisfaction can be measured by five indicators which are; the job itself, salary, promotion opportunity, supervision, and co-workers. An evaluation on link between job satisfaction and organizational commitment has been conducted by (Hidayat, 2013; Junaedi et al., 2013; Karim dan Rehman, 2012; Kurniasari dan Halim, 2013; Muhadi, 2007; Novriyadh dan Riana, 2015; Parwita, 2013; and Retnaningsih, 2007); shows that job satisfaction correlates with the organizational commitment. While Saputra (2013) found that job satisfaction is the most dominant factors contribute to organizational commitment, interestingly evaluation done by Rahmi (2013) shows that job satisfaction positively correlate to organizational commitment but not giving significant impact. Manuel & Rahyuda (2015) declare that organizational commitment could mediate between job satisfaction and turnover intention. Wirakusuma and Sintaash, (2015) also stated that there are positive correlations between job satisfaction and organizational commitment with the employee’s status as a variance. Tabitha and Harjanti, (2015); Santososo (2014) found that job satisfaction mediates the influence of leadership towards organizational commitment. Wirawan, (2013) found that whether or not an employee satisfies with the job affect the variables which mediate between job satisfaction an employee’s performance. Whereas, Hidayat, (2013) found that there is an insignificant positive effect of leadership on
job satisfaction. However, job satisfaction could not mediate influence between leadership towards organizational commitment. Rustini (2015) states that organizational commitment mediates the influence of the work environment on performance. Therefore, from the results of previous research there are still results of inconsistent research that needs to be studied further and have not found a study that examines the direct and indirect influence simultaneously the influence of leadership and work environment on organizational commitment with satisfaction as a moderation variable.

In the case of leadership related to job satisfaction and organizational commitment, Herzberg (in Wirawan, 2013) reveals that leadership is one factor that can affect job satisfaction. The results of this study are strengthened by (Junaedi and Utami, 2013; Muttaqien, 2014; Plangiten, 2013); leadership has a significant effect on job satisfaction. Several studies in other countries have shown that strong leadership impacts in schools, can create a change development (Hopkins 2001a, West et al., 2000). Meanwhile Hopkins (2001b) highlights the importance of transforming leadership and learning practices to achieve improvement in schools. However, according to a research conducted by Rahmi (2013), it shows leadership has a positive but insignificant effect on job satisfaction while leadership has a significant positive effect on organizational commitment. Whereas, Tabitha and Harjanti, (2015), declare that there is a significant influence of leadership on organizational commitment both directly and indirectly. For the working environment related to job satisfaction and organizational commitment, (Lutans, 2006; KurniaSAri and Halim, 2013; Mincu, 2014; Nasution, 2013; and Plangiten, 2013), the results of the study show that the working environment has an effect on job satisfaction. in addition Akhtar (2014) stated that the working environment affects the job satisfaction and organizational commitment of employees. Empirical studies by Kurniasari and Halim (2013) also found that the working environment had an effect on organizational commitment. While Rustini (2015) found there was a positive influence of work environment on commitment, McGuire & McLaren, 2009; and Saputra, 2013), argue that there is a strong positive correlation between work environment and employee commitment.

Commitment issues could appear in various types of organizations, one of them in educational institutions. According to Law no. 14/2005, a teacher has a function, role, and position which is very strategic in national development in the field of education, which are an effort to educate nation life and improve quality of Indonesians. Who has competency in science, technology, and art in realizing a society that is advanced, fair, prosperous, and civilized. The teacher's duties and functions as mentioned above cannot be properly implemented if a teacher's commitment is infirm. In fact, in the Stated Elementary School (SDN) in Batukliang Subdistrict, Central Lombok, there are numerous problems related to teachers' commitment. These problems include, discipline teachers in running some rules have not been maximized as it can be seen from the teachers not following the working hours, some of them may come late to the school or go home early. Another indication of the declining commitment of teachers in some SDNs in Batukliang subdistrict is that school programs designed and created by the Principal along with teachers are have not well achieved, and some teachers' intent to move to other duty areas. Other problems found in the education environment of elementary school (SDN) in Batukliang subdistrict are the problem of teacher work satisfaction, the principal leadership problem, and working environment problem. Some of the teachers interviewed expressed their dissatisfaction. Some teachers' dissatisfaction with their own work, colleagues, and the principal's style of leadership. This study aims to analyze and assess the significance of the influence of leadership, work environment to satisfaction and work commitment of teachers either directly or indirectly through job satisfaction as a moderation variable.

**LITERATURE REVIEW**

*Leadership.* Herzberg (in Wirawan, 2013) explain numbers of factors that affect job satisfaction are work, working conditions, work environment, job securities, compensation, health insurance, career path, organizational policy, leadership, subordinate employee
relations, coworkers relationship, autonomy work, and rewards. According to Luthans (2006), supervision from the boss is a crucial point that contributes to job satisfaction. Luthans further explained that for now there are two dimensions of supervisory style that affect satisfaction that is centered on employees and the dimension of participation or influence. Muttaqien, (2014) in his research found that leadership has a significant effect on employee job satisfaction. As well as Plangiten (2013) found that leadership style affecting employee job satisfaction. Junaedi et al., (2013) also found leadership has a significant effect on job satisfaction. The results of Tabitha and Harjanti (2015) research shows that job satisfaction mediates the influence of leadership style on organizational commitment. However, Rahmi (2013) shows that transformational leadership has a positive but insignificant effect on job satisfaction.

In line with Rahmi, Hidayat's research (2013) also shows there is a direct positive but insignificant correlation of leadership on job satisfaction. Job satisfaction does not mediate the influence of leadership on organizational commitment. Brenninkmeyer & Spillane (2008) in a recent study stated that the main task of a leader is to spend a lot of time solving learning problems at school, and solving performance-related problems. The real effect can be seen on student outcomes at school, and the school becomes effective. Therefore it takes a leader who not only determines direction but they also have consistent value and practice (Sergiovanni, 1995).

H$_1$: leadership has a positive and significant impact on job satisfaction.

Luthans (2006) stated that working conditions have an influence on job satisfaction. If the conditions are good (e.g. clean and pleasant environment), individuals will be easier to complete their work. In contrary, in lousy working conditions (e.g. hot air, noisy environment), individuals will be difficult to complete their work. Luthans further explained, lately because of the diversity of the workforce that increased working conditions become important. Working environment effects on job satisfaction as well as group effects. If the working environment is great then there will be no problem on job satisfaction, and vice versa if the work environment is bad then it will cause problems of job dissatisfaction. Herzberg (1959, in Wirawan, 2013) as has been expressed above the factors that may affect job satisfaction such as working conditions, work environment, subordinate boss relationships, and coworkers relationship. Kurniasari and Halim (2013) found that the working environment affects the job satisfaction. The results of Plangiten (2013) shows that the working environment has an effect on employee job satisfaction. Nasution (2013) in his research found that the working environment affects the job satisfaction. Research by Mincu (2014) also provides a conclusion that is similar to Nasution the working environment in an organization affect the job satisfaction.

H$_2$: Work environment has a positive and significant impact on job satisfaction.

Organizational commitment is the willingness of individuals to remain together in an organization to achieve the goals set. Individuals who have high organizational commitment will always be loyal to the organization and try to make efforts to build the organization (Gholi pour, 2012). Wirawan (2013) argue that one of the outcomes of leadership in an organization is the organizational commitment of his followers. Furthermore, Wirawan said that if the follower's commitment to the organization is high, they will provide a great quality of working performance. Commitments according to Luthans (2006), are determined by the person's variables (age, position in organization, and dispositions such as positive or negative effectiveness, or internal or external control attribution), organization (job design, value, support, and supervisory leadership style); non-organizational factors such as the existence of other work alternatives. The results of Tabitha and Harjanti (2015) found that leadership style has a positive and significant effect on organizational commitment either directly or indirectly through job satisfaction. Hidayat's research (2013) found a significant direct and positive influence of leadership on organizational commitment. There is a significant indirect and positive influence of leadership on organizational commitment with organizational communication intervention. There is a positive but insignificant indirect influence of leadership on organizational commitment with job satisfaction interventions. There is a positive and significant indirect influence of leadership on organizational commitment with
organizational communication interventions and job satisfaction. A study conducted by Santoso (2014) found that leadership style has a significant influence on organizational commitment, leadership style has a significant influence on organizational commitment with job satisfaction as intervening variable. Rahmi (2013) found transformational leadership to have a positive and significant impact on organizational commitment. Retnaningsih's research results (2007) support the results of previous research. The results of his research found leadership has a positive and significant impact on organizational commitment. While research Junaidi et al., (2013) does not support some previous research results. The results of Junaidi and Utami (2013) show that leadership has no significant effect on organizational commitment.

H3: leadership has a positive and significant impact on organizational commitment.

According to Kurniasari and Halim (2013) research outcome, the working environment measured through office design indicator, job equipment design, lighting, temperature and air conditioning, noise, leadership style, trust issues and authorization in a job description and decision making have an effect on organizational commitment. This means the working environment is one of the factors that determine the organizational commitment of employees. The result of Kurniasari and Halim research is in line with the research that has been done by Saputra (2013), it shows that the working environment has a significant effect on organizational commitment. While Rustini (2015) found there was a positive influence of work environment on budget management commitment. The result of Rustini's research also shows that organizational commitment mediates the influence of the working environment on the performance of budget managers. On the other hand, research conducted by McGuire and McLaren (2009) found a strong positive correlation between employee commitment and two independent variables (working area and working surface height), employee well-being fully mediates the influence of the physical environment on employee commitment and relationships a strong positive between the physical environment and employee commitment.

H4: the work environment has a positive and significant impact on organizational commitment

Organizational commitment reflects the individuals perceive of an organization and engaged in the organization goals (Wibowo, 2010). Wibowo further explained that the increasing the commitment of senior staff members may rise employee's job satisfaction. An institutional commitment can be used to predict variables associated with the organization such as turnover, staff's behavior, job satisfaction and performance (Wirawan, 2013). In addition, Wirawan (2013) sets out whether the employee's satisfaction with their work affects the mediation variables between job satisfaction and job dissatisfaction with employee performance and organizational performance. The mediation variables according to Herzberg (in Wirawan, 2013), are motivation, institutional commitment, absence, staff's behavior, industrial relations conflicts, work load, physical illness, psychological illness, interpersonal communication, withdrawal, and complaints.

Karim and Rehman (2012) in a study of employees in the Pakistani Civil Aviation Authority found that job satisfaction significantly affected organizational commitment. Saputra's research results (2013) also support previous research and concluded that job satisfaction has a significant impact on the organization's commitment. Novriyadhi and Riana (2015), Men and Authority (2015), Kurniasari and Halim (2013), Hidayat (2013), Junaidi et al., (2013), have similar results, job satisfaction having a positive influence on organizational commitment. A number of studies that explained above have a collateral result with research carried out by Retnaningsih (2007), Muhadi (2007), and Parwita (2013) that job satisfaction influence to institutional commitment. Manuel research and Rahyuda (2015) one of his findings is an emotional commitment, a calculative commitment, and has a normative commitment to intervene a role between the influence of job satisfaction on the intention of turnover. Wirakusuma and Sintaasih (2015) found a positive influence between job satisfaction and institutional commitment to employment status has the influence of moderation. Tabitha and Harjanti (2015) found that satisfaction in a mediation post influenced guidance on organizational commitment. The study found that job satisfaction had a positive and significant impact on the organization's commitment. Research conducted by
Santoso (2014) found that job satisfaction mediates the influence of leadership on organizational commitment. Although Rahmi's research (2013) gives different results with previous research. One of the findings of Rahmi's research is that job satisfaction has a positive but inadequate impact on the organization's commitment.

H₅: job satisfaction has a positive and significant impact on the organization's commitment
H₆: leadership has a positive and significant impact on organizational commitment through job satisfaction.
H₇: leadership has a positive and significant impact on organizational commitment to job satisfaction.

**METHODS OF RESEARCH**

Quantitative approach is used to identify causal relationships (causal associative) and in this study there are independent variables, namely variables affect and the dependent variable is influenced variable (Sugiyono, 2010). The independent variables are principal leadership and work environment, the dependent variable is teacher commitment and job satisfaction as intervening variable. The sample of this research is civil servant teachers in Elementary School, Batukliang Central Lombok as many as 200 respondents. Methods of data collection using census method. The data collection tool uses questionnaire scale likert point 1-5 (Strongly Disagree to Strongly Agree). The data analysis technique using Structural Equation Modeling (SEM).

This study adopted the leadership indicator of Rivai (2010) with 7 statement items. For work environment indicators, researchers adopted from research conducted by Sedarmayanti (2011), Wursanto (2005), Matin & Fuad (2016). Job satisfaction indicator using item statement from Luthans research (2006). And indicators of organizational commitment using as many as 13 items statement from research conducted by Meyer & Allen (in Wirawan, 2013). Here is the conceptual model of research:

![Conceptual Framework](image)

**RESULTS AND DISCUSSION**

In this study, data analysis obtained based on the characteristics of respondents as much as 200 teachers. Results of data analysis obtained on the characteristics of respondents, among others by gender, age, term of office, and class. For more details data on the classification of respondents can be seen in table 1.

Based on table 1 shows the characteristics of respondents by sex more dominated by men with age range above 50 years, duration of ten years over 30 years and the majority are in class IV.
Validity test is done by CFA (Confirmatory Factor Analysis) test. The value of convergent validity can be seen from the loading factor of each variable studied, in the research the loading factor value for all items of the indicator is above 0.40, the result refers from the opinion (Ferdinand, 2014) that the loading factor value must be greater than 0.40. For discriminant validity can be known if the average difference or Square Root (SQRT) Average Variance Extracted (AVE) of the variables studied is greater than the latent variables (Fornier and Larcker, 1981). The AVE value is used to test the square root of each AVE whether the correlation is greater than of any latent construct. If SQRT AVE> quadratic correlation between constructs then it can be concluded that discriminant validity is acceptable.

### Table 1 – Characteristics of respondent

<table>
<thead>
<tr>
<th>Respondent characteristics</th>
<th>Amount (person)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>124</td>
<td>62.0</td>
</tr>
<tr>
<td>Female</td>
<td>76</td>
<td>38.0</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 35 years</td>
<td>13</td>
<td>6.5</td>
</tr>
<tr>
<td>36-50 years</td>
<td>66</td>
<td>33.0</td>
</tr>
<tr>
<td>&gt; 50 years</td>
<td>121</td>
<td>60.5</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>Term of office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10 years</td>
<td>45</td>
<td>22.5</td>
</tr>
<tr>
<td>11-20 years</td>
<td>18</td>
<td>9.0</td>
</tr>
<tr>
<td>21-30 years</td>
<td>26</td>
<td>13.0</td>
</tr>
<tr>
<td>&gt; 30 years</td>
<td>111</td>
<td>55.5</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>Position class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>38</td>
<td>19.0</td>
</tr>
<tr>
<td>III</td>
<td>44</td>
<td>22.0</td>
</tr>
<tr>
<td>IV</td>
<td>118</td>
<td>59.0</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: research result.

For reliability test in this study with Cronbach’s Alpha values that show how well the item points correlate positively with each other. The acceptable Cronbach’s Alpha score is 0.6, (Hair et al, 1995 in Ferdinand, 2014). The second test of reliability is to calculate the value of Composite Reliability of each variable. According to Hair et al, (in Ferdinand, 2014) the acceptable Composite Reliability is ≥ 0.70.

### Table 2 – Interrelated Correlation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Leadership</th>
<th>Work Environment</th>
<th>Job Satisfaction</th>
<th>Organizational Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>0.528</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Environment</td>
<td>0.052</td>
<td>0.553</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>0.069</td>
<td>0.123</td>
<td>0.454</td>
<td></td>
</tr>
<tr>
<td>Organizational Commitment</td>
<td>0.151</td>
<td>0.119</td>
<td>0.151</td>
<td>0.330</td>
</tr>
</tbody>
</table>

Source: Data that have been processed by SEM AMOS versi 20.

### Table 3 – Value of Cronbach’s Alpha (CA) and Composite Reliabilities (CR)

<table>
<thead>
<tr>
<th>Variable</th>
<th>CA</th>
<th>CR</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>.886</td>
<td>.73</td>
<td>Reliable</td>
</tr>
<tr>
<td>Work Environment</td>
<td>.927</td>
<td>.82</td>
<td>Reliable</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>.907</td>
<td>.76</td>
<td>Reliable</td>
</tr>
<tr>
<td>Organizational Commitment</td>
<td>.946</td>
<td>.87</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

Source: Data that have been processed by SEM.

To know the influence between variables that have been formulated in the hypothesis in the study used path analysis with the help of SEM with software AMOS Version 20 as seen in Table 4. Hypothesis testing is done by looking at the value of critical ratio (CR) and
p-value value as a result data processing compared to the required statistical constraints. The required critical ratio value is above 1.96 and the required probability value is below 0.05 (Ferdinand, 2014; and Waluyo, 2011).

Table 4 – Result of SEM analysis

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>β</th>
<th>CR</th>
<th>P</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Leadership → Job Satisfaction</td>
<td>0.22</td>
<td>2.44</td>
<td>0.01</td>
<td>Significant</td>
</tr>
<tr>
<td>H2: Work Environment → Job Satisfaction</td>
<td>0.34</td>
<td>3.70</td>
<td>0.01</td>
<td>Significant</td>
</tr>
<tr>
<td>H3: Leadership → Organizational Commitment</td>
<td>0.30</td>
<td>3.15</td>
<td>0.01</td>
<td>Significant</td>
</tr>
<tr>
<td>H4: Work Environment → Organizational Commitment</td>
<td>0.19</td>
<td>2.31</td>
<td>0.02</td>
<td>Significant</td>
</tr>
<tr>
<td>H5: Job Satisfaction → Organizational Commitment</td>
<td>0.35</td>
<td>4.14</td>
<td>0.01</td>
<td>Significant</td>
</tr>
<tr>
<td>H6: Leadership → Job Satisfaction → Organizational Commitment</td>
<td>0.22 x 0.35 = 0.077</td>
<td>Significant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H7: Work Environment → Job Satisfaction → Organizational Commitment</td>
<td>0.34 x 0.35 = 0.119</td>
<td>Significant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data that have been processed by SEM AMOS versi 20.

In this study found Leadership, Work environment have a significant and positive effect on job satisfaction and organizational commitment of elementary school teachers in Batukliang subdistrict. Leadership and Work Environment have a significant and positive effect on organizational commitment through satisfaction of teachers of Elementary School in Batukliang Subdistrict.

Hypothesis 1: There is effect of leadership to job satisfaction of Elementary School teacher at Batukliang Subdistrict, which means if the better leadership will be higher satisfaction of Elementary School teacher at Batukliang. The results of this study support research from Muttaqien (2014), where simultaneously and partially leadership has a significant effect on job satisfaction. Research conducted by Plangiten (2013), Junaedi et al., (2013) and Tabitha & Harjanti (2015), research results show that leadership style affect the employee job satisfaction.

Good leadership is characterized by ability of the principal to describe the work program, the ability to provide clear guidance, to develop freedom of think and expression, the ability of the principal to develop harmonious cooperation, the ability of the principal to solve problems and take the decision, the principal's efforts to develop the ability to assume responsibility and the principal's efforts to utilize supervision as a controlling tool. If it is able to be realized properly then the leadership of the principals of elementary school in Batukliang Subdistrict will be able to provide job satisfaction for teachers of elementary school in the district of Batukliang.

In this study, the teachers of elementary school in Batukliang sub-district who are the respondents on this research are civil servant status, the amount of income received is enough to give satisfaction to the teachers of elementary school in Batukliang Sub-district. But it will be different from non-civil servant teachers or income policy or salary policy is still far from the word worthy or satisfied when compared with the workload given, this is where a fair leader needed. The results of this study not support the research conducted by Rahmi (2013) where transformational leadership has a positive but not significant impact on job satisfaction. The results of this study also not support research by Hidayat (2013) where not significant direct positive effect of leadership on job satisfaction. This means that the leadership is expected to fail to create employee satisfaction.

Hypothesis 2: There is effect of work environment on job satisfaction of elementary school teacher at Batukliang Subdistrict. This means that the more comfortable or supportive work environment, it will increase the work satisfaction of Elementary School teachers in Batukliang District. Conversely, if the work environment is not supportive or uncomfortable then the teacher work satisfaction will also decrease. The results of this study support research by Kurniasari & Halim (2013) where the results of his research indicate that the work environment has an effect on job satisfaction. Similarly, Plangiten (2013) and Nasution (2013) concluded that the work environment affects employee job satisfaction. Mincu Research (2014) also gives the conclusion that the work environment in an organization affect the job satisfaction.
The results of research on work environment variables provide responses of respondents who provide a fairly positive response from 10 indicators that reflect the work environment of Teachers Elementary School in Batukliang District with the category quite comfortable. This means that the work environment of Elementary School teachers in Batukliang District is considered quite comfortable. According Luthans (2006), working conditions have an effect on job satisfaction. If the conditions are good (e.g., clean, the environment is interesting), individuals will be easier to complete their work. Conversely, if bad working conditions (e.g., hot air, noisy environment), individuals will be difficult to complete their work. It is still in the same study that the label is due to the increasing labor diversity of working conditions. Work environment effects on job satisfaction as well as work group effects. If the work environment is good then there will be no problem on job satisfaction, and vice versa if the work environment is bad then it will cause problems of job dissatisfaction. This reinforces Herzberg (1959) opinion as revealed above factors affecting job satisfaction such as working conditions, work environment, subordinate employee relations, and peer relationships.

Hypothesis 3: There is effect of leadership on organizational commitment of elementary school teachers in Batukliang sub-district. The better the principal performs the leadership functions, the better the organizational commitment of the teacher in the organization of the elementary school environment in Batukliang sub-district. The findings of this study support research conducted by Tabitha and Harjanti (2015) in which leadership style has a positive and significant effect on organizational commitment. Research by Hidayat (2013) has a significant direct and positive influence of leadership on organizational commitment. Research conducted by Zaleha et al., (2013) in Islamic banks states that a leader will affect employee motivation that ultimately leads to organizational growth productivity. Therefore, with a good and comfortable culture within an organization, employees are likely to perform better and have stronger commitment to the organization. Similarly, research conducted by Santoso (2014) concludes that leadership style has significant influence on organizational commitment, Rahmi (2013) and Retnaningsih (2007) transformational leadership have a positive and significant effect on organizational commitment. The results of this study differ from those of Junaedi et al., (2013) where their results show that leadership has no significant effect on organizational commitment.

Hypothesis 4: There is effect of work environment to the organizational commitment of elementary school teachers in Batukliang sub-district. The more comfortable working environment will be the better organizational commitment of employees in an organization in this case is the elementary school teacher as the District Batukliang. The findings of this study supporting research conducted by Rustini (2015) suggest there is a positive influence of the work environment on commitment. McGuire and McLaren (2009) have a strong positive relationship between the physical environment and employee commitment. Similarly, the results of previous research conducted by Saputra (2013), Kurniasari and Halim (2013) where the work environment is measured through workspace design indicator, job equipment design, lighting, temperature and air regulation, noise, leadership style boss, which is bad, and giving authority in job description and decision making have an effect on organizational commitment. This means the work environment is one of the factors that determine the organizational commitment of employees.

Hypothesis 5: There is effect of job satisfaction on organizational commitment of elementary school teacher in Batukliang sub-district. The more satisfied a teacher will be to increase the organizational commitment of the teacher will increase towards the organization where they work. The results of this study support previous research conducted by Karim and Rehman (2012), found job satisfaction significantly affects organizational commitment. The results of this study also supports research by Saputra (2013) with the findings of his research that job satisfaction has a significant effect on organizational commitment in which job satisfaction has a dominant influence. The study also supports the research of Novriyadhi and Riana (2015), Putra and Wibawa (2015), Wirakusuma and Sintaasih (2015), Tabitha and Harjanti (2015), Kurniasari and Halim (2013), Junaedi et al., (2013), Retnaningsih (2007), Muhadi (2007), Santoso (2014) and Parwita (2013) with the results of the study concluded
that job satisfaction has an effect on organizational commitment. The research of Manuel and Rahyuda (2015) shows that affective commitment, commitment calculative, and normative commitment have a mediating role between the effect of job satisfaction on turnover intention. However, it does not support Rahmi (2013) where job satisfaction has a positive but insignificant effect on organizational commitment.

Hypothesis 6: The results showed that leadership has a significant effect on the organizational commitment of elementary school teachers in Batukliang sub-district through job satisfaction as a mediating variable. This implies that the better the leadership run can improve job satisfaction for teachers. If teachers are satisfied then the teacher's commitment to the organization will increase. The findings of this study are supported by research conducted by Tabitha and Harjanti (2015) where the leadership style has a positive and significant impact on organizational commitment either directly or indirectly through job satisfaction. Research by Santoso (2014) concluded that job satisfaction mediates the influence of leadership style on organizational commitment. Tabitha and Harjanti (2015) provide research conclusions that job satisfaction mediates the influence between leadership styles on organizational commitment. However, the results of this study do not support Hidayat (2013) who find job satisfaction can not mediate the influence between leadership on organizational commitment.

Hypothesis 7: The Effect of Work Environment on Organizational Commitment through Job Satisfaction. The findings indicate that the work environment has a significant effect on the organizational commitment of elementary school teachers in Batukliang sub-district through job satisfaction as intervening variable. This means satisfaction is able to mediate the relationship of influence between the work environments with organizational commitment. This means that the more supportive working environment tends to increase teachers job satisfaction. If teachers are satisfied then the teachers commitment to the organization will increase. Saputra (2013) in his research found that the work environment had an effect on organizational commitment. Conducive working environment, clean and comfortable can give satisfaction for every employee, which in a kikirnya tendency of employees to commit in organization will be high. Conversely, if the work environment does not support such as not conducive, the equipment is all short and limited, it is unlikely the employee will feel satisfied. If employees feel satisfied then the indication that the employee to commit to the organization is getting smaller and can potentially turn over.

CONCLUSION

Both leadership and working environment have a significant positive effect on job satisfaction and organizational commitment of elementary school teacher in Batukliang sub-district. Leadership and working environment positively influence the organizational commitment and the satisfaction of teachers at elementary school Batukliang District. In theory, there are many variables that can alter organizational satisfaction and commitment. But the focus on this research is whether organizational satisfaction and commitment can be influenced by leadership and working environment either directly or indirectly so that the findings can contribute to the development of the institution especially Human Resource Management and can be a scientific reference for the parties concerned. Leadership can affect work satisfaction and organizational commitment of teachers. Therefore, it is expected that the principal of elementary school in Batukliang sub-district to implement an effective leadership pattern by continuously improving the ability to carry out leadership functions well through various policies that favor teachers' well-being such as giving rewards for outstanding teachers thus that teachers are more motivated in improving teaching quality and performance.

Working environment as a factor that can affect teacher job satisfaction so that teachers become more committed to the organization. Therefore it is expected that the school should pay more attention to the working environment of teachers by providing proper facilities that can support the performance of teachers thus teachers are more comfortable in the process of teaching. Whereas, teachers of elementary school in Batukliang sub-district
are expected to continue improving their performance, reduce procrastinating and absenteeism level because a teacher is the role model for students should give a decent example in the school. For the Government especially the District Batukliang to continue to pay attention to the condition of physical facilities and infrastructure SD Negeri District Batukliang, thus the teaching and learning activities for teachers and students more comfortable and safe. And they expected to continue to improve the well-being of teachers by allocating the appropriate, and fair salary budget for teachers.

This study has limitations because it only focuses on leadership and work environment, on job satisfaction and organizational commitment with the object of research that is the status of civil servant teachers in educational institutions. Therefore, in the future research, we can examine the variables in this study by adding some other variables such as individual characteristics, compensation, work performance with different research objects, samples and analytical tools to obtain more diverse and comparable output.

REFERENCES


ETHNOMETHODOLOGY STUDY ON THE PRACTICE OF INFORMAL ACCOUNTING INFORMATION SYSTEMS IN LOCAL GOVERNMENT: A STUDY IN BARITO REGENCY, SOUTH KALIMANTAN PROVINCE, INDONESIA

Hidayati*, Triyuwono Iwan, Baridwan Zaki
University of Brawijaya, Indonesia
*E-mail: hdyt.hasan@gmail.com

ABSTRACT
The purpose of this study is to comprehend and portray the practice of informal accounting information systems within a government organization. The results of this study found that informal accounting information systems in the public sector were a system with no written procedures and policies, but conducted spontaneously, without any arrangement and agreement within the organizational structure. Informal accounting information systems in the public sector were conducted through interactions among staffs, discussions in an unplanned meeting, and the use of social media as a means of coordination. In addition, informal accounting information systems in the public sector were also practiced through improvisations such as the use of personal notes, reporting schedules creation, and financial reporting checklists aimed at supporting the effectiveness of accounting information system practices.

KEY WORDS
Accounting, information systems, informal, public sector.

Up to now, research on accounting information systems generally focuses on technology or software used to support the practice of an organization's accounting information systems. In addition, research on accounting information systems generally comes from research with a positivist paradigm (Roberts and Scapens, 1985). Compliance with any paradigms, such as that of information systems researchers in general, would make the research repository becomes inundated and weak (Wijaya et al., 2015).

Most researchers argue that accounting information systems are existing information systems within rational organizations (Button et al., 2012). This interpretation leads to the belief that the system will follow the previously outlined path (Roberts and Scapens, 1985).

In fact, the information systems not only cover the various structures and operational procedures but also involve humans (Vickers, 1999). The human element involvement triggers differences in the information system perception (Roberts and Scapens, 1985).

Preston (1996) states that in the information system, there is an information delivery process fundamentally different from the formal information system as described in the traditional literature. This process of delivering information is an unstructured process, largely based on personal interaction. Preston indicates that the process of information delivery refers to the social order rather than the formal order.

Further, Burns (1969) shows that there is a plurality of social systems within an organization. Such system can be seen as a socially constructed order (Berger & Luckmann, 1969) or be built by the environment. The social order consists of patterns of relationships, meanings, and interpretations formed and created a "sense" of individual interactions. Social order in the process of using information system becomes interesting to be studied. The social order in information systems is a phenomenon has not been widely explored (Wijaya et al., 2015).

According to Febriansyah (2014), it is still not much research regarding information systems in the public sector accounting domain in Indonesia. Based on the above
description, the researchers aim to examine and investigate more deeply about the informal information systems in the process of information systems utilization in the government sector.

The researchers chose the Regional Finance and Asset Management Agency (Badan Pengelola Keuangan dan Aset Daerah, BPKAD) of Barito Kuala Regency as the research location because of the daily interaction in BPKAD of Barito Kuala Regency used local language, i.e. the Banjar Language. The researchers' language and cultural similarities with the organization were significant in order to comprehend daily communication in the practice of informal accounting information systems in BPKAD of Barito Kuala.

Informants in this study were accountant staffs fully/actively involved in accounting work practices in BPKAD of Barito Kuala Regency.

Table 1 – List of Staff of BPKAD Barito Kuala as Informant Research

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mr. BN</td>
<td>Head of BPKAD</td>
</tr>
<tr>
<td>2</td>
<td>Mr. AR</td>
<td>Head of Accounting Division</td>
</tr>
<tr>
<td>3</td>
<td>Mr. RP</td>
<td>Head of Bookkeeping Sub-division</td>
</tr>
<tr>
<td>4</td>
<td>Ms. ASR</td>
<td>Staff of Reporting Sub-division</td>
</tr>
<tr>
<td>5</td>
<td>Ms. SK</td>
<td>Staff of Bookkeeping Sub-division</td>
</tr>
<tr>
<td>6</td>
<td>Mr. AN</td>
<td>Staff of Bookkeeping Sub-division</td>
</tr>
</tbody>
</table>

**METHODS OF RESEARCH**

The practice of informal accounting information systems is closely related to human actions (the accountant staffs). To examine the human sciences more deeply, a researcher must use the right method to reveal the scientific truth correctly so the meaning of the object becomes better and not stuck in an emotional situation (Budianto, 2002: 69). Therefore, this research used ethnomethodology as the method.

Some literature states that ethnomethodology is one of the perspectives within the interpretive paradigm (see Denzin and Lincoln, 2009: 338; Coulon, 2008: 3; Ritzer and Goodman, 2012: 419). The emergence of ethnomethodology begins with the works of sociologist Harold Garfinkel (Ritzer and Goodman, 2012: 418).

According to Garfinkel, ethnomethodology is used for the investigation or interpretation of indexicality and other practical actions as a complete unity of the practices undertaken in everyday life in an organized manner. In other words, Garfinkel's ethnomethodology aims to examine the social interactions in everyday life usually taken for granted, filled with assumptions, and had a shared meaning.

**DISCUSSION OF RESULTS**

*Interaction Portrait in the Practice of Accounting Information Systems.* After the researchers mingled in BPKAD of Barito Kuala Regency for one week, the researchers found that much important information was delivered in informal information channels through verbal interaction conducted in daily work practices. One of the staffs revealed the number of special allocation funds they received. The researchers were particularly interested in how the information was transferred through verbal communication. Through the interview, the researcher confirmed the information with Mr. AR. The researcher asked whether the information presented by the staff will be enclosed in the official financial statements (in this case, the financial statements produced by the accounting software). Mr. AR replied: "Of course, the information related to the allocation fund will be reported in the financial report".

The indexical statement stated by Mr. AR "The information related to the allocation fund will be reported in the financial report" had the reflexivity meaning that the information conveyed through verbal communication between the employees provided
information faster than the information generated through the official computerized report in SIMDA (Regional Management Information System, Sistem Informasi Manajemen Daerah) financial applications. The researchers analyzed the very important yet informal information exchange and concluded that formal accounting information systems were operated within the informal information systems, i.e. the relationship between employees.

In line with the statement, the researchers confirmed with Mr. BN as the head of BPKAD regarding the information he received so far. Mr. BN stated that some of the information he received was not all from official documents. He stated that: "I know most of the financial information is communicated verbally, for example, the IDR billions of the Special Allocation Fund/General Allocation Fund, while the report has not been received. Later, the report is published at the end of the month".

In line with Mr. AR's statement, the indexical statement stated by Mr. BN "I know most of the financial information is communicated verbally" had the reflexivity meaning that the information conveyed through verbal communication between employees provided information faster than information generated through computerized official reports. Further, Mr. BN added: "The financial statements are used later to synergize with the center. In practice, informal information is more important".

The indexical statement stated by Mr. BN "The financial statements are used later to synergize with the center. In practice, informal information is more important" had the reflexivity meaning that he as the head of BPKAD preferred the verbal information more, because verbal media provided higher flexibility, required less effort, and responded more quickly.

Some of these statements illustrated that some information was first known through the daily interactions between staffs. In this case, it seemed that the official information document produced by SIMDA only confirmed what they already knew and made the information the official document presented was no longer "surprising" because the staffs already knew most of the information in the document.

**Social Media Utilization.** The use of social media has formed and supported new ways of communicating, interacting, and collaborating. Social media offers a faster and more convenient way to participate in the information exchange through the network/online. With its advantages and convenience, social media is popularly used by many people. Social interaction can be done through digital communication and the presence of social media makes social interaction through digital communication becomes very popular. Through social media, users can perform a variety of social interactions, whether in entertainment, education, health, or work.

"Ting nong... ting nong" was the sound the researchers often heard between work time. It became a fresh joke among staffs in the accounting room of BPKAD of Barito Kuala Regency. The frequent sound from Ms. ASR's mobile phone caused Mr. ASN to tease her frequently. Besides, Ms. ASR is the most sociable and the youngest among the other staffs.

"Your hp just can't stop ringing. I wonder who calls you", joked Mr. ASN, causing the laughter of other staffs. His jokes revived the warm atmosphere in the accounting practice in Barito Kuala Regency. In response, Ms. ASR replied: "It's an official business, Sir, not something odd. If you do not believe me, just look at this," said Mrs. ASR while showing her phone displaying WhatsApp chat group communication entitled Batola Financial Information.

In response, the researchers conducted an interview with Ms. ASR regarding the communication in her WhatsApp. Ms. ASR replied: "I use WhatsApp to ask SKPD to come here. I know the financial statement updates via WhatsApp also".

The indexical statement stated by Ms. ASR "...I know the financial statement updates via WhatsApp also" had the reflexivity meaning that the presence and development of social media brought new ways of communicating in the accounting practices of BPKAD of Barito Kuala. Although not in the formal order, communication through WhatsApp messenger provided updated information about accounting activities.
in SKPD (Local Government Work Unit, Satuan Kerja Perangkat Daerah) environment. It was because communication through WhatsApp was not limited by distance, space, and time and happened anywhere and anytime, without having to talk directly or face to face.

The researchers once found an advertisement from one internet service provider stated "World is in your hand", which is relevant in the modern society era. The presence of the internet as a medium of modern communication has made the world becomes more easily accessible. Almost everyone has a communication tool, making one is able to communicate with another through social media. One of them is through a cross-platform messaging application allowing users to exchange messages without the SMS cost i.e. WhatsApp Messenger.

Related to this, the researcher confirmed through an interview with Mr. AR, following Mr. AR's statement regarding the use of WhatsApp in his work:

"The use of communication media nowadays has grown so rapidly along with the advancement of communication technology, in which we are faced with many options to be able to convey and access information. WhatsApp group is an alternative".

The indexical statement stated by Mr. AR "...many options to be able to convey and access information. WhatsApp group is an alternative" had the reflexivity meaning that the accounting information exchange did not merely involve accounting documents. Although it looked simple, communication through WhatsApp had a significant impact on the financial communication between SKPD and BPKAD of Barito Kuala Regency. Communication could be done quickly without having to conduct a meeting directly.

In line with the previous statement, Mr. AR added further:

"WhatsApp Group simplifies our work, from job updates to delegation. Communication becomes faster, smoother, and known by many people at the same time. One message can be read together. The display is also simple. The information exchange about the work can be done quickly", he continued. He seemed to use WhatsApp often to exchange information.

Each stage of technological progress leads to a series of changes interacting with other changes arising from the technology system as a whole (Gouzali, 2005: 21). WhatsApp Messenger as a medium of communication for the information sharing source was used to transfer accounting information in BPKAD of Barito Kuala Regency. The accountant staffs in BPKAD of Barito Kuala Regency were interested in utilizing this application as an information source because this application could provide information related to work practices and the display looks simple enough to be used. WhatsApp Messenger application media was assumed to provide convenience in social interaction and coordination between BPKAD and local SKPD.

The rapid technological advances in communications have been well utilized by the accountant staffs in BPKAD of Barito Kuala Regency to facilitate the more effective communication process with SKPD. This is in line with Mintzberg’s (1991) research that managers in fact often use the flow of information which does not fully utilize the accounting information systems formally.

Meeting as a symbiosis of mutualism. Nunung (2001: 129) states meeting is a form of face-to-face group communication media often organized by many organizations, including the governmental organizations. The meeting aims to achieve agreement through deliberations in decision-making.

BPKAD of Barito Kuala held the meetings for all staffs every once in a month. However, the meeting was not only the monthly meeting. The researchers conducted an interview with Mr. AR related to the meeting in BPKAD of Barito Kuala Regency. Mr. AR stated:

"The meetings are scheduled once a month, i.e. staff meetings. But in the accounting department, sometimes the meetings need to be held suddenly. We once held the meetings 2-3 times in a month (while chuckling). It usually happens when the process of making financial statements.

The indexical statement stated by Mr. AR "... but sometimes the meetings need to be held suddenly" had the reflexivity meaning that the meeting was held not based on a
plan and could happen at any time. From the statement, the researchers concluded the meeting could be done informally to find the solutions for occurring accounting problems.

Mr. AR further stated:

"The meeting is like a symbiosis of mutualism (while laughing). For example, we report to the relevant governance head about slow reporting from SKPD. The governance head has the power to suppress the SKPD".

Unplanned meetings were usually executed by the accountant staffs in BPKAD of Barito Kuala Regency as a communication media to present complaints related to urgent accounting practices. Thus, the meetings were not only planned but the meetings can also be held in accordance with their needs about some urgent issues.

Transfer Knowledge: Through Financial Technical Guidance. BPKAD of Barito Kuala Regency as the leading sector of regional asset and finance management must make asset and finance management efforts carefully to realize the good regional asset and finance management. Education Institution Cares for Government Performance (Lembaga Pendidikan Peduli Kinerja Pemerintah, LP2KP) is an institution supporting government programs to provide solutions for the needs of provincial, municipal, district, sub-district, and village level government in providing technical guidance, training education, and seminars.

Financial technical guidance is needed in the local government in budgeting, management, allocation, administration, financial statements preparation, and accountability for the finance utilization for regional development.

BPKAD of Barito Kuala Regency conducted technical guidance (Bimbingan Teknis, Bimtek) on Administration of Regional Financial Management for SKPD’s financial administration officers, expenditure treasurer, treasurer’s assistant, and revenue treasurer in Government of Batola Regency. Unfortunately, the researchers did not attend the financial technical guidance directly because it was carried out before the researcher conducted the research in BPKAD of Barito Kuala Regency, i.e. on March 08th, 2017.

Seeing the enthusiasm the researchers showed regarding the technical guidance activities they could not join, Mr. AR provided an overview related to the technical guidance implementation. He stated:

"In the activity, the participants were given an explanation about the administration in general, direct expenditure, indirect expenditure, and revenue, including application implementation in the administration of expenditure treasurers. Thus, it was expected that the participants understood the regulatory provisions, duties, and responsibilities of financial administration and used the SIMDA application appropriately and effectively."

Financial technical guidance is an effort of Government of Barito Kuala Regency to improve the quality of human resources expected to provide additional understanding in the administration in general, including the applied practice of accounting information systems. The researchers confirmed to Mr. BN related the financial technical guidance. He stated:

"I ask all participants to follow the financial technical guidance carefully. I hope all participants can utilize this financial technical guidance as well as possible. They can ask the speakers for more clear information as well".

The indexical statement stated by Mr. BN "... they can ask the speakers for more clear information as well" had the reflexivity meaning that there was an opportunity for the staffs to discuss the financial management practices in order to improve their abilities, skills, and understanding of local financial management mechanisms including the practice of accounting information systems.

Improvisation Portrait in the Practice of Accounting Information Systems. BPKAD of Barito Kuala Regency is a reporting entity compiling 47 SKPD’s financial statements which are reported to the above governments, i.e. the Regent, The Audit Board of Indonesia, the Ministry of Finance, and the Ministry of Home Affairs. The complexity of reporting raises an "art" in the practice of accounting information systems. The researchers saw some personal notes posted on the bottom of the computer used by
the accountant staffs. The researchers then asked Mr. AN as a staff of bookkeeping sub-division who attached some memos on his computer.

"These notes act as a reminder [while pointing to one note]. It is difficult if there is none, the older the more senile," said Mr. AN with a chuckle.

The indexical statement stated by Mr. AN "... It is difficult if there is none, the older the more senile" had the reflexivity meaning that there was improvisation used by staffs to "inform themselves", i.e. recalls of the occurred accounting activities. The researchers felt that the chuckle from Mr. AN when mentioning "the older, the more senile " is a form of recognition of his old age.

Furthermore, Mr. AN explained:
"It is one of the notes," said Mr. AN while addressing the note about some invalid SKPD’s financial statements.

Knowing that the researcher observed the note, Mr. AN kindly explained:
"At the end of the year, there is usually a difference in cash flow outside the budget mechanism, so this little note is useful to remind us of occurred events. For example, unexpected transactions such as transfer errors, SKPD make the tax payments to the local government treasury instead of the state budget. We usually record such kind of errors".

The accountant staffs made some notes because they could not remember all occurred accounting events. Notes were used to record accounting events relevant to the work days and can be seen again when forgotten or needed. Personal notes are a private property. Therefore, it was not specified to what extent personal notes were made in the process of accounting information systems in BPKAD of Barito Kuala Regency.

On Wednesday, November 1st, 2017, when the researchers were with the staffs of BPKAD’s accounting division, some employees who did not seem to be BPKAD employees entered the accounting room. The researchers who were not familiar with their faces asked Ms. ASR about who they are and what their intentions. The researchers’ questions were so to the point that Ms. ASR replied "you really want to know, eh" while laughing, causing the researchers also laughed. The researchers only said to themselves that the presence of the researchers indeed to acquire the information deeply.

Communicating with Ms. ASR was one of the routines the researchers often did because of not much age difference between Ms. ASR and the researchers, making the communication was comfortable. Ms. ASR justified the researchers’ opinion about the non-BPKAD staffs. Ms. ASR stated:
"That is the staffs from the Health Department. They come here because they need to report something".

Then the researcher asked whether their arrival was scheduled or random, while chewing the snacks on her desk, Ms. ASR replied:
"To facilitate the reports collections, we make some scheduled arrival for each SKPD. But sometimes, the staffs of some SKPD come over the schedule we have provided because they think something is unclear or they want to discuss something related to reporting".

In addition to the assistance agenda provided for SKPD, BPKAD staffs also provided a checklist of any documents which must be collected. Ms. ASR stated:
"In addition to the assistance schedule, we also provide documents checklist SKPD must complete related reporting".

The researcher confirmed to Mr. AR regarding work practices using assistance checklist and schedule of SKPD. Mr. AR stated:
"Making assistance checklist and agenda were our improvisations to simplify the process of accounting information systems".

The indexical statement stated by Mr. AR "Making assistance checklist and agenda were our improvisations to simplify the process of accounting information systems" had the reflexivity meaning that there was a method outside the procedure or
done informally in the practice of accounting information systems. This was done in the presence of an "additional method" by the accountant staffs with the aim of emphasizing discipline in the timeliness of reporting and the completeness and accuracy of documents submitted by the SKPD. Improvisation in the work practice aimed to facilitate the practice of accounting information systems in BPKAD of Barito Kuala Regency.

"Accounting is an art" is a sentence the researchers once heard. "What kind of art the accounting is?" was a question the researchers had and was finally illustrated in the process of this research. "Art is associated with spontaneous improvisation and spontaneous effect" is a statement from Panuti Sudijiman (1990: 37). In relation to that, the researchers considered the practice of informal accounting information systems was not constructed from procedural and systematic systems, but built through the practice of "art". J. Julia in her book entitled Anthology of Art Education and Local Wisdom Potential stated that "the root of art is beautiful". Beauty is the initial idea of a work of art creation, howsoever the beauty forms. Was it wrong if the researchers felt a form of beauty in the work practices of accounting information systems?

**CONCLUSION**

The practice of accounting information system in BPKAD of Barito Kuala Regency was not always related to systematic procedures and accounting information was not always generated through a computerized system. The practice of accounting information systems involving human resources (i.e. accountant staffs) triggered the practice of informal accounting information systems emphasizing more on communication from and for people within the organization.

Thus, the results of this study found that informal accounting information systems in the public sector are a system with no written procedures and policies, but conducted spontaneously, without any arrangement and agreement within the organizational structure. Informal accounting information systems in the public sector were conducted through interactions among staffs, discussions in an unplanned meeting, and the use of social media as a means of coordination. In addition, informal accounting information systems in the public sector were also practiced through improvisations such as the use of personal notes, reporting schedules creation, and financial reporting checklists aimed at supporting the effectiveness of accounting information system practices.

In addition, the researchers considered it was important to do a reflection on the research result. This was done so that the research result not only enriched the academic science but also improved the faith or belief of the researchers toward the more fundamental awareness. Slightly quoting a statement from Prof. Iwan Triyuwono: "Scientific research is a study that once I read, it will bring me closer to my God".

Therefore, the researchers tried to reflect on the findings of the practice of information systems informal accounting. The existing interactions between the staffs restore the awareness of the researchers about the relationship between human beings, which is known as Hablum Minannas in Islam. The researchers considered the interaction is a form of Islamic concept consciously or unconsciously applied in work. With the interaction in practice, informal accounting information systems produce a "sense" in the organization. Moreover, in Islamic point of view, the researchers considered an application of Allah’s 99 asthma, i.e. Al-Haadi (The Giver of Guidance), was found in the practice of informal accounting information systems through improvisation by accountant staffs. It meant that improvisation by accountant staffs was the actualization of the instructions given by Allah in a perfection attempt regarding the practice of accounting information systems.

**REFERENCES**

THE EFFECT OF FUND ALLOCATION OF SPECIAL AUTONOMY OF ECONOMICAL GROWTH IN WEST PAPUA PROVINCE

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ABSTRACT
Indonesian central government’s policy on special autonomy for West Papua regional government stands on Act # 21 of 2001. It is accompanied with the policy of regional addition of West Papua province in accordance to Act #35 of 2008. Under its special autonomy, West Papua has its own authority and fund called Special Autonomy Fund. This fund is oriented to support five areas considered important to indigenous West Papua people. They include education, health, infrastructure, people’s economy and affirmation/other areas. The study applies secondary data from library study, generalized structured component analysis method for data analysis concerning the effect of fund allocation on economic growth in West Papua province. The result confirms that fund allocation does not have an effect on economic growth in West Papua.

KEY WORDS
Special autonomy, fund, economic growth, regional development, local regulations.

Indonesia is an archipelago country with its diversity in races, religions, languages, and customs. This on one hand is that makes Indonesia different from most other countries. On other hand however, it poses challenges with disintegration effects.

One strategy central government has followed to spur the development in West Papua as a measure to ensure equal welfare especially when compared to other regions is to provide special autonomy for the former under decentralization perspective. This measure is accompanied with the provision of Special Autonomy Fund since 2009 the amount of which is determined by central government’s budget and regional development needs. The distribution follows the arrangement that 70% and 30% are respectively for Papua as the main province and West Papua province. The arrangement is based on consideration of several comparative indicators such as population number, region size, and villages. The total fund it has received yearly since 2009 to 2015 amounts to IDR 11,307,488,761,950.

Based on special autonomy policy accompanied with subsequent fund, the study intends to explore the direct and indirect effects of the fund on economic growth in West Papua Province. Moreover, it intends to find out factors related to special autonomy fund that hinder its governance.

LITERATURE REVIEW
Decentralization is authority provision by central government to Autonomous regional government to govern and manage public services. Decentralization put government much closer to its public. According to Henry Maddick (1963) decentralization isa legal authority provision to a lower region to run some fields/functions. Rondinelli, Nellis, and Chema (1983) define decentralization as reinforcement, financially and legally, of sub-national governments to run certain affairs on their own. Rondinelli (1983) defines decentralization as central government’s provision of planning, decision-making, or authority to regional governments, semi-autonomous organizations, or non-governmental organizations.

Keynes has argued in The General Theory that total income in one economy in short-terms has necessarily been determined by households, companies and governments’ spending. The more participants active in economy, the products and services consumed, and the more people employed (Mankiw, 2007).
One purpose in development is economic growth (Kuncoro, 2004). Autonomy enables regional government to make its own decision-making in fund governance. This makes regional economic growth possible.

Logical consequence of this autonomy is fund for regional governments to run their affairs on their own terms. For the case of Papua, the provinces of Papua and West Papua has earned fund since 2002 and 2008, amounting to respectively.

According to Boediono (1985), economic growth is a long-term per capita output increase process. It comprises three dimensions, those are process aspect, per capita output aspect, and long-terms aspect. Accordingly, economic growth is a long term process related to per capita output increase. It implies that economic growth covers theories of gross domestic product (PDB) and of population growth. Todaro and Smith (2004) define economic growth as a production output increasingly supported by more production factors. Sukirno (2005) defines economic growth as activity development in economy resulting on the increased number of products and services made available in a society leading to heightened welfare. Arsyad (2004) pinpoints economic growth as an increased Gross Domestic Product (GDP) or Gross National Product (GNP) regardless of whether that this increase is above or below population growth, or whether it is related to changes in structural economy.

Mualim’s research (2010:101) concerning the effect fiscal decentralization on economic growth in West Papua argues that random effect can be applied to estimate the effect of fiscal decentralization in West Papua on its economic growth. Subroto’s work (2011:230) concerning the effects of balanced fund and special autonomy fund on economic growth in regencies/municipalities of Papua province shows insignificant effect of the general allocation fund on economic growth, and significant effect of special autonomy fund on economic growth.

Figure 1 – Research Conceptual Framework

The study of Centre of Regional Study and Information concerning the effect of special autonomy fund on public welfare finds that special autonomy fund increases school
participation rate, literacy rate, health, infrastructure, and decreased poverty rate in Papua and West Papua. This effect is however overshadowed by trend of increasing amount of special autonomy fund received by Papua and West Papua since 2001 to 2015.

The framework is triggered by the question of to what extent Central government’s good government initiative reflected in policy of Regional autonomy for Papua and West Papua in the form of special autonomy based on Decentralization theory has any effect on economic growth in the two provinces. It is illustrated in the Figure 1.

Thus, the following hypotheses are formulated:

- It is assumed that special autonomy fund allocation has an effect on economic growth of West Papua.
- It is assumed that special autonomy fund through fund for education sector has an effect on economic growth of West Papua.
- It is assumed that special autonomy fund through fund for health sector has an effect on economic growth of West Papua.
- It is assumed that special autonomy fund through fund for infrastructure sector has an effect on economic growth of West Papua.
- It is assumed that special autonomy fund through fund for people’s economy has an effect on economic growth of West Papua.
- It is assumed that special autonomy fund through fund for other sectors has an effect on economic growth of West Papua.

METHODS OF RESEARCH

The research is conducted in West Papua which is one of the three provinces that central government has granted the status of a special autonomy. It makes use of secondary data, compiled by asking data directly to relevant institutions and studying the published data such as reports, archives, bulletin of rules and official notes already available. For data analysis, it applies GSCA (Generalized Structured Component Analysis) analysis that can be run by means of GeSCA which is the only online SEM software available today. This is right tool for the research for several reasons. For one, it does not require multivariate normality. Another is that it can still work even with small size.

RESULTS AND DISCUSSION

Direct Effect Hypothesis Testing. Direct effect hypothesis testing is conducted to find out the direct effects of exogenous variables on endogenous variables. The presence or absence of the effect can be confirmed by looking into critical ratio (CR) value. If critical ratio (CR) has star mark or ≥ t-table (t=2.00, alpha=5%), it indicates the presence of significant effect of exogenous variable on endogenous variable. The whole results are presented in the following table:

<table>
<thead>
<tr>
<th>Exogenous Variable</th>
<th>Endogenous Variable</th>
<th>Path Coefficient</th>
<th>SE</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund</td>
<td>Education</td>
<td>0.666</td>
<td>0.133</td>
<td>5.02*</td>
</tr>
<tr>
<td>Fund</td>
<td>Health</td>
<td>0.752</td>
<td>0.086</td>
<td>8.77*</td>
</tr>
<tr>
<td>Fund</td>
<td>Economy</td>
<td>0.392</td>
<td>0.133</td>
<td>2.95*</td>
</tr>
<tr>
<td>Fund</td>
<td>Infrastructure</td>
<td>0.304</td>
<td>0.174</td>
<td>1.74</td>
</tr>
<tr>
<td>Fund</td>
<td>Affirmative</td>
<td>0.579</td>
<td>0.093</td>
<td>6.19*</td>
</tr>
<tr>
<td>Fund</td>
<td>Economic Growth</td>
<td>-2.034</td>
<td>1.646</td>
<td>1.24</td>
</tr>
<tr>
<td>Education</td>
<td>Economic Growth</td>
<td>0.914</td>
<td>0.932</td>
<td>0.98</td>
</tr>
<tr>
<td>Health</td>
<td>Economic Growth</td>
<td>0.074</td>
<td>0.477</td>
<td>0.16</td>
</tr>
<tr>
<td>Economy</td>
<td>Economic Growth</td>
<td>0.801</td>
<td>0.431</td>
<td>1.86</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Economic Growth</td>
<td>1.109</td>
<td>0.614</td>
<td>1.8</td>
</tr>
<tr>
<td>Affirmative</td>
<td>Economic Growth</td>
<td>1.213</td>
<td>1.056</td>
<td>1.15</td>
</tr>
<tr>
<td>Economic Growth</td>
<td>Fund</td>
<td>-0.015</td>
<td>0.183</td>
<td>0.08</td>
</tr>
</tbody>
</table>

Note: * Significant.
**Indirect Effect Hypothesis Testing.** This kind of testing is to find out the presence or absence of the indirect effects of exogenous variables on endogenous variables through mediators. Indirect effect hypothesis testing. It can be conducted by looking into T-statistics value. If \( T_{\text{statistics}} \geq t_{\text{table}} (t=1.96, \alpha=5\%) \) holds, it indicates the presence of significant effect of exogenous variables on endogenous variables through mediating variables. The whole results are presented in the following table:

<table>
<thead>
<tr>
<th>Table 2 – Indirect Effect Hypothesis Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exogen</td>
</tr>
<tr>
<td>Fund Education</td>
</tr>
<tr>
<td>Fund Health</td>
</tr>
<tr>
<td>Fund Economy</td>
</tr>
<tr>
<td>Fund Infrastructure</td>
</tr>
<tr>
<td>Fund Affirmative</td>
</tr>
<tr>
<td>Education</td>
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<tr>
<td>Health</td>
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<tr>
<td>Economy</td>
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<tr>
<td>Infrastructure</td>
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<tr>
<td>Affirmative</td>
</tr>
</tbody>
</table>

**Conversion of Path Diagram into Structural Model.** The conversion is important to find out the presence or absence of direct or indirect effects exogenous variables on endogenous variables through mediating variables. The whole results are presented in the following table:

<table>
<thead>
<tr>
<th>Table 3 – The Direct and Indirect Effects of Exogenous Variables on Endogenous Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exogenous Variable</td>
</tr>
<tr>
<td>Fund Education</td>
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<tr>
<td>Fund Health</td>
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<tr>
<td>Fund Economy</td>
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<tr>
<td>Fund Infrastructure</td>
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<td>Fund Affirmative</td>
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<tr>
<td>Fund Education</td>
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<td>Fund Health</td>
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<td>Fund Economy</td>
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<td>Fund Infrastructure</td>
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<td>Economic Growth</td>
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<tr>
<td>Infrastructure</td>
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<tr>
<td>Affirmative</td>
</tr>
</tbody>
</table>

**Note:** * Significant.

**DISCUSSION OF RESULTS**

The effects among variables involved in the study are delineated by means of GSCA. The analysis goes further as to the reasons behind the relations, compatibility between theories and facts concerning the relations, and the possible effects it will bring to literature and policy makers. It in turn might lead to theory contribution that would enrich literature.

The present research has several limitations that opens chances for further researches in the future. One limitation is its ability to cover all data as it concerns with many regional governments in West Papua such as province government of West Papua, South Manokwari
regency government, Arfak Mountains regency government, Tambraw Regency government, Maybrat regency government, South Sorong regency government, Sorong regency government, Raja Ampat regency government, Fak-fak regency government, Kaimana regency government and Sorong municipality government. Area width and data incompleteness hinders data collection that makes this study only uses data of 2013 and 201, instead of that fact that special autonomy policy has started since 2009. Accordingly, further researches might continue comparable study with more complete data.

CONCLUSION AND SUGGESTIONS

The study intends to find out the effect of special autonomy fund allocation on economic growth in West Papua. From analysis results and discussion above, there are some conclusions that can be drawn as follows:

1. GSCA analysis results show that special autonomy fund allocation on economic growth in West Papua has 1.24 critical ratio (cr) without star mark. It means that fund allocation does not have a direct significant effect on economic growth. While it has indirect effects through funds for education, health, people’s economy and affirmative sectors on economic growth. It excludes infrastructure sector as its mediating variable.

2. There have been factors due to fund allocation and special autonomy for West Papua that might lead to ineffective special autonomy fund government. These factors need special attention to tackle.

3. The outcomes of Special Autonomy and the fund in West Papua might include:
   - There has been continuous increase in economic growth of West Papua from year to year;
   - There has been stark decrease in poverty and unemployment rates;
   - There has been increase in people income;
   - There has been stark increase in number of infrastructures including roads, school building, hospitals, and others from year to year.

   Special autonomy and its fund for West Papua focus on 5 sectors that has direct impact on indigenous people including: education, health, infrastructure, people’s economy and affirmation/other sectors. The policy itself does not guarantee of bringing the expected results. On the part of West Papua regional governments, the success of the policy lies on their capability to ensure the fund governance in every sector. The fund governance has been critical issue faced by almost all governments. This requires special attention for central government and regional government as fund recipients to make some improvement and related preparation to make sure its governance, especially in every sector the fund aims to develop.

REFERENCES

ABSTRACT
One of the development priorities implemented by the government is economic development, as one of the backbones of the national economy, which is capture fishery sector. Sei Ijum Raya village has a huge fishing potential supported by the natural and geographical condition of the area which is flowed by a Mentaya River. Broadly, Minapolitan area development planning in Sei Ijum Raya village aims to improve the welfare of the community, especially fishermen. The problems' complexity raises the need for community involvement planning in the development of Minapolitan areas to support the utilization of potentially productive resources. Sei Ijum Raya village with its various potentials may be considered as a unique village, in which coconut palm is a potential that can be utilized, but the community awareness on the importance of exploring the region potential is still very minimal. The findings of the field showed that there were acceleration and breakthrough efforts in marine and fishery development supported by economic policy as well as conducive social and political climate. In this case, cross-sectoral coordination and support, as well as other stakeholders, become one of the most important prerequisites.

KEY WORDS
Natural resources, income, fishermen communities, inhibiting factors, human resources, infrastructure.

One of the development priorities implemented by the government is economic development, especially populist-based economy. Indonesia with vast territorial water has a great potential as one of the national economy backbones, including the capture of fisheries sector. More specifically, East Kotawaringin Regency in general and Mentaya Hilir Selatan sub-district, in particular, has a great potential of capture fisheries, supported by its natural and geographical condition of the area which is flowed by the big river (Mentaya River). Along the river up to the estuary (Java sea), there are many fishermen's settlements that hereditary conduct capture fisheries activities. Sei Ijum Raya village is a pre-eminent village of a center minapolitan area that has a superior performance in terms of seafood production, which is good in the fishery products processing. Broadly speaking, this plan aims to support government programs in the field of development and improvement of fishery products, especially capture fisheries, which is located in the selected area of Minapolitan fishery center, Sei Ijum Village, South Mentaya Hilir District, East Kotawaringin Regency. Especially for fisheries, the abundant potential is expected to become the leading sector of the national economy.

Indonesia’s Law No. 31 of 2004 on fisheries has an important role. Minapolitan concept is the basis of marine and fisheries sector development that aims to improve the welfare of fisheries communities with the purpose of reducing the gap that occurs in fishing communities. Revenue per capita is one indicator that can measure the level of community welfare.

Based on its PDRB per capita, East Kotawaringin's tends to increase every year. Regional economic growth is one of the most important elements in the community welfare, especially Sei Ijum Raya Village. The great fishery potential provides benefits that can be generated. East Kotawaringin Regency Government issued the decree of Regent of East
Kotawaringin No.188.45/ 326/ Huk-DKP/ 2015 which stipulates that the core location is located in Sei Ijum Raya Village, South Mentaya Hilir District. To support the development of Minapolitan area, it should be supported by the community around the area so that the production process in the cultivation area (upstream), agro-industry (downstream) as well as in the distribution and marketing (supporting) can be realized well.

The concept of development is in line with the general direction of national development and the policy direction of regional development and area development explained in RPJMN 2016-2021 with the aim to accelerate the development of maritime areas.

In this case, improving the welfare and independence of a community is not an easy thing. It requires a direction and a series of efforts, therefore participatory (involvement) of the community to create a synergy is needed to ensure effective, efficient, fair, environmentally and sustainable success. To do such sustainability, it requires the optimization of Sei Ijum Raya village community. The spotlight of the Minapolitan area development planning is that the community has not been able to optimally support the government's program and the concern of local government in demanding the community's awareness so that the community involvement is needed. Participatory planning is an appropriate tool to optimize the community participation in planning.

### LITERATURE REVIEW

**Area Development Planning.** Development is a planned effort conducted to obtain a better state in various aspects of life. Kartasasmita states that development is done because of the need of improving in order to develop social, political and economic institutions so that the development is succeeding quickly, in which planning can be mean as guidelines or just a map of what to do. Planning is divided into four criteria which are:

1. **The Nature of planning goals.** The planning classification is according to the nature of the objectives designed to be achieved. This classification is a "goal-oriented" classification or a functional one.
2. **The scope of planning activities.** This classification takes into account the scope of planning activities designed to be influenced. This approach produces a classification on the discipline or professional path.
3. **The spatial level of planning activity.** Planning can be done at any level from the individual to the world as a whole. So categories such as international planning can be distinguished.
4. **The operational level of planning activity.** The classification of planning according to the level of "operational" planning activities which is planning development in a nation-state.
In planning the development of a developing regional area, there are several things, including:

1. Planning is the process defining the goals of a plan, creating a strategy to achieve the goal and developing a work activity plan in a planning.

2. Organizing is an activity process in constructing the organizational structure in accordance with the purpose and source as well as environment.

3. Actuating is an action that trying to realize the planning and the goal properly.

4. Controlling is a process of observation, the determination of the standard to be realized, assessing the implementation performance, and if necessary taking corrective action, so that the implementation can run as closely as possible to achieve the goal.

**Participatory Planning.** The community role in the Law No. 32 of 2014 which is initially small is encouraged to participate in the government. The participation of a person or group of community members in an activity. Bornby (1974) defines participation as an action to "take part" which is activities or statements to take part of the activity for the purpose of obtaining benefits (Webster, 1976).

Related to that, Muluk (2007: 127) states that public participation is not only derived from the bottom, but there are also initiatives from the above in the form of government efforts to increase the participation. In this research, participatory planning is used as an indicator to see if the planning is done in accordance with what is expected. Yadav (UNAPDI, 1980) points out that there are four kinds of activities that show participation decision making, implementation of activities, monitoring, and evaluation, as well as participation in the utilization of development outcomes.

Conyers (1992: 154) argues that there are at least three important reasons why community participation is needed in development: first, community participation can be used as a tool to obtain information about the conditions, needs, and attitudes of the local communities to support the success of programs or projects to be implemented in the area. Second, the community will trust the project or the development program more if they feel involved in the preparation and planning process, as they will know more about the project and will have a sense of ownership of the project; and thirdly, it is an effort to encourage general participation in many countries, as it is perceived that it is a democratic right if society is involved in the development of their own community.

**Participatory Planning in Community Development Perspective.** Korten (1984), community development as a concept of social change must be recognized to always refer to or based on the paradigm of community-based development. It can simply be defined as development that refers to community needs, planned and implemented by the community by utilizing the resources potential (nature, human, institutional, socio-cultural values, etc.) as big as possible. Community development which aims to improve the community welfare or quality of either life, inward, material and spiritual.

Through the community ability's participation and their struggle to awaken and sustain collective growth, it becomes strong. But such participation means not only that community is involved in the implementation of the development or the community is only considered as an "object" but must be followed by the involvement of the development community, or the community is also considered as the main "subject" that must determine the course of development. The success of community development depends on the role of the government and its community, therefore empowerment is conducted as a process of community development. Prijono and Pranarka (1996: 15) state that it requires three phases which are of the initial stage, participatory stage, and emancipatory stage. Sumadyo (2001) in Mardikantoro formulates three main efforts in every community empowerment, which are called as Tri Bina including: Human Development, Effort Development, and Environmental Development. As an outline that the process of community empowerment can be done gradually until the end to improve the community's welfare.
METHODS OF RESEARCH

This research is qualitative with descriptive type aims to obtain the description of the involvement of Sei Ijum Raya Village community in the minapolitan area development in East Kotawaringin regency, focusing on:

1. The Identification of Minapolitan Area Development:
   - Exploration of Sei Ijum Raya village potential;
   - Local government support in developing Minapolitan Area in Sei Ijum Raya Village.
2. Sei Ijum Raya village community involvement in the process of development planning of Minapolitan area through Participatory planning:
   - The Stages of Minapolitan area development planning process;
   - The forms and quality of community participation in the development of Minapolitan area in Sei Ijum Raya Village;
   - The actors involved in participatory planning process in the development of the minapolitan area;
   - The Institutions that can be developed to become a forum for Sei Ijum Raya Village community through community empowerment.
3. Supporting and inhibiting factors in the development of minapolitan areas based on participatory planning in improving the fishermen communities' welfare in Sei Ijum Raya Village.

This research was conducted at the Regional Development Planning Board of East Kotawaringin Regency, Marine, and Fisheries Office of East Kotawaringin Regency, South Mentaya Subdistrict Office, Sei Ijum Raya Village Office. The selection of this location also allows the researchers to obtain data or information exactly as needed. The data sources of this research consist of:

1. Informant;
2. Head of BAPPEDA of East Kotawaringin Regency;
3. Head of Marine and Fisheries Office of East Kotawaringin Regency;
4. Head of Program Development Sub-Section, Department of Marine Affairs and Fisheries of East Kotawaringin Regency;
5. Chairman of Dayak Customary Council of East Kotawaringin Regency; and
6. Planning target group, which consists of local communities in East Kotawaringin Regency; and Indigenous People of East Kotawaringin Regency;
7. Documents, in the form of general regional data related to the development of regional tourism minapolitan area in East Kotawaringin District, such as: The Profile of East Kotawaringin Regency, Strategic Plan of Marine and Fisheries Office, RPJMD 2016-2021 of East Kotawaringin Regency, including some other supporting data associated with this study.

The data collection in this research is done by:

1. Direct Interview, which is a technique or effort of collecting data or information directly related to the research object by conducting the question and answer with the informants determined using interview guides.
2. Observation, which is a technique of data collection conducted through direct observation in the field in order to obtain data to complement or improve the data obtained through interviews.
3. Documentation, is a data collection technique conducted by learning various reports, documents, archives, brochures, magazines, internet, newspapers and relevant data related to the issues raised in the research.

The instrument used in this research are:

1. Researcher herself. This is in accordance with the research method used, which is qualitative research, in which data collection depends on the researcher themselves. Researcher as the main instrument (instrument guide) by using the senses to watch and observe objects or phenomena in this research.
2. The interview guide, which is a series of questions used as a guide or framework in conducting the interviews with respondents involved as a source of data in this study.
3. Stationery and field notes. Stationary is the instrument to assist in recording important points in the field and the records are the result of the research heard, observed and considered in the framework of data collection and data reflection in qualitative research. The analysis of qualitative data is typically an interactive and active process. Meanwhile, to see the data validity, there are four criteria in conducting data validity test which is: credibility, transferability, dependability, and confirmability.

**DISCUSSION OF RESULTS**

Development center is an expanse of economy-scale fishery commodities in a mina ecosystem area, where the area is equipped with infrastructure as well as facilities needed such as institution, processing/ marketing, and other sectors that support the development of commodity center. Sei Ijum Raya village has a stretch of fish commodity surrounded by deep coconut utilized by the fishermen community.

*Identification of Minapolitan Area Development.* Regional development is a plan to improve the use of various resources. An area as a whole is an economic unit in which there are various sources that interact with each other through the potential of the region that can be utilized as a regional capability in order to realize the community welfare. With the total population of 78 are fishery households (RTP) with fishery yield productivity of 8 tons/month (80% of shrimp and 20% rough fish). Capture fisheries (marine), 75% of fisheries production by 2015 is 11.8,000 tons, comes from 14 fishing villages in 3 coastal districts of Minapolitan area, 65% from Sei Ijum village and hinterland village able to create functional relationship and marketing of capture fishery production. The regulation issued in the form of Decree of Regent of East Kotawaringin No.188.45/ Huk-DKP/ 2015 which specifies the support locations in 3 districts: Teluk Sampit Sub district, South Mentaya Hilir Sub district, and Hanaut Island. Two Teluk Bay sub-districts and Hanaut Island, and aquaculture fishery in Kota Besi Regency. Meanwhile, in Sei Ijum Village, South Mentaya Hilir District is developed as Minapolitan.

![Figure 2 – Fishery Center Map](image)

Since the establishment of Sei Ijum Raya village becomes a minapolitan, most fishermen with coconut plantations are very enthusiastic to build fish ponds in the last 1-2 years. Around (± 180 units) is integrated fish-deep coconut. However, the lack of public awareness of the potential exploration of the region still needs to be improved. With the potential identification by using LQ theory, the higher the number of community involvement in certain natural resources, the higher the contribution of these sources to the economic development, with the indication is seen in the Gross Regional Domestic Product (GRDP). The determination of the leading sector becomes very important as the basis of regional development planning, where the regions have the opportunity and authority to make a
breakthrough in accordance with the potential of the region in order to accelerate the area development for the improvement of its community welfare.

Table 1 – LQ (Location Quotient) Calculation Result of East Kotawaringin Regency in 2013-2016

<table>
<thead>
<tr>
<th>Economy Sectors</th>
<th>Location Quotient</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agriculture, Forestry and Fisheries</td>
<td>2.21</td>
<td>8.64</td>
<td>6.08</td>
<td>8.55</td>
<td>6.00</td>
<td></td>
</tr>
<tr>
<td>2. Mining and Excavation</td>
<td>62.08</td>
<td>-18.72</td>
<td>-12.32</td>
<td>9.42</td>
<td>12.00</td>
<td></td>
</tr>
<tr>
<td>3. Processing Industry</td>
<td>3.82</td>
<td>15.53</td>
<td>9.28</td>
<td>8.94</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>4. Electricity and Gas Excavation</td>
<td>6.52</td>
<td>30.49</td>
<td>18.00</td>
<td>13.20</td>
<td>17.00</td>
<td></td>
</tr>
<tr>
<td>5. Water Supply, Waste Management, Waste and Recycling</td>
<td>3.10</td>
<td>2.56</td>
<td>4.71</td>
<td>5.41</td>
<td>3.00</td>
<td></td>
</tr>
<tr>
<td>6. Construction</td>
<td>4.77</td>
<td>11.93</td>
<td>8.19</td>
<td>5.06</td>
<td>7.00</td>
<td></td>
</tr>
<tr>
<td>7. Great Retail Trade</td>
<td>2.84</td>
<td>10.25</td>
<td>9.35</td>
<td>8.07</td>
<td>7.00</td>
<td></td>
</tr>
<tr>
<td>8. Transportation and Warehousing</td>
<td>15.62</td>
<td>0.35</td>
<td>9.29</td>
<td>12.41</td>
<td>9.00</td>
<td></td>
</tr>
<tr>
<td>9. Accommodation and food-drink Supply</td>
<td>7.79</td>
<td>11.57</td>
<td>10.45</td>
<td>6.74</td>
<td>9.00</td>
<td></td>
</tr>
<tr>
<td>10. Information and Communication</td>
<td>10.73</td>
<td>18.63</td>
<td>7.93</td>
<td>3.48</td>
<td>10.00</td>
<td></td>
</tr>
<tr>
<td>11. Services</td>
<td>9.30</td>
<td>8.96</td>
<td>4.62</td>
<td>3.01</td>
<td>6.00</td>
<td></td>
</tr>
</tbody>
</table>

Source: Processed from KDA data of 2015.

The formula proposed by Bendavid-Val shows that the fishery sector in East Kotawaringin Regency is very potential. Seen from other commodities, deep coconut agricultural production has considerable potential, thus it allows an integration in terms of plantations, fisheries, and agriculture. Therefore, the integration of deep coconut-fish cultivation can be an alternative to support the development of the minapolitan area. Additionally, with the local government support through a relevant agency, the location of Minapolitan area is a huge opportunity for Sei Ijum Raya Village. The synergy of policy implementation is needed in realizing the development of the minapolitan area with the utilization of the resources potential owned.

Sei Ijum Raya village community involvement in the process of planning the Minapolitan area development through Participatory Planning. Participatory planning in Sei Ijum Raya Village community demands to be more active thus, it can be treated as a government partner. The involvement of the community in the early stages of development carried out through participatory planning aims to formulate a program in accordance with community needs, evaluated and explored by the community. The thing that is often forgotten in a participatory planning is the quality of the community as an input to determine the outcome of planning conducted. Sei Ijum Rayavillage still needs a boost where people want to be involved and become a determinant of the success and sustainability of a plan. In the field, the coordination role has not fully invited the groups’ involvement outside the government in order to implement, collect and analyze the information that will be the basis of regional development policy. Regional development planning that is able to involve all existing stakeholders to participate is a participatory development plan. Lack of harmonious cooperation among the governments is a fundamental factor in achieving more realistic and more community-driven development policies. Based on the findings in the field, three actors in minapolitan area development are government, community and private sector who are very important in realizing the policy implementation.

The local organization capacity in honing the community's ability to cooperate, organizes individuals and groups within it, in order to mobilize the existing resources in solving problems with well-organized communities able to make their voices heard better and the needs fulfilled still require a companion and facilitator.

Supporting and Inhibiting Factors in Minapolitan Area Development based on participatory planning in improving the fishermen communities’ welfare in Sei Ijum Raya Village. The availability of natural resources is the capital of minapolitan areas development. The natural resources are in the form of water and land support the development of minapolitan areas. In increasing the public income, the development of the minapolitan area is a development concept to realize the independence of fishermen community with the effort to make leverage of the regional economy in order to increase the fishermen community
income by realizing entrepreneur spirit in the community. The positive perception of the community due to the increase of income is a factor that is accepted by the community in minapolitan area development and the characteristics of the fisherman community of the Sei Ijum Raya village, which is always adjacent to the river is a local wisdom that can support the fishery business run by the community for generations. The recent condition of the community seen from the development benefits through minapolitan areas development concept has been felt even though the cultivation system is done traditionally.

The existence of human resources is one of the most important things that is always used as a foundation for an area development. The main problem in development policy is based on the regional specificity (endogenous development) by using human resource potential. The low quality of human resources is caused by unqualified education.

Infrastructure is the main thing in an area development because it brings the influence in the success. In this case, Roads and docks are very important access because it is a trade mobilization of an area.

CONCLUSION

Based on the results of research and discussion focusing on the problem of this research, several things can be concluded as follows:

Seen from its demography aspect, Sei Ijum Raya Village has various potentials. This village can be said unique with numerous deep coconut trees in the Minapolitan area as the inheritance of their ancestral land. The land utilization of coconut trees planting can be used for fish farming, which is a boon. This condition deserves appreciation and support from the aspects of cultivation techniques, processing management and marketing because it can overcome the economic problems when the famine season/ fishing season comes as it really depends on the weather factors. The Awareness of Sei Ijum raya village community on the importance of excavating the potential of the area is still very low, so it needs to be improved, with the potential identification of a region can encourage its region development. The identification of potential yields other than capture fisheries is a potential sector to be developed, while the deep coconut plantation sector is the leading commodity. Therefore, it is obtain an integration of Fish Pond-Deep Coconut in order to support the development of Minapolitan area. This is in line with the local government support with the issuance of the Decree of the Regent No.188.45/ 326/ Huk-DKP/ 2015 on the location determination of Minapolitan Area Development activities in East Kotawaringin Regency. Through the regent's decree, program plans have been developed through the relevant SKPD as well as cross-sectorial, so the minapolitan areas development can be accelerated through infrastructure development, public service system, raw material distribution network and production through various funding sources.

Regarding the planning process stages of Minapolitan area development in Sei Ijum Raya Village, looking at the potential in Sei Ijum Raya Village, the local government of East Kotawaringin Regency takes the initiative to decide minapolitan area development. The involvement of the community in the early stages of this minapolitan area development is not really seen because the policies characteristics are more top down as the leading sector Bappeda of Kotim Regency. Stages in the process of minapolitan area development have been done according to existing regulations, in which the first stage has been done in accordance with the master plan and restra as well as RPJDM of Kotim Regency. The forms and the quality of participation in the minapolitan areas development have not been felt by Sei Ijum Raya village community because of their fishing and gardening activity in their daily life so that sometimes they are not or even rarely involved in various Minapolitan area development activities. But, in recent times, it has been held socialization which encourages Sei Ijum Raya Village community involvement. The actors involved in Minapolitan area development are the private sector and the community which are still less perceived in the Minapolitan area development. Therefore, synergy occurs less than expected. The regional commitment is indispensable in the Minapolitan area development in Sei Ijum Raya Village. In terms of institutional village, Sei Ijum Raya has had a forum that can help the fishermen
community but it still requires assistance through socialization and training to find problems' solution that are still felt by Sei Ijum Raya Village community.

Supporting factors in Minapolitan area development is needed to support the implementation of minapolitan area development. Those are natural resources availability, the increase of the fishermen community income, and the characteristics of the fishermen community of Sei Ijum raya Village. Meanwhile, the inhibiting factors in East Kotawaringin regency include: human resources and infrastructure.

SUGGESTIONS

Based on the conclusions of the research results that have been stated above, the researchers provide suggestions for improvements in the future minapolitan areas development, as follows:

Planning that can be an alternative to refine and overcome minapolitan areas development is to integrate the potential and natural resources, aligning all development plans by utilizing the local potential. According to the researchers, one of the efforts for the minapolitan area development that can be driven from the integration of deep coconut-fishery ponds through the support of the local government of East Kotawaringin Regency.

Planning policy is the basic guidelines of regional development process. The importance of various stakeholders’ involvement is indispensable. A forum planning involves not only competent stakeholders but also communities and actors involved in the hope of answering all the problems because the planning is still sectorial. According to the researcher, community involvement in the area development planning is crucial. The lack of coordination and division of roles in planning resulted in a lack of synergy between the stakeholders. The basis of Minapolitan area development in Sei Ijum Raya Village is the potential of Natural Resources owned. In this case, Minapolitan area development still needs guidance in terms of institutional continuity with the synergy of various parties, especially professionals.

Utilizing the supporting factors in minapolitan area development of Sei Ijum Raya Village optimally.

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11. 2015. Profil Desa /Kelurahan Mentaya Hilir Selatan kabupaten Kotawaringin Timur
ANALYSIS OF ASYMMETRIC PRICE TRANSMISSION IN THE NAGAN RAYA DISTRICT’S RICE MARKET

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ABSTRACT

Asymmetric price on the rice marketing is a crucial problem and often occurs in the process of distribution from the farmers to consumers. This research aim to analyze the asymmetric price on the rice marketing of Nagan Raya District by using the quantitative testing with asymmetric price transmission theory approach done by using the Error Correction Model (ECM). The results show that in the short term the price of GKP at the farmers level with the price of rice at the end consumers level is asymmetrical, while in the long term is symmetrical.

KEY WORDS

Asymmetric price, rice, Error Correction Model, policies, farmers.

Indonesia is the third largest rice producing country in the world. But even though Indonesia occupies that position, Indonesia still rely on rice needs from other countries, such as Vietnam, Thailand, United States of America and Taiwan. Vietnam is one of the largest rice importing country from 2000 to 2015. On the 2011, Government does rice import policy (Kompas online 2011), as for the purpose of determining rice import policy in the year to maintain domestic rice stock.

In the Aceh province, rice commodity is also an important commodity for the community. Therefore, the level of availability should be a major concern for the government. Availability of rice is inseparable from harvested area and rice production.

Harvested area and rice production in the Aceh province from 2005 to 2014 experienced a highly fluctuating development. Which the highest growth of rice harvest occurred in 2007 that was 12.45 percent and the production rate growth 13.52 percent while the lowest growth of harvested area occurred in the 2018 that is equal -8.76 percent while the production rate growth of -8.55 percent, this situation is almost same occurred in the 2014. It will very affects the amount of rice produced so that it will affects the price of rice that is formed.

Asymmetric price problems are also felt by the people of Aceh, such as the difference between the price of retailers at the price received by farmers. Farmers expect high rice prices but consumers expect low rice prices. This condition causes the government to set a policy so that the price of rice can be controlled to be not too high that can side with the consumer, and the price of rice is not too low so that farmers can experience profits.

Of the 23 districts in Aceh Province, Nagan Raya District is one of the districts that produce large amount of rice. On the 2014, the area of paddy field in Nagan Raya Regency amounted to 33242.38 Hectares with total production of 153458.9 Ton. This illustrates that most of the inhabitants are livelihoods of paddy rice.

For rice paddy farmers in Nagan Raya District, the price asymmetric problem is also a crucial problem and often encountered in the marketing process. Asymmetry of a large price will lead more inefficient market. This will harm farmers as producers and communities as consumers. This means that income losses will occur at the farm level and expense losses will occur at the consumer level. Asymmetrical transmission is important to see how much
asymmetric level that occurs between the price at the farmer level and the final consumer price level.

This research aims to analyze whether the price on rice marketing at farmers and end consumers is asymmetrical?

**METHODS OF RESEARCH**

The location of this research is located in Nagan Raya District. Data used in this research is time series data that is monthly GKP data from January 2011 until December 2015 and monthly rice price data at retailer level.

Data processing in this research used Error Correction Model (ECM) method developed by Granger lee et al (1989). The first stages in this analysis are:

*Stationary test.* The stationer test data used Augmented Dickey Fuller test (ADF). The formulation of the ADF test model is:

\[ \Delta x_t = \alpha_0 + \gamma x_{t-1} + \sum_{i=1}^{p} \alpha_i \Delta x_{t-i} + \epsilon_t \]

Where: \( \Delta x_t = x_t - x_{t-1} \), \( t \) is the time period, \( \gamma \) and \( \alpha_i \) are the model coefficients, whereas \( \epsilon_t \) is the model error. The statistical hypothesis tested is \( H_0: \gamma = 0 \) (time series data \( x_t \) is not stationary \( y \)), \( H_1: \gamma \neq 0 \) (time series data is stationary). Non-stationary data is further distasioneerized through a differentiation process, which can be done several stages until the end result obtained a stationary data pattern.

*Cointegration test.* This test is used if the data is not stationary at the level, with the following formula:

\[ \Delta P_t = c + \Pi P_{t-1} + B_j \Delta P_{t-j} + \epsilon_t \]

The statistical hypothesis tested is \( H_0: \text{rank} = r; H_1: \text{rank} > r \). For that used the following test statistic:

\[ \lambda_{\text{max}}(r) = -T \sum_{i=r+1}^{p} \ln(1 - \lambda_i) \]

\[ \text{or} \]

\[ \lambda_{\text{max}}(r, r+1) = -T \ln(1 - \lambda_{r+1}) \]

Where: \( K = 0.1, ..., n-1; T= \text{Number of observations used}; \lambda_i = \text{Estimate the value of the eigenvalue order of the matrix} \ \Pi; r = \text{Number of vectors of cointegration vector in null hypothesis}. \)

The null hypothesis used in \( \lambda_{\text{trace}} \) and \( \lambda_{\text{max}} \), tests, namely:

- \( H_0: r \leq 0 \) or there is no cointegration relationship
- \( H_1: r \leq 1 \) or at most one cointegration equation
- \( H_0: r \leq n-1 \) or at most m-1 cointegration equation

If the statistical test is greater than the critical value in the Johansen table then \( H_0 \) is rejected, it means there is a cointegration relationship.

*Causality Test.* This test used the Granger method, to prove whether GKP price movement at the farm level is the main determinant of rice price movement at the retailer level or vice versa. The 2 (two) asymmetric equations that will be used in this research, namely:

\[ \Delta P_t = a_0 + \sum_{i=1}^{k} \beta^P \Delta P_{t-i} + \sum_{i=1}^{k} \beta^P \Delta PE_{t-i} + \pi^Z_{t-i} + \sum_{i=1}^{k} \beta^P \Delta PE_{t-i} + \pi^Z_{t-i} + \sum_{i=0}^{n} \beta^P PE_{t-i} + \pi^Z_{t-i} + \epsilon_t \]
\[ \Delta PE_t = a_0 + \sum_{i=1}^{\infty} \beta_i \Delta PE_{t-i} + \sum_{i=1}^{\infty} \beta_i' \Delta PP_{t-i} + \pi_i Z_{t-i} + \sum_{i=1}^{\infty} \beta_i \Delta Z_{t-i} + \varepsilon_t \]

Where: \( PP_t \) = Price of GKP at farmer level period \( t \) (Rp / Kg); \( E_t \) = Price of rice at consumer level period \( t \) (Rp / Kg); \( a_0 \) = Intercept; \( P \) = Length of lag; \( Z_{t-1} \) = Error correction term; \( \varepsilon_t \) = Error term.

**RESULTS OF STUDY**

**Asymmetric Price Transmission of Unripe Rice Harvest and Rice in Nagan Raya District.** The testing stages in the asymmetric price transmission analysis are as follows.

Stationary test is the first step in the Asymmetric analysis step to know in advance whether the time series data we use is constant or not. Conversely, if time series data is not stationary it will causes spurious regression, in this research stationary test time series data by used Augmented dickey-Fuller Unit Root Test (ADF) with 5% real level. Here the results of stationary test on the dry prawn harvest price data at the farm level on conditions Level.

**Table 1 – Static Test Results GKP Data at Level Conditions**

<table>
<thead>
<tr>
<th>Null Hypothesis: PETANI has a unit root Exogenous: Constant Lag Length: 0 (Automatic - based on SIC, maxlag=10)</th>
<th>t-Statistic</th>
<th>Prob.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
<td>-3.866806</td>
<td>0.0040</td>
</tr>
<tr>
<td>Test critical values:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1% level</td>
<td>-3.546099</td>
<td></td>
</tr>
<tr>
<td>5% level</td>
<td>-2.911730</td>
<td></td>
</tr>
<tr>
<td>10% level</td>
<td>-2.593551</td>
<td></td>
</tr>
</tbody>
</table>


**Table 2 – Test Results of GKP Stationary Data on First Difference Conditions**

<table>
<thead>
<tr>
<th>Null Hypothesis: D(PETANI) has a unit root Exogenous: Constant Lag Length: 10 (Automatic - based on SIC, maxlag=10)</th>
<th>t-Statistic</th>
<th>Prob.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
<td>-9.187962</td>
<td>0.0000</td>
</tr>
<tr>
<td>Test critical values:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1% level</td>
<td>-3.574446</td>
<td></td>
</tr>
<tr>
<td>5% level</td>
<td>-2.923780</td>
<td></td>
</tr>
<tr>
<td>10% level</td>
<td>-2.599925</td>
<td></td>
</tr>
</tbody>
</table>


**Table 3 – Stationary Test Result of Rice Price Data at Level Condition**

<table>
<thead>
<tr>
<th>Null Hypothesis: KONSUMEN has a unit root Exogenous: Constant Lag Length: 1 (Automatic - based on SIC, maxlag=10)</th>
<th>t-Statistic</th>
<th>Prob.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
<td>0.277368</td>
<td>0.9751</td>
</tr>
<tr>
<td>Test critical values:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1% level</td>
<td>-3.548208</td>
<td></td>
</tr>
<tr>
<td>5% level</td>
<td>-2.912631</td>
<td></td>
</tr>
<tr>
<td>10% level</td>
<td>-2.594027</td>
<td></td>
</tr>
</tbody>
</table>

Based on the above table seen the test results that GKP price variable at the level of producers or farmers have stationer at level conditions. But the difference in value is very slim, therefore for the data to produce more accurate results then the data tested again at first difference level by used ADF test. The test results on these conditions are obtained as follows in Table 2.

Based on table 2 above, the test results obtained at first difference conditions obtained GKP price data has been stationary, meaning GKP price data there is no root unit. Furthermore, stationary testing using ADF test is also conducted on the price of rice at the retailer level. The results obtained are as follows in Table 3.

Based on the first test conducted on rice price data at the Retailer level at the level obtained the same results as the test conducted on GKP price data at the farm level, which is the data presented is not stationary. The next stage is done on the first difference test. The results obtained from the test can be seen in table 4 below.

### Table 4 – Stationer Test Results of Rice Price Data on First Difference Conditions

<table>
<thead>
<tr>
<th>Null Hypothesis: D(PETANI) has a unit root</th>
<th>Lag Length: 10 (Automatic - based on SIC, maxlag=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exogenous: Constant</td>
<td>t-Statistic</td>
</tr>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
<td>-9.187962</td>
</tr>
<tr>
<td>Test critical values:</td>
<td>Prob.*</td>
</tr>
<tr>
<td>1% level</td>
<td>0.0000</td>
</tr>
<tr>
<td>5% level</td>
<td>-3.574446</td>
</tr>
<tr>
<td>10% level</td>
<td>-2.923780</td>
</tr>
<tr>
<td></td>
<td>-2.599925</td>
</tr>
</tbody>
</table>


In the above conditions we can see that the value of ADF statistics is -9.187962. From the results of test data of rice prices at the consumer level is declared stationary. The data is declared stationary so the null hypothesis is rejected. Therefore the next step can be done next testing stage is cointegration test.

Cointegration Test. Cointegration test conducted in this research is cointegration Johanssen cointegration test. In this test seen from the value of trace statistic (TS) and max-eigenvalue statistic (ME) to t-statistic value. The results of the Johanssen cointegration test can be seen in the following table.

### Table 5 – Cointegration Test Results on GKP Price Data at Farmer Level and Rice Price at Consumer Level in Nagan Raya District

<table>
<thead>
<tr>
<th>Sample (adjusted): 460</th>
<th>Included observations: 57 after adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trend assumption: Linear deterministic trend</td>
<td>Series: KONSUMEN PETANI</td>
</tr>
<tr>
<td>Lags interval (in first differences): 1 to 2</td>
<td>Unrestricted Cointegration Rank Test (Trace)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hypothesized No. of CE(s)</th>
<th>Trace Eigenvalue</th>
<th>Trace Statistic</th>
<th>0.05 Critical Value</th>
<th>Prob.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>None *</td>
<td>0.399608</td>
<td>29.08649</td>
<td>15.49471</td>
<td>0.0003</td>
</tr>
<tr>
<td>At most 1</td>
<td>0.000117</td>
<td>0.006648</td>
<td>3.841466</td>
<td>0.9344</td>
</tr>
</tbody>
</table>

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values
From the table above cointegration test results can be explained that GKP price data and rice price data cointegrated, this means that both series of price data has a long-term equilibrium relationship. This is in line with Muhammad’s statement. M (2014) cointegration is one method to indicate the possibility of a long-term equilibrium relationship between the dependent variable and independent variable, but in the short term it can also not experience an equilibrium relationship.

Causality Test. The test of causality is done to find the causal relationship between variables that affect the change of other variables. Here is the result of causality test by used Granger test.

Table 6 – Result of Causality Test with Granger test method

<table>
<thead>
<tr>
<th>Null Hypothesis:</th>
<th>Obs</th>
<th>F-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PETANI does not Granger Cause KONSUMEN</td>
<td>58</td>
<td>4.83830</td>
<td>0.0117</td>
</tr>
<tr>
<td>KONSUMEN does not Granger Cause PETANI</td>
<td>1.85888</td>
<td>0.1659</td>
<td></td>
</tr>
</tbody>
</table>

From the test of causality it can be concluded that causality occurs only one direction. It means that only GKP price growth at the farm level affects the price of rice at the consumer level. However, if the price of rice increases, the price growth does not affect the price of GKP at the farm level. This statement is used with attention to Prastowo et al’s research (2008 in Yustiningsih, 2012) suggesting that rice prices at the consumer level tend to be stable unless there is a disruption from supply angle such as crop failure, distribution disturbance and rice import policy.

Asymmetric Model Test. Based on the results obtained shows that there is a difference in the speed of adjustment response between the price level of farmers with prices at consumer level. For rice price variable at consumer level at the time of the decline indicates that value is not significant while at the moment of change of price increase in two previous period showed significant value. This means that the rice price at the consumer level in the period t is only affected by the price of grain in the previous two periods, while the decline in grain prices in the previous two periods did not affect the price of rice at the consumer level in the period t. This is possible because rice sold to consumers by traders is old stock rice. In this case seen the existence of storage systems made by traders. So when there is a decrease in rice price one period before traders do not necessarily respond to price decline in period t. From the estimation of the above model can be seen ECT_plus and ECT_neg show the value of coefficient is negative value, meaning that the deviation that occurs will return the balance of equilibrium (wixson and katchova, 2012) where the coefficient value ECT_plus (-0.073308) is a condition of deviation above the equilibrium line when the price of GKP decreases at the farm level is not followed by the decline in rice prices at the consumer level. However, at certain time the rice price at the consumer level will follow the change of such deviation. The length of time of adjustment is after one month, this can be seen from the coefficient value ECT_plus. However, because the value is not significant then the deviation does not affect the rice price at the consumer level. While the value of ECT_neg (-0.010783) is a condition of deviation when it is below the equilibrium line mean when GKP price rises at a certain period rice price at consumer level does not experience change of increase but at a certain period of rice price will follow price increase of GKP. The length of time to adjust the price of rice to the consumer following the GKP price is more quickly responded than at the time of the price decline at the farmer level. It can be seen from ECT_neg coefficient value of -0.010783.

CONCLUSION
Based on the test that has been done then it can be concluded that the transmission price of GKP at the level of farmers with rice prices consumer level in Nagan Raya district is asymmetrical in the short term while in the long term is symmetrical. This can be seen from:

- The cointegration test shows that the trace value of statistic is greater than the value of the critical value at the 5% level, the GKP price data and the cointegrated rice price data, this means that in the long run the series of price data (GKP price at the farmer level with rice price at consumer level) long-term.
- The causality test shows the results obtained on the slowness 2 GKP price at the farm level affects the consumer rice price at α = 5%, but the rice price at the consumer level does not affect the price of GKP at the farm level. It means that causality occurs only one direction, namely the price of GKP that affects rice price at the consumer level.

REFERENCES

SCENARIO PLANNING TO INCREASE THE VALUE OF LOCAL AGRIBUSINESS COMMODITIES IN INDRAGIRI HILIR DISTRICT OF RIAU

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ABSTRACT
Indragiri Hilir District as the largest producer of coconut commodity on National and International scale has not been able to provide prosperity for the society whose 70% of economy depends on the sector. This is due to high complexity of existing problems. Therefore, this research used scenario planning concept with SRI method because the approach is able to accommodate the complexity and high uncertainty and is suitable for future decision-making. Data was collected through interview, observation, and secondary data to determine six stages of SRI, namely strategic decision, key decision factors and environmental forces by using macro analysis (SEPT) and micro (Five Forces Porter), the outputs later become inputs for making scenario logic, then described in details on strategy implications. This paper offers 4 alternative scenarios to increase the value of future coconut commodity Inhil Scintillating and Inhil Industry Growth as scenario optimization. While Inhil Challenging as a moderate scenario, Inhil Dreaming becomes the worst scenario for the sustainability of coconut industry in Inhil District.

KEY WORDS
Coconut, commodity, scenario, planning, SRI method.

The role of potential local resources in the era of regional autonomy development has a high urgency since it can be self-supporting for the region. Economic growth supported by regional superior commodities can be used as a tool for development of people in the region (Oktavia et al., 2016). One of sectors that has always become government's attention is agricultural / plantation sector, for its role in massive economic development (Dewi & Santoso, 2014).

The agricultural / plantation sector has become a matter of choice for a concurrently managed government based on principles of accountability, efficiency, and externalities, as well as national strategic interests. (Law Number 23 Year 2014). This is because the sector contributes greatly to the economy of society (Chalid, 2009; Oktavia et al., 2016). Hopewell (2014) conducted a study on agribusiness in Brazil, the Brazilian Government has made a development policy on the export-based agribusiness sector during the past two decades. The results show that Brazil was proved to be able to improve the economy of its people through agribusiness sector. A similar study conducted by Haggblade (2011) under the title of“Modernizing African Agribusiness: Reflections for the Future” reported that in the last 30 years, agribusiness sector of Africa was managed to improve the economy of community through the concept of upstream and downstream industry management.

The majority of the world's population earns their livelihood from the agricultural/plantation sector (Mardikanto & Soebiato, 2017: 55), likewise Indonesia as an agrarian country, where the majority of the population still relies on agricultural / plantation sector as the economic support. One of them is Inhil District where the contribution of GRDP is dominated by this sector, especially coconut commodity (Cocos nucifera). This condition is supported by the largest coconut production of Inhil District nationwide and worldwide by contributing about 82.15% to 13.14% national production (Outlook of coconut commodity, 2014).

Interestingly, the majority of ownership of coconut plantations in Inhil Districts under local community. This is supported by data suggesting that 70% of community economy
depends on the sector. Therefore, the region’s superior commodities (coconut) are expected to improve community economy through such agricultural/plantation sector. However, this condition is still far from expectations. This is because there are various problems in coconut commodities that occur in Inhil District, including: (1) oligopsony of coconut market so that the price of coconut is cheap, even more at farmer’s level; (2) price fluctuations; (3) about 100,000 hectares of plantations damaged by a faulty other three-water system, (4) a large number of old coconut plantations and pest-attacked coconut plantations. However, the most crucial issues are low coconut price and uncontrolled price fluctuations.

Considering these conditions, the Inhil District Government has several development policies/programs to overcome such existing problems, including (1) the three-water system program; (2) the coconut rejuvenation; (3) the promotion of potential regional excellence; (4) the implementation of Warehouse Receipt System (SRG); (5) the establishment of Regional Owned Enterprises (BUMD); and (6) the formation of Local Regulation Draft (Ranperda) of Coconut Trading System. However, among the policies/programs mentioned, only a few that are possibly implemented i.e. points 1, 2 and 3, even not optimally. Others are still in the planning process. This is due to the low commitment of Local Government, the dragging of good interests either from governments (Local Government and Regional Representative Council (DPRD) of Inhil District) and especially the interests of private parties (PT. Sambu Group, PT. Kokonako and PT. Inhil Sarimas).

Therefore, Inhil District Government is required to make acceleration in regional development planning to overcome the occurring conditions. This is because development basically aims to improve human welfare in the broad senses (Kartasasmita, in Mardikanto & Soebiato, 2017: 9). However, regional development planning is a development planning process intended to create a change towards a better development for community, government, and its environment in a certain region, by utilizing various existing resources. It must have an orientation that is comprehensive, complete, but still adhering to the principle of priority (Riyadi and Bratakusumah, 2004: 7).

Therefore, this study aims to formulate scenario that improves the value of coconut agribusiness commodity in Inhil District, in spite of the high complexity occurring. This study used scenario planning approach as "Tools of Analysis" since the approach is able to provide some effective alternatives, despite high uncertainties existing. Lindgren & Bandhold's (2003) suggested that the use of scenario planning is based on high uncertainty. Scenario planning is one approach or tool for conveying perceptions about future environmental alternatives for an appropriate decision (Peter Schwartz, 1991 quoted by Lindgren & Bandhold, 2003: 21). Scenarios are considered as a tool to better understand the strategic implications of uncertainty because they are consistent insight into what will happen in the future (Porter, 1994: 444).

Scenario planning has many methods however, this study, used the Standford Research Institute (SRI) method for its relevance to this study. In addition, SRI's approach has experienced to create scenarios to serve as a basis for decision-making and strategy (Ringland, 1998: 194).

**METHODS OF RESEARCH**

Scenario planning research is a study that uses a qualitative approach. Data analysis was conducted by utilizing SRI scenario method with 6 (six) steps, namely: strategic decision, key decision factors, environmental forces, scenario logic, scenario, and strategy implications. (Ringland, 1998). Analysis must comply with the rules of each stage. Firstly, in strategic decisions, as the name suggests, to make strategic decisions in increasing the value of local agribusiness commodities (coconut) in the future were determined by selecting a period of 25 years ahead. However, determining these strategic decisions should be based on the second step. Secondly, all key decision factors (major trend) were determined in the step of key decision factors (Ringland, 1998 & Kroneberg, 2000).

Next, the third step called external forces; is when external power analysis was done by looking at micro and macro conditions. Micro scale was analyzed using Porter’s competitive
forces analysis which includes competitors, suppliers, customers, substitutes and potential entrants (Porter, 1994). Meanwhile, for the macro scale, SEPT (Social, Economic, Political and Technological) was used. After that, the fourth step called scenario logic is conducted to group (low, medium, and high) uncertainties that have been identified in the previous step. Then, to reduce the number of uncertainties identified, an analysis method of causal-loop diagram was carried out to finally present 4 (four) scenarios of increasing the value of coconut commodity. Whereas, the fifth step scenario was done to describe or make a detailed description of the 4 scenarios that have been made in the previous step. Subsequently, decision implications are the last step, in which an implication analysis of each scenario (positive/ negative) on the strategic decision that has been set previously was conducted.

RESULTS AND DISCUSSION

The research found the fact that coconut plantations in Inhil District are approximately 429,694 hectares in width. However, a massive damage occurring in 100,254-hectare plantations as a result of a faulty in the water system (construction of embankment, normalization of ditch/ canal, and construction of gate valve) causes a decrease in the production of crops. Moreover, old coconut plantations and pest (beetle, pig, and monkey)-attacked coconut plantations were also noticed. As a matter of fact, the low and fluctuating prices of coconut in past decades has led people to not look after their plantations since the working costs and production threw them off-balance (lost). Accordingly, a drop in production of coconut in Inhil District occurs. In line with a study conducted by Muhi (2011), the seasonal condition of agricultural/ plantation sector productions and a phenomenon of the falling price of agricultural commodities (particularly during great harvest) have been latent problems which incredibly harm farmers. Furthermore, some of them are often unwilling to harvest their crops due to a higher cost spent on harvesting than what they could sell.

The research found the fact that coconut plantations in Inhil District are approximately 429,694 hectares in width. However, a massive damage occurring in 100,254-hectare plantations as a result of a faulty in the water system (construction of embankment, normalization of ditch/ canal, and construction of gate valve) causes a decrease in the production of crops. Moreover, old coconut plantations and pest (beetle, pig, and monkey)-attacked coconut plantations were also noticed. As a matter of fact, the low and fluctuating prices of coconut in past decades has led people to not look after their plantations since the working costs and production threw them off-balance (lost). Accordingly, a drop in production of coconut in Inhil District occurs. In line with a study conducted by Muhi (2011), the seasonal condition of agricultural/ plantation sector productions and a phenomenon of the falling price of agricultural commodities (particularly during great harvest) have been latent problems which incredibly harm farmers. Furthermore, some of them are often unwilling to harvest their crops due to a higher cost spent on harvesting than what they could sell.

The pricing issue in coconut plantation sector in Inhil District is indeed crucial since price is a determinant of success in trading. Moreover, people have not been able to process coconut-derived products (stem, leaf, fiber, shell, etc.) to add their economic value, rather still fixated on coconut flesh. Based on analysis of scenario planning using SRI method in order to improve the value of coconut commodity in Inhil District, there are 6 steps suggested as follows.

First Step: Strategic Decisions. The first step in the SRI scenario method is carrying out identification and description in details of the desired goals, as Mandel (1993) in Kroneberg (2007: 75) suggested. Therefore, we performed in-depth interviews with key informants, including Regent (as a policy maker) and related stakeholders, i.e. Development Planning Agency at Sub-National Level (Bappeda), Department of Trade and Industry (Disperindag), Department of Plantations (Disbun), Head of Commission II of Regional Representative Council (DRPD) of Inhil District, and community leaders to observe strategic decisions for coconut commodity in Inhil District. It was concluded from the interviews that all the related
stakeholders from regional government (executives), DPRD (legislatives), and community agree to formulate a strategy to improve the value of coconut commodity in Inhil District.

**Second Step: Key Decision Factors.** The second step is in which identification and review on which decisions that make up key decision factors to improve the value of coconut commodity in Inhil District were conducted. This step conforms to Ringland (1998:248) who questioned “what management would like to know about the future to make a better decision” and other experts, such as Mandel and Wilson (1993) in Kroneberg (2000:76) suggesting that “key decision factors are defined as the matters that decision-makers want more information about, in order to make a good strategic decision”.

To discover the key decision factors, identification and analysis based on 4 (four) approaches were carried out, i.e. (1) interview with informants, (2) review on legal product, (3) review on planning document, and (4) observation. According to data (primary and secondary) analysis, it was concluded that to date, there are strategies set by Regional Government of Inhil District to improve the value of coconut commodity in the region, including (1) the three water system program, (2) the coconut rejuvenation program, (3) the promotion of regional potentials, (4) the implementation of Warehouse Receipt System (SRG), (5) the establishment of regional-owned enterprise (BUMD) of Inhil District, and (6) Regional Regulation Draft of Coconut Trading System. In addition, formation of cooperatives at every village, formation of soft financial institutions, as well as opening investment opportunities for domestic and foreign investors become concerns of the regional government, as decision factors are aimed to facilitate identifying external and internal forces (environmental conditions) (Kroneberg 2000:76).

**Third Step: Environmental Forces.** Analysis on external environment conditions was carried out in this step, under the pretext that internal factors are those controlled by the organization, while external factors are those not controlled by the organization (Pfeffer & Salancik (1978) in Bryson, 2007: 62). By focusing on two categories, i.e. micro and macro forces (Ringland, 1998: 249-250), results from identification of key decision factors become a consideration in performing analysis on environmental forces, in which micro forces are analyzed based on Porte’s five competitive forces, which include competitors, suppliers, customers, substitutes, and potential entrants (Porter’s, 1980) through an emphasis on industries and markets (Ringland, 1998). Macro forces are analyzed using Social, Economic, Political, and Technological (SEPT) approaches (Ringland, 1998 & Bryson, 2007). According to the analysis on environmental forces, each trend, both macro and micro, in the improvement of coconut commodity value was found and presented in Figure 2.

**Fourth Step: Scenario logic.** Based on the analysis on environmental forces, uncertainties to improve the value of coconut commodity in Inhil District have been largely identified.
As suggested by Korneberg (2000), grouping of uncertainties according to their levels into impact/uncertainty matrices was done, so that high impact uncertainties which comprise of political stability, oligopsony local markets, regulation changes, and conditions of coconut product demand were found. Medium level uncertainty comprises of plantation damage, overseas buyers, fluctuating prices, and land over-function. The purpose of uncertainty matrices according to Porter (1994) is that free uncertainty is an appropriate foundation to construct a scenario as it is the true source of uncertainty. Nevertheless low uncertainties are considered after making assumptions for each free uncertainty, and therefore they are a part of each scenario. Consequently, a technique of causal loop diagram is employed to eliminate the low uncertainties. Based on the analysis of causal loop diagram, scenario alternatives to improve the value of coconut agribusiness commodity in Inhil District are presented in Figure 3. Conforming to Ogilvy (2002), a scenario does not determine one vision/goal, except for proposing some future alternatives.

**Fifth Step: Scenarios**

This stage is in which depicting or describing in details the 4 (four) scenarios that have been made previously are done, in addition to rationalizing how each scenario is run. Then, goals and strategies are determined in each scenario because strategy is a tool to achieve goals (Rangkuti, 2008: 3). Strategy is a tool to achieve corporate/ public goals, in relation to long-term goals, follow-up programs, and resource allocation priorities (Chandler, 1962 in Rangkuti, 2008: 3).

![Scenario Diagram](source: Processed Data, 2018)

**Scenario 1 Inhil Scintillating**
- High and stable coconut prices (not fluctuating);
- The increasing community’s revenue and Inhil Regency’s Regional Revenues (PAD);
- Provision of good infrastructure accesses to enable high interest of investors;
- Improvement of coconut productivity and competitiveness of coconut markets.

**Scenario 2 Inhil Challenging**
- Stable prices of coconut during great harvest;
- Improvement of coconut productivity;
- Community’s revenue and PAD not increasing dramatically;
- Insufficient infrastructure accesses leading to a low interest of investors.

**Scenario 3 Inhil Industry Growth**
- High and stable coconut prices (not fluctuating);
- The increasing PAD of Inhil Regency;
- Provision of good infrastructure accesses to create high interest of investors;
- The occurrence of coconut competitive market;
- The increasing community revenue to allow growth in other economic sectors.

**Scenario 4 Inhil Dreaming**
- Low and fluctuating coconut prices;
- Low contribution of plantation sector to PAD;
- An increase in poverty and unemployment levels;
- Weakening of other economic sectors;
- Investment widely open but the supporting infrastructures not provided leading to unproductivity, eventually.

**Figure 3 – Scenario logic of Improvement in The value of Coconut Commodity**

Scenario 1 Inhil Scintillating (High coconut commodity price, Active Local Government) is a long-term planning with a period of 1-25 years in the future for its suitability to long-term planning (Lindgren & Bandhold (2009), Ringland (2002) Porter (1994). Thus, to establish this scenario, the following stages are defined: (1) establishment of BUMDs managing upstream
and downstream industries (2) establishment of cooperatives in each village and provision of supporting facilities, (3) development of transportation access (land and sea) including port and telecommunication, innovation of investment service, and strengthening regional potential promotion, (4) strengthening regulations to support coconut agribusiness, and (5) improvement of program of three-water system and coconut rejuvenation.

Scenario 2 Inhil Challenging comprises of Low coconut commodity price and Active Local Government. Scenario 2 is a scenario for a mid-term period of 1-10 years ahead as Lindgren & Bandhold's (2009) suggested that scenario planning is also suitable to medium-term planning. Thus, to achieve this scenario, strategies required are: (1) the establishment of BUMD as a provider of copra warehouse receipt system (SRG) and the formation of cooperatives in each village and the provision of supporting facilities; (2) development of transportation access (land and sea), port, and telecommunication; (3) improvement of the three water system and coconut rejuvenation program; (4) innovation of investment service and strengthening promotion of regional potentials; and (5) strengthening regulations to support coconut agribusiness.

Scenario 3 called Inhil Industry Growth is long-term planning (similar to the second scenario) but High coconut commodity price and Passive Local Government. Therefore, it has strategies through: (1) development of transportation access (land and sea), ports, and telecommunication as well as innovation of investment services; (2) strengthening the promotion of regional potentials; (3) increasing the amount of investment of the coconut industry; (4) enhancing high local community participation; (5) strengthening regulations to support coconut agribusiness.

Scenario 4 called Inhil Dreaming is the worst scenario (existing condition) due to its Low coconut commodity price and Passive Local Government, where Inhil District government only has strategies that are: (1) improvement of water system three program; (2) rejuvenation of coconut plantations (3) investment service and promotion of regional potentials; and (4) strengthening regulations to support coconut agribusiness.

Strategies in the above scenario are very important to achieve competitive advantage (porter, 1985), in increasing the value of coconut commodity in Inhil District. Hence, each scenario can be categorized as in Figure 4.

**Figure 4 – Categorizing Future Scenarios**

**Sixth Step: Strategic Implication.** The last step of the SRI scenario analysis is that participants describe scenarios in sufficient details to identify decision implications and to help develop and assess strategy options (in a form of risk-reward assessment) Ringland (1998). The four scenarios certainly have different implications for the future of coconut agribusiness in Inhil District. The scenario "Inhil Scintillating" is considered scenario optimization because it can create coconut agribusiness survival with an emphasis on establishment of BUMD that manage upstream and downstream sectors of coconut. However, it requires a high commitment from the government and a considerable cost to implement. Scenario of "Inhil Industry Growth" is also considered as scenario optimization.
because it is able to make coconut industry survive in the future by emphasizing on the concept of Local Economic Development (LED) through optimizing the utilization of local resources that involve government, businesses, local communities, and civil society organizations to develop economies in a region (Blakely, 1994 & Adjji, 2011 in Saragih, 2015). However, the government’s role concentrates on accelerating the provision of supporting infrastructures for investment. Similarly said by Saragih (2015: 60), the role of local government is not limited to forming new business, but improving public services.

The "Inhil Challenging" scenario is considered a moderate scenario because if the scenario is implemented, there will be no significant change to coconut agribusiness in Inhil District. This is due to the emphasis on the implementation of SRG, whereas SRG has not been able to raise prices but keep the price fluctuating during great harvest and plummeted, eventually. Nevertheless, the commitment of Local Government is also profound for the provision of initial capital, Human Resources (SDM), and other supporting Infrastructure. Meanwhile, the scenario of "Inhil Dreaming" is classified into scenario "Pessimistic", meaning that if this condition continues to run, the future of coconut agribusiness in Inhil District will be getting worse.

CONCLUSION

The formulation of SRI scenario produced 4 alternative scenarios: Inhil Scintillating, Inhil Challenging, Inhil Industry Growth, and Inhil Dreaming. Scenarios 1 and 3, however, are scenario optimization for the future of coconut agribusiness, which is destined for long-term planning. Meanwhile, scenario 2 becomes an option for medium-term planning for its scenario moderate. However scenario 4 is the worst scenario for the future of coconut agribusiness in Inhil District.

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SOCIAL IMPACT OF TOURISM DEVELOPMENT: A STUDY IN GUBUGKLAKAH TOURISM VILLAGE, INDONESIA

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ABSTRACT
Tourism is one of four biggest resource of Indonesian income. The development of Indonesian tourism business is rapid. However, there are both positive and negative impacts behind the rapid development of the business, whether in its social, economic, culture, and safety field. This research is conducted in order to identify the social impact of tourism development in Gubugklakah Tourism Village Malang, Indonesia. The method used in this research was qualitative with descriptive approach. The data were collected through interview using purposive and snowball sampling to determine the respondents. The result of this research shows that there are both positive and negative in social field from the tourism development in Gubugklakah. The positive impact is teenager’s delinquency can be directed to a more productive activity. Meanwhile, the negative impact is the environment is disturbed such as voice pollution, trash, and the decrease of original culture of the village rubbed down by the tourists.

KEY WORDS
Tourism, development, policies, business, income.

The increasing of tourism development or tourist visit can cause both positive and negative impact and the objects of the impact are usually the people, environment, economic, and social field (Lenner in “Tourism: Social, Economic, Environment Impacts”, accessed from www.jurnal-sdm.blogspot.com). The development of tourism will have a huge and significant impact toward the economic development, the effort of natural resource and environment conservation, and the social and cultural life of local people. The development of tourism will contribute to the regional income as it will open more business and vocation opportunities, and also function to guard and conserve natural and biological diversity. Tourism development is also one of the general development sectors so it is relevant if the development of the tourism is adjusted the regional potential. The development of tourism is expected to positively influence for the living of local people and encourage other sectors development such as economic, social, and culture field.

The tourism in Gubugklakah, Malang, East Java of Indonesia is a business that is well and professionally managed. According to Purmada (2016) Gubugklakah tourism village has implied community based tourism (CBT) perspective in its management which involves the active role of local people. Department of Tourism Village (Lembaga Desa Wisata/Ladesta) of Gubugklakah is one of the management aspects that sets local people or CBT forward, and to keep its existence in business there should be a good management and strategy to run this business. The local people of Gubugklakah Tourism Village (Desa Wisata Gubugklakah/DWG) who used to work only in agriculture sector, today they start to work in tourism sector. Tourism activity in Gubugklakah Tourism Village is held and managed by a community called Pokdarwis (kelompok sadar wisata) or Ladesta of Gubugklakah. By the development of tourism it has several impacts especially in social field. Therefore, the purpose of this research is to describe the social impact happens to the local people of Gubugklakah as the result of tourism development in that area.

LITERATURE REVIEW
Tourism development is a series of efforts to build cohesiveness in the usage of many tourism resources, integrating many aspects outside the tourism which directly or indirectly related toward the existence of tourism development (Swarbrooke 1996).
According to Pendit (2009:128) local people and their culture tend to change as a result of the existence of tourism site in the area. The impact of tourism toward social cultural living is mainly to answer three main questions, they are: what is the characteristics of interaction between the tourist and local people (host-guest), how tourism change local people and culture, and does the change give advantage or harm toward the host.

Cohen (in Hirawan 2008) explained social impact of tourism which is classified into ten main categories as follows:

1. The impact toward relationship and involvement of local people and the wider people, including the level of autonomy and dependency;
2. The impact toward interpersonal relationship among individuals;
3. The impact toward social organization/department foundation;
4. The impact toward migration into and from the tourism area;
5. The impact toward the rhythm of local people social life;
6. The impact toward work distribution pattern;
7. The impact toward social stratification and mobility;
8. The impact toward power and influence distribution;
9. The impact toward the increasing of social deviations;
10. The impact toward art and culture field.

Meanwhile, according to Richardson and Fluker (2004) the impacts of tourism toward the socio-cultural life in the tourism area are as follows:

*The impact toward population structure*. The increasing of tourism activity in an area needs personnel to run the business and to provide the service needed by the tourism. Some of them maybe come from local who decides to change their profession from another sector to tourism sector. Others may decide to stay live in its surrounding area although they are not recruited to work in the tourism sector rather than moving to other place because of the limited opportunity. Another possibility is the coming of people from another region to work in the area because of the tourism.

*Transformation of livelihood structure*. It has to be admitted that the opportunity to work in tourism sector has several benefits compared to other sector. It will suddenly attract people’s interest from other job and region to move closer to tourism sector. Some regions where most of the people generally work in agricultural sector are soon to face challenge. There will be job and employee transformation from agricultural sector to tourism sector. Some types of profession which do not need special skill in tourism sector such as gardener, cleaning service, house-keeping, and the like will attract housewives or agricultural worker to join. The characteristic of tourism which is seasonal sometimes socially affect local people who are happened to work in tourism sector.

*Tranformation of value*. The increasing of population because of the new comer with different attitude will cause value interference in the tourism area. The impact of tourism toward the value in the area is more because the influence of the tourist rather that the influence of tourism worker who comes from other region. The transformation of value can be as follows:

- Demonstration effect;
- Marginalization;
- Culture commodification.

*The impact toward daily life*. Beside its impact toward values and the way people think, tourism also cause problem for local people which affect the way they act in their daily life.

Based on previous explanation there are two kinds of impact appear from the development of tourism, they are positive and negative impact. The impact can be direct or indirect. In general, the development of tourism affects the economic, social, religion, and culture.

**METHODS OF RESEARCH**

This research used descriptive qualitative method. The data were collecting using in-depth interview technique. The respondents were determined using snowball sampling with
the head of the village as key informant which was purposively chosen. The data were processed using data triangulation technique.

RESULTS AND DISCUSSION

The impact of tourism toward social cultural living is mainly to answer three main questions, they are: what is the characteristics of interaction between the tourist and local people (host-guest), how tourism change local people and culture, and does the change give advantage or harm toward the host. Tourism development in Gubugklakah Tourism Village influences its social field. It also contributes both positive and negative values. The positive values occur because of tourism activity is that teenagers delinquency can be directed into more positive activity that is tourism itself. However, there are also negative effects of the tourism such as the traffic becomes more crowded which causes sound and air pollution, while in the social aspect tourism development affect the rusticity character and local culture started to fade also the mindset of local people turns to be material oriented.

According to Pendid (2009:128) local people and their culture tend to change as a result of the existence of tourism site in the area. The impact of tourism toward social cultural living is mainly to answer three main questions, they are: what is the characteristics of interaction between the tourist and local people (host-guest), how tourism change local people and culture, and does the change give advantage or harm toward the host. Cohen (1995) explained social impact of tourism which is classified into ten main categories as follows: the impact toward relationship and involvement of local people and the wider people, including the level of autonomy and dependency; the impact toward interpersonal relationship among individuals; the impact toward social organization/department foundation; the impact toward migration into and from the tourism area; the impact toward the rhythm of local people social life; the impact toward work distribution pattern; the impact toward social stratification and mobility; the impact toward power and influence distribution; the impact toward the increasing of social deviations; the impact toward art and culture field.

Tourism development in Gubugklakah Tourism Village influences its social field. It also contributes both positive and negative values.

Positive Impact. The positive value of tourism activity is that teenager’s delinquency can be minimalized and directed into more positive activity that is the tourism itself. Those teenagers who are previously unemployment after they are graduated, they have a new activity which is serving the guests. Those teenagers are even accommodated in a community named Lembaga Desa Wisata (LADESTA) of Gubugklakah. This community is responsible for coordinating the teenagers in serving the guests. There is always new guest comes everyday so they do not have time to be directed into negative activity (such as drugs, alcoholic drink, etc.).

Besides, the village institutional becomes stronger. The village’s officer does not expect any negative effect from the tourist who comes frequently. This institutional is functioned to solve the problem which is feared to happen. Those institutional are Security, Village's Welfare Department (badan kesejahteraan desa), Tourism Village Department (lembaga desa wisata), etc.

Work distribution also changes to be more positive. There is certain section for providing medium and infrastructure to support the activity so there will not be income accumulation for those who has bigger financial support. Who those with good financial support, they are allowed to build homestay and vehicle rent (car/hardtop). Meanwhile, for those who are not supported financially, they can work as tour guide, driver, or tourism destination organizer (such as organizing animal farm for tourism destination).

Negative Impact. It is not only positive impact happens as the result of tourism development in Gubugklakah, but also negative effect toward its social live; for example, the traffic becomes more crowded which causes sound and air pollution. Gubugklakah used to be a quiet and peaceful village without any vehicle passing by the village. Since it is proclaimed as a tourism village, and there are more visitors come in the condition of this.
village becomes more crowded and noisy especially in holiday. Big and small vehicles are coming in which do not balance the condition of the small road of the village.

And then for the social side that is the rusticity and local culture started to fade and people’s mindset tends to be material oriented. The fading rusticity and local culture becomes certain harm for tourism development because the tourist are coming with their culture, it of course affects the local culture and triggers foreign cultures’ imitation or adaptation. This condition also triggers awareness in the tourism development toward the negative social impact such as free sex and drugs distribution. These negative impacts also become obstacle for the tourism development. The obstacle can be people’s mindset which is already influenced by the tourist culture that causes the change of local culture. This condition will make the local wisdoms disappear as the result of cultural intercourse between local people and the tourist. The awareness of social negative impact such as free sex and drugs distribution also becomes an obstacle in the tourism development because Gubugklakah Tourism Village still does not have any plan to minimalize or wipe off the negative effect. Therefore the implication of tourism development is still conducted in a simple way without mature planning.

Tourism activity can trigger negative impact toward the social and environmental sector if it is not managed well such as a mound of trash which is the result of tourism activity. It also becomes an example of carelessly trashing that cause dirty view. It is possibly from each individual whether it is the tourist or the local people. Therefore, it needs sanitation education for both tourist and local people in the process of tourism development.

CONCLUSION AND SUGGESTIONS

The fading rusticity and local culture becomes certain harm for tourism development because the tourist are coming with their culture, it of course affects the local culture and triggers foreign cultures’ imitation or adaptation. This condition also triggers awareness in the tourism development toward the negative social impact such as free sex and drugs distribution. These negative impacts also become obstacle for the tourism development. The obstacle can be people’s mindset which is already influenced by the tourist culture that causes the change of local culture. This condition will make the local wisdoms disappear as the result of cultural intercourse between local people and the tourist. The awareness of social negative impact such as free sex and drugs distribution also becomes an obstacle in the tourism development because Gubugklakah Tourism Village still does not have any plan to minimalize or wipe off the negative effect. Therefore the implication of tourism development is still conducted in a simple way without mature planning.

Optimizing the involvement local people in Gubugklakah Tourism Village is expected to make them are able to become fully independent tourism people and are able to move and develop the tourism through their own idea, tradition, and potential as a local wisdom so they are not depended on the government anymore. The people are expected to be able to select foreign culture which is possible to acculturate with local culture without wiping out the local wisdom. The next researcher can conduct a study of the impact of tourism development in Gubugklakah Tourism Village. Besides, there can be a study about a strategy making of tourism development in Gubugklakah Tourism Village or a study about tourism business competitiveness of in Gubugklakah Tourism Village in the effort to increase local people’s well-being.

REFERENCES

THE ANALYSIS OF BAD CREDITS ON GENERAL SERVICE AGENCY (BLUD) MICROCREDIT «HARUM» IN KENDARI, INDONESIA

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ABSTRACT
This research is motivated by a number of bad credits that occurred in the General Services Agency (BLUD) Microcredit «Harum» in Kendari. The purpose of this study is to determine the factors that cause bad credit. The research used a qualitative approach by taking informants from managers (managers and field employees). The results showed that the factors causing bad credit are: the customer moved the different address; business does not run smoothly or bankrupt; the marketing / surveyor only chase bonus; no coordination between husband / wife; death, and limited number of employees.

KEY WORDS
Credit, microcredit, bank system, market, finance policy.

Microfinance is a pretty important instrument for job creation, income enhancement, and poverty reduction. An access to financial services for micro and small enterprises is a precondition to improve a business. Some of the things underlying the fact that microfinance is important are due to the number of perpetrators of microenterprises in Indonesia. In 2004, out of the total business units that existed in Indonesia, 98.5% or 41.8 million units of it are micro enterprises (Ismawan and Budiantoro, 2005). Furthermore, the microenterprise has limited financial resources for its micro attribute and small capital. Micro enterprises also do not have a legal body and some are still managed traditionally so that this sector is not touched by the service of formal financial institutions (banks) that always apply the principle of banking to decide the credit (Sumodiningrat, 2003).

Based on the data of the Central Bureau of Statistics (2014), of the whole micro and small enterprises, there was 73.01% of micro and small enterprises which experience a difficulty. The great difficulty experienced by small and micro enterprises is in the capital which is about 38.3%. Then, about 25.02% of the difficulties encountered are on the issue of raw materials and 21.3% are on marketing.

Microfinance (microcredit) has a very important role in economic development. Credit loans can encourage the small and micro enterprises to make investments or to adopt new technologies. Microcredit is considered important, both from the Government side as well as from the side of the businessmen who need credit. From the side of the Government, microcredit can be used as a tool to drive the economic level of the society through micro enterprises. Credit loans will give an impact on business, as for example, the increase in the purchase of inputs or the use of new technologies that can improve the outputs. The increasing outputs and sales will increase further profits. Moreover, it is possible to create an employment due to the additional working capital or investment. In wider impact, this can increase the economic activity of the community. Microcredit is very important for the Government to improve the welfare of the community.

It is also considered very important from the side of the microcredit user because entrepreneurs are experiencing capital barriers to make new investments or to change technologies. Without microcredit, entrepreneurs will have difficulty in developing the business. Generally, micro-entrepreneurs do not have the financial capability to do business development.

Microcredit is not only important for the development of micro-enterprises but also for entrepreneurs who have financial constraints and limited access to formal financial institutions. For that reason, this credit is designed in such a way to make low-income communities get credit loans in formal financial institutions more easily as to have flexible requirements for the loans.
Because of microcredit is essentially reserved for microenterprises conducted by the poor society, it is clear that these credits provide a great role in poverty reduction. Robinson (2001) pointed out that poverty reduction can be accomplished through many means and programs including food, health program, settlement, education, family planning, and micro financial services. Loan in the form of microcredit is one powerful way to cope with poverty.

The role of the Government to improve the standard of living of the poor community is urgently needed. It can be in the form of food program, job creation, and subsidies. Meanwhile, for the poor society which still has economic activities and for the people who have low incomes, it is more appropriate to approach them with the provision of microfinance services (Robinson (2001), Setiawan (2011)).

By that, Kendari City Government is considered to do the right steps by forming a special agency that specifically channels microcredit. The agency is known as General Service Agency (Badan Layanan Umum Daerah or BLUD) Microcredit "HARUM". This was established with the purpose to (1) Improve the services to the community in order to realize the tasks of the Government in advancing the common welfare and intellectual life of the nation; (2) Provide public services more effectively and efficiently which are in line with healthy business practices; and (3) Realize independent micro and small retail merchants.

The agency was formed in 2008 and has experienced significant development. Until 2014, it has served 28,952 clients with the total of fund IDR 48,740,000,000,-.

![Figure 1 – The development of the clients in BLUD Microcredit Kendari](image1)

![Figure 2 – The Development Distributed Funds (In Million Rupiahs)](image2)

The highest achievement experienced by BLUD Microcredit "Harum" was achieved in 2012 and 2013. In 2012, the number of clients served was 6,452 with the total of fund IDR 8,611,000,000,-. Meanwhile, the clients served in 2013 were slightly decreased to 4,261 clients but the flow of funds reached IDR 9,387,000,000,-.

The amount of funds has increased since the beginning of the establishment until 2013. At the beginning of the formation, BLUD Microcredit “Harum” of Kendari was already able to distribute funds as much as IDR 1,452,000,000,-. This gives an idea that the needs to increase the capital of the community are relatively large. On the second year, there was a very significant growth which reached 382.75%.
reached the highest position on the sixth year of its operation as much as IDR 9,387,000,000.-

Although it has a fairly good performance especially in the early days of its establishment, BLUD Microcredit “Harum” began to experience a decrease in the performance since 2014. This was caused by a large number of bad credit. To date, the number of clients that fall into the category of bad credit is 2,448 clients (Maret, 2017). On the other hand, the number of stalled loan is IDR 1,295,644,000,- (Maret, 2017).

BLUD Microcredit “Harum” make a category for bad credit. The bad credit is classified into 3 (three) categories such as loans with a term of 3 to 5 years categorized as stalled, 1 to 3 years categorized as sluggish, and 0 to 1 year categorized as active. Of the total loans of IDR 1,295,644,000,-, most of the loans are in the period of 3 to 5 years (IDR 602,365,000,-) so that it can be categorized as stalled credit/loan. Whereas, the loans categorized as sluggish are in the period of 1 to 3 years as much as IDR 368,257,000,-.

<table>
<thead>
<tr>
<th>Maturity (Years)</th>
<th>Total (IDR)</th>
<th>Timeframe (Years)</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008, 2009, 2010, 2011</td>
<td>602,365,000</td>
<td>Above 5 Years</td>
<td>Stalled</td>
</tr>
<tr>
<td>2012, 2013</td>
<td>368,257,000</td>
<td>3 - 5 Years</td>
<td>Sluggish</td>
</tr>
<tr>
<td>2014, 2015</td>
<td>325,022,000</td>
<td>1 - 3 Years</td>
<td>Active</td>
</tr>
<tr>
<td>Total of Debt</td>
<td>1,295,644,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: BLUD Microcredit Kendari, processed data (2017).

The number of bad credit that occurred on BLUD Microcredit “Harum” is a quite interesting issue to be researched so that it could give a way out for the improvement of the institution in the future.

This research was motivated by many bad credits at BLUD Microcredit “Harum” in Kendari. The purpose of this research is to know the factors causing the occurrence of bad credit.

METHODS OF RESEARCH

This research was implemented at BLUD Microcredit “Harum” in Kendari with the consideration that this agency is the only institution that serves microcredit on small and micro enterprises without any collateral. In addition, it is also the only microcredit institution established by Kendari City Government.

Selection and Determination of the Informant. Qualitative research emphasizes the amount of information rather than the number of informants. Therefore, the number of informants is not questioned as long as the information obtained is considered sufficient and valid (Fatchan, 2011). To get accurate and valid information, the selected informants should know the incident or event well. Informants who experience or do an activity are the source of information that is quite accurate. The research’s informants are the Manager which consists of the leaders and employees (surveyors).

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Occupation</th>
<th>Year of Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Drs. Askin, BC. Ku.</td>
<td>Chairman of Enterprise Construction &amp; Development</td>
<td>2013</td>
</tr>
<tr>
<td>2</td>
<td>Manser</td>
<td>The staff of Enterprise Construction &amp; Development</td>
<td>2008</td>
</tr>
<tr>
<td>3</td>
<td>Sulasman</td>
<td>Staff of Enterprise Construction &amp; Development</td>
<td>2009</td>
</tr>
</tbody>
</table>

These are the description of the informants selected in this study;

Drs. Askin, BC. Ku (first informant). He was a pensionary civil servants of Kendari and began working at BLUD Microcredit “Harum” of Kendari in 2013 as a surveyor. His tasks were looking for a customer, surveying the customer's feasibility prior to the loan distribution, and collecting the debts of the customers.

Currently, he is as the Chairman of Enterprise Construction & Development since 2016. In everyday life, he is the leader who always available in the office so that he knows
every issues or event occurred. In addition, in some national and local meetings, he attends the occasions as a representative of BLUD Microcredit “Harum” of Kendari.

The researchers conducted interviews with him for two times. The first interview took place on 5 September 2017 and the second was on 6 September 2017 at BLUD Microcredit “Harum” of Kendari. The interview was done in a relaxed and friendly environment. Besides that, he is already quite familiar with one of the research team so that the interview process was relatively more conducive and communicative.

**Manser (second informant).** He started working in BLUD Microcredit “Harum” of Kendari since 2008 or since the establishment of the agency as a surveyor. His tasks were looking for a customer, surveying the customer's feasibility prior to the loan distribution, and collecting the debts of the customers.

He is considered as a fairly senior employee and had quite a lot of work experience. Up to this point, he is recorded as one of the surveyors who have most clients by 500 people. Of the many clients who became his recruits, he has around 40 clients that belong to a sluggish credit.

The interview was conducted for two times. The first interview was held on 5 September 2017 and the second was on 6 September 2017 at BLUD Microcredit “Harum” of Kendari. The interview was relaxed and friendly. He was selected as an informant because of the recommendation from the first informant (Drs. Askin, BC. Ku).

**Sulasman (third informant).** He started working in BLUD Microcredit “Harum” of Kendari in 2009 as a surveyor. His tasks were looking for a customer, surveying the customer's feasibility prior to the loan distribution, and collecting the debts of the customers.

He is considered as a fairly senior employee and had quite a lot of work experience. To date, he is recorded as a surveyor who has the most clients which are ± 600 people. A large number of clients reflect him as an active worker who has a quite experience in performing the tasks in BLUD Microcredit “Harum” of Kendari.

The interview was carried out one time on 6 September 2017 at BLUD Microcredit “Harum” of Kendari. The interview was conducted in a relaxed and friendly environment. He was selected as an informant because of the recommendations from the first informant (Drs. Askin, BC. Ku and Manser (second informant).

The data and information needed in this study were collected through several methods, including:

- **Observations**, (before and after the interview): researchers were in the environment of the research and tried to understand the situation and condition of the research object. This was done before the interview. Whereas, the observations made after the interview is intended to verify the information revealed by the informant with the real conditions in the field (triangular).

- The **in-depth interviews** were conducted with the semi-structured and non-structured interview. The duration of this interview was customized based on the situations and condition of the informants. In fact, the interview took place for 30 to 90 minutes. Some instruments were used in the interview, such as tape recorders, cameras, and notebook.

- **Documentation**; collects various data from BLUD, Government, and other reliable sources.

In order to ensure the quality of the data, a test was performed by several criteria as has been said by Lincoln and Guba (1985) in Fatchan (2013):

- **The researchers performed data triangulation in several ways:** *First*, to compare the observations data with the results of the interview, when there is a mismatch between the statements of the informants and the reality, the researchers will ask the informant over and over again to obtain a completely valid and accurate information. *Second*, in comparison of informant’s understanding and other understanding (not the informant), if the researchers found that there were differences in the statements, there will be a confirmation to the informants concerned.

The data was analyzed by interactive techniques adopted from Miles and Huberman (1992). The interactive model is done with three stages of analysis, such as:
1. Data Reduction. Conducting the process of data election, selection, simplification, and grouping whether it is the result of observations or interviews. Next, do the coding of data and make the summary of the themes relevant to the focus of the research so that the data which are not relevant to the focus of the research will be removed.

2. Data presentation. The process of information organization and description in the form of narrative text, matrices, graphs, charts, or network.

3. Drawing conclusion.

RESULTS OF STUDY

The Condition of the Organization and Human Resources. There are 25 employees in BLUD Microcredit “Harum” of Kendari. This consists of 3 leaders and 22 staff who are divided into 4 financial staff, 5 administrative staff, and 14 business construction and development staff.

The big number of employees or staff in the division of business construction and development is caused by the condition that there is two classifications such as administrative division and field division. The field division is the employees placed at the “front area” of BLUD Microcredit “Harum” of Kendari. The employees who work in the field or more popularly known as surveyor have the tasks to find, survey, and charge the customer. As the "front area", it is reasonable that this division has a number of employees. The purpose of BLUD Microcredit “Harum” is to serve small merchants who are not familiar with credit providers so that this division needs employees to work directly from home to home (door to door).

The Process and Mechanism of Customer Service. BLUD Microcredit “Harum” of Kendari has implemented a good enough service and concept to facilitate the customers in channeling the loans. The concept used is tanggung renteng which means that some potential clients will make a group and then they will choose the leader of the group.

![Diagram of Loan Distribution Process in BLUD Microcredit “Harum” of Kendari](Figure 1)

Each member has to form at least three people and a maximum of 5 to make a group. In practice, a prospective client will look for another potential customer to form a group. Usually, the member of the group is relatives, neighbors, or family. This condition is quite helpful because they know each other thus making it possible to have a good communication and trust between them.

Each group must have a leader and should be elected by the members of the group. The task of the leader is to ensure that the members of the group have the ability and will to succeed in a revolving fund on BLUD Microcredit “Harum” of Kendari. If there is a stalled payment, the leader should play an active role in the process of the payment.
If there are members of the group who failed to pay and the loan turned into bad credit, there will be a forum conducted by the group leader and members as well as BLUD surveyors. The group leader and members will try to help the payment or repayment in some cases, but, the quantity or amount of the participation is voluntary.

The member who failed to pay is going to get the sanctions or be removed from the group if the group want to continue or open a new loan.

Terms, Time, and the Number of Loans. Each group member or potential customer must complete some files (documents) which are a requirement from BLUD Microcredit “Harum” of Kendari. The files that have to be met are relatively simple, including: copy of ID Card of Kendari; copy of Family Card of Kendari; photograph of the Applicant; Has a business.

Seen from the requirement to become a client, it can be said that nearly every small merchants are eligible to apply for a loan so that the enthusiasm of the small merchants to get capital loans is relatively very high.

The number of loans disbursed by BLUD Microcredit “Harum” of Kendari is relatively limited to each member of the customer. The number of funds will depend on the amount of disbursement or disbursements stages which have been passed.

The amount of funds which will be obtained by any member of the group at the first disbursement is IDR 500,000 (five hundred thousand rupiahs) for each member and will increase on the second disbursement and so on. However, the requirement to obtain the second disbursement is that all members of the group must have paid the first loan. On the second disbursement, each member will get IDR 1,000,000,- for the loan.

Then, in the next disbursement or the third round, each member will get IDR 1,500,000,-. Of course, the same terms still apply to all members of the group. The amount of fund for any subsequent disbursement on the next round will be increased to IDR 500,000,-.

The repayment of the loan has been assigned for 100 days (applies to all round of disbursement). This means that when the loan is IDR 500,000,- every client will pay daily for IDR 5,000,-. However, due to the factor of efficiency and effectiveness, the repayment becomes flexible based on the deal made between group members or clients with the surveyors. In general, the customer will pay 14 times or every 2 weeks.

In addition to the loan, the clients must pay services. The charge of the service is IDR 28,000,- for each disbursement in the first stage. This charge will increase along with the amount of the loan.

DISCUSSION OF RESULTS

Based on the results of observation and in-depth interviews, the researchers found some reasons causing the occurrence of bad credit on BLUD Microcredit “Harum” of Kendari, namely:

The Customer Moved Its Address. The first reason that contributes to the occurrence of bad credit is the fact that the client cannot be found at the address listed in the ID Card submitted. This is because they still use manual ID Card (non-electric and not national).

The changing of the customer’s address after making loan becomes the barrier of the BLUD employees to collect the debts. Customer’s new address is not reachable for the BLUD employees.

The Business Went Bankrupt. The other factor that caused the occurrence of bad credit on BLUD Microcredit “Harum” of Kendari is the condition that some businesses experience a loss and some customers went bankrupt.

The customers have difficulty to pay the loan along with the business that went down. The business is the only source of income for them so that there is no other alternative to pay the loan.

Marketing/Surveyor Pursue Target Customer. BLUD Microcredit “Harum” of Kendari in increasing the motivation of “marketing” also implemented the system of bonuses to those who are able to recruit customers. A growing number of clients will generate a greater bonus for the recruiters. As a microcredit agency which was formed in 2008, this requires a hard work from the "marketing" in the field so that the presence of BLUD Microcredit “Harum” of
Kendari can be felt by the community particularly poor society which becomes the target of this agency.

One measure of performance of this agency is a large number of clients and loans disbursed. Therefore, the "marketing" infield will compete to get new customers because it is an accomplishment for the individuals and organization.

On the other hand, "marketing" in recruiting clients tends to be less careful so that the survey of the appropriateness of potential customers did not go well. "Marketing" tends to be permissive in the circumstances or conditions of the customers because it emphasized more on the recruitment.

*There is No Coordination between the Husband/Wife.* The coordination between husband and wife in BLUD Microcredit “Harum” of Kendari also contributes to the occurrence of bad credit. In some cases, the husband or wife of the customer refused to know the existence of the loan they had. When the period of the loan has come to an end and the BLUD employees come to collect the debts, the husband or wife of the customer rejected it because they admit that they have no idea about the loans.

*Death.* The other factor which caused bad credit is death. Most clients had passed away so that the loans can no longer be paid. BLUD Microcredit “Harum” of Kendari in disbursing the loans did not recognize the existence of the insurance listed either on financial institutions and other nonfinancial institutions. In addition, BLUD does not distinguish the existence of debts delegation on heirs so that when a client dies, the loan will be jammed.

*The Limited Number of Employees of BLUD Microcredit “Harum” of Kendari.* The limited number of employees is one of the problems faced by the agency. The employees on the field or known as surveyors have an excessive workload. Surveyors who work in the field tend to be "self-employed" so that all information about a customer is only sourced from the surveyor. For example, on some financial or non-financial companies engaged in the business of credit, the surveys for customer worthiness have several layers and stages. The marketing and surveyor also being separated.

The number of customers handled by a surveyor also has the potential to make the surveyor less careful in performing the observation and verification in the field. As a single source of information, surveyors should have deep information about the prospective customer so that the information obtained is valid and accurate.

**CONCLUSION**

The factors causing the occurrence of bad credit on BLUD Microcredit “Harum” of Kendari are 1. The customer has moved its address, 2. The business went bankrupt, 3. The marketing/surveyors pursue bonus, 4. No coordination between husband and wife, 5. Death, and 6. The limited number of employees.

**REFERENCES**

THE CONSTRUCTION OF SHARIA MANAGEMENT ACCOUNTING OBJECTIVES: REACHING LIQAA-A RABB AND MAQASHID SYARIAH

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ABSTRACT
This study aims to construct the concept of Sharia Management Accounting (ShMA) objectives as an alternative to the conventional Management Accounting whose values are not always compatible with Moslem entrepreneurs. The Entrepreneurs need an information system which contains Islamic values namely ShMA. This study uses a qualitative approach through data identified from Islamic values from studying the Qur'an, hadiths and other Islamic literatures as well as interviews with informants. Under zikr, prayer, contemplation and analytical methods researchers come into a construction that the objectives of ShMA are essentially to help assist entrepreneurs in the provision and use of information that can allow to achieve the ultimate goals of life, namely liqaa-a rabb (“meeting” with God) and operational objectives of moamalah, maqashid syariah (sharia objective).

KEY WORDS
Management, accounting, Sharia, Liqaa-a rabb, Maqashid Syariah.

This study deals with the objectives of Sharia Management Accounting (ShMA) or concretely to answer the question what are the objectives of ShMA for further development? Compared to sharia-based financial accounting practices, ShMA is less prevalent. Previous studies proposed the techniques of management accounting (MA) in the perspective of Islam to determine the best method to apply (Abdul-Baki, Uthman, Olanrewaju, & Ibrahim, 2013). Another study was conducted to review the information obtained from the MA system in both conventional and sharia-based financial institution (Rasid, Rahman, & Ismail, 2011). However, their ideas had not yet tapped on the specific insights in constructing the objectives of ShMA. This concept is regarded as the key point in determining the orientation of the development and the practice of ShMA. The objectives and the direction of MA and ShMA are slightly different which urged the researchers to identify the real intentions of ShMA.

The history of MA has started since the 18 century, and MA has been growing in line with the growth of science and business (Juras, 2014; Kaplan, 1984; Waweru, 2010). At present, MA has been quite useful for business operational necessities. MA holds a vital role in simple practices up to strategic of business (Ferrara, 2007). Similar to other types of accounting, MA has two effects toward the environment in which MA is formed by the environment, and it creates the environment at the same time (Triyuwono, 2000). The intensive interaction allows MA to give the significant contribution to any users' behavioral changes (Covaleski, Evans, Luft, & Shields, 2003). Thus, MA as a body of knowledge and as a practice is always bounded to certain values (Triyuwono, 2004, 2006). Consequently, MA appears as a facility which implementation is influenced by certain values in it.

Seen from the evolution, it can be said that MA developed on the basis of Western-Modern values since MA rapidly grows in western countries (Triyuwono, 2004, 2006). Internalization of certain values is a normal process as the result of the advancement of science (technology), and it brings specific characteristics as stated by Sardar (1998) that technology carries values from the place of origin which might be transferred to where it is
applied. Western-modern science and knowledge has been known to solve various problems, but claims for its advantages do not diminish its weaknesses, whose fundamental values do not always correspond to their place of application, as in the Islamic community. As the part of the system of information in a company, MA holds a key role. The MA is in the practice of human greed in running a business, so preferably MA function to prevent people from the effects of harmful characters.

Regarding its role, MA ideally is modified by internalizing other values that are generated by the third eye or as referred by “Sē Laēn” (“Sing Liyan,” the Others) as “the deconstruction of the intellectual center” (Triyuwono, 2010) which was implemented by as the adoption of Islamic values. Exploration of Islamic values in sharia accounting has always been an exciting topic to discuss. This exploration should be continually implemented to find the best practice (Velayutham, 2014). This kind of review is done in the financial accounting (FA) context, yet it has not yet administered in the MA context. To grow with the developing of sharia accounting studies, the MA ideally also adapt concerning knowledge and practice.

As previously stated, this article seeks to establish the concept of ShMA's objectives for its further development. The focus of this study is to formulate the objectives of ShMA. The method of the study is given in the next section, while the characteristics, functions, position and the effect of ShMA are presented in the following sections. This article is closed by the explanation of ShMA objectives as the base of its development.

METHODS OF RESEARCH

This study is administered under qualitative approach based on Islamic Spirituality. Data are identified from Islamic values through a reading of texts from the Qur'an, hadiths and other Islamic literature as well as interviews with informants and analyzed through the method of zikr, prayer and contemplation (ZPC), and analytical method. This ZPC method was introduced and being developed by Abdurahim, Triyuwono, Mulawarman, and Achsin (2016) and Triyuwono (2015). Zikr and prayer are the forms of vertical relationship between human and God. Both zikr and prayer are done to remember the presence of Allah through intensive interaction. However, zikr and prayer are different. Zikr refers to spoken, physical and emotional activities that close the distance between human and God (Dasuki, 1994a). Zikr is done by reciting Allah’s names (Asmaa al Husnaa) and vowing to Allah as the one and only God. Zikr is better done in the morning and evening as often as possible. Through zikr, the human asks for hopes and ability to receive goodness from God.

Prayers are words sent by a human to ask for hopes and to worship Allah SWT in a certain way. Prayer contains requests, expectations, greetings, and compliments to Allah SWT (Dasuki, 1994a). Prayer also gets the human to stay close to the God by telling their requests and hopes. Prayer and requests are directed only to Allah SWT, as the only God who holds the highest power in granting human’s wishes. Besides using the way of praying as taught in the Qur’an and Hadith, Moslems may create their own prayer to ask for certain things to the God.

Contemplation (tafakur) refers to the activity of deep thinking, contemplating, or meditating. Tafakur is suggested by Qur’an for a human to deeply think about Allah SWT's creation (Dasuki, 1994b). Tafakur is a solemn activity by engaging in dialogue between information obtained from thoughts and feelings with those of the Qur'an and Hadith (Abdurahim et al., 2016). In the context of this study, tafakur is included in the prayer and zikr. Thus, the use of a way of thinking that leads to the awareness of the Godhead is a form of reflection ideally integrated with zikr and prayer.


2 Surah Al-Ahzab (33) verse 41: “O you who believe! Remember Allah with much remembrance”.

3 Surah Al-Faathihah (1) verse 5: “You (Alone) we worship, and you (Alone) we ask for help (for each and everything)”; and QS Al-Baqarah (2) verse 186: “And when may slaves ask you (O Muhammad saw) concerning Me, then (answer them), I am indeed near (to them by My Knowledge). I respond to the invocation of the supplicant when he calls on Me (without any mediator or intercessor). So let them obey Me and believe in Me, so that they may be led aright”.

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The data of this study are in the forms of texts or lesson recited from Qur’an, hadith and Khabar Sodiq (good and true news) which were systematically documented (Islamia, 2005), and results of interviews with informants. The collected data are then analyzed using an analytical and reflective approach (Velayutham, 2014). ZDT is a method throughout this study along with qualitative research activities as stated by Huberman and Miles (2009) such as data collection, data reduction, data presentation, and decision making.

This study employs the flexibility of the qualitative approach which allows the researchers to develop an appropriate design to meet the need of this study (Moleong, 2005). The chosen method allows the researchers to act as the primary instrument in the data analysis by conducting analytic and reflective activities. The researchers also attempt to review the most appropriate objectives of ShMA that matched the values of Islam. Through the intensiveness of ZDT, reflection and analytic action, the researchers attempted at capturing verses from Qur’an, Hadith, and Khabar Sodiq that match the objectives of ShMA. When the researchers find one, the verse is then compared to the definition of ShMA. Later, the researchers take certain actions to determine the usability of the data to answer the research questions of this study. Therefore, it is necessary to explore the definition of ShMA before administering the analytical discussion.

RESULTS AND DISCUSSION

Definition of ShMA. According to the main idea of this study, ShMA refers to the transformation of MA. The concept of ShMA arose from the needs of an MA information system with good compatibility toward Islamic values and sharia rules to fit the need of Moslems in managing and running their business and organizations. ShMA holds an essential role because it can create particular method or technique that regard “internalized Islamic values” which are expected to influence users’ behavior. The most interesting question is “is ShMA completely different from MA?”. A broad discussion on the dominant concept of MA and its technical implementation from Islam point of view was necessary to conduct. Explanation of the definition of ShMA adopted from Sonhaji (2016) is presented before the discussion session.

Before defining ShMA, it is necessary to determine the definition of MA to see the development of MA orientation. Two descriptions of MA show the change of MA overtime. The National Association of Accountants (NAA) defines MA as follows.

Management accounting is the process within an organization that provides information used by an organization’s managers in planning, implementing, and controlling the organization’s activities. This process includes the identification, measurement, accumulation, analysis, preparation, interpretation, and communication of the information needed by management to perform its function (Anthony & Reece, 1989, p. 515).

An important point from the definition shows that management does not face complex competitions for it should only do the tasks based on its function. Different from the definition stated by the Institute of Management Accountants (IMA).

Management accounting as value adding improvement process of planning, measuring and operating nonfinancial and financial information system that guides management action, motivates behavior, and supports and creates the cultural values necessary to achieve an organization’s strategic, tactical and operating objectives. (Atkinson, Banker, Kaplan, & Young, 1995, p. 5).

An environment is ever-changing, leaving only companies which are able to offer extra values to the customers that will survive and win the competition. The MA definition of the IMA indicates the difference of emphasis and orientation of the MA on changes in management. The orientation is also presented by Hansen and Mowen (2005) whose definitions include customer orientation, strategic position, and Value Chain Framework. Concerning this value, there has been a shift in the MA from the value-added concept to value-creating activities (Shank & Govindarajan, 2000).

Related to the managerial necessities as presented by definition above, MA has fulfilled the concept based on its function. There is the shift of the orientation reached from
the cost analysis to the value-creating activities. MA is characterized by material-financial orientation and has not yet tapped on any transcendental or worshipping activities which are Moslems necessities. An important question arose, “can MA be made oriented to worship?”

A Moslem is required to orientate any action to Allah SWT. This is in line with Allah’s command stated in Surah Adz-Dzaariyaat (51) verse 56: "And (Allah) created not the jinns and humans except they should worship Me (Alone)." This value is emphasized in the Hadith which states that “actions are based on intentions, and everyone will get what was intended” (Amir, 1974). In the context of Islam, those who only do any activities without orienting it to worship the God are losing. Therefore, the development and the implementation of ShMA is ideally intended to worship Allah SWT. Therefore, the answer to the question in the previous paragraph is definitely possible. MA which is transformed on the basis of Islamic values is called ShMA.

The function and the objectives of sharia accounting that have been previously proposed can be used to define ShMA. Some academics have stated their insights that sharia accounting is "...as an instrument of prayer and remembering God for awakening God-consciousness" (Triyuwono, 2012). According to Lewis (2001): “Accounting, if performed in accordance with Islamic law (the sharia), should be as much an act of worship and prayer." Also, according to Mulawarman (2011, p. 201), sharia accounting better has the main orientation “as the realization of humans’ love for Allah SWT”.

Considering the roles of MA within the value chain process in the form of value-creating activities and the characteristics of sharia accounting, the researchers defines ShMA as a set of knowledge and practical guidance to create information of any process within a network of values to implement Islamic values as zikr dan prayer to fulfill economic, mental, and spiritual necessities as the form of worshipping the God. This definition puts ShMA in the practice of commercial activities and business to enhance the values, expanding economic and trade activities beyond financial orientation and more on spiritual-transcendental worship activities. ShMA is also a way to show love for Allah SWT and an attempt to approach the God. Hence, it is clear that the difference between MA and ShMA relies on the presence of spiritual orientation, yet both of them intend to provide useful information for users.

Based on the definition, ShMA has a broader role beyond financial-material oriented activities. Allah’s commandment related to this matter is written in Surah Al Maidah (5) verse 35: “O you who believe! Do your duty to Allah and fear Him. Seek the means of approach to Him, and strive hard in His Cause as much as you can. So That you may be successful”. It is true that there are many ways to show faith to Allah and there are various ways to strive for the religion, which one of them can be done by implementing the ShMA. Therefore, the word “be successful" refers to both fortunes in life and afterlife ideally underlies the development of ShMA. This point is the main objective of ShMA.

**Function, Position, and Influence of ShMA**

Regarding to the definitions that have been previously mentioned, MA and ShMA as an information system in an organization, both of them have similarities function including: (1) providing information based on a management process from the planning to controlling in order to make sure that the management runs its function well, (2) providing information based on the identity of the senders to be distributed to the correct receivers, (3) providing information based on structural organization hierarchy including the top management, middle management and operational management, and (4) enhancing the internalization of cultural values and other good values in any organizational activities from suppliers’ activities to customer handling and the information system. Meanwhile, the difference between MA and ShMA relies on the function of ShMA that taps on the objective to obtain material-economic benefits as well as spiritual benefits in the form of prayer, zikr and taqarrub (draw near to Allah). This can be considered as the fifth characteristic of ShMA.

From the explanation of the characteristics of MA and ShMA, it can be concluded that ShMA is an information system that holds broader functions, positions, and influences. The attributes of ShMA is illustrated in Figure 1.

It can be inferred from the figure that: (1) ShMA should be able to cover the information reporting in the whole process both intern and extern value networking. In the internal
network, ShMA prepares and report the intended information that fits the needs of the top management, middle management, and operational management. Meanwhile, in the extern domain, ShMA should arrange and report information related to suppliers and customers. The information is adapted to the characteristics of ShMA itself. (2) ShMA creates value networks and presents information according to the needs of the units within the organization. (3) ShMA as a tool that helps a company running its organization should be able to create and provide information related to the function of management from the planning, decision making, up to the controlling process. (4) The function of ShMA as a tool to reach both material-economic objectives and spiritual objectives through prayer, zikir and taqarrub to Allah SWT.

![Diagram](image)

Figure 1 – Scope and Function of ShMA

In another word, ShMA covers quantitative and qualitative information as well as financial-material and transcendental objectives which development and application are done to reach life and after-life dimensions. ShMA is expected to facilitate people in business to run business based on Islamic values. ShMA ideally influences people to modify their behavior and to get them direct their activities to worship the God. An important question that needs to be answered is what is the real objectives of ShMA related to its function and scope of effect as stated above?

**Ligaa-a Rabb: The Highest Objective of ShMA**

Before answering the question related to the objectives of ShMA, it is necessary to explain question related to whom ShMA is for. The answer to this question determines the goals of ShMA. It is obvious that ShMA is a facility that helps an organization to reach its objectives or the objectives of the organization’s main participants. It implies that ShMA is meant to help a human. Therefore, objectives of ShMA are ideally no different or contrary to the ultimate objective of human beings. If ShMA is built on the basis on Islamic values, then to know the ultimate goal of humanity should also be based on Islamic perspective.

Outside Islamic context, there are two perspectives on the creation of human; pessimistic perspective and optimistic perspective. These two attitudes have different and contradictory basic concept of life. Pessimistic outlook views life negatively without any meaning or objectives. Meanwhile, the optimistic perspective believers consider life precious and worth fighting for. They are motivated to work hard to reach happiness in life. Thus, life from the optimistic perspective is full of meaning and goals (Madjid, 1992). The objectives of life are entirely subjective since they are determined by what makes a person feel happy.

Within the Islamic context, Islam rejects the pessimistic perspective since it goes contradictory to the concept of Islam as the religion of love for the universe. Moreover, Islam believers are forbidden to have a pessimistic attitude about life. Meanwhile, Islam does not
reject the optimistic perspective that believes life has specific meaning and worth fighting for. A question appears related to what kind of meaning and where it should direct.

This question is critical to be answered since it is strongly related to the real goal of the creation of human and its goals. This issue has been an exciting topic to discuss among philosophers. They have been trying to figure out the meaning and the objectives of the creation of humanity in the world. The real intention of human creation has been an interesting issue to discuss among philosophers since the answer is the basic theory of any knowledge. Philosophers see human from various perspectives including the biology, philosophy, and myths (Fidiana, 2016). Hence, it is normal to have different perspectives about life because the debate has not yet found an agreement. Therefore, in Islam, the objectives of life should be matched with the information and commands given by Allah SWT.

A good Moslem should be able to understand the concept of life to understand the real objective of life by studying Qur’an. The clear aim of life as stated in Qur’an and has been agreed by Moslems is the Liqaa-a-rabb or “meeting” with God (Madjid, 1992, p. 18) which verse states:

Say (O Muhammad saw): "I am only a man like you. It has been inspired to me that your llâh (God) is One llâh (God) i.e., Allâh. So whoever hopes for the meeting with his Lord, let him work righteousness and associate none as a partner in the worship of his Lord” (Surah Al Kahf/18: verse 110).

Related to this top goal, an informant pointed out a relatable verse as stated below.

*It is true that liqaa-a-rabb should be set as the top goal of life...it has to be the biggest dream in life...but there are some relatable verses besides Al Kahr (18) that is the verse 110 [while opening the translated Qur’an, informant shows his letters by reciting his verse].

In relation to the “meeting” with Allah, some other verses provide insights on this matter, such as.

And send (good deeds or ask to Allâh bestow upon you pious offspring) before you for your own selves. And fear Allâh, and know that you are to meet Him (in the Hereafter), and give good tidings to the believers (O Muhammad saw). (Al Baqarah/2: verse 223).

“O man! Verily, you are returning towards your Lord with your deeds and actions (good or bad), a sure returning, so you will meet (i.e. the result of your deeds which you did)” (Al Insyiqaaq/84: verse 6).

To obtain a better understanding about liqaa-a-rabb, the researchers recited some other verses as suggested by the informant.

“The Day whereon neither wealth nor sons will avail. Except him who brings to Allâh a clean heart [clean from Shirk (polytheism) and Nifâq (hypocrisy)]” (QS Asy Syu’ara’ (26): verse 88-89)

“And, verily, among those who followed his [nûh’s (Noah)] way (Islâmic Monotheism) was Ibrahim (Abraham).

When he came to his Lord with a pure heart” (QS Ash Shaffaat (37): verse 83-84)

In Surah Al Kahf (18): verse 110, Allah SWT shows how to reach liqaa-a-rabb by doing good actions and believing to no other God but Allah. Related to the verse in which it is stated "and let him not associate anyone with Him in the worship of his Lord," the informant explained that this verse emphasizes on the Tawheed. Further, in the interview, the informant shared broader explanation on the relationship between this verse and the concept of sincerity as presented below.

Do not worship anyone but Allah...do not do shirk actions...and what we have talked about tapping on the concept of sincerity...a verse might have a broader scope...wala yusrik, the following words...leads to something...it is important to notice that wala yusrik bi ibadati refer to the shirk in worship activities...yes, any act of worship should be sincerely directed to Allah. The command to always be sincere in worshipping the Lord are stated in some verses...such as in Surah Al Bayyinah verse 5...[informant recited the verse]...it can be implied that human is required to only worship Allah as the only God by purifying their intention...which can be realized in the form of sincerity in worshipping Allah.3

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3 The commandment is stated in Surah Al Bayyinah (98), ayat 5.
In *Surah Al Baqarah* (2) verse 223, Allah states that good deeds come back to the doers (and for others), and those who have faith in Allah will eventually meet Allah. Allah SWT also mentions in *Surah Asy Syu’ara’* (26) verse 89 and *Ash Shaffaat* (37) verse 84 that those who have a good heart and pure heart (*salim*) are given chances to meet Allah. Thus, to be given a chance to “meet” with God, ideally, one do good deeds, not worshipping other God, doing good things for herself/himself (and others) and having faith (*taqwa*). “The meeting” with Allah should be the highest dream of Moslems. The prophet Muhammad saw highlighted that “those who love to meet with Allah, Allah loves to meet them and those who do not, Allah hates meeting them” (Al-Huda, 2014, p. 1394). If the message is followed, Allah SWT guarantees the meeting.

As the goal of life, *liqaa-a rabb* gives absolute meaning to the life of a Moslem and inspiration for all his activities. The goal should be the orientation of Moslem activities. All of Moslem activities should be oriented at Allah in the form of worship, or *moamalah*. Reaching *liqaa-a rabb* for Moslem always be pursued in *moamalah* one of them through the help of ShMA. Thus, ShMA ideally aims to help entrepreneurs in the provision and use of information that lead them to achieve the ultimate life goals, namely *liqaa-a rabb* (*meet* God).

Worshipping Allah is a way to praise Allah. In the broader scope, worship can be realized in any activities which are intended to gain love from Allah. Allah the Almighty is always watching human, but most of the time, humans are not aware of it. The notification from The prophet Muhammad saw above ideally can be an inspiration in doing *moamalah* that ShMA can help grow this awareness. This way, ShMA will have stronger influence toward the behavior of the users in directing their intention in doing any activities to meet Allah. Within this condition, ShMA is not merely a material-financial effort, but it also appears as a transcendental action which is oriented at the life and the afterlife.

The ultimate goal in life should be realized into real action as in doing business. In running their business, Moslem should orientate their effort to reach the *liqaa-a rabb* by doing good deeds, being sincere, *salim* and having strong faith (*taqwa*). The development of ShMA in the future ideally also regards the objectives and the ways to reach it. It can be explored from elaboration and interpretation of the ideal concepts into the method and the technique of ShMA, which are expected to encourage user behavior that is compatible with existing values. This should be ideally guided by the *moamalah*’s objective, namely *maqashid syariah* (sharia goal).

*Maqashid Syariah*: Operational Goals of ShMA

Any kinds of activities done by Moslems can be regarded as worshipping the God. Every Moslem should recognize this. In Islam, there are two types of worship called *maghdah* and *ghairu maghdah*. *Maghdah* worship is directly directed to Allah. Activities of this worship should be written in certain commandment and based on the examples which have been provided by The prophet Muhammad saw, besides it is rather supra-rational and the primary goal is the obedience. The example of this worship is the command to do prayer and Hajj (Shiddiq, 2008).

*Ghairu mahdah* worship is beyond the direct relationship with only Allah, but it is also a relationship between human and other creatures. This worship does not require commandments, but it is determined by the absence of any prohibition in doing certain actions. How to worship does not stick to the examples given by The Prophet Muhammad saw, it rather requires rationality and the principle of “benefit”. For example education, work, and teaching (Shiddiq, 2008). These activities are called *moamalah*. The most important thing of *moamalah* is the intention. The intention of doing those actions determine the value of the activities either they are regarded as worship activities. On the other hand, those activities would not be regarded a good deed if the intention is not directed at Allah.

The development of ShMA is included in the domain of *ghairu mahdah* or *moamalah*. Because of the nature of the activity and its arrangement in sharia, ideally *moamalah* refers

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4 Allah stated in Surah Ar-Ra’id (13), verse 2 about nature and science
5 *Maqashid Syariah* is objectives of sharia.
to the objectives of sharia or *maqashid syariah*. Thus, the objective of the development of ShMA is better derived from the goals of sharia or *maqashid syariah*. This concept appears following the determination of sharia law. In addition, this concept also should be regarded in determining any sharia action such as ShMA. The real meaning of *maqashid syariah* can be explained by the meaning of the word *maqashid* and *syariah*. *Maqashid* means intentional or direction. Meanwhile, *syariah* means the “road to the water source” which also means the route to the life sources (Bakri, 1996). Based on its definition, sharia is the laws given by Allah for human are intended to give them happiness in life and in after life (Bakri, 1996, p. 63). Therefore, there is no doubt that sharia is the best way of life according to Allah’s rules.

The essence of *maqashid syariah* is *maslahah*, as one of the sharia objectives (Bakri, 1996; Syaputra et al., 2014). *Maslahah* is derived from Arabic which means goodness, benefit, appropriateness, properness, obedience, and interest (Asmawi, 2012; Syamsul, 2012). The term *maslahah* is often compared with the term *al-mafsadah* or *al-madarrah* which mean damage (Asmawi, 2012). Thus, beneficial goodness is the core essence of *maslahah*.

Explanation on the idea of sharia cannot be separated apart from the term *maqashid syariah* as mentioned by an informant.

*Society cannot be separated apart from maqashid syariah…which essence is about maslahah. There are some ulama (Moslem scholars) who classify maqashid syariah into general one and special one. The general maqashid syariah refers to the whole application of intention and the goal of sharia in the entire Islamic law system, which emphasizes on the maslahah. It can be implied that the direction of sharia law is the maslahah. Maslahah has two objectives, obtaining benefits and rejecting bad things. In another word, it requires human to do good deeds and avoid doing bad things.*

Further explanation on the term *maslahah* refers to the insights proposed by AL Ghazali. Maslahah emphasizes on the effort to care for, realize and to take benefit from avoidance of doing bad things to keep life directed to performs Islamic values. *Maslahah* should be able to maintain and preserves or maintains the five pillars of life are: religion (*hifz al-din*), life (*hifz al-nafs*), intellect (*hifz al-aql*), progeny (*hifz al-nasl*) and property (*hifz al-mal*) (!!! INVALID CITATION !!!). Hence, any action that is directed at improving those five pillars is regarded as *maslahah* (Bakri, 1996), including any actions which attempt at avoiding bad things and negative impacts. Basically, *maslahah* refers to any goodness and benefits offered by Allah for the human by doing good deeds.

The results of this study show that ShMA intends to help the entrepreneurs in the provision and use of information that can encourage them to achieve of the ultimate life objective, namely *liqaa-a rabb* (“meeting” with God) and operational objectives of *moamalah*, namely *maqashid syariah* (sharia objective). The objective in reaching a *liqaa-a rabb* needs to be operational through *maqashid syariah* whose essence is *maslahah* by preserving the five pillars of life. *Maqashid syariah* preferably also inspires and directs companies' activities to stay on the right track with using the methods and techniques of ShMA are expected to be able to encourage entrepreneurs to achieve *maqashid syariah* that focus on *maslahah* completely.

Furthermore, the implementations of reaching *liqaa-a rabb* and *maqashid syariah* influence other goals, which the basic concept can be identified from Islamic values for the development of ShMA. Further research and discussions are expected to develop the ShMA by identifying its concept and principles and creating methods and techniques of ShMA are hoped to inspire and encourage entrepreneurs to perform its functions according to Islamic values that ultimately can achieve their ultimate goals.

**CONCLUSION**

Both as knowledge and as practices, MA has been developing based on western-modern values, which are often incompatible with Islamic values. Apart from its contribution to the problem solving in the world, western-modern values suffer from some weaknesses. MA as an information system has been employed in various companies. As the part of the
information system in a company, MA is often used, as a tool to satisfy human’s ambition in running their business. Unfortunately, MA contains no values that protect humanity from the negative nature. Therefore, MA requires another value in the form of the Third Eye or Sé Laén (Sing Liyan, the Others). This leads to consequences for the development of ShMA, which can start from the idea of the objectives of ShMA.

Through ZPC method, this study collects data in the form of texts related to commandments in Qur’an, Hadith, and Khabar Shodiq, as well as data from informants to elaborate this issue. The obtained data are selected to leave only the data, which are relatable to the definition of ShMA. The data are analyzed by using an analytic and reflection method self as main analysis tool.

The result of this study shows the importance of implementing ShMA as a system of information that is compatible with Islamic values. From the study, the researchers come into a conclusion that the objectives of ShMA are to assist entrepreneurs in the provision and use of information that could lead to the achievement of ultimate life goals, namely liqaa-a rabb. At the operational level in the form of methods and techniques, ShMA preferably is able to help the user achieve the operational goal of moamalah, namely maqashid syariah that focus on maslahah. The result and idea in this article can be used as a guide for ShMA development, and subsequent researchers are better include analysis of classical "Islamic" economic literature and consider the data on sharia-compliant business practices.

REFERENCES

THE COMPARATIVE ANALYSIS OF PERFORMANCE STRUCTURAL AND FUNCTIONAL APPARATUS OF EXTENSION AND FOOD SECURITY AGENCY IN JAYAWIJAYA REGENCY OF PAPUA PROVINCE, INDONESIA

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ABSTRACT
This study aims to determine whether there are differences in performance of structural apparatus with functional apparatus at Extension and Food Security Agency of Jayawijaya Regency. The samples in this study were 50 respondents, consisting of 25 structural apparatus and 25 functional apparatus. The results of study show that there are differences of performance, discipline and cooperation between structural and functional apparatus, but there is no difference in service orientation.

KEY WORDS
Performance, agency, services, food security, cooperation.

In the era of globalization and along with the progress of the times, as a government agency serving the community, government agencies are also required able to adapt to the environment and developments that occur continuously make changes (Wimastuti, 2016). Achievement of organizational goals is determined from the performance and effectiveness the apparatus in carrying out the task. Every organization, in general, expects its apparatus able to carry out their duties effectively, efficiently, productively and professionally. All this aims to have the organization of human resources quality and at the same time have a high competitiveness, so that later will produce quality public service in accordance with the expectations of the community (Setiawan and Maesarch, 2016).

Each organization or institution in implementing the program is always directed to achieve its goals. One of the factors that become the criteria to achieve the smooth goals of an organization is to identify and measure the performance of its apparatus. Organizations are a complex entity that seeks to allocate the full human resources for the achievement of a goal. When an organization is able to achieve its intended purpose, then it can be said that the organization is effective (Taroreh, et al, 2016).

Along with its development, all organizations are required to compete to provide maximum service, not least government organizations (Makawimbang, et al, 2015). Similarly, government officials as public servants and government servants, are required to be able to provide the best service to the community because it is already one of the functions that must be executed by the government that has the task of organizing the whole process of implementation of development in various sectors of life starting from the central level up to the regional level up to the village (Heriyanto, 2017).

Organizational resources can be broadly divided into two groups: human resources and non-human resources. Human resources include all the members of the organization, each of which has roles and functions. While the non-human resources consist of: natural resources, capital, machinery, technology, materials, and others (Makawimbang, et al, 2015). Both categories of resources are equally important, but human resource (HR) is the dominant factor because the only resource that has a reason, feelings, desires, intentions, knowledge, and skills, motivation, work and achievement (Heriyanto, 2017).

Performance is basically what the apparatus does or does not do. The performance of the apparatus affects how much they contribute to the organization. Each job has a specific job criterion or a working dimension that identifies the most important elements of a job. Organizations need to know the various weaknesses and strengths of the apparatus as a

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foundation for fixing weaknesses and strengthening the advantages in order to increase productivity and apparatus development so that the performance of apparatus in every institution must be optimized for the achievement of the purpose of the agency. It is necessary to conduct periodic performance assessments that are oriented in the past or future. Assessment here is intended to determine whether the performance of the apparatus has met the expected work standards or not.

Performance in the organization is the answer to the success or failure of organizational goals that have been set. The boss often does not pay attention unless it is very bad or everything is so wrong. Too often the boss does not know how bad performance has degenerated so that the organization faces a serious crisis, the bad impression of the deep agency resulted in and ignored the warning signs of a degenerate performance. Talking about the performance and achievement of organizational goals are inseparable from who exists and runs the organization, none other than the man himself. As an element of organization, humans have a very important role in carrying out its function in the framework of organizational progress. The potential of every individual that exist in the organization should be utilized as well as possible so as to provide maximum results. Where the success of the organization is very dependent on the role of humans in it because humans as a potential resource and is a source of power to drive the wheel of organizational activity. Human resources must be directed and coordinated to produce the best contribution to the organization, so that what the organization's goals can be realized.

Apparatus performance appraisal system that has been used still shows some weaknesses that have not been able to measure appropriately about the performance of the apparatus. As in the system of Appraisal Implementation Appraisal Work Civil State Apparatus (DP3). Performance appraisal for civil servants (PNS) has been using the Implementation Assessment List in which there are 8 (eight) assessment elements, namely honesty, loyalty, obedience, work performance, responsibility, cooperation, leadership, and initiative.

If examined in fact the format of Work Implementation Assessment List will still raise doubts that the Job Implementation Assessment List can accurately depict the performance of the Civil Service Apparatus. The Work Implementation Schedule Format also implies being less flexible to express things that are the special characters that differentiate a profession from other professions. The elements that are valued are many items that overlap, and the standards are also unclear and interpretable. Assessment of Assessment List Implementation The work is also vulnerable to the occurrence of subjectivity bias. Moreover, the assessment results are never discussed / evaluated together to get feedback from the apparatus. Meanwhile, performance appraisal system using LAKIP (Performance Accountability Report of Government Institution) also not yet able to measure apparatus performance appropriately. Some problems in the preparation of LAKIP, among others: a) Implementation of performance management that is still oriented to "output" rather than "outcome", b) Quality of performance planning that has not described the logical flow program and logical performance, c) Determination of performance both the main performance and performance of target or program performance that has not result oriented (outcome), d) Not optimal of internal performance evaluation conducted and discussed in LAKIP and e) LAKIP has not been utilized in preparing the plan and implementation of performance management in the next period (Hakawimbang, et al, 2015).

Food Counseling and Food Security Agency of Jayawijaya Regency as the government bureaucracy is one of the work units within the Government of Jayawijaya Regency. The Counseling and Food Security Unit of Jayawijaya Regency is the implementing the element of regional autonomy led by a Head of Agency who is under and responsible to the Regent of Jayawijaya through Regional Secretary. Food Counseling and Food Security Agency of Jayawijaya Regency in accordance with Regional Regulation No. 08 of 2009 has the task of assisting the Regent in the implementation of regional government in the field of extension, fisheries, forestry extension and food security.

According to Regent Regulation Jayawijaya Number 21 of 2009 on Main Duty, Function and Working Procedure of Food and Drug Enforcement Agency of Jayawijaya
Regency in structural position, in general, have a function that is to carry out the formulation of technical policy and control in food security and extension, implementation of coordination and prevention effort prevention of food insecurity symptoms, guidance on improving the performance of extension workers, as well as the implementation of other activities in the field of food security and in accordance with the policy of the regent. While in functional positions, in general, have the task of performing some tasks of the Agency in accordance with the expertise and needs, the implementation of extension, fisheries, and forestry.

Based on preliminary interviews with Head of Sub Division of Food Supervision and Food Security Agency of Jayawijaya Regency, it is concluded that the performance of apparatus, in general, is good, but besides that, there are still some shortcomings that must be solved so that its performance can be improved even more. Problems such as service orientation to the community are still lacking due to the bureaucratic processes that are convoluted, long, full of uncertainty and full of formalities cause the service process to be inhibited. In addition, the discipline of apparatus problems that inhibit the achievement of the objectives of low implementation of discipline in work, lack of awareness to complete the task, lack of sense of responsibility in the implementation of tupoksi. And lack of cooperation in realizing the success of performance and work performance.

Problems that occur in the structural apparatus that is the realization of attendance as well as the implementation of routine tasks in the Agency for Counseling and Food Security of Jayawijaya Regency that has not been maximized, the achievement of performance targets such as the office administration service program and the increase of facilities and infrastructure that has not been maximized. While the problems that occur in the functional apparatus is the limited field of workers so that activities cannot be maximized, workers who are not always in place.

METHODS OF RESEARCH

This type of research is a comparative study, which is a comparative study. Here the variable is still the same as the independent variable but for more than one sample, or in a different time. This study was conducted to compare the similarities and differences between two or more facts and properties of the object under study based on a particular frame of mind. According to Kasim (2014: 65), comparative research is a formulation of a research problem comparing the existence of a different sample or at different times.

The population in this research is the whole apparatus at Food and Food Security Agency of Jayawijaya Regency is 61 people consisting of 25 structural apparatus and 36 functional apparatus. In a comparative experiment, the same sample was used as many as 50 people consisting of 25 people of structural apparatus and 25 functional apparatus. Data analysis in this research uses two independent samples with interval/ratio data type using T-test two samples. Calculation of two independent sample test is presented in two forms, namely: calculation manually and using SPSS software.

\[
T_{\text{count}} = \frac{X_1 - X_2}{\sqrt{\frac{(n_1 - 1)S_i^2 + (n_2 - 1)S_j^2}{n_1 + n_2 - 2} \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}
\]

Where: \(X_i\) = group measurement data to \(i\); \(X = \) the average value of the group measured data to \(i\); \(n_i = \) number of group respondents to \(i\); \(S_i^2 = \) the value of the \(i\)-group variance.

RESULTS AND DISCUSSION

Result of comparative analysis of structural apparatus and functional apparatus hence each indicator and apparatus performance variable used T-test two sample analysis with SPSS version 11 as follows:
Service Orientation Indicators. Result of analysis got the value of $T_{count} = 1.255$. To test the hypothesis on service orientation indicator is done a comparison between value $T$ table and $T$ arithmetic. Obtained $T_{table} \leq T_{count} \leq T_{table} (-2.0126 \leq 1.225 \leq 2.0126)$ which means Ho accepted and Ha rejected, so the conclusion there is did not difference in service orientation between the structural apparatus with functional apparatus in Agency and Food Security District Jayawijaya.

Discipline Indicators. Based on the analysis results obtained value $T_{count} = 2.849$. To test the hypothesis on the indicator of discipline is done a comparison between the value of $T$ table and $T$ arithmetic. Obtained $T_{table} \leq T_{count} \leq T_{table} (-2.0126 \leq 2.849 \leq 2.0126)$ which means Ho is rejected and Ha accepted, so the conclusion there is a discipline difference between the structural apparatus with functional apparatus Counseling and Food Security Agency of Jayawijaya Regency.

Cooperation Indicator. Based on the result of analysis where got value of $T_{count} = 2.171$. To test the hypothesis on the indicator of cooperation made a comparison between the value of $T$ table and $T$ arithmetic. The value of $T_{table} \leq T_{count} \leq T_{table} (-2.0126 \leq 2.171 \leq 2.0126)$ which means Ho refused and Ha accepted, so the conclusion there is a difference of cooperation between the structural apparatus with functional apparatus Counseling and Food Security Agency of Jayawijaya Regency.

Performance Variables. Based on the analysis of SPSS version 11 obtained value $T_{count} = 2.470$. To test the hypothesis on the performance variable is done a comparison between the value of $T$ table and $T$ arithmetic. Obtained $T_{table} \leq T_{count} \leq T_{table} (-2.0126 \leq 2.470 \leq 2.0126)$ which means Ho is rejected and Ha accepted, so the conclusion there is a performance difference between the structural apparatus with functional apparatus Counseling and Food Security Agency of Jayawijaya Regency.

DISCUSSION OF RESULTS

Based on data analysis used either through descriptive data analysis and statistical analysis by using comparative method then got explanation:

Performance Apparatus. In general, the definition of performance is the work of quality and quantity that can be achieved by an apparatus in performing the main duty and function as an apparatus in accordance with the responsibilities imposed or given to him. According to Ganap (2015) performance is the result of work that can be achieved by a person or group of people within an organization, in accordance with the authority and responsibility respectively, in order to achieve the objectives of the organization concerned legally, not violating the law and in accordance with the moral as well ethics.

The state apparatus is an element of state apparatus, state servant, and public servant who with loyalty and obedience to Pancasila and the 1945 Constitution, state and government, performs government and development duties. The Civil Affairs Parliament consists of structural positions and functional positions. is a position which indicates the duty, responsibility, authority and right of a Civil State Apparatus in order to lead a unit of State organization. While the functional position is a position that indicates the duty, responsibility, authority, and rights of a civil servant apparatus in order to carry out basic tasks and functions of expertise and / or skills to achieve organizational goals.

Based on the result of calculation through SPSS with $T$ test, it can be concluded that there is a difference of performance of structural apparatus with functional apparatus at Agency and Food Security of Jayawijaya Regency obtained $T_{table} \leq T_{count} \leq T_{table} (-2.0126 \leq 2,470 \leq 2.0126)$ which means Ho is rejected and Ha accepted. This is caused by:

Service orientation. Service Orientation is defined as the attitude and working behavior of the Civil Government Apparatus in providing the best services to those served, among others, covering the community, superiors, co-workers, related work units, and / or other institutions. The concept of service orientation is closely related to market orientation. If market orientation emphasizes the aspects of service practices, policies, and procedures a service orientation focuses more on aligning the capabilities of organizational units and customer needs in order to achieve business work goals (Novianti, 2017).
Based on the calculation result through SPSS by using T-test, it can be concluded that there is no difference of service orientation between structural apparatus and functional apparatus at Agency and Food Security of Jayawijaya Regency got T\text{table} \leq T\text{count} \leq T\text{table} (-2,0126 \leq 1,225 \leq 2,0126) which means Ho accepted and Ha rejected. This indicates that the orientation of service between the structural apparatus with the functional apparatus at the Food Counseling and Food Security Agency of Jayawijaya Regency is satisfactory or already in a good category based on positive descriptive analysis. This indicates that the structural apparatus and functional apparatus able to provide services to the public with a polite attitude and provide maximum service to the community can show loyalty to the leadership can appreciate and respect the colleagues and able to behave well towards superiors, colleagues and the community.

**Discipline.** Discipline is the ability of Civil State Apparatus to comply with obligations and to avoid prohibitions stipulated in legislation and/or official regulations which, if not observed or violated, are punishable by discipline. Discipline is the HR function of the management human resources cooperative function. Most importantly because the more discipline the employees are, the higher the job performance is can be achieved. Without good employee discipline, it is difficult for companies to achieve optimal results. Discipline is the awareness and willingness of a person to obey all corporate rules and prevailing social norms (Khumaedi, 2016). The purpose of the discipline is to prepare an atmosphere in which the discipline itself can be developed and to take firm action against small groups who do not obey and obey disciplinary rules (Supriyatno and Sukir 2007).

Based on the calculation result through SPSS by using T-test, it can be concluded that there is a difference of discipline between the structural apparatus and the functional apparatus at the Food Counseling and Food Security Agency of Jayawijaya Regency obtained T\text{table} \leq T\text{count} \leq T\text{table} (-2.0126 \leq 2,849 \leq 2.0126) which means Ho is rejected and Ha accepted. This indicates that the discipline between the structural apparatus and the functional apparatus at the extension and Food Security Agency of Jayawijaya Regency has different levels of discipline. In the structural apparatus more in compliance with legislation and official regulations, apparatus come and return within the stipulated time, be able to complete the work on time, and able to carry out their duties and responsibilities in accordance with TUPOKSI, and respect and respect the applicable regulations. While the functional apparatus is still less appreciate the time in completing the work, apparatus come and go home not in accordance with the time specified so that affect the productivity of the apparatus associated with the quality and quantity of work produced to be low. Discipline will produce a good work ethic that will have an impact on productivity. From the results of descriptive analysis shows the level of discipline of positive and negative (+) positive structural apparatus (-) means more disciplined structural apparatus, but there is still a lack of discipline apparatus due to lack of time, work completion and lack of respect for applicable regulations. While the functional apparatus of the discipline level is positive (+) and negative (-), meaning that the functional apparatus is good enough in discipline but there is still a less disciplined functional apparatus.

**Cooperation.** According to Handayani (2015) cooperation in essence indicates the existence of two or more parties that interact dynamically to achieve common goals. In that sense there are three basic elements attached to an element of cooperation, that is, two or more elements of the element, the interaction element and the common goal element. If one element is not contained in one object studied, it can be assumed that the object there is no cooperation Lestari, 2017). Individual teams and individuals are closely tied to the collaboration that is built on the awareness of achievement and performance, and in cooperation there will be unfinished individual settlements (Widyaningtyas and Farid, 2014). Reliable advantages in teamwork are the emergence of synergistic solutions from various individuals who are members of teamwork (Widyaswari, et al, 2016).

Based on the calculation result through SPSS by using T-test, it can be concluded that there is a difference of cooperation between structural apparatus and functional apparatus at Food and Food Security Agency of Jayawijaya Regency got T\text{table} \leq T\text{count} \leq T\text{table} (-2.0126 \leq 2.171 \leq 2.0126) which means Ho is rejected and Ha accepted. This means that the
cooperation between the structural apparatus and the functional apparatus at the Counseling and Food Security Agency of Jayawijaya Regency has different cooperation. In the structural apparatus can always cooperate in completing the task, established good cooperation in the implementation of the work, always give new ideas in completing the activities undertaken, always working in team to improve organizational performance and spirit in cooperation to support the completion of work. While the functional apparatus is still less to give ideas or ideas in completing the activities undertaken, the lack of ability to work in teams to improve organizational performance and lack of spirit of cooperation in supporting the completion of work. From the results of descriptive analysis shows the level of cooperation of positive structural apparatus (+) means that structural apparatus more have good cooperation among colleagues. While the functional apparatus of discipline level is positive (+) and negative value (-), meaning that the functional apparatus is good enough in cooperation but there are still functional apparatus who lack of spirit in cooperation.

CONCLUSION AND SUGGESTIONS

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

- There are differences in performance on the structural apparatus and functional apparatus at the extension and Food Security Agency of Jayawijaya Regency.
- There is no difference in service orientation between the structural apparatus and the functional apparatus at the Extension and Food Security Agency of Jayawijaya Regency
- There is a difference of discipline between the structural apparatus and the functional apparatus at the Extension and Food Security Agency of Jayawijaya Regency
- There is a difference of cooperation between the structural apparatus and the functional apparatus in the Extension and Food Security Agency of Jayawijaya Regency

Based on the conclusion above then it should be:

It is expected that the performance system will be applied equally between structural apparatus and functional apparatus especially on work discipline and cooperation between apparatus at Extension and Food Security Agency of Jayawijaya Regency

REFERENCES


ABSTRACT
Tourism development is one of the priority programs of the regional development. The reason is that the effect of tourism development can improve the regional economy. However, in order to improve the regional economy, tourism development should be managed based on the good governance. This research aims to identify the development planning of the Ujung Pandaran. This tourist attraction is one of the leading tourism in Kotawaringin Timur Regency, Central Kalimantan Province, Indonesia. This research uses qualitative research type with analysis method proposed by Miles, Hubberman, and Saldana. The research results show that the tourism development planning of Ujung Pandaran beach has some limitations. The example of the limitation of the planning is the absence of feasibility analysis process and evaluation stage for the planning that has been determined. The failure of this process has impacted the implementation stage. The cooperation planning with the private sector that has been determined cannot be realized properly. Meanwhile, the existence of private sector participation in the tourism development is one of the criteria of tourism development planning based on the good governance perspective.

KEY WORDS
Planning, tourism, good governance, policy, development.
In the development of tourism must be through good planning-oriented governance. Fundamentally, good governance is a responsible and consistent management of efficient democratic and market principles, avoiding misallocation of investment funds and preventing corruption both politically and administratively (LAN, 2006). Therefore, the existence of good governance is believed to have an impact on the success of tourism development plans.

Tjokroamidjojo (2006) argued that an understanding of the conception of good governance can be explained by principles such as accountability, transparency, openness, under the law, and guarantee fair treatment. Implementation of Good Governance in the development of the tourism sector includes three (3) main elements, namely the government, the private sector which represents the employers in tourism and the community that supports tourism. By involving all elements of good governance are expected to be able to overcome the problems of the tourism sector. Good Governance in the field of tourism development planning is a necessity, otherwise, if the development planning of tourism without being based on the Good Governance causing partial plan is not integral.

As regulated in Act no. 10 of 2009 which states that tourism is an integral part of the national development that is done systematically, integrated, and sustainable. In addition, the ongoing tourism activities are required to be able to synergize the interests of inter-sector, regional, center with areas that have close ties and synergize the integration among stakeholders in it as a systemic unit within the framework of Regional Autonomy and synergize the integration between the existing stakeholders inside it.

Therefore, this paper intends to analyze and to know whether in the planning of coastal tourism development Ujung Pandaran have based on a perspective of good governance. So the expectations, this paper will be useful as a study, especially for local governments in development planning Sampit Regency leading tourist attraction of the area.

METHODS OF RESEARCH

This research has been conducted for 4 months from December 2017 until March 2018. This research uses descriptive qualitative research type. Through direct observation and interviews to stakeholders, and with additional secondary data such as a strategic document, some pictures and so on aims to describe the planning of tourism development on the coast of Ujung Pandaran Kotawaringin Timur, Central Kalimantan Province.

The analysis technique used in this research is using mode released by Miles and Hubberman (2014) with the steps that must be done is:

1. Data condensation refers to the process of selecting, simplifying, focusing, abstracting and altering data that has been collected in field notes, transcript interviews, documents and other empirical materials. Condensation can make data stronger and occur continuously during qualitative research. Things done on the condensation data are writing summaries, coding, developing themes, generating categories and writing analytic memos.

2. Display data is a short parse such as a chart, the relationship between categories and types. At this step, the processed data is then further analyzed in depth and thorough to facilitate the understanding of the narrative text. Then the analysis is entered into groups according to their respective themes then described and then analyzed again thoroughly.

3. Conclusion Drawing or verification is an activity to test the truth of every meaning that emerges as well as the classification of data that has been made through the chart. The preliminary conclusions raised are temporary and will change if there is no strong evidence to support the next stage of data collection. The data presented are tested truthfully by analyzing and clarifying them again.
RESULTS OF STUDY

Tourism Potential of Kotawaringin Timur Regency. Kotawaringin Timur Regency has attractive natural resources, especially for tourism. With natural resources owned, making this district into a tourist attraction leading tourist sector. Potential tourism owned this district is as follows:

Table 1 – Tourism Potential of Kotawaringin Timur Regency

<table>
<thead>
<tr>
<th>No.</th>
<th>Type</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nature</td>
<td>Ujung Pandaran Beach and Mangrove Forest</td>
</tr>
<tr>
<td>2</td>
<td>Cultural</td>
<td>Simah Laut and funeral</td>
</tr>
<tr>
<td>3</td>
<td>Artificial</td>
<td>FishPond</td>
</tr>
</tbody>
</table>

Source: Processed Data.

The natural wealth owned by East Kotawaringin Regency is a beach called Ujung Pandaran beach. The location of this beach is located in District Sampit. Ujung Pandaran Beach has become a leading tourist attraction because it also has a mangrove forest that can be used as a tourist attraction. In addition, there is also the potential that comes from local cultures such as Simah Laut and funeral. And then, has the potential of artificial tourism is the existence of fish ponds.

It can be seen from Fig. A1 that the location of Ujung Pandaran beach is very strategic. Adjacent to the burial place of one scholar called Al-Alimulallaamah H. Sheikh Hamid Bin Abu Al-Alimulallaamah H. Mufti Sheikh Muhammad As’ad. He was the great-grandfather of one of the well-known scholars in the island of Borneo and is highly respected by the people, namely Datuk Kalampayan Sheikh Arsyad Muhammad Al-Banjari. He was an author of science books of fiqh Sabillal Muhtaddin. Many people visit for the purpose of pilgrimage. Because he was someone who has an important role in the spread of Islam.

Figure 2 – Fishery Production in Ujung Pandaran Beach, Ton (Source: BPS Kotim Regency)

Another artificial potential that culinary tourism. With the strategic location of the beach with sea looks beautiful, it also has the potential of marine fish. So many people visit as well as to purchase various types of fresh fish caught by the fishermen. Fishing activities that
were fishing with a boat and came up with catches from the sea can be seen directly. Visitors who come can also rent boats owned by fishermen to tour the region along the coast as a means of transportation to get to the station sacred religious tourism or fishing in the sea.

Addition based on a strategic coastal location, coastal tourism Ujung Pandaran also has the potential of culture-based. Local communities have a culture called the "Simah Laut", which is a cultural ritual to take away from unfortunate carried out by the local village of fishing communities in the implementation of area locations Ujung Pandaran beach tourism. Simah Laut in the form of a special ritual ceremony by using different terms in the form of a special dish into the sea with mythical.

**Development Planning Tourism of Ujung Pandaran Beach.** This study is based on a planning model that had been developed by the Department of Culture and Tourism related Kotawaringin Timur district development planning Ujung Pandaran leading tourist beach. The planning process is set out in the Strategic Plan of the Department of Culture and Tourism. However, the planning process is the reference Kotawaringin Timur District tourism development is tourism development plan of the Ministry of Tourism. The process is shown in Figure 3 below:

![Figure 3 – Model of Tourism Development Planning Process](Source: Disbudpar Kotim, 2018, Processed)

**DISCUSSION OF RESULTS**

As shown in figure A1, Ujung Pandaran a leading tourist sector because it has a strong potential. The potential of not only potential source of natural resources but also originating from the culture and history of the local environment such as "Simah Laut" and the funeral of a famous person who is one of the propagators of the Muslim religion.

The first potential is called “Simah Laut”. Simah Laut is a culture of ritual ceremony that aims to keep away from all the misfortune committed by local fishing communities. The implementation of this ceremony conducted at the location of coastal tourism area Ujung Pandaran. "Simah Laut" is a ritual ceremony by providing various things as a special form of offering to the sea of mystical nuance. By the local community, this cultural ritual is believed to bring safety and provide an abundance of fortune during head seaward.

The second potential is religious tourism called "cemetery". There is a funeral one of the scholars in the area of coastal tourism Ujung Pandaran, namely Al-alimulallaamah H. Sheikh Hamid Bin Abu Al-Alimulallaamah H. Muti Sheikh Muhammad As'ad which is a great-grandfather of one of the well-known scholars in the island of Borneo (Datuk Kalampayan sheikh Muhammad Al-Banjari Arsyad an author of science books of fiqh Sabillal Muhtaddin).
The tomb is visited by people with the intention to make pilgrimage because it is the tomb of one of the scholars who also have an important role in the spread of Islam.

Third potential is culinary tour. At the time while entering the coastal tourism area Ujung Pandaran, visitors will find a variety of fresh fish that catch from the sea. The price offered will be cheaper and have a big difference in the market price. In fact, fish that have been purchased and selected by the visitors can be requested to be cooked by the sellers/owners of food stalls located in the area.

In addition to the appeal of such attractions as stated above, other attractions are found in the coastal areas of Ujung Pandaran namely fishing community activities were fishing with a boat and came up with catches from the sea can be seen directly. Visitors who come can also rent a boat belonging to the fishing community to tour the region along the coast as a means of transportation to get to the station sacred religious tourism or fishing in the sea.

The diversity of the appeal (points) travel and public life behavior village of Ujung Pandaran contained in the sights or the environment around it is a resource that can be used for a variety of tourism activities, one of the characteristics of tourism resources is to be vandalized and destroyed by the use of the uncontrolled and errors in its use.

The potential of this kind needs to be developed to be able to boost the regional economy. In developing the potential of this kind need a better plan and based on good governance.

The conception of good governance proposed Tjokroamidjojo (2006) is that it should have the principles of accountability, transparency, openness, under the law and guarantee fair treatment. That is, in the planning of tourism development of Ujung Pandaran beach must refer to the principle.

The results showed that the process of development planning of Ujung Pandaran beach already has the principles of accountability, transparency, fair treatment under the law draft. In making the plan, the Department of Culture and Tourism has been referred to several laws such as Act No. 25 of 2004 on National Development Planning System in which states that in the development planning process must go through the forum Musrenbang from the village level, and the District. The musrenbang forum serves as a forum or community facility to freely provide advice or feedback on the program to be designated as a development plan. Thus, through this activity has accommodated the principles of good governance, such as participation, transparency, accountability and fair treatment for all stakeholders to provide input.

Linking tourism development planning of Ujung Pandaran Beach based on a theory proposed by Mahi and Trigunarso (2017), that in a development plan has several components that must be passed. 1) That the Department of Culture and Tourism should have diagnosed the problem. This means, that in preparing a plan seen through strategic issues that have. The issues set out in the presence of the tourism potential but not optimal in its management; low quality and quantity of supporting infrastructure; not optimal promotion; lack of community tourism awareness; and yet the development of the creative economy based on tourism. 2) Formulation of objectives. Based on these issues, the government set the goal of synchronization results on the vision and mission of the Regional Medium Term Development Plan. That is increasing the quantity and quality of tourism products and tourism resources. 3) Projection. In this case, the government has estimated the programs that support the creation of the necessary budget and their objectives. 4) Feasibility analysis, 5) evaluation. Components of feasibility and evaluation analysis have not been seen in the planning process of Ujung Pandaran Beach tourism development. 6) Implementation, through the implementation will be known if the process of tourism development planning has been based on good governance.

Implementation of Good Governance in the development of the tourism sector includes three (3) main elements, namely the government, the private sector which represents the employers in tourism and the community that supports the tourism sector (Sedamayanti, 2013; Ganie, 2000). In the process of development planning of Ujung Pandaran beach, the government has involved the community in determining development programs.
The program plan specified in Ujung Pandaran beach tourism development has been referring to the 3 pillars of good governance. The role of government in involving the public and private sector in tourism development. However, in the Implementation within 2 years, the government only implements the involvement of the community in awareness of tourism such as giving counseling and empowerment to the community. While the private sector has not been involved in the development of Ujung Pandaran beach tourism. It can be seen through the table A1 related tourist facilities were inadequate, and the lack of adequate market system interactions in tourist areas.

The lack of private sector involvement in the development planning of Ujung Pandaran beach tourism is due to the limited competence of the local government. It can be seen through the specified programs. The program planning is done in order to develop a leading tourist attraction East Kotawaringin not optimal. Due to the planned investment cooperation program lacks clarity related to the desired form of investment.

Until now, the state of the existing facilities at the attraction is still inadequate. The results showed that the reasons for lack of development and construction of tourist infrastructure are due to lack of funds owned by the government. This indicates that local governments do not accommodate what private sector roles have been planned for investment cooperation programs. This also indicates that the competence of personnel resources and still not up in the planning of tourism development. In fact, if the cooperation programs and activities defined investment can be optimized, then the issue of public service provision in the tourist area can be resolved. As Partnership (2003) stated that with the participation of the private sector in tourism development planning will lead to many benefits such as the availability of alternative sources of financing; faster implementation of infrastructure provision; Budgets and risk reduction in the burden of government; The infrastructure can be provided more and more; the better performance of public services; accountability can be improved; and the private sector could contribute capital, technology, and managerial skills.

CONCLUSION

In this research has indicated that the development planning process of Ujung Pandaran Beach tourist object does not pass the feasibility analysis stage and evaluation stage before the implementation stage. So that programs that have been set cannot be implemented properly as well as cooperation with the private sector. It can be seen through the availability of existing infrastructure in Ujung Pandaran Beaches inadequate. Though this infrastructure is one of the charms that elevate visitors. Cooperation with the private sector that is not implemented in the construction of coastal tourism object Ujung Pandaran due to lack of clarity of planning activities that have been determined. This happens because of lack of competence possessed apparatus. So it is necessary to empower the apparatus of the development planning process through assistance by a team of planning experts.

RECOMMENDATIONS

Based on the results of research, can be known weaknesses that occur in the planning of the development of superior tourist attraction of Ujung Pandaran beach. The weakness is the lack of knowledge and skills of apparatus resources in planning the development of tourism object. The reason is that of the absence of feasibility analysis and evaluation process, the absence of excellent programs that become the main priority in tourism development and the lack of clear partnership program planned so that at the implementation stage there is still no cooperation with the private sector. Therefore, we give recommendation suggestion that in order to improve the quality of planning, it is the necessary empowerment of apparatus accompanied by the team of planning expert by cooperating with the academic sector as an expert team. The empowerment of such apparatus will broaden the apparatus's knowledge of tourism development planning so that the resulting planning can be qualified. With the increased insight also may increase the apparatus in carrying out cooperation with private sector investment, especially in infrastructure.
APPENDIX

Figure A1 – Picture of Ujung Pandaran Beach

Table A1 – Ujung Pandaran Beach Tourism Facilities

<table>
<thead>
<tr>
<th>Name</th>
<th>Amount</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big House</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Home Stay</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Public bathroom</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Public toilet</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Cottage</td>
<td>5</td>
<td>3 broken</td>
</tr>
<tr>
<td>Gazebo</td>
<td>5</td>
<td>2 broken</td>
</tr>
<tr>
<td>Stage show</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Mushola</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Electricity</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Road access</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Trash can</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Clean water access</td>
<td>1</td>
<td>2 water pump machine and 2 water container (20.000 liter)</td>
</tr>
</tbody>
</table>

REFERENCES

7. Undang-Undang Nomor 10 Tahun 2009 Tentang Kepariwisataan.
MEASURING THE REVISIT INTENTION USING CITY BRANDING CONCEPT

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ABSTRACT
The main purpose of this study was to build an understanding of the impact of city branding concept implementation on revisit intention with mediating variable of tourist satisfaction. In the tourism sector, recurring behavioral intentions are condition that describes the consumer's plan to revisit previously visited tourist destinations. The understanding of satisfaction and intention to return is very important because it is useful to develop tourism products that exist in the city especially related to aspects of city branding. This type of research was explanatory. The samples used in this study were 142 domestic tourists in the city of Ambon, Indonesia. Ambon Island has a characteristic surrounded by a group of islands that offer many natural attractions, beaches, recreation places, historical places and cultural heritage. General Structure of Component Analysis used to analyze the relationship between city branding concepts, satisfaction and revisit intention. The findings showed that city branding has a significant influence towards satisfaction of tourists and revisit intention. Besides, the satisfaction of tourists had a significant influence towards revisit intention.

KEY WORDS
City branding, satisfaction, revisit intention, tourist, tourism sector, tourist satisfaction

One of the most recent and strategic forms of tourism destination branding is the implementation of city branding which is the agenda of many municipalities in introducing the character of the city in the tourism market. City branding is a marketing concept with a brand-like approach that makes the cities as same as commercial goods. In other words, the brand tries to give a different identity to a city so that it can differentiate with competitors. In addition, increased competition among cities has led to increasing the use of marketing strategies. City marketing strategy using city branding approach became border phenomenon in around the world (Kavaratzis and Ashworth, 2004). The city branding concept is a strategy to brand a city that serves as a tool to introduce or market the city's potentials. In both local and international target markets (Kavaratzis, 2005) As an innovative measurement instrument, city branding makes it easier for city government to know the perception of citizens and visitors about the city (Porpescu and Cobos, 2010). On the other hand, the intense competition in the tourism industry causes the tourists to have important meaning for tourism service companies. It can be an asset that must be maintained in order not to move to a competitor. Chen and Phou (2013) stated that intense competition can be overcome by creating a strategy that can generate potential demand from the public in general and tourists in particular. The power of demand can be predicted how many market opportunities will be available in the future. Steps that can be used to predict tourists are to pay attention to satisfaction and intention to return. The understanding of satisfaction and intention to return is very important because it is useful to develop tourism products that exist in the city especially related to aspects of city branding.

The decision-making process of returning to a tourist destination is synonymous with the decision to buy back a product. The intentions of return visits to a city can be described as a pride of the city's inspiration (Kavaratzis, and Asworth, 2004). One measure of city success can be shown through the level of satisfaction and the intention of tourists to visit again to the same city. Satisfaction with the service or product that has been used is the trigger factor of the establishment of repetitive behavior intention (Bitner et al., 1997). In the tourism sector, recurring behavioral intentions are a condition that describes the consumer's
plan to revisit previously visited tourist destinations. Re-visiting intentions are considered to be a consequence of the tourist satisfaction model, and there are many people in determining vacations are still highly dependent on the 'revisit intention' (Kemperman et al., 2003, Anwar and Sohail, 2004). Satisfaction is an emotional response to what experienced tourists. Previous research revealed that there is a direct relationship between the satisfaction of tourists and the intention to visit back to the city of Bandung (Pratminingsih et al., 2014). The author also has not found the use of city branding variable and its relation to the satisfaction of tourists in tourism research. Thus, this study is directed to the understanding of brand as a marketing concept that can be used as a measurement instrument in the urban tourism sector, with the main objective is to measure its direct impact on the level of satisfaction and revisit intention.

The implementation of city branding on the city can use the name, the tag line, the symbol or a combination of all of them to attract tourists. Travelers tend to pay attention to the tag line as a tool to know the characteristic of a city (Kusumawati, 2017). Therefore, almost every city today has a tagline as a media message in attracting the attention of the public about the characteristics of the city. The city of Ambon, located in the eastern part of Indonesia, has a nickname of "Ambon Manise" which means having a fertile, beautiful and beautiful nature, being the center of provincial government, and the gate of tourism in Maluku province. The city of Ambon has an appeal as it lies along the coastline following the 'Ambon bay line' against the backdrop of the hills to give a distinctive impression to every visitor (Leirissa et al., 2004). The city government of Ambon in 2012 has launched the city's tagline "Ambon, The City of Music" and together with the Indonesian Creative Economy Agency has launched "Ambon, Towards the City Music of World." This tagline illustrates that since the first Ambonese community has a talent in the field of musical art as an inheritance ancestor such as Tifa, Totobuang (gong-shaped gamelan), Tahuri (Tramshell trumpet), Arababu, Ukulele and bamboo flute. Music becomes one of the economic forces of the future. Therefor, it needs to be preserved. All these historical heritage, culture and local wisdom can be packed for city branding and professionally managed as a tourism development policy of Ambon city. Successful branding is not only limited to communication and marketing but also to the city, business and investment planning (Herget et al, 2015). This combination of all development sectors becomes a competitive force that aims to create satisfaction and encourage repetitive behavior in the future. A number of previous studies reveal that there is a significant relationship between satisfaction and revisit intention and the intention to recommend (Ajzen, 1991; Lin, 2012; Pratminingsih, 2014). Therefore, the purpose of this study is to measure the level of revised intention with city branding as well as to measure the effect of customer satisfaction on revisit intention due to the impact of city branding implementation.

THEORETICAL REVIEW

The City Branding Concept. In the tourism industry, the brand concept is developed in response to changing status and the role of tourism in the global environment. Brands are able to market a product with a unique look or message will win the competition. A brand strategy approach known as city branding is believed to provide a different identity in every city (Herget et al., 2015). City branding depicts a character, charm, style, and personality of a city. A successful city branding is not only a good form of marketing communication but also reaches city planning, regulation, local wisdom, trade, and investment. Mailanen and Rainisto (2009) state city branding as city management through strategic innovation and economic, commercial, social, cultural, and governmental coordination. City branding is the process of forming a city brand to be known by the target market ie investors, tourist, talent, events and others using icons, taglines, slogans, exhibitions, expo or other promotional media (Anholt, 2006).

The two main issues in the process of comparing the city are (1) city branding acts as a means of broadcasting the identity of a city, (2) city branding is seen as an instrument in the capacity of competition (Herget et al, 2015). In the tourism sector, Anholt (2007) measured
the world's major cities based on six aspects of "City Branding Hexagon" namely; (1) Presence, covering the city's international status, community knowledge of the city; (2) Place, covering the public perception of the physical aspects of the city, environmental hygiene, climate, iconic buildings, and urban parks; (3) Pre-Requisites, about views of city accommodation, public facilities such as hospitals, schools, transportation, sports facilities and asya; (4) People, including resident friendliness, friendship and security; (5) Pulse; (6) Potential, covering the economic opportunities, jobs, business as well as the higher education facilities available in the city. The figure of six aspects of Brain Hexagon by Anholt as follows:

![City Brand Hexagon](image)

As like the positioning of a product, then the city branding is a strategy to strengthen the position of a city to be widely known. City branding can restore the identity of many unknown and neglected cities to compete globally. Acceleration of technology also changed the city from local to global environment and competition to become an attractive tourist destination. The previous research mentioned that the main purpose of city branding is to revitalize investment and tourism with the main target to increase the inflow of tourists to a city (Kavaratzis, 2004).

A city that has a big name will attract many people from different parts of the world to come visit, stay, study, work and enjoy the attractions available on the city (Sjafrizal, 2014). Previous findings suggest that attractive city destinations will generate satisfaction for toris and will further build loyalty (Manhurrun et al., 2014). Customer satisfaction is the target of most companies because it is a predictor of repeat purchase intention. Therefore, tourists as customers of city destinations become assets that must be maintained so it is not easy to move to a competitor.

*The Tourists Satisfaction.* Consumer satisfaction theory assumes that one's satisfaction is influenced by positive or negative feelings that are associated with buying and consuming goods or a service. When buying a product, the consumer has an expectation of how the product is performing. In the context of tourism services marketing, Payangan (2014) stated that tourism business actors should pay attention to the fulfillment of tourist satisfaction. The customers satisfied will become pioneers or determinants in terms of continuity of a service business. Terms in determining the level of satisfaction are known from the attitude of fun, frequent visits, recommending friends and provide solutions to what is felt in the service tour. The Satisfied of customers will be loyal to the various services offered. Customer satisfaction factor is also an important element in adding customer value as well as value for tourism management companies. Morgan et al (2004) state that in a highly competitive tourism market, the city government and all stakeholders must work hard to showcase the distinctive characteristics of different cities, as well as perform services based on customer satisfaction. This is an important concern because the impression of tourists to a city can turn into negative if that emanated from the city does not meet their expectations (Riza et al, 2012). The size of the quality standard specified by the manufacturer is not necessarily the same as the standard quality measure specified by the consumer. For example, in providing the same service to different tourism customers, the level of satisfaction perceived by each customer
will be different too. However, business actors continue to give attention to the customer (customer care) with all the power so that the service remains the best in the eyes of consumers. The relationship between variables can be seen in the implementation of city branding in various cities that is a powerful marketing communication tool in building a positive impression and satisfaction for every visitor. The previous research mentioned that the attraction factor of the city, recreational facilities and other attributes of the city can create satisfaction for the visitor causing the intention to return to vacation in the same city (Khuong and Ha., 2014).

**The Revisit Intention.** Revisit intention refers to the willingness of tourists to revisit the same tourist destinations. Revisit intention is the possibility of tourists to repeat the activity or return to a destination that has been visited before (Lin, 2012). Revisit intention is a future behavioral commitment to buy back products or services or connect with service providers on other occasions (Chen and Chen, 2010). The company's fundamental reason for maintaining and improving tourists visiting intention is due to the cost of maintaining tourist customers much cheaper than attracting new visitors (Um et al., 2006). Revisit intention is considered as consequences of the satisfaction of tourists (Bigne and Shanchez, 2001). Customers who get satisfaction on the products or services they buy tend to make the repurchase of the product. Prior research suggests that a large push of tourists to return to a destination is due to past experiences such as the satisfaction of vacation, attractiveness, and perceived value (Petrick J.F, 2002; Um et al., 2006). While the two dimensions of tourists' attitudes in mediating the impact of revisit intention factors intention are (1) the desire to recommend to others, and (2) the desire to return to visit (Lin, 2012). Repeated behavioral intentions to a destination are the initial attitudes of loyalty behavior. Loyalty happens because the tourists get satisfaction, as a result of the fulfillment of their expectations in tourist attractions.

Riza et al. (2012) stated the physical environment of cities such as iconic buildings, tourist attractions as part of the attributes of city branding affect consumer attitudes forward. Conscious or not, the actions of tourists to come to a place influenced by their attitudes and beliefs. (Oppermann (1999) argued that understanding the attitude of tourists in terms of visiting is the foundation in developing marketing strategies and management of tourism, this is also a part of the development of motivation theory and decision making a journey. The previous research mentioned that tourists are willing to spend more if they feel the high quality of service and tend to make repeat visits if their expectations are met (Quintal and Polzynsky, 2010).

**The Research Hypothesis.** Based on this literature review, the hypothesis can be formulated as follows:

- H1: City branding has a significant effect on the satisfaction of tourists;
- H2: City branding has a significant effect on the revisit intention;
- H3: Tourists' satisfaction has a significant effect on revisit intention.

**METHODS OF RESEARCH**

This research used explanatory research type with quantitative approach. The explanation to be studied in this research was associative that obtain a deep understanding of the relationship between variables and test the hypothesis for generalization purposes. The research location was Ambon city, located in eastern part of Indonesia. The reason was this city is in addition to the administrative center of Maluku province, and also the city had many natural attractions, marine and beach tourism, historical monuments, various national and international events and socio-cultural conditions of interest to be visited by tourists. Three variables studied were city branding, tourist satisfaction, and revisit intention. The sampling technique used non-probability sampling that was purposive sampling, in another word the determination of sample based on certain consideration, where the respondent is considered suitable with population characteristic that was domestic tourist 18 years old and above and understands about city branding of Ambon city. Respondent's profile includes respondent's gender, respondent's age, education, occupation, area of origin, a frequency of respondents visited Ambon city as well as a source of respondent information about Ambon
city. Validity and reliability testing performed before the research instrument used, to collect data.

*The Data Collection and Research Sample.* As the survey research, the data used are both primary and secondary data obtained directly from the research respondents and other sources such as municipalities officials and related offices. Research respondents were 18 years old domestic tourists and over who were doing tourist visits in the city of Ambon. Data collection was done by filling questioner by respondent. The population type was the infinitive population, thus in the determination of the sample size used the formula from Lemeshow et al. (1997) so that the total sample was 142 people. The questionnaires are distributed as many as 200, and 142 are defined which met the population criteria, consisting of 73.2% (104 male) and 26.8% (38) female. The data collection activities started from October 2016 to January 2017.

*The Research Instrument.* The form of the questionnaire according to previous studies and used to collect information from respondents. The questionnaire contained fourteen indicators of the city branding variable, adapted from the Anholt research instrument (2007). Eight indicators of the variable of tourist satisfaction were adapted from Manhurun et al (2014). Three indicators of the revised intention were adapted from Ryu et al. (2008), Lin (2012). The measurement scale used in this research is Likert Scale with five choices; strongly agree (5), agree (4), neutral (3), disagree (2) and strongly disagree (1).

*The Data analysis.* Data analysis consisted of the use of 'Descriptive Statistics' which aimed to describe the frequency of respondents' answers, while 'Inferential statistics' aimed to analyze how much influence of city branding application to tourist satisfaction, and revisit intention, and the influence of variable satisfaction on revisit intention. Analyzing descriptive statistics using frequency tables, whereas inferential statistics were analyzed by using Generalized Structured Component Analysis (GSCA) and other tools were SPSS for window version 20.

*The Test of Validity and Reliability Instrument:*

1) Validity test aimed to determine the accuracy and accuracy of instruments used in data collection. Analyze instrument used was the Product Moment correlation technique. The minimum requirement of the correlation coefficient (critical r) was 0.30. If the result of r was positive, and r result ≥ 0.30 then the item was valid (Now and Roger 2010). Thus the calculation results showed the correlation coefficient of all question items greater than 0.30. This means that all question items were valid for use as a data collection tool.

2) The reliability test aimed to measure the extent to which instruments are trusted and consistent in collecting data. Testing using Cronbach Alpha technique where an instrument is said to be reliable if it had the alpha (α) of 0.6 or more (Arikunto, 2010). The calculation results as in Table 1, showed that all cronbach alpha values in the overall variables of this study were greater than 0.6 as in Table 1 below:

<table>
<thead>
<tr>
<th>Table 1 – Reliability Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td>City Branding (X)</td>
</tr>
<tr>
<td>Traveler's Satisfaction (Y₁)</td>
</tr>
<tr>
<td>Revisit Intention (Y₂)</td>
</tr>
</tbody>
</table>

*Source: Primary data processed 2017.*

**RESULTS AND DISCUSSION**

The criteria of hypothesis testing stated that if the critical ratio (CR) is an asterisk (*) or CR ≥ t-table (t = 2.00, alpha = 0.05), the hypothesis is said to have a significant effect of the exogenous variable on the endogenous variable. Direct correlation test results are presented in Table 3.

This descriptive analysis is based on Table 2, which showed that the average score of respondents of city branding (X) variable was 4.08. This figure interprets that the variable of city branding is included in a very high category, besides indicating the respondent tend to
perceive that city branding of Ambon city including very good. City taglines, historical and cultural relics and local wisdom contribute positive feedback to visitors. The attractiveness of the city as well as tourist services can also meet the desires and needs of tourist; especially the local transport service was quite good with the highest average score of 4.37. This finding also showed that the average score of respondents’ answers to the variable satisfaction of tourists (Y1) of 4.27 which means that the variable satisfaction of tourists including very high category. This indicates that respondents tend to perceive that the city branding aspect of Ambon city can contribute a very high level of satisfaction to the visitors. The attractiveness of the city, recreational facilities, resident friendliness, and urban security are indicators that contribute greatly to the variable of tourist satisfaction. In addition to these two variables, these findings also showed the average score of respondents’ answers to the variable revisit intention (Y2) of 3.95, which can be interpreted as a number that was in the high category.

Table 2 – Distribution of Respondents’ Perception

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Average Score</th>
<th>Variable Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Branding</td>
<td>Hear the city of Ambon globally</td>
<td>3.82</td>
<td>4.08</td>
</tr>
<tr>
<td></td>
<td>City contribution in national history</td>
<td>4.23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>City contribution in national culture</td>
<td>4.14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The attraction of the park &amp; building</td>
<td>3.59</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environmental hygiene</td>
<td>4.22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Local transport facilities</td>
<td>4.37</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Educational facilities</td>
<td>4.22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recreation facilities</td>
<td>4.18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The friendliness of the people</td>
<td>4.36</td>
<td></td>
</tr>
<tr>
<td></td>
<td>City security</td>
<td>4.34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Entertainment</td>
<td>4.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comfortable city suites</td>
<td>4.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work opportunities</td>
<td>3.62</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Business opportunities</td>
<td>3.78</td>
<td></td>
</tr>
<tr>
<td>Tourists’ Satisfaction</td>
<td>Satisfied with the appeal of the city</td>
<td>4.35</td>
<td>4.27</td>
</tr>
<tr>
<td></td>
<td>Satisfied with leisure facilities</td>
<td>4.99</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Satisfied with the hospitality of the people</td>
<td>4.38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Satisfied with city security</td>
<td>4.35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Satisfied with educational facilities</td>
<td>4.21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Satisfied with public services</td>
<td>4.18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Satisfied with job opportunities</td>
<td>3.73</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Satisfied with the city tagline</td>
<td>3.96</td>
<td></td>
</tr>
<tr>
<td>Revisit Intention</td>
<td>Ever visited</td>
<td>3.68</td>
<td>3.95</td>
</tr>
<tr>
<td></td>
<td>Intention to visit again</td>
<td>4.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intentions to recommend</td>
<td>4.07</td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary data, processed 2017.

Table 3 – Hypothesis Test Results

<table>
<thead>
<tr>
<th>Research Hypothesis</th>
<th>Exogenous</th>
<th>Endogenous</th>
<th>Coefficient Direct</th>
<th>SE</th>
<th>CR</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>City Branding</td>
<td>Traveler Satisfaction</td>
<td>0.422</td>
<td>0.083</td>
<td>5.10*</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>City Branding</td>
<td>Revisit Intention</td>
<td>0.459</td>
<td>0.117</td>
<td>3.91*</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>Traveler Satisfaction</td>
<td>Revisit Intention</td>
<td>0.347</td>
<td>0.139</td>
<td>2.49*</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Source: Primary data, processed 2017.
Note: * Significant
This indicates that respondents tend to intend to return to the city of Ambon due to feelings of satisfaction over various facilities and services obtained. On the other side of the declaration of 'Ambon to the Music City of World' with various music events held, has an appeal to visitors. Likewise, historical relics, culture, and local wisdom contribute to visitors who wish to know more about the history and culture of Ambon city community. Thus, if referring to the level of customer satisfaction and responses to the variable revisit intention, it can be stated that the implementation of the concept of city branding in the city of Ambon by the city government is very effective and impact on the intention of return visits tourists. So, also as one of the marketing concept, city branding can be used as a measuring instrument for a sustainable urban market.

**H1: City branding significant effect on the satisfaction of tourists.**

GSCA analysis results (Table 3) obtained a direct coefficient of 0.422 and CR value of 5.10 *. This means the value of CR > t-table (t = 2.00, alpha = 0.05). This result means that city branding has a significant effect on the satisfaction of tourists at 95% confidence level. Thus, H1 is empirically proven and otherwise accepted. A direct positive coefficient value that is 0.422 (42.2%) indicate that if there is a change in city branding variable, it will be followed by the change of 42.2% in a variable of tourist satisfaction. The implication of this research result confirms that city (Ajzen, 1991) branding of Ambon city as one of measurement instrument of urban tourism can give satisfaction to a visitor. The city's attractions, historical and cultural heritage, security, resident friendliness, recreational facilities as well as local transport services contribute to satisfaction. Characteristic of white sand beaches, with iconic buildings such as 'Jembatan Merah Putih' which lies in the middle of Ambon Bay, Siwalima Museum, Mangrove Forest and various cuisines, can give satisfaction so that tourists feel apart from all the boring routines. Satisfaction is the result of psychology that comes after getting the service (MacKay and Crompton, 1990). Previous studies have suggested that the attractiveness of cities affects the satisfaction of tourists (Pratminingsih et al., 2014). Customer satisfaction significantly affects future behavioral intentions (Reichheld and Sasser, 1990). City branding as one of the benchmarks of urban tourism development, becoming a proven city marketing strategy. Good management will have a direct impact on satisfaction, and satisfaction will build visitor loyalty thereby encouraging investment and increasing economic growth (Kavaratzis and Asworth, 2005).

**H2: City branding has a significant effect on revisit intention.**

GSCA calculation results (Table 3) obtained the value of the direct coefficient of 0.459 and CR value of 3.91 *. This means the value of CR > t-table (t = 2.00, alpha = 0.05). Thus, it can be interpreted that the variable of city branding significantly influences the revisit intention at 95% confidence level. H2 was empirically proven and accepted in this study. A direct positive coefficient value was 0.459 (45.9%) which means that if there was a change in city branding variable, it would be followed by 45.9% change in revisit intention variable. These results indicated that the intention of tourist visits to the city of Ambon was quite high. Implementation of city branding as a means of marketing communication, become the right instrument in influencing the tourists so there was planning to visit back to Ambon city. The tagline of 'Ambon city of music' and the 'Ambon Movement towards the Music City of the World' was still a power base to attract many people to come to visit. Organizing local and international-class music events was a public concern, often a special schedule for groups of visitors who have a musical talent. The Ambon city government's move was in line with Trueman et al. (2004) which stated that many tourists who visit a region because the area has a certain characteristic and a cultural heritage. Resources of ideas, capital, and local wisdom can be mobilized for sustainable city branding policies (Herget al., 2015). Previous findings had also proven that city branding significantly influences the revisit intention (Andriani, 2017).

**H3 Satisfaction of tourists have a significant effect on revisit intention.**

GSCA calculation results (Table 3) obtained the value of a direct coefficient of 0.347 and CR value of 2.49 *. This means the value of CR > t-table (t = 2.00, alpha = 0.05). Thus, it can be interpreted that the variable of satisfaction of tourists has a significant effect on the revisit intention at 95% confidence level. Therefore H3 is proven empirically and accepted in
this research. A direct positive coefficient value was 0.347 (34.7%) which means that if there was a change in the variable of tourist satisfaction, it will be followed by a change of 34.7% in revisit intention variable. These results indicate that the satisfaction of tourists that occur due to the impact of city branding can be a determinant of the revisit intention. In other words, the satisfaction of tourists could mediate city branding with a revisit intention. The customers satisfied would become pioneers or determinants in terms of continuity of a service business. Terms in determining the level of satisfaction are known from the attitude of fun, frequent visits, recommending friends and provide solutions to what was felt in the service tour. The Satisfied of customers would be loyal to the various services offered. The results of previous studies indicated a significant relationship between satisfaction and revisit intention (Ajzen, 1991, Chen and Phou, 2013, Khuong and Ha, 2014; Pratminingsi et al., 2014). In a very tight inter-regional tourism competition situation, many consumers choose to move to destinations.

CONCLUSION

This study aimed to direct the understanding of the impact of city branding implementation on the satisfaction of tourists and the intention of intention in the urban tourism industry in Ambon. The result of analysis of three variables indicates that the variable of city branding has a significant effect on the satisfaction of tourist. This showed that tourists are satisfied with the city branding attributes of Ambon city such as city attraction, recreational facilities, culture, community friendliness and various local wisdom available. City branding significantly influences the revisit intention. This showed that tourists use city branding as a consideration for the intention of visiting back to the city of Ambon. Tagline 'Ambon city of music' becomes one of the attractions force for tourists in planning a return visit to Ambon and there was a desire to recommend to others. This fact gave meaning that city branding was a predictor of satisfaction and revisit intention. The city branding was a strategy to strengthen the position of a city to be widely known. City branding can restore the identity of many unknown and neglected cities to compete globally. Acceleration of technology also changed the city from local to global environment and competition to become an attractive tourist destination. The variable of satisfaction of tourists had a significant effect on the revisit intention. This showed the feeling of satisfaction of tourists on the aspect of city branding influence on visiting return to Ambon. In other words, the satisfaction of tourists was able to mediate the city branding with a revisit intention. The customers satisfied would become pioneers or determinants in terms of continuity of a service business. Terms in determining the level of satisfaction are known from the attitude of fun, frequent visits, recommending friends and provide solutions to what is felt in the service tour. The Satisfied of customers will be loyal to the various services offered. Customer satisfaction factor is also an important element in adding customer value as well as value for tourism management companies. Tourist tendency to return to Ambon should get welcome from city government especially in developing tourism through city branding strategy. The intensity of promotion of 'Ambon city of music' through various music festivals, both national and world class. The city government could also synergize with tourism entrepreneurs in increasing the intensity of tourist visits. Another strategy was to develop a promotional program that describes the real condition of Ambon city, will greatly help the knowledge and awareness of tourists to this region. It is recommended that the city government of Ambon continue to develop city branding as one of the leading strategies for building the tourism sector. Periodical surveys to determine the level of satisfaction and expectations of tourists need to be done. Efforts to increase the number of tourists can be through cooperation with tour or travel agent, also through music events, sports, and culture. The establishment of tourism business groups and permits easy to obtain public business, which can help increase the number of tourist visits.

This research is still limited to the impact test of city branding implementation toward the satisfaction of tourists and the revisit intention. The research on the revision of intention is repeated so that the observation takes a long time. Thus, the longitudinal study approach
was very precise in giving a complete conclusion. It is recommended that future research use other variables and different research methods to obtain more comprehensive results.

REFERENCES

THE EFFECT OF TRANSFORMATIONAL LEADERSHIP STYLE AND ORGANIZATIONAL CULTURE ON EMPLOYEE PERFORMANCE OF PT. SIERAD PRODUCE TBK

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ABSTRACT
PT. Sierad Produce Tbk is one of the companies engaged in the poultry industry. The existence of business development in the poultry industry requires PT Sierad Produce Tbk to continue to improve company performance. However, currently, the company is experiencing a decline in net sales from 2012 to 2016. It is inversely proportional to the rising chicken population rate. The decline in net sales in the company can be indicated due to the company performance. One of the factors affecting company performance is employee performance. There are several factors that can affect employee performance, one of which is transformational leadership style and organizational culture factors. This research was conducted to analyze the effect of transformational leadership style and organization culture on employee performance. Census was carried out by surveying 77 employees on supervisor position. The data analysis was performed by using the correlation analysis of spearman’s rank and Structural Equation Modeling – Partial Least Squares (SEM-PLS). The findings of this research indicated that there was a positive and significant effect between transformational leadership style and organization culture on employee performance where transformational leadership styles had greater effect compared to organizational culture.

KEY WORDS
Employee, performance, organizational culture, transformational leadership style.

Poultry industry is one industry that plays an important role in encouraging the economy in Indonesia. This is because the poultry industry is able to produce self-sufficiency of poultry and eggs. Poultry commodities, especially chickens, are the main drivers of national animal protein supply, so this good prospect should be utilized through more optimal utilization of resources (Pusdatin 2016). The development of consumption of animal protein, especially from the Indonesian poultry per capita, tends to keep increasing by 7.44% per year which is also supported by the growth of the average population of 1.34% per annum (Ministry of Agriculture 2016). The number of chicken population in the past few years has increased. The number of chicken population in Indonesia from 2012 - 2016 can be seen in Table 1 below.

<table>
<thead>
<tr>
<th>Year</th>
<th>The number of chicken population (tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>1.383.119.768</td>
</tr>
<tr>
<td>2013</td>
<td>1.490.812.618</td>
</tr>
<tr>
<td>2014</td>
<td>1.590.009.532</td>
</tr>
<tr>
<td>2015</td>
<td>1.683.336.571</td>
</tr>
<tr>
<td>2016</td>
<td>1.754.720.664</td>
</tr>
</tbody>
</table>

Source: Badan Pusat Statistik 2016 (processed).

Due to the increase in chicken population, companies engaged in the poultry industry such as PT Sierad Produce Tbk and several other companies compete to improve the company's performance optimally. PT Sierad Produce Tbk is one of the companies engaged in the industry of poultry, animal feed, and processed frozen foods. Performance of PT Sierad Produce Tbk can be seen from the company's success rate in managing the company's resources, especially human resources, because the performance achieved by
human resources or employees will ultimately contribute greatly to the company's performance. One of the company's performance indicators can generally be measured by the information on the net sale. The net sales of PT Sierad Produce Tbk can be seen in Table 2 below.

Table 2 – Data on Net Sales of PT Sierad Produce Tbk

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Sales ( Billion Rupiah)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>4.354</td>
</tr>
<tr>
<td>2013</td>
<td>3.854</td>
</tr>
<tr>
<td>2014</td>
<td>2.505</td>
</tr>
<tr>
<td>2015</td>
<td>2.113</td>
</tr>
<tr>
<td>2016</td>
<td>2.427</td>
</tr>
</tbody>
</table>


The existence of business development in the poultry industry requires PT Sierad Produce Tbk continue to improve their company’s performance. However, what is currently happening is the company's net sales decline from 2012 to 2016. This is inversely proportional to the rising chicken population rate. The decline in net sales in the company indicates that the company's performance is still not appropriate. One of the factors affecting company performance is employee performance. There are several factors that can affect employee performance which one of them is a factor of leadership style. Based on previous research conducted by Dania (2012), PT Sierad Produce Tbk implements a transformational leadership style. During 2012 to 2016, the company has experienced three major directors turnover. It was predicted to affect employee performance. Based on the reviews in the annual report of PT Sierad Produce Tbk, the company will make improvements to each employee to improve their performance. In addition to making improvements to employees, the company also makes improvements to the leadership in the company. One effort to make improvements to the leadership is to evaluate the application of leadership style. The applied leadership style must be in accordance with the environment and the demands of the company itself. In addition to the leadership style, the company also makes improvements to the organizational culture that is applied by the company in order to create a familial and harmonious environment. Thus, every employee who works in the company does not experience too much pressure in carrying out the task and can perform their duties properly. Based on the above background, it is necessary to conduct research at PT. Sierad Produce Tbk on the effect of organizational culture and leadership style on employee performance especially in the field of poultry industry business.

LITERATURE REVIEW

Transformational Leadership Style. A transformational leader is a leader who is able to inspire the employees to prioritize organizational progress rather than personal interests, pay good attention to employees and change employees’ awareness in viewing old problems in new ways (Robbins 2008). According to Yukl (2009), by having transformational leadership, subordinates will have the trust, admiration, and respect for the leader and they will do more than what is expected. Transformational leaders transform and motivate their employees by (1) making them more aware to the importance of the end result of a work, (2) encouraging the employees to transcend their own personal interests to the interests of the organization or team, and (3) activating their higher-order needs.

Bass and Avolio (1994) suggest that transformational leaders typically exhibit behaviors associated with the following four characteristics (dimensions):

1. Idealized Effect. It is illustrated when a leader can set an example for the employees and encourage them to share a common vision and goal by providing a clear vision and a strong sense in achieving the goal.
2. Inspirational Motivation. It represents behavior when a leader tries to express the importance of a desirable goal in a simple way, communicates high expectations and convinces the employees that the work is meaningful and challenging.

3. Intellectual Stimulation. It refers to leaders who challenge the ideas and values of their employees to solve the problems.

4. Individualized Consideration. It refers to leaders who spend more time developing their employees and paying attention to their employees on the individual basis of the employee.

Organizational Culture. According Wibowo (2011), organizational culture is the basic philosophy of the organization that contains the beliefs, norms, and shared values that become core characteristics of how to do something in the organization. These beliefs, norms and values become the guidance of all human resources in carrying out its performance. Based on Robbins’ opinion (2003), there are seven important elements that show the characteristics of organizational culture, namely:

1. Innovation and risk taking; a level where employees are encouraged to be innovative and risk-taking.

2. Attention to detail; where employees are expected to show accuracy, analysis and attention to detail.

3. Outcome orientation; where management focuses on results or benefits rather than on the techniques and processes used to derive those benefits.

4. People orientation; it is the management decision in considering the effect of its benefits on others in the organization.

5. Team orientation; where work activities in the organization are based on teams rather than individuals.

6. Aggressiveness; where people tend to be more aggressive and competitive than easy-going.

7. Stability; where organizational activity emphasizes maintaining the status quo as opposed to development.

Employee Performance. According Mangkunegara (2009), performance is the work performance or work output both quality and quantity achieved by human resources with the timeliness in carrying out its work duties in accordance with the responsibilities given to him. According Bangun (2012), performance appraisal can be done by comparing the work achieved by employees with work standards. If the work has reached or exceeded the standard of work, it is considered that the performance of an employee included in a good category. On the other hand, an employee whose work results do not reach the standard of work, it is considered to be included on performance that is not good or low. The employee performance can be measured through:

1. Number of Works. Each work has different requirements that require employees to be able to meet these requirements with the appropriate knowledge, skills, and capabilities. This dimension shows the number of works produced by an individual or group as a requirement that becomes the standard of work.

2. Work Quality. Each employee must meet certain requirements to be able to produce work in accordance with the quality demanded of a particular work. Employees perform well if they can produce works according to the quality requirements that the work demands.

3. Timeliness. Certain types of work must be completed on time because the work has dependence on other work. Thus, if work on a particular part is not completed on time, it will hinder work on other parts and affect the quantity and quality of the work.

4. Presence. A certain work requires the presence of employees to do it in accordance with the time specified. There is a type of work that requires an employee’s Presence for eight hours a day and five working days a week. Employee performance is determined by the presence of employees in the process of the work.

5. Cooperative Skill. There is a job that cannot be completed by one employee only, but must be completed by two or more employees so that it requires cooperation among employees.
METHODS OF RESEARCH

This research was conducted by taking research setting at Head Office of PT Sierad Produce Tbk. The data collection was conducted since November until December 2017. The respondents of this research were all employees of the head office of PT Sierad Produce who had a supervisor position. The method used in the selection of respondents was census method. The number of respondents in research was 77 employees.

CONCEPTUAL FRAMEWORK

The research started by analyzing leadership styles, organizational culture and employee performance based on the opinions of respondents. Furthermore, testing was carried out to measure the effect of leadership style on employee performance and organizational culture. Testing was also conducted to measure the effect of organizational culture on employee performance. Measurement of effect on the three variables was conducted by using correlation analysis of spearman's rank and structural equation modeling. The results of these analyzes were then used as the basis for recommendations for the organization on employee performance. The recommendations were also based on literature studies related to research. The conceptual framework of this research can be seen in Figure 1.

![Conceptual Framework of the Research](image)

Based on the conceptual framework above, the proposed research hypotheses are:

- \( H_1 \): The transformational leadership style has a positive and significant effect on organizational culture.
- \( H_2 \): The transformational leadership style has a positive and significant effect on employee performance.
- \( H_3 \): The organizational culture has a positive and significant effect on employee performance.
RESULTS AND DISCUSSION

**Respondent Characteristics.** Respondent characteristics of this research consisted of age, work period and last educational degree. The majority of respondents of this research were employees aged 21-30 years with the last educational level of S1, had worked for 1-5 years and had a position as a supervisor.

**Correlation between Respondent Characteristics and Employee Performance Variable.** Correlation analysis of spearman’s rank was performed to see the correlation between respondent characteristics and employee performance variable; namely the number of works, quality of work, timeliness, Presence and cooperative skill. Based on Table 10, all respondent characteristics have a significant relationship to employee performance.

<table>
<thead>
<tr>
<th>Table 3 – Calculation Results of Spearman’s Rank Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent Characteristics</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>The work period</td>
</tr>
<tr>
<td>The last educational level</td>
</tr>
</tbody>
</table>

Notes: * significant at 5% level, ** significant at 1% level.

Age was negatively correlated with the quality of work with a coefficient value of -0.269. The correlation showed that the more age, the lower the performance. The correlation between age and performance of this research fell into the low category. It was because by the increase of the age, the problems will be more complex. It was possible that things outside the work affect performance such as health factors. As the age grows, stamina, vitality and fitness will decrease, which will affect the quality of work.

The work period was positively correlated with the timeliness with the coefficient of 0.237. The correlation indicated that the longer the work period, the higher the performance. The correlation between work period and performance in this research was included in low category. It was because the increase of employment will increase the timeliness of employees in completing the work. As the employees work in the company, they will have more experience and better skills in accomplishing their work in a more effective and efficient time.

Furthermore, the last educational level was positively correlated with the number of works, the quality of work and the cooperative skill. The last educational level was positively correlated with the number of works with a coefficient of 0.311. The closeness of the correlation between the last educational level and the performance in this research was included in the low category. It was because the higher last educational level of the employee will make them perform a number of works more appropriately. The workload provided by the company has different requirements that require employees to meet the requirements of appropriate knowledge, skills, and competence. Therefore, with the higher last educational level, the employees will be more qualified in completing the number of works provided by the company.

The last educational level also had a positive correlation with the quality of work. The relationship between the last educational levels with the quality of work had a coefficient value of 0.465. The correlation between the last educational levels with the performance of this research was included in the medium category. It indicated that the higher last educational level of the employee will make the quality of work better. Highly educated employees have better mindsets and knowledge that affect the quality of the work they produce.

The correlation between the last educational levels with the cooperative skill had a positive correlation with the coefficient value of 0.254. The correlation between the cooperative skill and performance in this research was included in the low category. It showed that the higher last educational level of the employee will make the cooperative skill among their colleagues better. The last educational levels can affect a person in the way of...
thinking and communication well so as to interact and work with colleagues in a team to produce optimal work in achieving organizational goals.

The Evaluation of the Outer Model. The evaluation of the outer model was performed by measuring convergent validity, discriminant validity and reliability. In this research, all provisions of convergence validity, discriminant validity and reliability had been met the requirements. Figure 2 shows the value of the loading factor of each indicator on the construct of transformational leadership style, organizational culture and employee performance.

![Diagram](image)

Figure 2 – The value of loading factor in the outer model

Intellectual stimulation (0.763) had the greatest effect on transformational leadership styles. Leaders play a role in growing creative ideas that can create innovation and able to encourage employees to be more solutive in solving problems that arise in the company. It showed that intellectual stimulation was the most determinant factor in measuring transformational leadership. Team orientation (0.794) had the highest effect on organizational culture. In carrying out the tasks assigned by the company, the employees help each other in the process of completion of these tasks. It will certainly have an effect on employee productivity that raises a good and harmonious relationship among employees. With the increase of employee productivity, it will of course directly imply on improving employee performance. It indicated that team orientation was the most determinant factor in measuring organizational culture. In employee performance, the quality of work (0.817) had the greatest effect. The company had certain requirements in every job that every employee was required to produce work in accordance with the standards. The better the quality of work produced by an employee the better the performance they make. It indicated that quality of work was the most determinant factor in measuring the employee performance.

The Evaluation of the Inner Model. Evaluation of the first inner model aimed to see the value of R-square on endogenous variables and path coefficient parameters. The path of transformational leadership relationships and organizational culture had an R-square value of 0.482. It showed that organizational culture could be explained by 48.2 percent by transformational leadership, while the other 51.8 percent was explained by other variables outside the scope of the research. The path of transformational leadership relationship and organizational culture on employee performance had an R-square value of 0.534. it showed that employee performance could be explained by transformational leadership variables and organizational culture of 53.4 percent, while the other 46.6 percent was explained by other variables outside the scope of the research. The second evaluation was hypothesis testing
performed by bootstrapping method. The result of bootstrapping on the inner model can be seen in Figure 3 below.

![Figure 3 – Bootstrapping Result of Structural Model](image)

The bootstrapping results that had been processed before showed that the three relationship paths had a larger t-statistic value than t-tables so that all previously assumed hypotheses are acceptable (Table 3).

<table>
<thead>
<tr>
<th>Hypothesis Testing</th>
<th>Loading Factor</th>
<th>T-statistic</th>
<th>T-table (α=5%)</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transformational leadership style → Organizational Culture</strong></td>
<td>0.694</td>
<td>11.334</td>
<td>1.960</td>
<td>H&lt;sub&gt;1&lt;/sub&gt; accepted</td>
</tr>
<tr>
<td><strong>Transformational leadership style → Employee Performance</strong></td>
<td>0.467</td>
<td>4.586</td>
<td>1.960</td>
<td>H&lt;sub&gt;2&lt;/sub&gt; accepted</td>
</tr>
<tr>
<td><strong>Organizational Culture → Employee Performance</strong></td>
<td>0.325</td>
<td>3.328</td>
<td>1.960</td>
<td>H&lt;sub&gt;3&lt;/sub&gt; accepted</td>
</tr>
</tbody>
</table>

Transformational leadership affected organizational culture. The value of positive loading factor (0.694) indicated that the application of organizational culture in the company can be improved through transformational leadership. It was because a transformational leader has a high role in creating an organizational culture. Based on the above findings of the research, it could be concluded that the transformational leadership style in PT Sierad Produce Tbk affected organizational culture; namely achievement oriented, innovation and beneficial to the community environment. These values served as the bounding and could be used as a behavior reference in the organization to achieve organizational goals that have been established and must be upheld by all levels of management and employees. Leaders have placed the employees according to their capacities and competencies and provide opportunities for employees to provide creative ideas for the purpose of increasing production. It was in accordance with research conducted by Garini (2016) and Parashakti (2016) where transformational leadership affected organizational culture.

Transformational leadership affected employee performance. The value of positive loading factor (0.467) showed that the employee performance in the company can be improved through transformational leadership. It was because the success of the company in creating employee performance and achieving the goals cannot be separated from the role of leader. A leader must be able to affect, move and direct an action on a person or group of people to achieve certain goals in certain situations. The change of directors from 2012 to 2016 had a little impact on employee performance because the application of leadership style remained the same to the organization's basic values. Leaders can affect employees to
always find new ways to solve problems, give new ideas or opinions, solve problems for logical reasons and invite employees to be always creative and innovative. As a company engaged in integrated poultry farming business, it is important for a company to have high performance of human resources. Companies always pay attention to the quality of work produced by its employees. It enables the company to continuously strive to facilitate the development of employee competencies to improve employee performance through various trainings and skills upgrades in line with measurable and planned needs covering the aspects of formal education, technical and managerial training as well as courses and other general capacity building. Research conducted by Riana (2014) and Muhsin et al (2017) supported the findings of this research that transformational leadership affected employee performance.

Organizational culture affected employee performance. Positive loading factor value (0.325) showed that employee performance in the company can be improved through the application of organizational culture. Implementation of organizational culture in PT Sierad Produce Tbk became the basis of understanding for all members of the company in behaving and acting in accordance with the values of the organization. A good and conducive organizational culture was vital in driving the level of employee performance. The company realizes that the increasingly competitive world of business today encourages companies to anticipate it through the improvement of the entire process line to be more efficient, effective and productive. The company created a program called Quality Control Circle (QCC). The QCC program consisted of groups of 4 to 10 employees who meet regularly to discuss and cope with the problems they face in a sustainable way. The QCC program was supported by learning tools to improve the knowledge and ability of employees by practicing the knowledge in order to create a pleasant workplace. Research conducted by Primary (2015) and Irwan (2018) supported the findings of this research that the organizational culture affected the employee performance.

Managerial Implications. Employee performance can be optimized by increasing the application of transformational leadership styles and organizational culture. Leaders must enhance their ability to generate internal motivation within the employees so that they realize that their work behaviors are meaningful and provide maximum benefit for themselves, for groups and for companies so that the employees will do their best for the company. Leaders can conduct monitoring or supervision periodically on employee performance by providing direct guidance in the implementation of the work. Leaders can reward employees who excel in their work so that they are more motivated to work optimally.

Company management can conduct Focus Discussion Group activities regularly by involving leaders and employees to discuss the latest development issues especially in the field of chicken poultry in which hopefully it will come up creative ideas or innovations that will be able to improve employee performance. Leaders must continue to be active in encouraging employees to increase their potential by engaging them in internal and external corporate trainings which are in accordance with the employee’s field.

CONCLUSION

The transformational leadership style positively affected organizational culture. This positive effect indicated that the application of organizational culture in a company can be enhanced through transformational leadership. The transformational leadership style also positively affected employee performance. This positive effect showed that employees’ performance in the company can be improved through transformational leadership. The transformational leadership style had a greater effect on organizational culture than its effect on employee performance. It was because the role of the leader can strengthen the organizational culture by instilling the values of organizational culture to employees to be used as a behavior reference in the organization to achieve the organizational goals. Organizational culture had a positive effect on employee performance. The positive effect showed that employee performance in the company can be improved through the application
of organizational culture. It was because the values and behaviors in organizational culture performed by the employees can improve employee performance.

RECOMMENDATIONS

Based on the research findings, employee performance can be improved through transformational leadership style and organizational culture. The management of PT Sierad Produce Tbk can implement the managerial implications of this research; namely by conducting regular monitoring or supervision on employee performance and giving awards to employees who excel in the field of work. The company needs to develop things that have been achieved so far such as issuing policies on a more effective working system to improve the results that are going to be achieved by the company. For further research, it is recommended to increase the number of samples that is going to be used to improve the limitations in this research. Furthermore, it is also advisable to add and use other variables that affect employee performance in the analysis process, such as motivation, job satisfaction, and organizational commitment and so forth to get more comprehensive research findings.

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THE ECONOMIC IMPROVEMENT AND COMMUNITY CULTURE BETANG DAMANG BATU TUMBANG ANOI IN CENTRAL KALIMANTAN

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ABSTRACT
House of Betang Damang Batu Tumbang Anoi is a milestone in the framework of human rights enforcement in Central Kalimantan. House of Betang Damang Batu Tumbang Anoi is a symbol of the people's struggle to live in peace, peace, and prosperity between the hostile tribes. These homes have now become a tourist attraction that can increase revenue for local communities and local revenue. The research concludes that the tourism sector of house Betang Damang Batu Anoi can improve the economy and income of the society especially to a local community in Palangka Raya.

KEYWORDS
Betang Damang Batu Anoi, local tourism potential, economic improvement, development.

Indonesia is a country that has many historical places because Indonesia has experienced the period of colonialism. Place and historical relics have become a lot of tourist destinations known to people in the world. One example of a historical relic is a house of Betang Damang Batu Tumbang Anoi located in Central Kalimantan. House of Betang Damang Batu Tumbang Anoi is a milestone in the framework of human rights enforcement in Central Kalimantan. Central Kalimantan is one of the many provinces in Indonesia consisting of thirteen districts and one municipalities (Usop, 2011). House of Betang Damang Batu Tumbang Anoi is a symbol of the people's struggle to live in peace, peace, and prosperity between the hostile tribes. Betang was established in 1868, located in the Village Tumbang Anoi, Damang Batu District, Gunung Mas District, exactly on the edge of the Kahayan river (Harysakti and Mulyadi, 2017).

In order to muffle the business, a meeting called the Damai Tumbang Anoi Meeting was held in 1894 attended by some elements of community leaders not less than 300 people, for example: West Kalimantan, East Kalimantan, Central Kalimantan, South Kalimantan, North Borneo, Sarawak, Borneo including elements from the Netherlands, England, and others but at that time North Kalimantan has not been officially named as Province (Usop, 2016). The meeting resulted in 3 agreements: 1) stopping habunu (killing each other), 2) restricting Takayasu (mutual beheading), 3) stopping hatetek (mutual chopping) (Euneke, et al, 2015).

For now Central Kalimantan Province has become a densely populated area. According to Damayanti and Handinoto (2005), the areas that have experienced population growth are often undergoing renovations to suit the new demands, especially in the 21st century. Urban development is a means of government to realize a prosperous society with the construction of infrastructure and facilities for the convenience of the community (Yuwono and Wardiningisih, 2016).

After the government has provided support for infrastructure facilities for development with the aim of preserving cultural history, developing tourism and improving the economy of the community, there are problems that arise, the community is not yet ready for its utilization, the attitude of the community is tend to be individual so that the attitude of
togetherness and mutual cooperation is almost extinct overcome it is needed solution that society need to be given coaching cultivation attitude togetherness and understanding so that society can participate in the development and can utilize for improvement its prosperity.

METHODS OF RESEARCH

The method used in the study using the ethnographic approach with qualitative analysis. Research with qualitative data approach analysis is a research that prioritizes on process and meaning/perception problem, which is expected to reveal various qualitative information with description (Euneke, et al, 2015). The design of a qualitative approach is general, and it changes or evolves according to the situation in the field (Sarwono, 2009). Research using a qualitative data approach, then appropriate analysis will help researchers in generating new knowledge or theory or develop ideas that have existed before (Junaid, 2016). Data on the qualitative approach is not a number, meaning that data can be categorized or other forms, such as photographs, documents, artifacts and field notes when the research is done (Sarwono, 2009).

RESULTS AND DISCUSSION

Description of Betang Damang Batu Tumbang Anoi. Building or house is a place for humans to perform daily activities. Home construction is an effort to fulfill a basic human need (Saleh, 2010). As well as the construction house of Betang Damang Batu Tumbang Anoi by Dayak ethnic located in Central Kalimantan, according to Usop (2016), Dayak traditional house is called Betang, Betang established generally facing river, with the rectangular shape. The house of Betang is often used for meetings among the citizens, including for dancing art activities with children and the community.

Philosophically house of Betang Damang Batu Tumbang Anoi is the values of togetherness which means that human beings are bound to their society, people are concerned with togetherness rather than selfishness (Anggraini, 2016). Usop (2016) mentions that for the Dayak ethnic of Central Kalimantan, the culture of betang has historical value which has a great influence in responding to various problems they face. For the Dayak tribe, the betang house is a symbol of tolerance and solidarity among fellow human beings (Anggraini, 2016).

House of Betang Damang Batu Tumbang Anoi renovated by not eliminating the meaning plus 5 (five) bedrooms that serve as a place of lodging for the immigrants and tourists so that it can bring additional results for the community by making food and snacks, traditional herbal Kalimantan and souvenirs procurement community crafts local.

The Impact of Tourism Culture Development on Community Economy. In the era of globalization the tourism sector has become one of the largest and strongest industries in the world and tourism are expected to be the largest contributor to the supply of income, especially in the economy of society and the state. Juliprijanto (2014) mentions that in 2007 the contribution of tourism to employment increased to 5.22 million people or 5.22% of the total employment of 99.93 million people, so the magnitude of tourism contribution to the economy shows that the development of tourism can encourage growth economy.

Tourism activities have become part of the lives of people starting from the existing community in the city to the community in the village. This tourism activity is conducted by the community to encourage the economic progress of the community. In accordance with the opinion Resnawaty (2016) that the development of small businesses in the community associated with the tourism industry became one of the strategies to a welfare society. But tourism is not only about economic issues, but also social, cultural, political and so on. According to Cohen in Gunawan, et al (2016) the economic impacts of tourism are as follows:

1. Impact on foreign exchange earnings
2. Impact on people's incomes
3. Impact on employment
4. Impact on prices
5. Impact on development in general
6. Impact on government revenue

Tourism has an impact on the countries visited as well as the local communities. These impacts are positively affected and some are negatively affected (Aryani, et al, 2017). These effects include the following:

**Impact on foreign exchange earnings.** Betang Damang Batu Tumbang Anoi Tourism can increase foreign exchange in Central Kalimantan. The results of this study are similarly conducted by (Makarau, et al, 2016) that the existence of tourism in a region will bring in tourists from within and from outside the region or even will bring in foreign tourists. With the entry of foreign tourists from outside it would be very influential on the increase of foreign exchange.

**Impact on people's incomes.** Tour Betang Damang Batu Tumbang Anoi can improve the economy of society. The results of this study are supported by (Widiastuti, 2013) that the tourism sector will increase income to the community so that the welfare of the community will increase.

**Impact on employment.** With the tourism sector of Betang Anoi, people can create new jobs (Harianik, et al, 2016) so that unemployment rate will decrease. However, there is a negative side to the impact on employment in this community, ie the type of work found is usually the type of seasonal work. So usually this seasonal worker only works at a certain time only and there is no guarantee of work to work next time or after.

The existence of the development of cultural and natural tourism that previously local communities only farmed, hunting animals. The above-mentioned potential is directly the creation of employment in the house of Betang Anoi, for example: servants at the house of Betang Anoi; provide food and snacks: sell food by providing a restaurant/stall; procurement of traditional herbal medicine from Borneo Kalimantan wood for example Pasak Bumi wood and others; procurement of local handicraft souvenirs such as rattan, rubber made from boats and sandals, mats from rattan or from large pandan leaves, animal skins can be used for clothes, bags, art tools, including pegs for glasses for drink used as medicine; procurement and tourism services, by preparing a boat getek carried out by the local community.

**Impact on prices.** With the tourism sector in a region will increase the prices of goods needs of the society which would be detrimental to the community. Such price increases can occur due to an increase in demand for services and goods from visiting tourists (Santi, 2014).

**Impact on development.** To attract tourists or to increase the interest of tourists come to visit places of tourism the government made various efforts. One such effort is the efforts undertaken in the field of tourism-related development, such as the construction of hotels, airports, and restaurants and other supporting facilities (Fahad and Endrayadi, 2017). By doing so, the result is that the state has to spend a lot of money, so the cost that should be allocated for other purposes is reduced to do the development.

**Social and Cultural Change of Society.** Culture is everything that is done by man as a result of his mind thinking. The civilization of human knowledge as social beings are utilized for life and benefit. Teng (2017) mentions that culture is a human creation that takes place in life. Culture is also a complex that includes knowledge, beliefs, arts, laws, customs of abilities, and habits, gained by human beings as members of society (Soeprapto and Jirzanah, 1996).

Dayak ethnic experience a shift in views from changing development, increasingly advanced people, electronic devices into rural villages, villagers immigrating to the city. When viewed from the point of view of different properties. the role of human resources viewed from the workforce in terms of educational background of the community is very less.

House of Betang Damang Batu Anoi has historical value so that now developed as cultural tourism object. Tourism business has become a mainstay sector in many countries this is reinforced by the opinion Setiawan (2015) states that tourism is the largest foreign exchange earner and the strongest sector in the global economy. Development of this
tourism certainly has the relationship with various aspects of community life both in terms of economic and sociocultural terms. When viewed from the economic point of view that tourism as one source of local revenue (PAD), among others in the form of taxes, levies and sources of foreign exchange for the state.

The impact of the development of cultural tourism that occurred in the community Tumbang Anoi seen in terms of facilities and infrastructure have increased a lot. This is shown from the house of Betang Damang Batu Tumbang Anoi facilities and transportation facilities, public facilities that have many developments. Not only in terms of transportation facilities that have been developed but from lodging, public facilities as well have improved to a better direction. As for the implementation of culture for the local community:

- As a means of community meetings both routinely and incidentally
- The smoothness of land and river transportation, even the Dragonplane (the airplane on which the water runs).
- Events of the last peace meeting there are local arts for example for Central Kalimantan featuring Kinyah dance, Manasai dance, Badeder and others, it is until now done as a friendship dance and community intimacy.

The role of the tourism sector in regional economic development or even in the economic development of the country is very big role. Besides, the role or participation of the local community to continuously improve the quality of tourist attractions in their area to be able to attract tourists to visit their territory is also very necessary for economic improvement and employment occasions not only take place at certain moments but can take place continuously. Thus the unemployment rate of the community will decrease. Because one of the advantages of the tourism sector is the creation of new jobs and new employment opportunities so that the economic income of the community will increase and the welfare of the community will be guaranteed. So the burden borne by the government will be reduced and will achieve the national goals of the Republic of Indonesia. And in essence the purpose of the establishment of the country is not only the burden and responsibility carried and which must be run by the government alone, but the responsibility is also intended for all Indonesian people because the people of Indonesia are strongly tied to the state and not only can claim their rights, but must also perform its duty as a good citizen. And if the obligations and rights of the community as a citizen in a country and the obligations and rights of the state go well automatically the purpose of the country will be easy to achieve.

CONCLUSION AND RECOMMENDATIONS

This research can be concluded that house of Betang Damang Batu Tumbang Anoi has historical value so that developed cultural tourism object, tourism business has become the mainstay sector of the country. Betang Damang Batu Tumbang Anoi Tourism can improve local community’s economy, as one of the sources of local revenue (PAD) such as tax, levy, and source of foreign exchange especially for the local community in Palangka Raya. Through cultural tourism community, Betang Damang Batu Tumbang Anoi also can improve the infrastructure, such as public facilities and lodging.

The tourism development house of Betang Damang Batu Tumbang Anoi required cooperation or partnership between the government and local communities to improve local economic empowerment, in addition to increasing the income of the community evenly and also can reduce unemployment.

REFERENCES

THE ATTITUDE OF KOH NGOMONG OF STATE CIVIL APPARATUS AND WHISTLEBLOWING INTENTION

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ABSTRACT
This study analyzes whether the attitude of koh ngomong, subjective norms and the personal cost of reporting influence whistleblowing intention. The theory of reasoned action and the theory of planned behavior are used as the theoretical basis in this research. The population in this study is all the members of the Regional Organization (Organisasi Perangkat Daerah) Denpasar City. The method of determining the sample is purposive sampling. Hypotheses were tested using Partial Least Squares. The results of the analysis show that the attitude of koh ngomong and personal cost of reporting have a negative effect on whistleblowing intentions, while subjective norms have a positive effect on whistleblowing intentions.

KEY WORDS
Whistleblowing, koh ngomong, subjective norm, personal cost of reporting, theory of reasoned action, theory of planned behavior.

Whistleblower is a person (an employee within the organization) who reports allegations of dishonesty, illegal activity or misconduct in government departments, public organizations, private organizations or a company to the public or to powerful officials (Susmanschi, 2012). Whistleblowing has been defined as a disclosure by members of the organization (whether current or not) of an illegal, immoral or illegitimate practice to any person or organization seen as having influence in such a matter (Miceli and Near, 1985). According to Near and Jensen (1983), whistleblowing is a process of influencing someone to use his or her power to change attitudes and behaviors of members of the organization concerned.

Differences in attitude and work behavior are held by each individual, certainly not always in line with the work culture of the organization. Any sophisticated internal control system that is used will not be effective if the human resources that are to implement it turn out to have bad faith or behave unethically.

Unkind or unethical behavior is evidenced by the rampant cases of fraud (corruption) which are committed by the State Civil Apparatus (Aparatur Sipil Negara) as public servants in Indonesia. The detection or eradication of ethical violations in the public sector is not easy to do. Whistleblowing is very effective in exposing fraud and corruption, so it requires community awareness. Disclosure of fraud, otherwise known as whistleblowing in recent years, has also become a phenomenon that attracts the attention of the world and Indonesia.

Indonesia has been shaken with revelations of several cases of fraud successfully revealed by whistleblowers. For example, the case of "Papa Minta Saham (Papa Ask for Stock)". Sudirman Said took the role of whistleblower by reporting Setya Novanto's actions to the Court of Honor Council (Fahlevi, 2017). What Sudirman Said did or whoever took on the role of a whistleblower was an important step to be followed by Indonesian society.

The role of a whistleblower is invaluable in exposing corruption, fraud and mismanagement. The disclosure of initial misunderstandings or the risk of error may then protect human rights, help save lives and enforce applicable law. But unfortunately, the role is not a role that can easily be taken by those who already know the occurrence of an illegal practice. A person who comes from an internal organization will generally face an ethical dilemma in deciding whether to become a whistleblower or to keep it hidden. Some people view whistleblowers as betrayers or people who violate the norms of organizational loyalty,

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others consider whistleblowing a heroic deed that helps to preserve values that are deemed more important than mere loyalty to the organization (Rothschild and Miethe, 1999). This is a conflict that ultimately puts potential perpetrators of whistleblowing in a dilemma, which leads to doubts in determining the attitude that eventually can sway one's intention to be a whistleblower.

The dichotomy in understanding whistleblower conflicts leads studies or research on whistleblowing to be seen from various sciences. The perspective of whistleblowing research from various academic fields, such as psychology (Zhang, Chiu and Wei, 2009), organizational behavior (Seifert et al., 2010), organizational theory (Miceli and Near, 1984), business ethics (Kaptein, 2011) accounting and auditing (Brennan and Kelly, 2007; Miceli, Dozier and Near, 1991) and culture (Hwang et al., 2014).

A study in Indonesia by Soeharjono (2011) and Fatmawati (2016) examined local culture in the context of whistleblowing. Soeharjono (2011) conducted a cultural research bureaucracy “ewuh-pakewuh” on the effectiveness of internal control systems. Meanwhile, Fatmawati (2016) has conducted research on accounting fraud with ewuh pakewuh culture. This attitude can occur because a subordinate will feel uncomfortable or hesitate in expressing contradictory opinions in order to maintain good relations and to avoid conflict with a senior or superior, or someone who is seen as having a higher social standing (Fatmawati, 2016).

In Bali there is a term known as the attitude of koh ngomong, which is the attitude pattern of costiveness, reluctance to speak. This attitude almost resembles the "ewuh-pakewuh" attitude that causes adherents to feel reluctant in expressing opinions. The term koh ngomong attitude consists of three syllables. First is attitude. Attitude is a tendency to approach or avoid, respond positively or negatively to various social circumstances (Nikmah, 2014). Secondly, the word koh comes from the Balinese language which means hesitate. Hesitate in the Great Indonesian Dictionary (Kamus Besar Bahasa Indonesia) means lazy (to do something); reluctant to do anything; feel bad; respectful; or there is a feeling of shyness. Thirdly, the term is also derived from the Balinese language which means to speak. So from the explanation, it can be concluded that the attitude of koh ngomong is a tendency of the Balinese which results in a person hesitating, being lazy, reluctant or uncomfortable in expressing a thing or talking.

Dyne, Ang, & Botero (2003) define the silence of an organization as a collective phenomenon in which employees hold their opinions and concerns about potential organizational problems. They argue that in an organization with a systematic silent culture, employees do not express their ideas and do not speak the truth for fear of negative repercussions and because of the belief that their opinions are unappreciated. Dyne et al. (2003) also revealed there are three motives for employee, i.e. acquiescent silence, defensive silence, and pro-social silence. According to Brinsfield (2012) regarding employee silence motive, silence can occur because someone has known or received much kindness from others, so that person will have difficulty rejecting or ignoring the opinion and request of the person. He undertook to build upon research conducted by Dyne et al. (2003), which revealed that there are 4 (four) employee silence motives: self-protective silence, acquiescent silence, pro-social silence, and deviant silence.

Another consideration that encourages a person to be a whistleblower is the matter of subjective norms. The subjective norm in Theory of Planned Behavior is how far a person has a desire that motivates him to exercise the will or outlook of the person to the behavior he / she will perform (Ajzen, 1991). Ajzen (1991) also states that a person who believes that people in his environment have an influence in his life has the thought that he must perform a certain behavior and he will feel the pressure to carry out the behavior. Conversely, if a person believes that the majority of people within his or her environment have an influence against such behavior, then that person will have the confidence to refuse to carry out the behavior.

The heroism of whistleblowers will certainly never be immune to the ethical dilemmas felt in their working environment. Another influence upon the intention of whistleblowers to engage in whistleblowing is personal cost. Personal cost is the employee's view of the risk of
retaliation or revenge or sanction from members of the organization, which may reduce the employee's incentive to report wrongdoing. This shows that every employee has a need to protect himself (self-protection) in order to seek security, which is a reason someone does not want to report alleged violations. This is because they are of the view that the reports they make will not be followed up, and they will receive retaliation (revenge). Management will not protect them against the threat of revenge, especially for the type of fraud that involves managers (McMillan et al., 2008). In his research, Bagustianto and Nurkholis (2015) stated that personal cost is not just the impact of retaliation from the offender, but also the decision to be a whistleblower is considered unethical, for example reporting fraud committed by superiors is considered an unethical action because it is against the boss.

The purpose of the study was to prove empirically the influence of the attitude of koh ngomong, subjective norm, and personal cost of reporting on whistleblowing intentions. This research can provide several benefits. First, the theoretical benefits of this research are contributing to the Theory of Reasoned Action and Theory of Planned Behavior and supported by Pro-social Behavior Theory. A positive attitude and support from people around is expected to trigger the emergence of whistleblowing intentions. The discussion on the attitude of koh ngomong (hesitate to speak) in this research is a development of research conducted by Brinsfield (2012) which revealed 4 (four) motives of employee silence.

The Theory of Reasoned Action (TRA) connects belief, attitude, intention and behavior. Intention is determined by subjective attitudes and norms (Ajzen and Fishbein, 1980). Furthermore, TRA developed into the Theory of Planned Behavior (TPB). TRA explains one's intention toward behavior formed by two main factors: attitude toward the behavior and subjective norms (Ajzen and Fishbein, 1980). While in TPB there is additionally one more factor that is perceived behavioral control (Ajzen, 1991).

The attitude of koh ngomong, subjective norm and whistleblowing intention in this research interpret the attitude factor, subjective norm and intention as contained in The Theory of Reasoned Action (TRA). Whereas the personal cost of reporting explains perception of behavioral control or perceived behavioral control as contained in Theory of Planned Behavior (TPB). Pro-social behavior theory is a theory that supports whistleblowing. Brief and Motowidlo (1986) state that whistleblowing is one of thirteen forms of pro-social organizational behavior. This is in line with research conducted by Dozier and Miceli (1985) which states that whistleblowing actions are viewed as pro-social behavior because it will benefit other people (or organizations) as well as benefit the whistleblowers themselves.

Hypotheses:

Attitude of Koh Ngomong and Whistleblowing Intentions. Dyne et al. (2003) revealed that there are 3 (three) motives of employee silence attitude (employee silence motive), i.e. acquiescent silence, defensive silence, and pro-social silence. According to Brinsfield (2012) regarding the employee silence motive, silence can arise due to the individual having known or received much kindness from others so that person will have difficulty to rejecting or ignoring the opinions and requests of the person. Brinsfield (2012) also states that employees may be motivated to withhold unpleasant information from their superiors because they want to protect themselves from the negative impacts associated with whistleblowing.

This silence variable of Dyne et al. (2003) and Brinsfield (2012) is similar to the attitude of koh ngomong in Balinese society. The attitude of koh ngomong can occur due to the age difference factor. Koh ngomong usually will be more often faced by younger people facing older people. Soeharjono (2011) used the ewuh pakewuh culture under high uncertainty conditions that the subordinates will "wait for the superior's guidance" because they feel the boss is more suitable to decide a matter of uncertainty or the issue of ambiguity. Subordinates feel uncomfortable to speak and act because they think it is not their authority. In a pre-condition of the subordinates of "awaiting guidance of the boss", bosses develop a policy of encouraging frank speech from their subordinates.

In general, the Balinese grow up in the tradition of fear of criticizing and being criticized. As much as possible there should be no criticism, for the sake of communal harmony and stability. In that tradition, the criticisms that appear must be muzzled, and the originator of the
criticism must be hostile. Thus, a Balinese person tends to avoid debate. They will choose silence and do not respond if the conversation has led to the debate so that the attitude of koh ngomong is growing in Bali. Based on the explanation, the first hypothesis (H1) in this study is:

H1: The higher the person's koh ngomong attitude the lower the whistleblowing intention.

Subjective Norms and Whistleblowing Intentions. The study of Ajzen (1991) states that people have the belief that most people of influence in their lives think that they should behave in a certain manner and that individuals will feel the pressure to do so. Conversely, if people are certain that the majority of other people who influence them do not support them in a behavior, individuals will be confident in refusing such behavior. A study conducted by Randall and Gibson (1991) describes subjective norms affecting the intentions of a health professional to report his colleagues. A study conducted by Ellis and Arieli (1999) on Israeli soldiers also found that subjective norms have a significant effect on the intention of something, while a study conducted by (Miceli, Near, and Graham, 2008) shows that reporters tend to receive support from family and social acquaintances. Similarly, in a study conducted by Park and Blenkinsopp (2009), they found that subjective norms had an impact on whistleblowing intentions of police officers. Keller and Miller (2015) also found that subjective norms have a significant influence on the intentions of an eyewitness in reporting a crime. Purwantini's empirical findings (2016) explain that subjective norms have a positive effect on whistleblowing intentions. Based on the explanation above, the second hypothesis of this study is:

H2: The higher a person's subjective norm the higher the whistleblowing intention.

Personal Cost of Reporting and Whistleblowing Intentions. The disclosure of fraud will generally have unfavorable consequences for whistleblowers who disclose violations. Elias (2008) reveals that organizations threaten to take revenge on violators to prevent public disclosure of unethical acts of the organization. Personal cost is one example of the need to protect oneself in order to feel safe. Personal cost is also the main reason that people are not interested in reporting allegations of fraud because they assume that their report will be ignored, they will experience revenge, and management will not protect them from the threat of revenge, especially in the type of offense involving managers (McMillan et al., 2008).

One of the considerations for employees who might report fraud is the threat or retaliation of the perpetrators of fraud. The threat of retaliation that may face an employee if disclosing the fraud as described by Kreshastuti (2014), may be retaliation, a threat to security, a transfer to another department that is inconsistent with their competence and would result in an unfair performance assessment. Bagustianto and Nurkholis (2015) say that in view of the risk of this threat of retaliation, the reporting candidate will face a dilemma between doing what is right and suffering the consequences or just silence and pretending not to know what is happening. This dilemma results in an attitude that reduces one's interest to report such fraud. This study was reinforced by Aliyah's (2015) and Kaplan and Whitecotton (2001) studies which stated that personal cost affects whistleblowing intentions. This description leads to the assumption that personal cost of reporting can reduce the employee's intention to report the fraud that he or she knows. The third hypothesis (H3) in this study is:

H3: The higher the Personal cost of reporting borne by someone the lower the whistleblowing intention.

METHODS OF RESEARCH

The research was conducted at the State Civil Apparatus (Aparatur Sipil Negara) working in the Regional Organizations (Organisasi Perangkat Daerah) in the Government of Denpasar. The research year was 2017. The dependent variable in this research is the whistleblowing intention (Y). The independent variables in this study are the attitude of koh ngomong (X1), subjective norm (X2) and personal cost of reporting (X3).
This study uses primary data sources obtained through questionnaires. The questionnaire used in this study utilized the five point Likert scale. The population of this study were employees of Regional Device Organization (Organisasi Perangkat Daerah) in Denpasar City. The research sample was selected using a purposive sampling technique. A sample of 35 respondents was thereby obtained.

Data analysis technique used in this research is Partial Least Square (PLS). The wake of the established theoretical model is as presented in Table 1. The path diagram of the equation outer model and inner model in this study are as follows:

Figure 1 – Path Diagram (Source: Data processed, 2017)

RESULTS OF STUDY

36 questionnaires were distributed in this study. Of the 36 questionnaires distributed, 35 questionnaires were returned. The questionnaires that are eligible for analysis are 35 questionnaires (with 100% useable response rate). The questionnaires were filled completely, so they are worthy to be analyzed further. The return of questionnaires can be seen in Table 2.

Descriptive Statistics Analysis. Descriptive statistics in this study are presented to provide information about the characteristics of research variables, including minimum values, maximum values, mean and standard deviation. Based on Table 3 the number of samples of each variable is 35. The variable of the attitude of koh ngomong is measured using a questionnaire consisting of 9 items of statement. Each statement has a Likert scale of 1 - 5 with a score range of 9 - 41. The attitude of koh ngomong has a minimum value of 9.00 which means that there are respondents who disagree on whistleblowing intentions. The maximum value of 41.00 indicates that respondents who answered strongly look favorably on whistleblowing intentions, while the average value of the attitude koh ngomong of 18.46 means the average respondent tends to respond neutrally to the attitude of koh ngomong. The standard deviation value of the attitude of koh ngomong is 7.28, and is smaller than the mean value, indicating that the attitude of koh ngomong experienced by respondents has small data distribution.

The subjective norm variable was measured using a questionnaire consisting of 6 items of statement with a score range of 8 - 30. Subjective norm has a minimum value of 8.00 which indicates that there are respondents who answered disagree. This means there are respondents who believe that whistleblowing intentions are not influenced by superiors, peers and subordinates. A maximum value of 30.00 indicates that there are respondents who answered strongly agree. This means there are respondents who are very confident that the intention of whistleblowing is strongly influenced by superiors, peers and subordinates. The average value of the subjective norm is 22.34 which means the average respondent tends to respond neutrally to subjective norms. The subjective standard deviation value of 4.14 is
smaller than the mean value; it indicates that subjective norms experienced by respondents have small data distribution.

The personal cost of reporting is measured using a questionnaire consisting of 6 items of statement with a score range of 6 - 30. The personal cost of reporting has a minimum value of 6.00 which indicates that there are respondents who answered disagree. This means that there are respondents who believe that no obstacles are felt in whistleblowing. A maximum value of 30.00 indicates that there are respondents who answered agree. This means that there are respondents who believe that many obstacles are felt in whistleblowing. The average value of personal cost of reporting is 19.91 which means the average respondent tends to respond neutrally to the personal cost of reporting. This means that the standard value of personal deviation cost of reporting, 6.77 is smaller than the mean value. This indicates that the personal cost of reporting experienced by the respondents has small data distribution.

Whistleblowing intentions were measured using a questionnaire consisting of 2 items of statement with a range of 4 - 10. Whistleblowing intentions had a minimum value of 4.00 indicating that there were respondents who answered disagree. This means that there are respondents who are not confident about the intention to conduct whistleblowing. The maximum value of 10.00 indicates that there are respondents who answered strongly agree. This means that there are respondents who are very confident about the intention to conduct whistleblowing. The average value of a whistleblowing intention of 8.43 means that the average respondent tends to respond in agreement with whistleblowing intentions. This shows that the average respondent is certain about engaging in whistleblowing. The standard deviation value of whistleblowing intentions of 1.42 is smaller than the mean value; it indicates that the whistleblowing intentions experienced by respondents have small data distribution. The results of the descriptive statistical analysis of this study are presented in Table 3.

*Results of the Outer Model Analysis.* The results of an outer model value analysis are presented in Table 4. Outer model values or correlations between variables with variables have fulfilled convergent validity because all have a factor loading above 0.5.

The model is said to have good discriminant validity if each loading indicator of a latent variable is greater correlated with the latent variable than when correlated with other latent variables. Table 5 shows that the loading factor value for each indicator of each latent variable has the largest loading factor value compared to the loading factor value if it is associated with other latent variables. This means that each latent variable has good discriminant validity.

Test results shown in Table 6 show that all values of composite reliability value are greater than 0.70, the cronbach alpha value is greater than 0.60 and the AVE value in the study has a value greater than 0.50. Table 6 shows that the composite reliability test shows good and reliable results. All constructs fulfill the composite reliability because the value of each variable is greater than 0.70. This means that all reflexive indicators are the measuring tools of their respective constructs.

*Inner Model Analysis Results.* Inner model evaluation or structural model is done to see the relationship between variables, significance value, and the R-square of the research model. The structural model is evaluated by using R-square for dependent constructs, t-tests, and the significance of the structural path parameter coefficients. The structural model is shown in Figure 2.

Inner model test results can show the relationship between constructs by comparing the value of significance and R-square of the research model (Ghozali, 2015: 42). R-square value in Table 7 shows a value of 0.774 which means that 77.4 percent of whistleblowing intent variable can be explained by the variable of the attitude of koh ngomong, subjective norms, and personal cost of reporting, while the remaining 22.6 percent is explained by other variables outside the research.
Hypothesis Testing Results. Hypothesis testing is done by Bootstrap re-sampling method developed by Geisser and Stone (Mindra and Sumertajaya, 2008). The value contained in the result output for inner weight is used to test the hypothesis. The result of t-statistic value on output result for inner weight compared with P Value with 5% of significance is ≥ 0.05. The following Table 8 presents the results of the bootstrapping outputs of the effects between variables with statistical analysis of PLS.

Data from Table 8 can be seen that all indicators of the attitude of koh ngomong and personal cost of reporting have a negative and significant relationship to whistleblowing intentions. Whereas the indicator of subjective norm has a positive and significant impact on whistleblowing intentions. The variable having the most influence upon the whistleblowing intention is variable of koh ngomong attitude that is equal to -0.632, compared with the subjective norm variable of only 0.319 and also the variable of personal cost of reporting equal to -0.255.

DISCUSSION OF RESULTS

The Attitude of Koh Ngomong and Whistleblowing Intentions. The first hypothesis states that the higher the attitude of one's koh ngomong attitude the lower the intention of whistleblowing. The results of the test on the parameter coefficient between the attitude of koh ngomong on the whistleblowing intention showed a negative correlation with a coefficient value of -0.632 with t-statistic value of 8.530 and significance at α = 0.05. The value of t-statistics is greater than the value of P variable is 0.000. This means that the attitude of koh ngomong has a negative and significant influence on the intention to engage in whistleblowing, thus the first hypothesis is accepted.

This is in accordance with the Theory of Reasoned Action and Theory of Planned Behavior which states that attitudes toward behavior affect one's intentions in making decisions (Ajzen, 1991). In line with the theory proposed by Ajzen (1991), empirically several studies have proven that the concept of attitude has a relationship to whistleblowing intentions. Soeharjono (2011) also found that the influence of bureaucratic culture "ewuh-pakewuh" actually makes the internal control system ineffective. There are things that need to be underlined in the research of Soeharjono (2011), i.e. subordinates feel that there is no value in talking or acting because they deem it outside their authority. In a pre-condition of subordinates "awaiting guidance from superiors", superiors develop policies encouraging blaka attitude (speaking frankly) from the subordinates. Same statement also revealed by Brinsfield (2012) which states that employees may be motivated to withhold unpleasant
information from their superiors because of the motive to protect themselves from the negative impacts associated with whistleblowing. This means that the attitude of koh ngomong measured in three dimensions, i.e. Pro-social dimension, Acquiescent dimension, and Deviant dimension has a negative and significant influence on whistleblowing intention. The more one believes that the attitude of koh ngomong is the safest attitude, and can protect one from the negative impacts associated with whistleblowing, the smaller the person's intention to become a whistleblower.

The results of this study are in line with Dyne et al. (2003) and Brinsfield (2012) are associated with employee silence motive, which states that employee silence has a significant effect on the behavioral phenomena in the organization. The results of this study are also in line with research conducted by Bjorkelo, Einarsen, Nielsen, & Matthiesen (2011), Wang & Hsieh (2013), Elizabeth W. Morrison (2014), and Mannion & Davies (2015) stated that silence attitude (silence) effects one's intentions. In this case the attitude of koh ngomong is a negative attitude that can lead a person to become a whistleblower. This means that the lower the negative response or negative attitude of a person to the whistleblowing action, the stronger the intention of a person to engage in whistleblowing.

From the test results on each question in the variable of koh ngomong attitude, the question indicator of the Pro-social dimension has a higher value than the values of the acquiescent dimension and the deviant dimension indicators. This indicates that the reason for the koh ngomong attitude of the Head of Finance at the respective Organizations of Regional Device (Organisasi Perangkat Daerah) in Denpasar City is generally due to their wish to avoid conflict that would hurt the feelings of others. They often remain in temporary work to protect their organizations or agencies from dangers and protect others, in this case the colleagues in their work, from danger. While the question on the deviant dimension indicator has a value lower than the other indicators, this means that the attitude of koh ngomong is due to the Head of Finance in the Regional Organizations (Organisasi Perangkat Daerah) Denpasar not wanting to hurt the feelings of others deliberately.

Subjective Norms and Whistleblowing Intentions. The second hypothesis states the higher one's subjective norms the higher the whistleblowing intentions. The test results on the parameter coefficient between subjective norms in Whistleblowing intention showed a positive relationship, with a coefficient value of 0.319, with t-statistics of 3.654 and significance at α = 0.05. The value of t-statistics is greater than the value of P value, specifically 0.000. It shows that subjective norms have a positive and significant influence on whistleblowing intentions, thus the second hypothesis is accepted.

The influence of subjective norms on whistleblowing intentions (H2) is accepted which states that subjective norms have a positive and significant influence on whistleblowing intentions. This is in accordance with the Theory of Planned Behavior which states that subjective norms have an influence on one's intentions in making decisions (Ajzen, 2005). An individual will intend to do a certain action when associated individuals support that action. This means subjective norms measured by four indicators such as superiors, peers and subordinates have a positive and significant influence on whistleblowing intentions at the Regional Organization (Organisasi Perangkat Daerah) of Denpasar City. The more someone is persuaded that superiors, peers and subordinates support whistleblowing, the bigger someone's intention to engage in whistleblowing.

The results of this study are in line with research conducted by Jubb (1999), Morrison (2014), Mannion & Davies (2015), Pariantri et al. (2016), Purviantini (2016), and Zakaria et al. (2016) which states that subjective norms affect one's intentions. This means that the more confident the nearest person supports becoming a whistleblower, the more likely one is to engage in whistleblowing.

From the test result on each question in the subjective norms variable, support from superiors to engage in whistleblowing has the highest score, then the co-workers indicator is in second position and the subordinate indicator has the lowest value in terms of close environmental support to engage in whistleblowing. Meanwhile, in the case of motivation to conduct whistleblowing, it turns out that the head of Finance at the Regional Organizations
Denpasar will consider the motivation derived from colleagues and superiors in comparison with the motivation derived from subordinates.

**Personal Cost of Reporting and Whistleblowing Intentions.** The third hypothesis states that the higher the cost of personal cost of reporting a person, the lower the intention to engage in whistleblowing. The results of parameter coefficient test between personal cost of reporting on whistleblowing intention showed a negative relationship, with coefficient value of -0.255 with t-statistic value of 2.619 and significance at α = 0.05. The value of t-statistics is greater than the value of P value, specifically 0.009. This means that the personal cost of reporting has a negative and significant influence on whistleblowing intentions, thus the third hypothesis is accepted.

The influence of personal cost of reporting control on the intention to perform whistleblowing (H3) is accepted which states that the personal cost of reporting has a negative and significant influence on the intention to engage in whistleblowing. In this study personal cost of reporting is measured by three indicators such as intimidation, retaliation and negative views. The results of personal cost of reporting show a negative and significant influence on whistleblowing intentions. The more convinced someone is that intimidation, retaliation and negative views are obstacle to becoming a whistleblower, the less intention someone has to engage in whistleblowing. It also means that everyone still has the need for security, so they will try to protect themselves first as stated in the employee silence motive.

The results of this study are in line with research conducted by Mesmer-Magnus & Viswesvaran (2005) Bjorkelo et al. (2011), Morrison (2014), Alitha (2015), Bagustaino & Nurkholis (2015), Mannion & Davies (2015), and Sonnier et al. (2016) stating that the personal cost of reporting negatively affects the intention of whistleblowing. This means that the higher the belief in the absence of factors that inhibit becoming a whistleblower, the stronger the intention of someone to engage in whistleblowing.

From the test results of each question in the personal cost of reporting variable, the largest compared to other indicators is the retaliation indicator. This means one of the inhibiting factors of whistleblowing is the fear of retaliation. They feel that if they become whistleblowers, then the offender will retaliate. Their next concern is the negative view of colleagues at the agency where they work and also the intimidation in the reporting process. The existence of intimidation, retaliation and negative views are what influence them against becoming whistleblowers.

**CONCLUSION AND SUGGESTIONS**

Based on the results of the analysis and discussion, it can be concluded that the attitude of koh ngomong has a negative and significant influence on whistleblowing intentions. This means that the more a person chooses to be koh ngomong or the lower the positive attitude of the State Civil Servant in the Regional Organization (Organisasi Perangkat Daerah) Denpasar, the lower their intention to conduct whistleblowing. Subjective norms have a positive and significant influence on whistleblowing intentions. This means that the higher the subjective norm of a person, the higher the intention of a State Civil Servant in the Regional Organizations (Organisasi Perangkat Daerah) Denpasar City to conduct whistleblowing. Personal cost of reporting has a negative and significant influence on whistleblowing intentions. This means that the more one's beliefs relate to the inhibiting factor for whistleblowing, the weaker the intention of someone to engage in whistleblowing.

Based on the conclusion of the research result, the suggestions submitted to the Local Government of Denpasar City are: to support employees to dare to speak more, without any burden of intervention from their surrounding environment; more frequent coaching of subordinates to understand the personality of each employee better, in order to support whistleblowing without fear or pressure from others; and pay more attention and provide the certainty of legal protection for whistleblowers. To suggest further research: it is to be hoped that other variables may be added, such as the seriousness of fraud, because the results of this study indicate that 77.4 percent of variable intentions of whistleblowing can be explained by the variable attitude of koh ngomong, subjective norms, and personal cost of reporting,
while the remaining 22.6 percent are explained by other variables outside the study. In addition, in this study, the question items of the attitude of *koh ngomong* are still described in the context of employee silence motive as found in the study of Brinsfield (2012). Further research development is suggested to reconstruct the question items in the context of Balinese culture. It is also to be hoped that further research will develop the research model using an experimental model and increase the number of research samples by involving employees or other officials as respondents, in order to improve the results.

REFERENCES


APPENDIX

Table 1 – Variable Research Model

<table>
<thead>
<tr>
<th>No</th>
<th>Construct</th>
<th>Dimensional Construct</th>
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<tr>
<td>1</td>
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</tr>
<tr>
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<td>Acquisitive dimension</td>
</tr>
<tr>
<td></td>
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<td>Deviant dimension</td>
</tr>
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<td>Subjective Norms</td>
<td>Superiors</td>
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<td></td>
<td>Peers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subordinates</td>
</tr>
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<td>Personal Cost of Reporting</td>
<td>Intimidation</td>
</tr>
<tr>
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<td></td>
<td>Retaliation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative views</td>
</tr>
<tr>
<td>4</td>
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<td>Decision to do whistleblowing</td>
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Table 2 – Rate of Return of Questionnaire

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<td>Questionnaires distributed</td>
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<td>Questionnaires returned</td>
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<td>Incomplete questionnaires</td>
<td>(0)</td>
</tr>
<tr>
<td>Rate of Return / Response Rate</td>
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</tr>
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<td>Questionnaires returned x 100%</td>
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<tr>
<td>Reasonable Return Rate / Useable Response Rate</td>
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Source: Data processed, 2017.

Table 3 – Descriptive Statistics Test Results

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<td>10.00</td>
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Source: Data processed, 2017.
## Tabel 4 – Outer Loadings Results

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<td></td>
<td>Peers</td>
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<td>0.918</td>
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<td>Personal Cost of Reporting</td>
<td>Subordinates</td>
<td>SBN3</td>
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<td></td>
<td>Intimidation</td>
<td>PCR1</td>
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<td></td>
<td>Retaliation</td>
<td>PCR2</td>
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<td>Negative views</td>
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<td>WBI1</td>
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Source: Data processed, 2017.

## Table 5 – Value Discriminant Validity (Cross Loading)

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<th>The Attitude of Koh Ngomong</th>
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<th>Whistleblowing Intentions</th>
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Source: Data processed, 2017.

## Table 6 – Composite Reliability, Cronbach Alpha dan Average Variance Extracted

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<th>Cronbach Alpha</th>
<th>Average Variance Extracted (AVE)</th>
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<td>The Attitude of Koh Ngomong</td>
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<td>0.930</td>
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Source: Data processed, 2017.

## Table 7 – R Square

<table>
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<th>Original Sample (O)</th>
<th>Sample Mean</th>
<th>Standard Deviation (STDEV)</th>
<th>T Statistics (O/STDEV)</th>
<th>P Values</th>
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<td>0.774</td>
<td>0.792</td>
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Source: Data processed, 2017.

## Table 8 – Bootstrapping Output Results

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<th>explanation</th>
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<tr>
<td>Personal Cost of Reporting =&gt; Whistleblowing Intentions</td>
<td>-0.255</td>
<td>2.619</td>
<td>0.009</td>
<td>Significant</td>
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Source: Data processed, 2017.
THE IMPLEMENTATION OF POVERTY REDUCTION PROGRAMS THROUGH PNPM MANDIRI-PROSPEK: A STUDY CONDUCTED IN SOUTH JAYAPURA SUB-DISTRICT, PAPUA

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ABSTRACT
Contemporary phenomenon of poverty was always interested to be studied, given that the effort of poverty alleviation through various types of community empowerment program still found many deficiencies in terms of both the process and the implementation of poverty alleviation policy. This research aimed to study the phenomenon of reality, normative and theoretical gap of poverty alleviation policy implementation through Mandiri National Community Empowerment Program and Strategic Village Economic and Institutional Development Program (PNPM Mandiri-Prospek). This research was intensively carried out for two months using naturalistic inquiry approach sourced from informants, circumstances, and documents. This research was conducted in one sub-district and two villages, i.e. Tahima Soroma and Tobati villages. Data collection techniques used to conduct this research was observation, interview, and documentation science. Output program has been in accordance with the needs of target group representing that output program could be utilized properly. The implementation of community empowerment program through PNPM Mandiri-Prospek has been conducted in accordance with the application of empowerment principle/values.

KEY WORDS
Implementation, poverty reduction, policies, community, empowerment, programs.

Global leaders have agreed on the purpose of global development from “Millennium Development Goals” (MDGs) in September 2015 to “Sustainable Development Goals” (SDGs) with the global development sustainability purpose under the development indicator of poverty, education, environment, and health and gender equality. Indonesia is especially expected to overcome the complexity of human and development problem so that in the future there will no one who leaves behind. In between the current national issues, Indonesia is surely not allowed to forget its commitment to the SDGs performance. Indonesia also takes part to declare that development agenda in New York, United States. SDGs’ contain sustainable development goals, has a particular deadline and a measured target that has to be achieved at the end of 2030. SDGs implementation becomes country's commitment to the Indonesian and Indonesia's commitment to the global community (UN, 2015).

As written in the Outcome Document Transforming Our World: The 2030 Agenda for Sustainable Development, the goal to end poverty becomes the “major” goal of 17 goals agreed in Sustainable Development Goals (SDGs) program. The first goal of those 17 Sustainable Development Goals is "end poverty in all its forms everywhere." Even though Indonesia has become G-20 (Government-20) member, that is 20 biggest countries in the world which dominate 75% of world trade and 2/3 of the total global citizen, but Indonesia is still as the lower-middle-income-country (income per capita US$ 1.046-4.125). It means the major factor of Indonesia's participation in G-20 is still because of the population so that it is not surprising if poverty problem still becomes the major problem. (UN, 2015).

Indonesia through the 1945 Constitution of Article 34 paragraph (1) stipulates that "Impoverished persons and abandoned children shall be taken care of by the State", and paragraph (2) "The state shall develop a system of social security for all of the people and shall empower the inadequate and underprivileged in society in accordance with human
dignity”. It is emphasized by Law of The Republic of Indonesia Number 11 of 2009 on Social Welfare, article 20 letter a stipulates that; one of the goals of poverty alleviation is to increase capacity and to develop the poor's basic skills and business skill. That Law of The Republic of Indonesia is followed up by Presidential Regulation Number 15 Year 2010 on the Acceleration of Poverty Alleviation. Poverty Alleviation is a policy and local government program conducted systematically, planned, and synergized with the business world and community to decrease total poor community in order to increase the degree of community welfare. Furthermore, Giddens (1984) stated that the relationship between the actor and structure has a mutual relationship so that brings them into duality. For that matter, an actor-oriented approach is used to see how poor family (agent) or poor community (a group of agents) respond various existing conditions of policy in considering interface among them. Relationship dynamic among the actors is expected able to explain why poverty alleviation policy along this time is not successful yet to touch the poor community, thus, the problem of participation and empowerment principle implementation needs to get attention.

Suharto (2006) mentioned that there are two grand theories on poverty, i.e. neo-liberalism paradigm and democracy-social paradigm. Neo-liberalism theory is rooted in classical politic written by Thomas Hobbes, John Lock, and John Stuart Mill. According to the neo-liberalism view, poverty is an individual problem caused by the weakness or individual choice. The country only acts as a "night keeper" and the strategy applied is "residual" that is through market strength and economic development accompanied by assistance provision to the poor directly and selectively.

In Indonesia’s context, thinking pattern and the practice of development can be divided into three models (Mochtar & MacAndrew, 1993). Those models are; firstly, approach that priorities political consideration which emphasizes on the state’s role and bureaucrats as the main actor of the development or also known as Politics as Commander (PSP); secondly, approach that prioritize the role of entrepreneur and corporate known as Economy as Commander (ESP); and thirdly is poverty handling by helping community to find its own strength or known as Human as Commander (MSP). Those three ideas are illustrated by Michtar & Mac Andrew (1993) in table 1 below:

<table>
<thead>
<tr>
<th>Description</th>
<th>Politics as Commander</th>
<th>Economy as Commander</th>
<th>Human as Commander</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actor</td>
<td>State (Bureaucrats)</td>
<td>Market (Entrepreneur)</td>
<td>Local Community (Citizen)</td>
</tr>
<tr>
<td>Mechanism</td>
<td>Political Strength</td>
<td>Economic Strength</td>
<td>Community Strength</td>
</tr>
<tr>
<td>Ideology</td>
<td>Statism/Conservative</td>
<td>Liberalism</td>
<td>Populist</td>
</tr>
</tbody>
</table>


Public administration organizer or participation-based governance can be ideologically said an antithesis of market-based approach (Peters, 2001). Poor community or the poor as the policy target of poverty alleviation must be heard since whatever happened they are the one who will make a decision for themselves and that will determine their future life (Wahab, 2002; Narayan, 2002). At the micro-level, the respond and the behavior of the poor as the actor is influenced by anything that according to them is most beneficial and enables or commonly called as notion of rationality. Poor community as the actor is actually not a passive group but in opposite is a group which actively takes an action in an intervention and will determine the success (Ploeg & Long, 1994). Poor community also tries to play a role and influence that is through the effort of counter-labeling from poor community and this can be identified as a struggle. That understanding is needed in accordance with the characteristic or in the social context is institutional and local politics. Therefore, Narayan (2002) proposed that some efforts of community empowerment as one of the steps of poverty alleviation are conducted by applying principles (values) of empowerment including aspect, access to information, inclusion & participation, accountability and local institutional capacity. Narayan’s idea is in accordance with the discussion that has been proposed by World Bank in 2012 in which the access to information, involvement (participation),
accountability, and institutional capacity in the local area is truly needed in terms of community empowerment.

This research shows that the real condition of the poor community for Papua Province scale in Indonesia can be described below:

According to the regional type, the poor community is concentrated in the rural area, in September 2015 there was 37.34% poor community living in the rural area while 3.61 present lived in the urban area. Poverty Line (PL) in the urban area in September 2015 was by Rp. 445,057 (US$ 31.82) higher than Poverty Line of rural area that reached up to Rp. 392,446. That is the cost to fulfill the basic needs for food not indicating that the food in the urban area is always better than in rural area. During the period of March 2015-September 2015, Poverty Gap Index-P1 and Poverty Severity Index-P2 tended to increase. This indicates that the average expenditures of the poor community tend to out of poverty line and inequality of poor community expenditure is also bigger (BPS, 2016).

Phenomenon description related to the poverty problem above needs "way out as the trajectory" in form of public policy that aims to determine the direction of development which will be conducted in terms of poverty alleviation. However, this policy has a risk to fail since its bad execution or bad policy, or even that policy has a bad luck. For that matter, Mazmanian & Sabatier (cited by Wahab, 2002) have investigated that learning the problem of policy implementation means trying to understand what has been done after the program finished. It means that it does not only influence institutional behavior that responds to the target group but also consider various strengths of politics, economics and social that influences the implementation of state policy. Furthermore, implementation success a policy will be determined by various aspects and factors, and each aspect or factor relates each other. The success of the policy implementation is truly determined by the implementation model which is able to guarantee problem complexity which will be finished through particular policy. This implementation model is actually expected a model that is more operational so that able to explain causality among the aspect or factor related to policy (Sumaryadi, 2005). Edward III (1984) mentioned that there are four aspects or factors that influence implementation performance of a public policy, they are 1) Communication; 2) resources; disposition or attitudes; 4) bureaucratic structure. While Korten (1988) described that in terms of policy implementation, there are three elements of program execution, i.e. program itself, program execution, and target group.

According to the description of the poverty above, Provincial Government gives a solution of poverty alleviation through Strategic Village Economic and Institutional Development Program (PROSPEK) based on the Laws, Governor Regulation, Governor Decree, and Mayor’s Decision Letter. That legal standing becomes an entry point of Papua Province Government and Jayapura city in terms of poverty alleviation. According to the description of that background so that the researchers are interested to conduct a study with the focuses: (1) program implementation of PNPM-MANDIRI PROSPEK in South Jayapura Sub-district, and (2) community empowerment implementation through the study of PNPM MANDIRI-PROSPEK in South Jayapura Sub-district, Papua Province.

LITERATURE REVIEW

Public Policy Implementation. The existence of a public policy is always followed-up by policy implementation. For that matter, implementation is a determining stage in the policy process Ripley & Franklin (1982, as quoted by Tarigan, 2000). Policy implementation is an activity that is seemed after being issued an official guidance of a policy including input processing effort to produce output or outcomes for society. Policy implementation stage can be characterized and differentiated by a policy-making process. Policy-making is a process having bottom-up logical which means policy process is started by proposing aspiration, asking or support from society. While the implementation of a policy has a top-down logical which means as an alternative integration of abstract or macro policy alternative so that become a concrete action (Wibawa, 1994). Policy formulation that has been formed will not have a meaning if not being implemented. For that matter, success measurement of policy is
in the implementation process. Adiwisata (cited by Tachjan, 2006) emphasized that policy implementation is an important thing. Public policy made will only be a "paper" if its implementation is failed. Furthermore, the success of public policy implementation does not only need rationality, but also implementer ability to understand and respond expectation developing in the society, in which public policy will be implemented.

Nugroho (2004) offered two options for public policy, i.e. (1) directly implement it in form of programs, and (2) through derivative policy formulation or integration of that public policy. Those two options above can be implemented well, it should also consider what and how the form of reality program is so that can fulfill public interest. Policy implementation activity management can be arranged in orderly through the following stages: 1) strategy implementation (pre-implementation), organizing, 3) movement and leadership, 4) controlling. Moreover, understanding the implementation of policy means trying to understand what happened next after a program is being executed or formulated. Mazmanian and Sabatier (as quoted by Wahab, 2002) has explained that implementation means understanding what truly happened after a program stated applicable or formulated is a focus of policy implementation consideration, that is circumstances and state activities that cover both effort to administer and bring real impact to the society or circumstances can be meant that policy implementation can be seen as a process of policy implementation. While the objective of the most basic implementation study is learning how the performance of a public policy, and learning critically factors that influence a policy to achieve a policy goal (Effendi, 1993).

In a policy process, there will always be a possibility of the difference between what expected and planned by the decision maker and the reality (condition sin qua nun) also known as implementation gap Dunsire (1978). The size of implementation gap depends on the implementation capacity that is an ability of an organization/actor to execute policy decision as it so that there is a guarantee that the goal or target has been set in the formal document can be achieved. Government policy that has been set in its implementation contains failure risk. Hogwood and Gunn (1984) divided policy failure into two categories, i.e. (1) not implementation; and (1) unsuccessful implementation). Not implementation policy is caused by; (1) involved parties in the implementation process do not want to cooperate; (2) working not efficiently; (3) working halfheartedly; (4) not completely master the problem; (5) problem faced beyond the ability. On the other hand, unsuccessful implementation is caused by; (1) bad execution; (2) bad policy; (3) bad luck.

![Policy Implementation Model](Image)

Figure 1 – Policy Implementation Model (Edward III, 1984)

Public policy implementation can be seen from several perspectives or approaches. One of them is implementation problems approach introduced by Edwards III (1984). The approach to implementation problem is firstly proposing 2 main questions, i.e. (1) what does the factor that supports the success of policy implementation? (2) What does the factor that inhibits the success of policy implementation? Moreover, there is four variables that influence public policy implementation performance, i.e. (1) communication; (2) resources; (3)
Disposition or attitudes; (4) bureaucratic structure. Policy implementation study approach, its abstract question is started from how the pre-condition to success public policy and what the main obstacle to public policy success. Detail information can be seen in Figure 1.

According to the figure above, it can be meant that the success of policy implementation requires the implementer to understand what have to do. Every purpose and policy target has to be socialized to the target group so that will decrease the implementation distortion.

In relation to the human resources factor that influence implementation process of a policy, Mazmanian, and Sabatier as quoted by Subarsono (2005) made a categorization that policy implementation is understood through three different perspectives, i.e. decision maker, executing officials at the field and individual actor as the target group. Implementer's obedience is measured by considering the relevance of implementer behavior to the obligation carried out. Important sources in the implementation of policy meant to cover: 1) Staff must have the skill and ability to do the task, 2) Command, 3) Superior/boss's suggestion. In addition, there have to accuracy or propriety between the total staff needed and skill that has to be had to the task that will be done. The cost to pay operational of that policy implementation, relevant and adequate information on how the way to implement a policy, and the willingness or ability of various parties involved in the implementation of that policy. This is intended to make the implementer will not make a mistake on how the way to implement that policy.

Development Concept. Development theory in the social science can be divided into two big paradigms, i.e. modernization and dependence (Larain, 1994). Modernization paradigm covers macro theories on economic development and social change and micro theories on individual values that support change process. Dependence paradigm covers under-development and dependent development theories as well as world-system theory in accordance with Larain's (1994) classification. While Tikson (2005) divided it into three classifications of development theory, i.e. modernization, under-development and dependent development. Those various paradigms bring some versions of the definition of development.

Development can be defined as an effort to be coordinated to create more official alternatives to every citizen to complete and achieve its humanism aspiration (Nugroho & Dahuri, 2004). The first theme is coordination implicating on the needs of planning activity like that has been discussed previously. The second theme is the creation of a more official alternative. This can be defined that development should be diversity-oriented at all aspects of life. Any mechanism brings to the creation of trusted institutional and law which are able to play role efficiently, transparently, and fairly. The third theme is the most humanism aspiration; it means development must be oriented to the problem solving and the guidance of moral values and attitude. In relation to the development definition, some experts give various definitions of the planning. The term of development is possible to be translated into a different meaning by one and another, one region to another and one country to another. However, actually, there is an agreement that development is a process to do improvement (Bratokusumah & Irawati, 2005).

According to Kuncoro (1997), the existing development theory still has not completely finished economic development activities in the region. For that matter, it is important to do a reformulation of a new paradigm of more comprehensive local economic development planning. It needs a synthesis of the existing various approaches so that can result in a new formulation on a new paradigm of economic development more completely. In the existing various ideas, there are some of the difference between old and new concept on development. Following identification conducted by Kuncoro (1997) so that the implementation can be used in Jayapura to evaluate or assess regional economic development that is going on now. One of the points that must be considered in order to apply more comprehensive regional economic development paradigm is how the process of economic identification will be more realistic. National Long-Term Development Plan (RPJMD) must line basic things to achieve the target, among other is the improvement of regional potential that can be conducted. While the fundamental points to compile
identification of that local development economics are (a) the increase of local economics development rate (b) the increase of income per capita (c) the decrease of the poverty rate, and significant inequality.

Community Empowerment. According to Bevir (2007), the term of empowerment was firstly found in the introductory politics in the liberal community since 1960s. The struggle of human rights from black American, the appearing of feminism theory leans both on the empowerment idea of liberal democracy portrait as an incomplete thing and is not sufficient to care full rights of all citizens. Community empowerment actually refers to the term of empowerment in which the effort to actualize potential owned by society, community empowerment concept covers the definition of community development, community-based development, and community-driven development. Community empowerment paradigm comes as a response to the reality of the gap that is not completely solved especially among the society in the rural area. Isolated and Underdeveloped Area Rural community seems like being a reflection of poverty because of several factors, 70% of the poor community in Indonesia live in rural area, one of the solutions for central government or local government is community empowerment-based innovation. Empowerment is actually putting society on the object referred.

The government as the "agent of change" can apply the policy of poor community empowerment with three directions, i.e. enabling, empowering, and protecting. Enabling means creating a situation or climate that enables community potential to develop. While empowering aims to strength potential or power owned by the citizen by applying real steps, that is by accommodating various input and providing facilities and infrastructure needed. Protecting means securing and defending the interest of weak people. In order to increase community participation in the decision-making process relating to themselves and community is an important element, such perspective will make community participation is tightly closed to the consolidation, culture and democracy experience.

According to Narayan (2002) there are many examples of empowerment approach initiated by poor people itself and by the government, civil society, and private sector. The successful effort to empower poor community increases their freedom from the option and practice in the different context; it is divided into four elements that also become community empowerment principle explained below:

Information Access Two-way information flowing from the government to the citizen and from citizen to the government is critical for a society that responsible, responsive from responsible government. Information Technology and Communication can play an important role in connecting poor people to the types of information, as is the case with each other and in the larger society. In order to make sure poor community's response, the government also adds the way to collect information on the options and priorities of the poor community. The mechanism for systematical feedback from them must be institutionalized.

Inclusion and Participation Inclusion focuses on the questions of who involved is. Participation refers to the question of how they are involved and what role they play when they are involved. An empowerment approach in the participation that sees the poor community as a co-producer with the authority and control of decisions and resources especially finance resources.

Accountability refers to the ability to call public officials, a private employee, or service provider to responsible, demands that they can answer about the policy, behavior, and the use of their fund.

Local organization capacity refers to the people's capacity to cooperate, organize them, and mobilize resource as the alternative of joint interest.

PNPM-MANDIRI PROSPEK Policy. According to Sumodiningrat (1998), poverty alleviation policy can be categorized into two, i.e. direct and indirect policy. The indirect policy includes the effort of creating tranquility and situation stability of economics, social and politics; controlling population; conserving living environment and preparing poor civil society through training activity. While direct policy includes: database development in determining target group; provision of basic needs (food, clothes, home, health, and education); the creation of working opportunity; regional development program; and credit
service. Community poverty's condition viewed from the social and economics side is categorized very low including the provision of water and electricity as well as minimum infrastructure. Community living in the rural area is commonly having low background education, low status, and having no beneficial family structure. A large amount of definition of poverty mentions the difficult to decide the size of poverty since that level is different from one country to another, from one region to another in the same country.

In a legal standing way, the existence of PROSPEK is realized with the presence of Law Number 21 Year 2001 concerning Special Autonomy: Papua Governor Regulation Number 16 Year 2014 on the PROSPEK; Papua Governor's Decree Number 188.4/334/2014 regarding the Allocation of Budget for PROSPEK of allocation year 2014 and Mayor's Decree Number 116 Year 2014 on the Formation of Coordinator Team of Poverty Alleviation. That legal standing becomes an entry point of Jayapura Government to implement the policy of poverty alleviation through the PROSPEK. Papua province especially gives larger authority to the Papua Province, District/City Government in Papua and all the Papuan to regulate and manage them. In addition, the application of Special Autonomy actually wants to make a basic change from centralistic government system into decentralization government bureaucratic which is participative, democratic, transparent in accordance with the local people characteristic.

Any development program designed by Governor in which is in accordance with Rural Area PNPM Mandiri and supporting PBB MDGs (Millenium Development Goals) program by launching PROSPEK to manage:

1. There is still Papuan who are economically notable spread in villages but having local wisdom and its institution.
2. The implementation of Vision and Mission of Papua Governor with the slogan read “Papua Rises Up, Be Independent and Prosperous in 2018.”
3. The implementation of the theme of the development Year 2014 is the first year of the leadership of Papua Governor Year 2013 until 2018 in which "strengthening local economics based local resources to reduce the gap between the region and the improvement of life quality.

METHODS OF RESEARCH

This research used qualitative approach research in which qualitative research is used to find, understand and get description clearly about the problem observed, study the phenomenon logically and disclose something behind the phenomenon and the problem being observed (Strauss & Corbin, 2003). The description of poverty alleviation implementation phenomenon in Jayapura has been carried out in a descriptive-qualitative and inductive way with the researchers role as the main actor in collecting data related to the study of poverty alleviation policy implementation through PROSPEK in South Jayapura District. The focus of this research was: 1) Program Implementation includes conformity between the program and the beneficiary (community), between the program and the implementing organization, and between the beneficiary and the implementing organization. Empowerment Implementation Program of PNPM-MANDIRI PROSPEK.

Any important program is a community as the decision maker in the rural area. While the executors in the sub-district level, district level, and so on more function as the guidance to facilitate and accompany the planning, execution, and responsibility of PNPM MANDIRI PROSPEK. The main executor (backbone) of PNPM MANDIRI-PROSPEK in rural level is TPKK (the Implementing Team of Village Activity) and PK (Village Facilitator) selected by society through village meeting. In addition, the ones becoming key informant are Mayor, Vice Mayor, Regional Secretary, Assistant 1 of Government, the Head of Government Office of Community and Village Governance Empowerment (BPMPK), Social Services Department, Local Government Agencies (SKPD). From these informants, the researchers collected the data both primary and secondary data.

The method or techniques to collect the data was observation, interview, and documentation. Validity data was checked by its a) credibility; b) transferability;
c) dependability; d) conformability. Data analysis of this research refers to the interactive model by Miles et.al., (2014) stating that data analysis stage covers Data Collection; Data Condensation; Data display and Conclusion drawing/verification. It is as indicated in the following table 2:

![Data analysis of Interactive Model](Source: Miles et al., 2014)

**RESULTS AND DISCUSSION**

**PNPM MANDIRI-PROSPEK Implementation.** The research result, in relation to the relevance of PNPM-MANDIRI PROSPEK program offered to the beneficiary (Tahima Soroma and Tobati villagers of South Jayapura sub-district of Jayapura), shows the effort of adjustment of PNPM MANDIRI-PROSPEK program offered by what needed by the beneficiary of the program (target group). The fact of the research result described that the implementation of PNPM-MANDIRI PROSPEK was preceded by the implementation of Mandiri National Community Empowerment Program and Strategic Village Economic and Institutional Planning Program or PNPM MANDIRI-RESPEK under the focus of the program was the effort of fulfilling nutrition and food, education, health and the availability of facility and infrastructure in Tahima Soroma and Tobati village. Giving PNPM MANDIRI-RESPEK program has been considered successful so that the next step was being offered PNPM MANDIRI-PROSPEK with the focus of local economic development and capacity building of village institutional. That really represents the effort of program adjustment offered with the beneficiary needs, that is a community of Tahima Soroma and Tobati village of South Jayapura sub-district of Jayapura city of Papua Province. At the previous event was offered a similar program of nutrient and food fulfillment, education, health and the availability of basic facility and infrastructure, and then was changed by local economics development program and capacity building of village institutional.

Meanwhile, in relation to the program financing, the research result shows that the source of cost of PNPM MANDIRI-PROSPEK program comes from allocation and special autonomy cost of Papua Province whose management from Papua Government, moreover was allocated to all administrative regions of district/city of Papua Province. Started from budget year 2014/2015, program funds of PNPM MANDIRI-PROSPEK which previously was managed by Papua Government and its allocations was given directly to the head of village through the program of PNPM MANDIRI-PROSPEK under the focus of nutrient and food fulfillment, education, health and the availability of facility and infrastructure, was then changed by Papua local government, in which the allocation of the fund was transferred into each of bank account of the district/city and at the same time become source of income of the Local Government of district/city being there in the administrative region of Papua Province.

The research result, in relation to the relevance of PNPM-MANDIRI PROSPEK to the implementing organization in Tahima Soroma and Tobati Village of South Jayapura sub-district of Jayapura City, shows that the executor has had a capacity in performing the task that has been required by a program offered in the implementation of PNPM MANDIRI-PROSPEK program. For that matter, in order to realize the relevance of the program to the executor, thus Central Government and Papua Local Government make a Memorandum of
Understanding (MoU) as a legal basis in managing PNPM MANDIRI-PROSPEK. The initial data collection in relation to the implementation of PNPM-MANDIRI PROSPEK was conducted in the village area for pre-program socialization, identification of the candidate that comes in the sub-district meeting (MUDIS), inform the schedule of MUDIS, make a sketch of a village consisted of related data; population; village category; potential and location of development as well as executor training, such as to; a). Implementing Team of Village Activity (TPKK); b). Village Facilitator; c). Proposal Writer Team; d). Verification Team; e). Village Meeting Body (BAMUS-KAM) and the Head of Village; f). Three Stovers Team; and g). Implementing Team of Sub-District Activity (TPKD)

The research result related to the relevance of beneficiary to the implementing organization of PNPM MANDIRI-PROSPEK shows that the requirement set by the implementing organization can be fulfilled by the beneficiary (target group) so that getting the output program expected by those two parties.

In relation to the beneficiary and the executor, it shows that procedure and requirement decided by the organization to be able to get program output to the beneficiary (community), to show that the mechanism of channeling and responsibility of financial help is like rigid and long but in a normative has become a system (value) to be obeyed so that become a real freedom that can be learnt to create efficiency and effectiveness in the implementation of PNPM MANDIRI-PROSPEK program.

According to the research result of those three relevance aspects above, it can be meant that if there is an adjustment among the three elements of policy implementation, program performance will be not a success as expected. If the output program is not in accordance with target group's need so its output clear target cannot be utilized. If the implementing organization has no ability to do the duty required by the program so that its organization cannot deliver the output program properly. If the requirement set by the implementing organization cannot be fulfilled by target group so that it will not get output program. That research result above, if seen from the perspective of theoretical, is in accordance with Korten's idea (as quoted in Tarigan, 2000) in which the adjustment model of policy or program implementation using learning process approach. Core in the intended model is the adjustment among the three elements within program implementation, that is the program itself, program implementation and program's target group. It is concluded that the implementation of PNPM MANDIRI-PROSPEK program in Tahima Soroma and Tobati Village of South Jayapura sub-district of Jayapura City, has had a relevance between the program, beneficiary and the implementing organization of PNPM MANDIRI-PROSPEK program preceded by policy implementation process symbolized by determining norm (value) in form of regulation (policy).

According to that analysis description of the research result, it can be arranged a minor proposition below:

Minor 1 proposition: "If There Is a program Adjustment, the Beneficiary and the Implementing Organization in the Program Implementation, thus Output Program can succeed and beneficial".

The implementation of community program empowerment through PNPM MANDIRI-PROSPEK in Tahima Soroma and Tobati village of South Jayapura sub-district of Jayapura city represents the research result related to the principle application and community empowerment values in the effort of poverty alleviation through the program of PNPM MANDIRI-PROSPEK:

The research result shows that information access through the socialization of PNPM MANDIRI-PROSPEK was conducted openly by Jayapura government through related SKPD to all of the citizens of Jayapura, the implementation of the program was conducted by having related SKPD officials, Sub-district Head, the Head of Village and the representative of civil society. Program socialization implementation was also conducted through electronic media such as local television, local RRI broadcasting as well as printed media and website. All were conducted formally and structurally. Any group and facilitator role truly influence the information access of PNPM to the community so that more efficient and effective in providing understanding to the society. According to the research result above, if observed
properly, it actually is in accordance with Narayan’s (2002) idea which explains that the first principle in conducting empowerment is information access. Information access meant is the existence of two way information flowing from the government to citizen and from citizen to the government. Without having relevant and on time information as well as presented in an understandable way, it is impossible for the poor to take an effective action.

The research result conducted by the researchers is different with what Anyebe’s (2014) result, that discusses the problem of policy development of Poverty Alleviation in Nigeria through National Poverty Eradication program. The research result shows that National Eradication Programme (NAPEP) as a policy intended to eradicate poverty extremely has noted limited success and continuously face a challenge of reality caused by bad coordination (access and information). For that matter, it was recommended so that the policy of National Poverty eradication programme (NAPEP) needs to be reviewed and redesigned to achieve more effective performance.

According to the analysis description of the research result and theoretical discourse and related concept of information access in the community empowerment, so that it can be arranged a minor proportion as follows:

**Minor 2 Proposition:** *“If the principal access to information is government, facilitator, and village community in the program implementation maintained by all stakeholders, so that community empowerment can be achieved well”.*

This inclusion and participation aspect is based on the research result that the application of community empowerment principle has been conducted well by not comparing society in participating, all community has a chance to participate. Even though the program budget was limited, but the community independently has been able to develop donation both in form of money or goods. Therefore, that mechanism brings many societies which can participate in the implementation of PNPM MANDIRI-PROSPEK. Any community who are allowed to directly participate has a group and business potential that can be developed, while the community member who has not group and a business is directly scouted by a group who has had a group an business to be able to become group member and is involved in a business that has been run so that indirectly all community member participate in the implementation of PNPM MANDIRI-PROSPEK. Moreover, all community members getting program assistance of PNPM MANDIRI-PROSPEK participate through a discussion in every meeting conducted by each group leader who is commonly attended by facilitator or the representative from sub-district government and local directly, that situation was used as a facility or media to discuss to ask all things related to the process and implementation of PNPM MANDIRI-PROSPEK as one of the manifestations of commitment of Jayapura government in conducting community empowerment.

The research result above has answered inclusion concept focusing on the question who empowered is, while participation focusing on how they are empowered and what role they play after being part of group empowered. This research result supports the study conducted by Darwanto (2003) and Narayan (2002) stating that elements from empowerment do not separate from inclusion and participation aspect. Moreover, Sumodingrat (1998) explained that participation as one of the development elements is an adaptation process of the community to the running changes. For that matter, participation has a significant position in the development. Therefore, it can be compiled a minor proposition as follows:

**Minor 3 proposition:** *“If the principle of inclusion and participation in the implementation program was grown by all stakeholders, so that community empowerment can be achieved well”.*

The research result discloses that implementation accountability of PNPM MANDIRI-PROSPEK has been grown and performed well by civil society getting the help of PNPM MANDIRI-PROSPEK group in form of either money or goods in running the business. Accountability is proven by the written report of the donation acceptance, business development, and group member of beneficiary delivered through a facilitator, later on, the facilitator says it to the related SKPD. After that was being done monev to assess the success of the program. Later on, Japayura Local Government delivers the report both in
accounting terms and program development to all of the related stakeholders in Jayapura or Papua Province Government.

The research result above reflected the obligations of individuals or employer trusted to manage program assistance of PNPM MANDIRI-PROSPEK and the related to be able to answer something related to the responsibility. Accountability is tightly related to the instrument for control activity especially in terms of achievement of program implementation result and deliver it transparently to the community. While the public accountant concept is also related to the obligation to explain and answer questions on what have been going, and planned will be conducted by public sector organization (Mahmudi, 2002). Taking a close look theory discourse and accountability concept, if related to the research result stating that the accountability of PNPM MANDIRI-PROSPEK implementation has had an adjustment with the research result and theory and concept of accountability in the concept of the accountability program. According to the description research result analysis and theoretical discourse as well as the related concept of accountability principle application in the community empowerment so that can be arranged a minor proposition as follows:

Minor 4 proposition: "If accountability Principle in the program implementation is applied well, so that community empowerment is achieved well".

Of this aspect, every business group has a different capacity. There is a group that still needs management training so that able to develop its business group so that able to overcome faced problems, in addition, is also there is a business group that has been developed so that has been a business entity in form of cooperative. Jayapura city government in developing local organization capacity has conducted comparative study and training, as well as guidance aims to improve the quality of human resources of farmer group, fisherman group of cage fish farming, livestock farmer group and creative economy group both living in Tahima Soroma Village and in Tobati Village of South Jayapura Sub-district of Jayapura City. Local organization capacity is grown by conducting organization to the groups in the community at the low level (such as woman group, youth group, farmer group), and to the public figure, traditional leaders, religious leaders, sub-district or village officials.

Capacity strengthening is a process to increase or change individual behavior, organization, and community system in achieving the determined goal efficiently and effectively. According to the research result, local organization capacity application in the implementation of PNPM-MANDIRI PROSPEK for community empowerment also determine the success of empowerment for society through PNPM-MANDIRI PROSPEK. For that matter, it can be arranged a minor proposition below:

Minor 5 Proposition: “If the principle of local organization capacity is fulfilled correctly in the program implementation so that community empowerment can be achieved well”.

CONCLUSION

The implementation of PNPM MANDIRI-PROSPEK has indicated a relevance of the program to the beneficiary (Community), of the program to the implementing organization and of the beneficiary to the implementing organization. Output program has been in accordance with the needs of target group showing that output program can be utilized well. The implementing organization has had an ability to perform the duty required by the program so that the implementing organization can present the output program correctly. Requirements and procedure determined by the implementing organization can be fulfilled by target group (beneficiary) so that the beneficiary obtains output program in form of both economic development and village institutional building as an effort of poverty alleviation especially in Tahima Soroma and Tobati Village of South Jayapura Sub-district of Papua Province. The implementation of community empowerment program through PNPM MANDIRI-PROSPEK under the application of principle/empowerment values include: a) information access realized by the activity of open socialization to SKPD/SATKER and all community, as well as there is two-way discussion between the government, facilitator, and villagers; b) community inclusion and participation who are able to participate directly must
have a group and potential that can be developed. However, the community inclusively is able to participate indirectly; c) accountability is signed by the written report since the donation acceptance, business development, and member group of beneficiary delivered through guidance, and then propose it to the related SKPD/SATKER. After applying money to assess the success of the program; d) local organization capacity and the implementation of PNPM MANDIRI-PROSPEK have a capacity difference between the arranged group and the new one so that the government makes an improved capacity of the implementing organization of PNPM MANDIRI-PROSPEK through training and guidance.

This research result can encourage Jayapura City Government to keep the supporting factor of the success of the policy of PNPM MANDIRI-PROSPEK, such as the existence of facilitator in every sub-district level, community enthusiasm in performing PNPM MANDIRI-PROSPEK. That is able to anticipate or minimize the inhibiting factors of PNPM MANDIRI-PROSPEK policies, such as the realities of community members who are still difficult to accept changes and limited budgets and program scope, as well as discontinuities, program disinformation, disorientation, a bureaucratic range related to the implementation of PNPM MANDIRI-PROSPEK policy.

REFERENCES

POSTHARVEST DEVELOPMENT STRATEGIES OF CORN AGribUSINESS IN GroBogan disTRICT

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ABSTRACT
The declining quality of corn, on the acceptance of raw materials in an industry caused by postharvest process at the level of farmers in Grobogan District that is still not appropriate, has resulted in the low price of the corn. The aim of this research was to know and evaluate the implementation of Good Handling Practices (GHP) in corn postharvest in Grobogan District and to determine the priority strategy in developing corn postharvest activities in Grobogan District. This research used the data sources obtained from interviews and questionnaires from the corn farmers and the related stakeholders. Furthermore, the data were analyzed descriptively using GHP checklist analysis method, SWOT analysis and AHP analysis. The findings showed that the application of GHP for farmers at the level of storage, facilities and cleanliness and recording was still not appropriate. From the SWOT analysis, the matrix position of postharvest activities was in quadrant I (S-O) which supported the development of competitive corn postharvest activities. The obtained AHP priority strategy was coaching and mentoring in corn postharvest activities (weight 0.412). In the priority alternatives from the 9 aspects, the most important aspect in the priorities of corn postharvest development was the improvement of postharvest modern technology (0.273). By having the improvement of technology, postharvest activities were expected to run effectively and efficiently so that the corn commodities will be competitive.

KEY WORDS
Corn, postharvest, quality, competitive, price.

Corn is one of the main food commodities that play a very important role in supporting the availability of food. Corn production in Indonesia continues to increase over time as market demand continues to increase (Revina, 2008). Corn is one of agricultural commodities which is also the main component of raw materials in industry especially in the manufacture of feed which is widely used in preparing feed rations.

Grobogan District is one of the largest corn-producing areas in Central Java Province and is a leading agricultural commodity other than rice and soybeans. Every year, corn production in Grobogan District is increasing. By 2015, corn production reached 700,941 tons (Central Bureau of Statistics of Grobogan District, 2016). However, the high quantity of corn production is not balanced with the quality of shelled corn. The declining quality of corn is due to the poor handling of postharvest activities at the farmer level and most of the corn harvest is sent to the feed industry.

The national feed industry, in 2015, grew by 12% which was marked by an increase in feed consumption by 16 million tons compared to 2014 by 14.9 million tons. In particular, the contribution of corn raw materials to feed industry in 2015 will increase from 7.5 million tons in 2014 by 7 million tons (Department of Communications and Informatics, 2016). It is estimated in the 2016 period, the consumption of animal feed reached 16.4 million tons (Joint
Livestock Feed Company, 2016). Grobogan District is the main supplier of corn raw material to the feed industry in Central Java.

The acceptance of raw materials in the feed industry always implements high quality standards. Thus, many corns from the farmers are purchased at low prices because the quality of the corn is not in accordance with the quality standard. Quality assurance is vital to the food and feed industry. Quality assurance can be generated by the application of Good Agricultural Practices (GAP) and Good Handling Practices (GHP) to improve the quality and guarantee the products (Hermansyah et al., 2013); such as through commodity quality management system which is in accordance to market demand.

As a major component in feed industry, the quality of corn will greatly affect the overall feed quality which will ultimately affect the productivity of livestock consuming the feed; according to research conducted by Novitasari (2016). According to Kereth et al. (2013), there was a quite high evaluation of losses from Good Handling Practices (GHP) in postharvest. The causes are human, technology and infrastructure provision factors. Therefore, efforts are needed to reduce postharvest damage or losses and improve the quality of crops. Meanwhile, based on a research conducted by Khalil and Anwar (2016), the quality of corn is not considered to be good if the drying process and postharvest handling are not carried out properly. At the time of harvesting, corn has fairly high water content, about 30-40%, in which the corn will be easily damaged corn if it is not handled appropriately. Based on the opinion from Fitriati et al. (2015), priority strategy for corn postharvest activities is the quality of conformity of Indonesian National Standard (SNI), criteria of facility price and fixed cost, technological criteria, institutional human resource quality and location of varietal difference.

The aim of this research was to know and evaluate the implementation of Good Handling Practices (GHP) in corn postharvest in Grobogan District and to determine the priority strategy in developing corn postharvest activities in Grobogan District.

**METHODS OF RESEARCH**

The research was conducted in Pulokulon, Toroh and Geyer Sub-Districts in December 2017 - February 2018. The selection of the research setting was conducted purposively with the consideration that the areas were the highest corn production center in Grobogan District (Central Bureau of Statistics of Grobogan District, 2016).

From each selected Sub-District, it purposely determined 2 villages which had the largest agricultural land and corn farming; respectively from Pulokulon Sub-District were Pojok Village and Mlowo Village, Toroh Sub-District were Tunggak Village and Boloh Village, and Geyer Sub-District were Rambat Village and Bangsri Village. Calculation of Slovin formula yielded the total of 90 respondents as sample using simple random sampling system. The formulation of internal and external factors was performed using Forum Group Discussion (FGD) by 12 key persons consisting of government, academicians, farmers and collectors (Sugiyono, 2001).

Primary data were obtained through direct observation, in-depth interviews and filling out an evaluation questionnaire about postharvest handling by the respondents guided by the researcher. In addition, secondary data were obtained from previous research, books, journals, data from the Agricultural Service of Grobogan District and Central Bureau of Statistics of Grobogan District.

Corn postharvest evaluation was conducted using a structured check sheet questionnaire that had been modified according to Good Handling Practices (GHP) guidelines by employing the corn farmers (Pennstate, 2012). The determination of alternative strategies was done by using SWOT analysis to identify the internal (strengths and weaknesses) and external (opportunities and threats) factors in postharvest activities and formulate future corn postharvest development strategies (Rangkuti, 2006).

The determination of priority strategy of corn postharvest development in decision making was performed by using hierarchy framework from Analysis Hierarchy Process (AHP) with comparison partner in decision process which was performed by the key person.
Furthermore, the data were processed using Expert Choice software (Firdaus and Farid, 2008).

![Figure 1 – Analysis Hierarchy Process (AHP) Framework](image)

**RESULTS AND DISCUSSION**

**Overview on the Respondents of Corn Farmers in Grobogan District.** The average age of the respondents of corn farmers in Grobogan District was 50 years old. It meant that their age was old enough to conduct farming so that they might experience a decrease in the performance and it would affect the productivity of corn farming. It was in accordance with the opinion of Mohamad, Nur and Abd (2016) that the productive age of a farmer ranges from 25-35 years. Productive age will affect the productivity of farming product.

The educational background of corn farmers in Grobogan District was high school graduates on average. The high level of education will usually affect the absorption of information and application of technology and innovation in every corn postharvest farming activity. From the findings of a research conducted by Mohamad et al. (2016), the level of education is one of the supporting factors in farming activities, because it is closely related to someone’s ability in their way of thinking. Thus, it becomes the basis in adopting a technological innovation of farming in agribusiness development.

Average land area of corn farmers in Grobogan District was 0.86 ha. Farmers' land was considered to be wide enough and the greater the agricultural land, the higher the yield of corn production. It was supported by the opinion of Setiawan et al. (2014) that the more widely used agricultural land will affect the commodity as well. Corn farmers in Grobogan District had an average farming experience for 23 years. It showed that the corn farmers had a long experience. The longer the experience they have, the more stable the farming. This opinion was also supported by the findings of Aji et al. (2014) research that farmers with sufficient experience tend to overcome the problems that arise in the implementation of the business and able to use efficient solutions to the problem so as to generate maximum business profits.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (year)</td>
<td>50</td>
</tr>
<tr>
<td>Educational background</td>
<td>High School</td>
</tr>
<tr>
<td>Land area (ha)</td>
<td>0.86</td>
</tr>
<tr>
<td>Farming experience (year)</td>
<td>23</td>
</tr>
</tbody>
</table>

*Source: The processed primary data (2018).*

**Evaluation of Good Handling Practices (GHP) Implementation of Corn Postharvest.**

Good Handling Practices (GHP) is a postharvest method related to the application of technology and utilization of facilities and infrastructure (Lukman, 2013). Implementation of good and proper cultivation techniques and appropriate GAP (Good Agriculture Practices) is not enough to provide quality assurance without paying attention to postharvest handling of
good products. Application of GHP is one of the quality control processes so that a commodity has guaranteed quality and can be accepted by market and competitive.

![Flow Chart of Corn Postharvest Process](image)

**Figure 2 – Flow Chart of Corn Postharvest Process**

Postharvest stages at the corn farmer level (Figure 2) consist of 6 stages consisting of harvesting, drying, shelling, storing, transporting and classifying quality standards. The evaluation of Good Handling Practices (GHP) implementation in postharvest activities in Grobogan District showed overall that it had not been well implemented by the corn farmers.

<table>
<thead>
<tr>
<th>Postharvest Components</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest</td>
<td></td>
</tr>
<tr>
<td>• Corncob with husks</td>
<td>75</td>
</tr>
<tr>
<td>• Corncob with no husks</td>
<td>0</td>
</tr>
<tr>
<td>• Others</td>
<td>25</td>
</tr>
<tr>
<td>Drying Method</td>
<td></td>
</tr>
<tr>
<td>• Being dried with no husks using plastic pads</td>
<td>89.75</td>
</tr>
<tr>
<td>• Being hanged in the kitchen or other place</td>
<td>9.27</td>
</tr>
<tr>
<td>• Other</td>
<td>0.98</td>
</tr>
<tr>
<td>Shelling Method</td>
<td></td>
</tr>
<tr>
<td>• Using hands</td>
<td>3.25</td>
</tr>
<tr>
<td>• Using shaver</td>
<td>20.45</td>
</tr>
<tr>
<td>• Using machine</td>
<td>76.30</td>
</tr>
<tr>
<td>Drying after the Shelling Process</td>
<td></td>
</tr>
<tr>
<td>• Being dried in the sun</td>
<td>74.80</td>
</tr>
<tr>
<td>• Not being dried in the sun</td>
<td>25.2</td>
</tr>
<tr>
<td>Duration of Storing</td>
<td></td>
</tr>
<tr>
<td>• &lt; 7 days</td>
<td>4.55</td>
</tr>
<tr>
<td>• 7-14 days</td>
<td>0.00</td>
</tr>
<tr>
<td>• 14 days – 1 month</td>
<td>13.64</td>
</tr>
<tr>
<td>• 3 months</td>
<td>27.27</td>
</tr>
<tr>
<td>• &gt; 3 months</td>
<td>54.55</td>
</tr>
<tr>
<td>Storing Method</td>
<td></td>
</tr>
<tr>
<td>• In the form of shelled corn in a sack</td>
<td>43.68</td>
</tr>
<tr>
<td>• In the form of cornstarch in a plastic bag</td>
<td>6.12</td>
</tr>
<tr>
<td>• In the form of corncob</td>
<td>20.14</td>
</tr>
<tr>
<td>• Others</td>
<td>30.06</td>
</tr>
<tr>
<td>Sanitation</td>
<td></td>
</tr>
<tr>
<td>• Sanitation</td>
<td>28.72</td>
</tr>
<tr>
<td>• Facilities and infrastructure</td>
<td>42.80</td>
</tr>
<tr>
<td>Recording</td>
<td></td>
</tr>
<tr>
<td>• Recording the farming activities</td>
<td>12.43</td>
</tr>
<tr>
<td>• No recording on the farming activities</td>
<td>87.57</td>
</tr>
</tbody>
</table>

*Source: The processed primary data (2018).*
Evaluation of postharvest activities that had not been properly applied is a drying process. Stages of drying are an important process in producing high quality corn because good quality corn has low moisture content. The lower the water content produced then the selling price of the corn will be more competitive. The selling price of corn in Grobogan District at the farmer level in February 2018 was IDR 3500/kg. In accordance with the opinion of Miskiyah and Widaningrum (2010), the average level of moisture content at the farm level was still relatively high; which was about 19%. In fact, the average moisture content for imported corn was 14%. Therefore, many feed industries used imported corn. Meanwhile, based on the opinion of Falatehan and Wibowo (2008), the drying process was not good because the farmers were still using natural dryer that was from sunlight and did not have modern corn drying facilities.

Other postharvest processes that had not been good were the means and facilities for corn storage. The corn storage was still simple and was not also supported with good hygiene and sanitation so that affect the quality of the corn. If the storage warehouse is not handled properly, it will result in fungus and aflatoxin in corn. High levels of aflatoxin will cause poisoning and death when corn is consumed by livestock or humans. In accordance with research conducted by Kusumaningrum et al. (2010), in addition to unsuitable temperature and humidity factors, the absence of hygiene and sanitation of the storage room will potentially cause aflatoxin. The high level of aflatoxin results in the corn quality. It was supported also by the opinion of Yusrini (2010) that the limit of aflatoxin tolerance in corn was 50 ppb and for feed was 100 ppb.

The level of knowledge of corn farmers on average was low-educated, so in conducting farming process from cultivation to postharvest process had never recorded the farming. As a result, farmers did not have accurate data related to corn production and only relied on farming experience. Recording has a function that when there are irregularities in corn farming, it will be able to trace the source of the problem and able to make better farming planning in the future. According to research conducted by Leatemia and Sari (2012), attitudes and skills of farmers about recording the farming was still low. In fact, with good and appropriate farming record, farmers will be able to manage farming finances well so that future farming planning becomes more organized. Thus, in doing their farming, besides acting as themselves, they also play a role as manager.

**SWOT Analysis of Strategy of Corn Postharvest Development Agribusiness:**

**Internal factors:** Strengths and Weaknesses. Based on the obtained data and information, several factors that become the strength in corn postharvest development farming are as follows:

1. High motivation of the farmers. High desire of corn farmers in Grobogan District to be able to conduct postharvest activities properly and correctly will have an impact on the results of good quality corn.

2. Facilities and infrastructure. The condition of the facility is sufficient to support the corn postharvest activities appropriately.

3. Farming experience. Most of the corn farmers in Grobogan District have been doing corn farming for a long time, so they have experience in corn postharvest activities which is expected to do it well and correctly.

4. Government cooperation in postharvest activities. The government, in this case Grobogan District Agricultural Office, through counseling, always provides education and assistance in corn postharvest activities.

5. Availability of human resources. Part of Grobogan District is agricultural land so that most of Grobogan District people is farmers.

6. Market access. Strategic location to big cities makes agricultural commodities in Grobogan District have access to promising market network.

7. Amount of corn income. Corn is a superior commodity besides rice and soybean in Grobogan District which makes the commodity farming quite potential.

In addition, the weakness factors in corn postharvest development farming in Grobogan District are:
1. Postharvest handling sanitation. The facilities and infrastructure are good but not supported by the hygiene system or have poor sanitation. That will lead to poor corn quality.

2. The technology is still traditional. Government support, in this case Agricultural Office Grobogan District, is only in the assistance and gives no assistance or appropriate technology that can be used by the farmers. Thus, they still use traditional tools.

3. Capital capability. Farmers often have difficulty in terms of farming capital so that farmers make a lot of debt to run their farms with high interest.

4. Recording or bookkeeping in postharvest activities. Corn postharvest activities in Grobogan District have not been able to run well since most farmers have not realized the importance of recording in the farming activities.

5. Concern in postharvest. The concern of farmers in corn postharvest is still very low so that the quality is not in accordance with market demand.

Internal factors that illustrate the strengths and weaknesses in the corn postharvest development strategy in Grobogan District are summarized into the factor matrix of internal strategy of IFAS (Internal Factor Analysis Summary).

Table 5 – IFAS (Internal Factor Analysis Summary) Matrix

<table>
<thead>
<tr>
<th>Internal Strategy Factors</th>
<th>Weight</th>
<th>Rating</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. High motivation of the farmers</td>
<td>0.08</td>
<td>3.47</td>
<td>0.27</td>
</tr>
<tr>
<td>2. Good facilities and infrastructure</td>
<td>0.07</td>
<td>3.20</td>
<td>0.22</td>
</tr>
<tr>
<td>3. Farming experience</td>
<td>0.09</td>
<td>3.13</td>
<td>0.28</td>
</tr>
<tr>
<td>4. Cooperation with government in postharvest process</td>
<td>0.09</td>
<td>3.53</td>
<td>0.32</td>
</tr>
<tr>
<td>5. Availability of human resources</td>
<td>0.09</td>
<td>3.47</td>
<td>0.31</td>
</tr>
<tr>
<td>6. Market access</td>
<td>0.09</td>
<td>3.47</td>
<td>0.31</td>
</tr>
<tr>
<td>7. Amount of income from corn farming</td>
<td>0.09</td>
<td>3.47</td>
<td>0.31</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.60</td>
<td></td>
<td>2.03</td>
</tr>
<tr>
<td><strong>Weaknesses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Sanitation in postharvest handling</td>
<td>0.08</td>
<td>2.80</td>
<td>0.22</td>
</tr>
<tr>
<td>9. Traditional technology</td>
<td>0.07</td>
<td>2.87</td>
<td>0.20</td>
</tr>
<tr>
<td>10. Capital capability</td>
<td>0.07</td>
<td>3.13</td>
<td>0.22</td>
</tr>
<tr>
<td>11. Postharvest recording</td>
<td>0.06</td>
<td>3.13</td>
<td>0.19</td>
</tr>
<tr>
<td>12. Concern in postharvest process</td>
<td>0.06</td>
<td>2.81</td>
<td>0.17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.34</td>
<td></td>
<td>0.99</td>
</tr>
</tbody>
</table>

Source: The processed primary data (2018).

The results of IFAS matrix assessment (Table 5) show that the total score of power factor is 2.03 and the score on the weakness is 0.99. It shows that corn postharvest development strategy in Grobogan District had greater strength compared to its weakness with the difference of 1.04.

**External Factors: Opportunity and Threat.** Based on the obtained data and information, several factors that become opportunities in corn postharvest development farming are as follows:

1. Postharvest technology. The government plan, in this case the Grobogan District Agricultural Office, pays great attention to the transition of traditional technology to modern technology which is expected to be an excellent opportunity to help farmers in postharvest activities so that they can be more effective and efficient in working.

2. Improving the corn quality. By having government's program plan to support corn postharvest development at the farmer level supported by modern technology, it is expected that farmers can produce quality corn so as to meet the quality standards of market demand.

3. The define market. Grobogan District which is the center of corn commodity is a potential market to produce corn with high production and good quality too, so that the corn produced by the farmers will be bought with high price by feed industry.
4. Farmer’s increasing income. Postharvest development that has been running well is expected to produce quality and competitive corn in market price. So that it will indirectly improves the economic income of farmers in Grobogan District.

5. The level of postharvest knowledge is getting better. With the assistance program plan in postharvest activities, it is expected that farmers’ motivation will grow high in improving corn postharvest process so that it will provide better knowledge to the farmers about how important the application of GHP to corn postharvest process.

6. Government support. Corn is a superior commodity besides rice and soybean in Grobogan District. Government role and support are expected in their farming.

7. The improvement of facilities and infrastructure. With a good level of knowledge, ongoing facilitation and transfer of modern technology, it is expected that improvements will be made in terms of facilities and infrastructure in corn farming.

In addition, the threat factors in corn postharvest development farming in Grobogan District are as follow:

1. Fluctuation of corn prices. Corn postharvest handling that has not run appropriately will affect the price of corn at the market level. It is because the quality of corn that has been produced is not in accordance with the standards that have been set so that the selling price of corn will be below the market standard price.

2. The entry of imported corn commodities. Demand for corn raw material for the feed industry cannot be balanced with the supply of local corn raw materials, especially from Grobogan District. Therefore, the feed industry decides to import the corn for the supply of raw materials.

3. Lack of assistance in corn postharvest process. Assistance from the government, to farmers in the application of corn postharvest GHP, is still lacking due to limited human resources. Thus, the role of government in providing mentoring cannot be maximized.

4. Quality is not up to standard. Corn postharvest activities in Grobogan District are still not good so it affects the quality of shelled corn which is difficult for it to be accepted by the market.

5. Competition of corn farming. Corn is a lucrative farming commodity. So, there will be competition between commodities of the same type with the possibility that they will rely on different quality of the corn.

Environmental factors that reflect opportunities and threats are presented in the factor matrix of the external strategy of EFAS (External Factor Analysis Summary).

Table 6 – EFAS (External Factor Analysis Summary) Matrix

<table>
<thead>
<tr>
<th>External Strategy Factors</th>
<th>Weight</th>
<th>Rating</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Postharvest technology</td>
<td>0.08</td>
<td>3.60</td>
<td>0.30</td>
</tr>
<tr>
<td>2. Improving the corn quality</td>
<td>0.09</td>
<td>3.41</td>
<td>0.31</td>
</tr>
<tr>
<td>3. The define market</td>
<td>0.09</td>
<td>3.67</td>
<td>0.33</td>
</tr>
<tr>
<td>4. Farmer’s increasing income</td>
<td>0.09</td>
<td>3.47</td>
<td>0.31</td>
</tr>
<tr>
<td>5. The level of postharvest knowledge is getting better</td>
<td>0.08</td>
<td>2.8</td>
<td>0.22</td>
</tr>
<tr>
<td>6. Government support</td>
<td>0.09</td>
<td>2.87</td>
<td>0.26</td>
</tr>
<tr>
<td>7. The improvement of facilities and infrastructure</td>
<td>0.07</td>
<td>3.07</td>
<td>0.21</td>
</tr>
<tr>
<td>Total</td>
<td>0.59</td>
<td></td>
<td>1.95</td>
</tr>
<tr>
<td>Threats</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Fluctuation of corn prices</td>
<td>0.08</td>
<td>3.40</td>
<td>0.26</td>
</tr>
<tr>
<td>9. The entry of imported corn commodities</td>
<td>0.06</td>
<td>3.33</td>
<td>0.20</td>
</tr>
<tr>
<td>10. Lack of assistance in corn postharvest process</td>
<td>0.06</td>
<td>3.61</td>
<td>0.22</td>
</tr>
<tr>
<td>11. Quality is not up to standard</td>
<td>0.06</td>
<td>2.4</td>
<td>0.14</td>
</tr>
<tr>
<td>12. Competition of corn farming</td>
<td>0.06</td>
<td>2.87</td>
<td>0.17</td>
</tr>
<tr>
<td>Total</td>
<td>0.32</td>
<td></td>
<td>0.99</td>
</tr>
</tbody>
</table>

Source: The processed primary data (2018).

Based on the identification of external factors (Table 6), the opportunity score is 1.95 and the threat score is 0.99. Thus, it shows that the opportunity has greater score than the
threat by a margin of 0.96. after obtaining the internal factor and external factor scores, the next is determining SWOT matrix. In the SWOT matrix, the X axis is the difference between strength and weakness, while the Y axis is the difference between opportunity and threat. Difference in scores of strengths, weaknesses, opportunities and threats resulted in a coordinate score of 1.04; 0.96.

The strategic positions of the four alternatives are: in the first quadrant the strategy choice is the aggressive strategy or SO strategy (strengths-opportunities), in the second quadrant of strategy choice is the diversification strategy or ST strategy (strengths-threats), in the third quadrant the strategy choice is improvement strategy or strategy WO (weaknesses-opportunities) and in the fourth quadrant the strategy choice is defense and dis-survival strategy or WT strategy (weakness-threats). The strategy of corn postharvest process in Grobogan District is produced in the first quadrant (Figure 3). It means that corn postharvest development strategy supports aggressive growth by exploiting the existing opportunities (Rangkuti, 2006).

![Figure 3 – SWOT Matrix of Corn Postharvest in Grobogan District](image)

Table 7 – Analysis Formulation of SWOT Matrix

<table>
<thead>
<tr>
<th>Strengths</th>
<th>IFAS (Internal Factor Analysis Strategy)</th>
<th>Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. High motivation of the farmers</td>
<td></td>
<td>1. Postharvest technology</td>
</tr>
<tr>
<td>2. Good facilities and infrastructure</td>
<td></td>
<td>2. Improving the corn quality</td>
</tr>
<tr>
<td>3. Farming experience</td>
<td></td>
<td>3. The define market</td>
</tr>
<tr>
<td>4. Cooperation with government in postharvest process</td>
<td></td>
<td>4. Farmer’s increasing income</td>
</tr>
<tr>
<td>5. The availability of human resources</td>
<td></td>
<td>5. The level of postharvest knowledge is getting better</td>
</tr>
<tr>
<td>7. Amount of income from corn farming</td>
<td></td>
<td>7. The improvement of facilities and infrastructure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S-O Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The improvement of postharvest technology</td>
</tr>
<tr>
<td>2. The application of commodity quality standards</td>
</tr>
<tr>
<td>3. The reinforcement of market development</td>
</tr>
<tr>
<td>4. Sustainable consultation for the farmers</td>
</tr>
<tr>
<td>5. The development of postharvest supporting facilities</td>
</tr>
<tr>
<td>6. The improvement of commodity quality</td>
</tr>
<tr>
<td>7. The improvement of commodity capacity and quantity</td>
</tr>
</tbody>
</table>

Source: The processed primary data (2018).

S-O Strategy (Table 7) includes: The improvement of postharvest technology, the application of commodity quality standards, the reinforcement of market development, sustainable consultation for the farmers, the development of postharvest supporting facilities, the improvement of commodity quality, and the improvement of commodity capacity and quantity. According to research conducted by Maramba (2018), technological improvement is
very important in farming; the better the technology used the better quality standard. Indirectly, commodities will be competitive at the marketing level. As Pratama and Sahaya (2014) adds that farming assistance to change the mindset is very important. Thus, there will be awareness from farmers to improve the quality of commodity products. Meanwhile, Pamungkas et al. (2015) argue that the supporting facilities in farming are very important in producing quality commodities. Unsupported facilities will cause damage to the commodity itself, thereby lowering the selling price of commodities.

**Determination of Priority Strategy in Corn Postharvest Development.** The determination of priority strategy in corn postharvest development is by conducting FGD (Focus Group Discussion) which was carried out by 12 key persons consisting of 3 academicians, 3 officials of agriculture institution, 1 businessman, 3 from corn farmers, 1 from agricultural counselor and 1 person from local village apparatus. Determination of criteria and strategic alternatives undertaken to make priority policy in the development of postharvest activities of corn commodities in Grobogan District is by considering the results of SWOT analysis.

![Strategy in Corn Postharvest Development in Grobogan District](image)

**Figure 4 – Criteria and Alternatives of Priority Strategies**

Corn postharvest development in Grobogan District has a very important role in enhancing the competitiveness of regional and national commodities. The goal is to increase the income of corn farming, to produce quality commodities and to improve the regional and national economies. The result of Hierarchy Process Analysis (AHP) shows that the criterion of corn postharvest guidance and assistance (0.412) is the most important criterion in corn postharvest development strategy in Grobogan District. The next is the criteria for the reinforcement of aspects of postharvest technology (0.359), the criteria of development of facilities and infrastructure (0.139) and criteria of human resources aspects (0.089).

![Inconsistency Ratio =0.08](image)

**Figure 5 – Analysis Results of Development Strategy Criteria of Corn Postharvest Activities**

The selection of postharvest guidance and mentoring criteria (Figure 5) as the main priority reflects that corn postharvest development farming in Grobogan District is very influential on mentoring issues. It is due to the fact that most corn farmers have not gained...
knowledge about the importance of producing corn with good quality. It is expected that with continuous guidance and assistance from relevant stakeholders, starting from harvesting process, postharvest process and selling the corn industries or markets, farmers can produce competitive commodities.

Aspects formulated in postharvest guidance and assistance of corn, among others: guidance to the corn farming groups, assistance in building the market networks and conducting supervision related to the standardization of corn commodities. From the three aspects (Figure 6), the most important one according to the key persons is the guidance to the corn farming groups (0.648). The selection of this aspect indicates that the main problem is the absence of knowledge, skills and awareness of farmers to be able to produce good commodities.

The next aspect chosen by the key persons is assistance in building a network to gain market access (0.232). Limited market access for the farmers makes the corn price below the price of the commodity. The price of corn in February 2018 was IDR 3500/kg but there is still a lot of corn produced by farmers were purchased below that price.

The last aspect chosen by the key persons is to supervise the standardization of corn commodities (0.120). The key persons argue that the farmers do not yet know about the importance of good corn quality. Thus, it is necessary to supervise the standardization of corn quality.

![Figure 6 – Analysis Result of Alternative Strategy of Corn Postharvest Development Activity on Criteria of Postharvest Mentoring and Assistance](image)

The second criterion in corn postharvest development in Grobogan District is the criteria of strengthening aspects of corn postharvest development. The technological aspect (Figure 7) consists of modern postharvest technology and the use of ecofriendly postharvest technology. Aspects of modern postharvest technology (0.762) become the main priority chosen for corn postharvest development. Most corn farmers are still using traditional technology so that technology improvement is needed to produce competitive corn that has good quality.

![Figure 7 – Analysis Result of Alternative Strategies for Corn Postharvest Development Activities on Criteria for Strengthening Aspects of Postharvest Technology](image)

The aspect in achieving human resource improvement criteria (Figure 9) is an intensive postharvest handling technique and improved sanitation hygiene at postharvest facilities of corn farming. The chosen aspect by the key persons is the intensive handling of corn postharvest techniques. It is because postharvest activities have not been applied with Good
Handling Practices (GHP), so it needs intensive handling so that the results can be maximized.

![Intensive vs Sanitation](Intensive_Sanitation.png)

**Figure 9** – Analysis Result of Alternative Strategies for Corn Postharvest Development Activities on Criteria of Human Resource Aspects

![Analysis Result of All Alternative Development Strategies](Analysis_Allstrategies.png)

**Figure 10** – Analysis Result of All Alternative Development Strategies for Corn Postharvest Activities

From the results of the overall analysis (Figure 10), based on the weight value in corn postharvest development strategy in Grobogan District using Analysis Hierarchy Process (AHP), the aspect of using modern postharvest technology is the most important aspect to achieve the expected goal. Meanwhile, the sanitation aspect is the least priority in achieving the expected goals.

**CONCLUSION**

Based on the results of postharvest development strategy of corn farming in Grobogan District, by applying an evaluation analysis of the application of Good Handling Practices (GHP) in corn postharvest activities at the farmer level, there were some obstacles including the drying process of corn that had not been appropriate, facilities and infrastructure of postharvest that had not been adequate and the absence of recording or bookkeeping activities undertaken by farmers in corn farming.

Based on the alternative strategy of SWOT analysis, it was obtained strategy on the first quadrant matrix which was S-O strategy that supported aggressive growth by exploiting the opportunity. The resulting strategies included: the improvement of postharvest technology, the application of commodity quality standards, the reinforcement of market development, sustainable consultation for the farmers, the development of postharvest supporting facilities, the improvement of commodity quality, and the improvement of commodity capacity and quantity.

The priority strategy of the Analysis Hierarchy Process (AHP), taking into consideration to the SWOT results, made the first priority criterion on guidance and mentoring of corn postharvest activities (0.412). The selection of postharvest guidance and mentoring criteria as the main priority reflected that postharvest development of corn farming in Grobogan District is very influential with mentoring issues. It was due to the fact that most corn farmers had no knowledge about the importance of producing corn with good quality and competitive. In the priority alternatives of the 9 aspects, the most important aspect in the priorities of corn postharvest development is the improvement of postharvest modern technology (0.273). With the improvement of technology, postharvest activities are expected to run effectively and efficiently so that corn commodities will be competitive.
REFERENCES


EXPERIMENTAL STUDY OF SALTED FISH DRYING UNDER GREENHOUSE DRYER

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ABSTRACT
A parabolic roof, active solar greenhouse dryer was developed and tested. The greenhouse dryer was 6.5 m² in area and 2.5 m high. The greenhouse cover was made of polyethylene and the floor made of concrete paving blocks. Experiments were conducted in the tropical area of Sorong, West Papua, Indonesia (0°49’ S and 131°14’ E) over 3 days in December 2017. Variation of the salting method (brine and dry salting) and salt concentration (0.2, 0.25 and 0.3 g NaCl/g) were investigated to determine the effect of those variations on the moisture content and the drying rate of salted yellowtail fish. The temperatures of the greenhouse room and the ambient air, relative humidity, global solar radiation inside the greenhouse dryer and the velocity of the exhaust air were recorded hourly during the fish drying. Those data were used to determine the thermal efficiency of the greenhouse dryer. The temperature differences of the air inside the greenhouse and the ambient air reached 15.8°C. The temperature and relative humidity inside the greenhouse varied from 32°C to 51.4°C and 24.9% to 58.71%, respectively. This was within the recommended range for fish drying. In the first 8 hr of the drying process, a salt concentration of 0.2 g NaCl/g gave the fastest drying rate for both salting methods. For salted yellowtail fish the drying rate, the dry salting method was slower than the brine one.

KEY WORDS
Greenhouse dryer, salted fish, salting method, salt concentration.

Indonesia is one of the largest fisheries in the world, with annual production reaching around 6 million tons (Fisheries, 2013). In Indonesia, the most consumed fishery product is fish. Fish is one of the most important foodstuffs because of its high nutritional value and protein content. It has high-quality animal protein, providing around 6% of the global protein requirement and 16% of the total animal protein (Jain, 2006). However, fresh fish contains up to 80% water and is a highly perishable material (Bala and Mondol, 2001). If fresh fish is not directly consumed or processed into finished products, the fish will quickly decay and become waste (Sidhi et al., 2017). Prompt preservation of fish prevents decay and maintains the quality of the fish. This can be done by salting, freezing, smoking, frying or drying. The commonest fish preservation method in Indonesia is salting followed by drying.

One of the oldest techniques for preserving fish is salting. It was in use long before drying, smoking, and marinating. Dried salted fish demand in many countries of Southeast Asia is very high because of the simplicity of the process. It needs a minimum of capital investment and the product provides a cheap source of high-quality protein (Berhimpun et al., 1990). The salting process can be wet, dry or a combination of the two (Sobukola and Olatunde, 2011). Drying is a moisture removal process from a product, that involves heat and mass transfer. It can be done by open-air sun drying, firewood/fuel drying, electrical drying and solar drying (Tiwari, Tiwari and Al-Helal, 2016).

Salting followed by open-air sun drying is commonly used by traditional processors because it is cheaper and easily adaptable. Only a few traditional processors use solar drying. There have been a number of studies on salting and drying fish, both with open-air sun and solar drying. Sobukola and Olatunde (2011) studied the effect of salting techniques on the salt uptake and drying kinetics of African cat-fish (ACF). The effect of dry and brine salting on the salt uptake and drying kinetics of ACF was investigated by using a convective dryer. Berhimpun et al. (1990) investigated the salting and drying behavior of low-fat yellowtail. They used 15%, 21% and saturated salt brine solutions on salting experiments.
and dried the salted fish with different temperature and relative humidity using a mechanical dryer. Bala and Mondol (2001) investigated the performance of a greenhouse solar tunnel dryer for drying fish in Bangladesh. Bellagha et al. (2007) studied the salting and drying kinetics of sardines using a convective dryer to improve the quality of the traditional dried salted fish.

Although Bala and Mondol (2001) investigated the performance of solar tunnel dryers for drying fish, no work has been reported using a parabolic greenhouse for drying fish. Therefore, the aim of this study was to examine the effect of salting technique on the changes of the moisture ratio and drying rates for salted yellowtail fish in a parabolic greenhouse dryer.

MATERIALS AND METHODS OF RESEARCH

Experimental Setup. An active greenhouse dryer (See Figure 1) was installed at Politeknik Kelautan dan Perikanan Sorong (0°49’ S and 131°14’ E), West Papua, Indonesia. The greenhouse was 3.25 m long, 2 m wide, and 2.5 m high and fixed in an East-West direction. The greenhouse cover was made of 0.05 mm thick polyethylene and concrete paving blocks 100 mm thick were used for the greenhouse floor. Two air inlet holes, each measuring 530 mm × 145 mm, were located near the door. For forced convection, six exhaust fans (12 V DC) were mounted on the back-wall opposite the door. Electrical energy for the exhaust fans was supplied by 2 × 50 Wp solar cells. The two drying trays (2400 mm × 650 mm) inside the greenhouse were made of aluminium wire mesh and had a combined capacity of approximately 7.5 kg.

Salted fish was dried to determine the effect of the salting technique on the drying process under the greenhouse dryer. This study used yellowtail fish. Fresh yellowtail fish were bought from local fisherman around the coast of Sorong. Fish were iced in an insulation box before salting. They were manually filleted on the back with a stainless-steel knife from near the tail to the head after they were washed using fresh water. The initial mass of each sample before salting was approximately 2500 g. Brine and dry salting methods were carried out for the products. Salt concentrations for each salting method were 0.2, 0.25, and 0.3 g NaCl/g. Before the drying process, salted fish were kept in a plastic box for about 24 hr. The salted fish sample was dried in an electric oven for 24 h at 105°C to determine the dry mass after the drying process in the greenhouse dryer (Mujaffar and Sankat, 2005).

2.2 Experimental Procedure

The experiments were conducted over 3 days from 20–22 December 2017. The drying process was run for 8 hr every day from 08.30 to 16.30. A pyranometer RK 200-04 (accuracy ± 5%) was used for measuring solar radiation inside and outside of the greenhouse. Relative humidity and temperature inside and outside the greenhouse were measured using DHT 22 sensors. These sensors typically had accuracies of ± 0.5°C and ± 2% for the relative
humidity and a resolution of 0.1°C and 0.1%. The temperature of the fish was measured with an infrared thermometer with an accuracy of ± 2°C. The air inlet velocity was measured using an anemometer with a resolution of 0.1 m/s and an accuracy of ± 5%. The mass of fish was measured using a digital balance with a resolution of 0.2 g.

The pyranometer and DHT 22 voltage signals were hourly recorded using a data logger, which used an Arduino Mega board. The pyranometer was calibrated against a calibrated pyranometer by the manufacturer. The sensor of hygrometers in the DHT 22 were calibrated using saturated salt solution (sodium chloride) at approximately 30°C (75.09 ± 0.11%) (Greenspan, 1977). Air inlet velocity, mass, and temperature of fish were also manually recorded every 1 hr.

RESULTS AND DISCUSSION

Solar radiation was recorded hourly during the drying process for each of the 3 days, variations in outside and inside solar radiation are shown in Fig. 2. Outside solar radiation varied from 127.61 to 1048.72 W/m², while inside solar radiation varied from 70.46 to 998.29 W/m². Average solar radiation values on the first day were 703.21 W/m² (outside) and 615.06 W/m² (inside). These values were higher than for other days. Each day the highest solar radiation occurred between 11.30 and 12.30, except on the second day due to cloudy weather conditions. A significant decrease in solar radiation occurred on the third day from 13.30 to 16.30, also due to cloudy weather conditions.

![Figure 2 – Variations of solar radiation with the time of day during fish drying](image)

Figure 2 shows the temperature and relative humidity of the air recorded every 1 hr. The temperature of the ambient air varied from 29.8°C to 39.0°C and the temperature of the greenhouse room varied from 32.0°C to 51.4°C. The highest temperature (51.4°C) in the greenhouse room occurred on the third day. The temperature of the greenhouse room did not exceed 70°C, which is considered the maximum temperature for fish drying (Rahman, 2006; Hubackova et al., 2014). The difference between the temperature of greenhouse room and the ambient air varied from 2.2°C to 15.8°C. The highest value was 15.8°C at 11.30 on the third day and the lowest value was 2.2°C at 15.30 on the third day. The relative humidity of the air is shown in Figure 4. The relative humidity of the ambient air varied from 43.26% to 82.15% while the relative humidity of the greenhouse room air varied from 24.9% to 58.71%. Variations in the relative humidity (10–40%) had no noticeable effects on the quality of the product (Rahman, 2006). The lowest relative humidity for greenhouse room air was 24.9% on the third day, while the relative humidity of ambient air was 47.01%.
Figure 3 – Temperature and relative humidity of air variations during fish drying

The surface temperature of the salted fish during drying is shown in Figure 4. The average temperature for brine and dry salted fish, at concentrations of 0.2 g NaCl/g, 0.25 g NaCl/g, 0.3 g NaCl/g, were 48.19°C, 47.24°C, 45.68°C, 48.79°C, 50.66°C, and 50.71°C, respectively. The average surface temperature of the fish in the dry salting method was higher than for the brine salting method. For the brine salting method, the fish with 0.2 g NaCl/g salt concentration had the highest average surface temperature, while for the dry salting method, the fish with 0.3 g NaCl/g salt concentration had the highest average surface temperature.

Figure 4 – Temperature of fish inside the greenhouse dryer

Figure 5 shows the moisture ratio of the fish with different salting methods and salt concentrations for the 24 hrs drying process in the greenhouse dryer. The moisture ratio ($M_r$) can be determined using Eq. (1). Where $M$ is the moisture content, $M_e$ is the equilibrium moisture content and $M_0$ is the initial moisture content. The moisture ratio was calculated on
a dry basis. The moisture ratio of the fish salted with brine decreased faster than that of the fish that were dry salted. The average air temperature and relative humidity inside the greenhouse dryer were 44.36°C and 37.14%, respectively. For the dry salting method, the decrease in the moisture ratio for the 0.3 g NaCl/g salt concentration was slower than for the 0.25 g NaCl/g and 0.2 g NaCl/g salt concentrations for the 24 hrs of the drying process. While the decrease in the moisture ratio for the 0.2 g NaCl/g salt concentration was faster than for the 0.25 g NaCl/g for 18 hrs of the drying process. After further drying, the rate of decrease in the moisture ratio for the 0.25 g NaCl/g and 0.2 g NaCl/g concentrations tended to be similar. For the brine salting method there was an inversion point in the moisture ratio that was reached after about 12 hrs of drying. The decrease in the moisture ratio for the 0.3 g NaCl/g salt concentration was slower than for the other salt concentrations for the first 12 hrs of the drying process. After further drying, the rate of decrease of the moisture ratio for the 0.3 g NaCl/g salt concentration was greater than for the other salt concentrations. The rate of decrease in the moisture ratio for the 0.25 g NaCl/g and 0.2 g NaCl/g salt concentrations were almost equal for the 24 hrs of the drying process.

\[ M_r = \frac{M - M_e}{M_0 - M_e} \]  

(1)

![Figure 5 – Moisture ratio during drying process](image)

In general, the drying rate reduces with time or with the reduction of the moisture content (Darvish et al., 2013). The drying rate (DR) of salted fish was determined using Eq. (2) (Sobukola and Olatunde, 2011) and is shown in Figure 6, where \( DR \) is the drying rate in g/g db/hr, \( M_n \) is moisture content at \( t+dt \) in g/g db, \( M_i \) is the moisture content at time \( t \) in g/g db and \( dt \) is time difference in hours. The drying rate continuously decreased with drying time increased. The drying rate of dry salting method was slower than brine salting method for the first 8 hrs of the drying process. That can be explained that water motion from the inside to the surface of the fish was followed by salt migration during drying. When the initial salt concentration was greater, then water evaporation on the surface of the fish caused a crust formation. The crust that was on the surface of the fish, lessened the rate of water loss by making the surface of the fish less permeable (Bellagha et al., 2007; Sobukola and Olatunde, 2011).

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After further drying, the drying rate of dry and brine salted fish tended to be similar. For the brine salting method, the convective heat transfer coefficient decreased with a decrease in the moisture content of the fish (Jain, 2006). The salt concentration of 0.2 g NaCl/g for both salting methods had the fastest drying rate in the first 8 hrs of the drying process, compared with other salt concentrations. This salt concentration is still favoured by traditional processors (Berhimpon et al., 1990).

CONCLUSION

Drying of salted yellowtail fish using renewable energy in a tropical area was investigated. The drying process was conducted under an active greenhouse solar dryer. The air inside the greenhouse was circulated by a DC exhaust fan and the electrical power was supplied by a solar cell. The performance parameters of drying were the temperature and relative humidity. The greenhouse temperature varied from 32°C to 51.4°C and the relative humidity varied from 24.9% to 58.71%. Those temperature and relative humidity were within the recommended range of values for fish drying i.e do not exceed 70°C for temperature and 10 – 40% for relative humidity.

Testing of the dryer was carried out to examine the effect of fish salting treatment on the moisture ratio and drying rate of fish under the greenhouse dryer. Two different methods were used for salting the fish, brine salting and dry salting. Both of these salting methods were investigated using different salt concentrations. The brine salting method showed a better drying rate and moisture content reduction than the dry salting method. For both salting methods, the lowest salt concentration of 0.2 g NaCl/g is recommended as it showed faster moisture content reduction and drying rate in the first 8 hr of the drying process. The highest salt concentration of 0.3 g NaCl/g for the dry salting method is not recommended as it had a slower drying rate.

REFERENCES


THE ANALYSIS OF QUALITY AND FOOD SAFETY ON FROZEN TIGER SHRIMP (PENAEUS MONODON) HANDLING IN CENTRAL JAVA, INDONESIA

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ABSTRACT
Shrimp is one of Indonesia's fishery commodities that are still excellent. The value of shrimp exports was at the first rank for fishery products besides tuna. In January to August 2016, Indonesia's shrimp exports reached 136.3 thousand tons with a value of US $ 1.13 billion (BPS). The purpose of this research is to analyze the quality and food safety of frozen tiger shrimp that have been handled and processed by fish processing units in Central Java, Indonesia. This research uses descriptive and purposive random sampling method, by taking sample of raw material and final product of frozen tiger shrimp at three processing units in Central Java of Indonesia periodically. The results of organoleptic, microbiological and chemical tests show that the processing units in Central Java has performed good quality of frozen tiger shrimp products by conducting handling and processing the shrimp in accordance with the HACCP concept.

KEY WORDS
Frozen tiger shrimp, quality, food safety, HACCP, Central Java, Indonesia.

Shrimp is one of Indonesia's fishery commodities which remains excellent and able to contribute significantly and quickly to Indonesia. This is due to the demand of shrimp. Both the domestic market and the international markets tend to have increasing demand from time to time. The value of shrimp exports takes the first rank for fishery products besides tuna. According to the data that has been released by the Central Bureau of Statistics (BPS), Indonesia's shrimp exports reached 136.3 thousand tons with a value of US$ 1.13 billion during January to August 2016. The shrimp export volume rose 6.84%, while the value of shrimp exports rose 3.75%. Currently, Indonesia's shrimp production has taken the second position after India in the United States shrimp market. Every year, Indonesian shrimp entering the United States keeps increasing. In 2013, the number of shrimp exports to the United States booked the figure of 64,520.6 tons. That number increased in 2014, which reached 85,838 tons, or it rose about 33%, but in 2015 shrimp exports to America decreased with the export volume of 82,283.8 tons (Central Statistic Bureau, 2016). In the region of Central Java alone, the shrimp export value increased significantly. In 2014, the export value of Central Java shrimp reached 1,495,879 tons, reaching another 1,495,850 tons in 2015 and again reaching another increase of 2,992,633 tons in 2016 (BKIPM, 2017).

Shrimp that is going to be exported must be kept away from any harmful ingredients to maintain its quality. A food product including shrimp that is proven to contain harmful substances in both biological, chemical and physical materials will not be able to penetrate the export market, because the quality requirements to enter the export destination countries are very strict. Examination and control of chloramphenicol levels on frozen shrimp that is going to be exported are essential to ensure the food quality and safety. Chloramphenicol is one of nine types of food additives that is prohibited in Indonesia (Ministry of Health, Republic Of Indonesia, 1999). Even the WHO (World of Health Organization) applies zero tolerance rules to the content of chloramphenicol in shrimp (Islamulhayati, 2005). Some time ago, the issue of chloramphenicol residue was spreading widely after the release of the European Union Decision on 27 September 2001 which stated that chloramphenicol contamination of 0.075 ppb in Indonesian export shrimp products entering EU countries Setyaningsih (2004); WHO (2007) had been detected. Similarly, shrimp exports to China and Japan in 2006 and
2007 were rejected due to the suspicion of that the shrimp contained chloramphenicol residues (Putro, 2008). The worst situation happened in 2011 as there were massive rejections from the European Union on Indonesian shrimp export products due to the chloramphenicol content.

Perishable shrimp warranty becomes the main reason to strive for better handling. The most commonly exported shrimp is the shrimp that has been frozen or processed (frozen shrimp). The shrimp freezing is one of the process of fishery products with the purpose of preserving the food. The freezing process is expected to inhibit the growth of microorganisms, enzyme activity and to retain chemical reactions that occur in shrimp (Sunarya, 2014). Shrimp processing should be done in accordance with the standards to obtain products with guaranteed quality. Raw materials and auxiliary materials should be recognized in order to receive proper process. Currently, frozen shrimp processing companies in Indonesia with the purpose of exporting the products have applied HACCP. Nevertheless, in order to avoid economical loss in exporting the frozen shrimp and to increase competition of shrimp export in anticipating the ASEAN Economic Communities, a good quality control system which is in accordance with the standards that are specified by the importing countries such as the United States, Japan and EU countries needs to be established. The purpose of this research is to identify the quality and safety of frozen tiger shrimp products that is produced by the Fish Processing Unit in Central Java in accordance with the HACCP concept including GMP and SSOP. The quality analysis result is then used to formulate strategies which are going to be used to make corrections should there be any, in order to maintain and to control the quality of frozen shrimp products by companies and to reduce product defects.

MATERIAL AND METHODS OF RESEARCH

The research was conducted in February until September 2017 with the objects of research emphasized on 3 Fish Processing Units (FPU) that process frozen shrimp in Central Java, Indonesia. The subjects of this research were frozen shrimp processing in the Fish Processing Units. The research object was Frozen Tiger Shrimp, frozen shrimp sampling was done 3 (three) times periodically. Further steps include organoleptic, microbiology and chloramphenicol test to the sample of raw materials and end products of frozen shrimp. The laboratory tests were conducted at Laboratorium Pembinaan dan Pengujian Mutu Hasil Perikanan Propinsi Jawa Tengah (the Laboratory of Fishery Product Quality Assurance Testing of Central Java Province).

The parameters observed in this study include the prevention efforts on received products in the fish processing unit of both caught and cultivated shrimp. The analysis was done qualitatively and quantitatively in the form of processing data test of organoleptic, microbiology and chemistry.

The scope of activities in the processing unit includes:
2. Good Manufacturing Practices (GMP).
4. Quality of products / raw materials that are received in the processing unit and the ones after the production process, to determine the effectiveness of quality assurance and food safety in handling frozen shrimp products. The observations was done by having the organoleptic and microbiology test on the shrimp samples before and after processing and also the chloramphenicol content test on the raw material samples of tiger shrimp. The microbiological tests include TPC test (SNI 01-2332.3-2006), Escherichia coli test (SNI 01-2332.1-2006), and Salmonella test (SNI 01-2332.2-2006).

Data used in this research are primary and secondary data. The primary data was obtained by having observation and interview. Observations were conducted by observing the activities of the frozen shrimp processing and handling directly in the three units of frozen shrimp processing. On the other hand, the interview was conducted on the employees who
carry out the handling of frozen shrimp by giving a questionnaire about quality assurance in regards to the handling of frozen shrimp in their work place.

The data analysis was done quantitatively. The quantitative analysis in the form of data processing of quality test result (Organoleptic, microbiology / TPC / TPC and chloramphenicol test), done by using different test (t test). The quantitative analysis was done by applying T-test to compare the mean value of quality test (organoleptic, microbiology and chloramphenicol) between raw material and final product. If the result of the T-test calculation is bigger than the table in the real determined stages (5%), it means that the handling and processing of the frozen tiger shrimp causes a significant change to the quality of shrimp, so the supervision and control should be done more intensively.

\[
t = \frac{\bar{X}_1 - \bar{X}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}
\]

With:

\[
s = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}
\]

Notes:

t: difference value between the mean of quality test value before and after the stage that is considered as critical point;

n\(_1\): number of samples in quality test before observed stages;

n\(_2\): number of samples in the quality test after the observed stages;

S\(_1\)\(^2\): sample variance of quality test result before observed stages;

S\(_2\)\(^2\): sample variance of quality test results after observed stages;

X\(_1\): mean test value before observed stages;

X\(_2\): mean test value of the quality test after observed stages.

RESULTS AND DISCUSSION

Organoleptic Observation. The result of organoleptic analysis shows the processing and handling of frozen shrimp at Fish Processing Unit (FPU) 1, FPU 2 and FPU 3 are able to maintain the organoleptic value of shrimp with the value of 7-8.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Organoleptic Test Results (scale: 1-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FPU 1 Raw Material End Product</td>
</tr>
<tr>
<td>1</td>
<td>7 8</td>
</tr>
<tr>
<td>2</td>
<td>8 8</td>
</tr>
<tr>
<td>3</td>
<td>7 8</td>
</tr>
<tr>
<td>Mean</td>
<td>7.33 ± 0.577</td>
</tr>
</tbody>
</table>

The data analysis using T-test difference with probability value of 0.05 got the result that t-value at FPU 1 is 0.423, at FPU 2 is 1.0 and at FPU 3 is 0.423. This indicates that the frozen shrimp handling and processing performed by FPU 1, FPU 2 and FPU 3 showed no significant difference between organoleptic value of shrimp raw material and frozen shrimp final product.

The activity of handling and processing of frozen tiger shrimp conducted by the Fish Processing Units by applying cold chain is able to maintain the organoleptic value of shrimp. The fishery products handling by means of temperature thorough monitoring through cold chain management is proven to be able to maintain the quality of the product (Tsironi et al.,
The freezing process that is carried out on shrimp products can inhibit the growth of microorganisms, enzyme activity and obstruct chemical reactions that occurs in shrimp (Sunarya, 2014). The quality decrease of frozen foods, meats and fishery products due to chemical reactions such as loss of nutritional value and other chemical reactions (color change and rancidity in foods) happened because of uncontrolled temperature changes of the food products (Giannakourou & Taoukis, 2015; Giannoglou et al., 2014).

**TPC Test of Content.** Food materials damage can occur due to the ongoing process either quickly or slowly depending on the type of food and its environmental conditions in which the food is placed (Wijayanti, 2011). In order to know the extent of the food damage, whether it is safe or not to be consumed, a microbiology test should be conducted. The microbiology observation is commonly used to determine the freshness of the fishery products by calculating the bacterial population based on the Total Plate Count (TPC) method.

<table>
<thead>
<tr>
<th>Sample</th>
<th>FPU 1</th>
<th>FPU 2</th>
<th>FPU 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Material</td>
<td>1.0 x 10^3</td>
<td>2.9 x 10^3</td>
<td>2.3 x 10^3</td>
</tr>
<tr>
<td>End Product</td>
<td>1.6 x 10^4</td>
<td>1.0 x 10^4</td>
<td>2.3 x 10^3</td>
</tr>
<tr>
<td>Raw Material</td>
<td>0.6 x 10^3</td>
<td>2.0 x 10^3</td>
<td>1.0 x 10^4</td>
</tr>
<tr>
<td>End Product</td>
<td>1.4 x 10^3</td>
<td>1.4 x 10^3</td>
<td>2.3 x 10^3</td>
</tr>
<tr>
<td>Raw Material</td>
<td>3.4 x 10^3</td>
<td>2.3 x 10^3</td>
<td>4.5 x 10^3</td>
</tr>
<tr>
<td>End Product</td>
<td>2.9 x 10^3</td>
<td>2.7 x 10^3</td>
<td>6.5 x 10^3</td>
</tr>
<tr>
<td>Mean</td>
<td>2.6 x 10^3</td>
<td>1.6 x 10^4</td>
<td>3.3 x 10^3</td>
</tr>
<tr>
<td></td>
<td>7.2 x 10^3</td>
<td>1.2 x 10^4</td>
<td>3.0 x 10^3</td>
</tr>
</tbody>
</table>

The results of laboratory tests on TPC content showed that the processing and handling of frozen shrimp on FPU 1, FPU 2 and FPU 3 has been able to maintain the amount of TPC content in shrimp products according to SNI standard. The T-test result on TPC content of shrimp samples at FPU 1 is 0.08, at FPU 2 is 0.44 and FPU 3 is 0.412. The result of the T-test with probability value of 0.05 shows that there is no significant difference of the TPC value between raw material and frozen shrimp final product. However, the overall laboratory analysis showed that there was a decrease in TPC content in shrimp final products although not significantly significant. The TPC content of frozen shrimp at FPU 1, FPU 2 and FPU 3 still meets the SNI standard of frozen shrimp that is <5 x 10^3 col/ml. The activity of handling and processing of frozen shrimp conducted by the FPUs by keeping cold chain of product is able to prevent the increase of bacterial population during the production process so that the shrimp freshness can be maintained. The increasing of bacterial population in foodstuff during storage shows the decrease of freshness level of fish (Liviawaty and Eddy, 2010). Husni et al. (2015) states that the increase and decrease of TPC can occur because fish meat is a suitable medium for bacterial growth. The shrimp processing by means of freezing is able to maintain the quality of shrimp. The use of low temperature of 0°C after mortality time of the fish can extend the life of rigor mortis, decrease enzymatic, bacterial, chemical and physical change process of the fish (Wibowo et al., 2014).

**Eschericia coli Content Test.** The results of E coli test showed that the whole process of frozen shrimp production at FPU 1, FPU 2 and FPU 3 is able to maintain the amount of Escherichia coli content from shrimp product. In shrimp raw material, it can be seen that the average of Eschericia coli content of raw shrimp protein is <2 per 25 gr. sample, after processing and handling the Eschericia coli content on shrimp product, it shows that it is still below the threshold figure that is <2 per 25 gr. sample. The processing and handling of shrimp conducted by the three fish processing units are able to minimize the content of E coli shrimp products, so it is safe to be consumed. One of the processing and handling stages of shrimp to minimize the microbial content is by washing. The fish washing process can reduce the microbes at the surface up to 80-90% (Mountney and Gould, 1988). The fish washings should be performed on running water to prevent cross-contamination. Dirt and microbes will soon be washed away so it does not contaminate the fish. One way to maintain the quality of shrimp products is done by applying
cold chain method. At low temperatures (cold and freezing), the biochemical processes in shrimp which leads to the deterioration of shrimp quality can be slowed down. The process of bacterial growth in the shrimp body can also be inhibited. Thus, the freshness of shrimp will be maintained (Junianto, 2003).

<table>
<thead>
<tr>
<th>Sample</th>
<th>FPU 1</th>
<th>FPU 2</th>
<th>FPU 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Material</td>
<td>End Product</td>
<td>Raw Material</td>
</tr>
<tr>
<td>1</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
</tr>
<tr>
<td>2</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
</tr>
<tr>
<td>3</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
</tr>
</tbody>
</table>

Unprocessed and unhandled shrimp can cause potential harm to consumers. The results of a research in the United States suggests that 60% of shrimps imported from Thailand, Vietnam, India and Indonesia are contaminated (Graham, 2015). The product test results indicate the presence of antibiotic residue and the presence of bacteria such as Salmonella, Vibrio, S. Aureus, E. Coli and Listeria.

**Salmonella Content Test.** Some several types of pathogenic microbes have been established as indicators in determining food safety, such as E coli, Salmonella, S aureus, etc. The existence of these microbes in fishery products or their processed products can be used as an indicator about food security level decrease. Salmonella sources in foodstuffs are predominantly derived from animals including fishery products. Unhygienic sanitation and imperfect processing of food materials or contamination from the environment is a contributing factor to Salmonella infection in human’s body (Lynch et al., 2006; Majowicz et al., 2010).

Salmonella spp. in fishery product is caused by water conditions and cultivation system, where the accumulation of the environmental contamination causes an increase in Salmonella prevalence in fishery products (Reilly & Twiddy, 1992; Saheki et al., 1989). The Salmonella contamination in fishery products can occur from caught or harvested fish until the time it is sold in the market. Many factors can lead to Salmonella contamination, ranging from fishing or cultivation environments, handling at post-harvest moment, during transportation, and the way of handling when the fishery products are sold in both traditional and modern markets (Bhaftopadhyay, 2000; Kamat et al., 2010). The results suggest that fishery products in its fresh form becomes the source of salmonellosis, especially in fisheries which are obtained from an environment exposed to human or animal fecal waste (Mol et al., 2010; Norhana et al., 2010).

<table>
<thead>
<tr>
<th>Sample</th>
<th>FPU 1</th>
<th>FPU 2</th>
<th>FPU 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Material</td>
<td>End Product</td>
<td>Raw Material</td>
</tr>
<tr>
<td>1</td>
<td>negative</td>
<td>negative</td>
<td>negative</td>
</tr>
<tr>
<td>2</td>
<td>negative</td>
<td>negative</td>
<td>negative</td>
</tr>
<tr>
<td>3</td>
<td>negative</td>
<td>negative</td>
<td>negative</td>
</tr>
</tbody>
</table>

From the table above, it can be seen that the results of the laboratory analysis of Salmonella content in shrimp raw materials used in the production process at FPU 1, FPU 2 and FPU 3 in Central Java showed negative results per 25 gr samples. While on frozen shrimp products which have been handled and processed showed negative result per 25 gr sample. Overall the production process of frozen shrimp at FPU 1, FPU 2 and FPU 3 is able to maintain the amount of salmonella content from shrimp product, that is also negative per 25 gr. sample.

Based on the results of observations during the sample taking both at FPU 1, FPU 2 and FPU 3 indicate that the FPUs in Central Java have been able to perform the process of production and to handle the shrimp well. The FPUs have been able to apply sanitation and
hygiene procedures in accordance with the HACCP concept. In addition, the FPUs in Central Java are also able to prevent any contamination from the environment, equipment, and also any contamination that may arise during the distribution and transportation process. *Salmonella* distribution in fishery products is still often found, possibly due to contamination that is derived from workers who handle the product. The results of the previous research indicate that Salmonella bacteria are still found in fishery products for export markets resulting the rejection of export of the fishery products from Indonesia (Yennie et al., 2015). Meanwhile, the prevalence of *Salmonella spp.* is also found in tuna loin along with the frozen tuna supply chain for export market which is collected at raw materials reception and processing process at fish processing unit (Yennie et al., 2016).

For developing countries, the incidence of salmonellosis and salmonella prevalence in the food production increases significantly (Saha et al., 2001; Byrd et al., 2002), transportation chain and the food processing may be the main contributing factor to cross contamination at that stage. In addition to that, contamination due to improper handling practices of transportation of food products and the use of ice and water which do not meet the requirements and also cross-contamination between foodstuffs are also becoming the major factors in the high number of Salmonella spp prevalence. (Badonia, et al., 1988; Hatha & Lakshmanaperumalsamy, 1997; Indrajith et al., 2015).

**Chloramphenicol Content Test.** The cultivation of tiger shrimp is not easy to do because there are many obstacles faced by shrimp farmers, such as disease attacks caused by bacteria, viruses or fungi that causes mortality to the shrimp and shrimp larvae, so that the production levels can decrease (Nugrahery, 2001). The control of shrimp disease caused by bacteria is done by farmers by using antibiotics such as tetracycline, oxytetracycline, nitrofuran, sulphonamide and chloramphenicol groups (Nisha, 2008; WHO, 2007).

The following is a table of chloramphenicol content test results on shrimp samples of 3 FPUs production in Central Java.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Raw Material</th>
<th>End Product</th>
<th>Raw Material</th>
<th>End Product</th>
<th>Raw Material</th>
<th>End Product</th>
<th>Raw Material</th>
<th>End Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.121</td>
<td>0.108</td>
<td>0.138</td>
<td>0.083</td>
<td>0.092</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.096</td>
<td>0.083</td>
<td>0.128</td>
<td>0.088</td>
<td>0.093</td>
<td>0.075</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.064</td>
<td>0.074</td>
<td>0.091</td>
<td>0.12</td>
<td>0.072</td>
<td>0.103</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0.094 ± 0.029</td>
<td>0.088 ± 0.018</td>
<td>0.119 ± 0.025</td>
<td>0.097 ± 0.020</td>
<td>0.086 ± 0.012</td>
<td>0.099 ± 0.023</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result of the laboratory test shows that the handling and the processing of frozen shrimp at the FPU 2 is able to decrease the amount of chloramphenicol content in frozen shrimp with the percentage of 18.48%, whereas the handling and processing activities of the frozen shrimp at FPU 1 can decrease the chloramphenicol content in frozen shrimp with the percentage of 6.38%. The selection of raw materials quality with low initial chloramphenicol content causes the content of it in frozen shrimp end products at FPU 1 to be lower in comparison to the FPU 1 frozen shrimp products, while at the FPU 3, the chloramphenicol content increases.

Different T-test result in chloramphenicol content on shrimp with probability value of 0.05 at FPU 1 is 0.559, at FPU 2 is 0.485 and at FPU 3 is 0.480 which indicate that there is no significant difference of chloramphenicol content between raw material and end product of frozen shrimp. However, the overall results of the laboratory analysis showed that there was a decrease in TPC and chloramphenicol contents in shrimp final products although the value is not so significant.

The examination and control of chloramphenicol levels in frozen shrimp which is prepared to be exported are essential to ensure the food quality and safety. Chloramphenicol is one of the nine types of food additives which are prohibited in Indonesia (Ministry Of Health Republic Indonesia, 1999). Even the WHO (World Health Organization) applies zero tolerance rules to the content of chloramphenicol in shrimp (Islamulhayati, 2005). Some time ago the issue of chloramphenicol residue was spreading so widely after the release of
the European Union Decision of 27 September 2001 which stated that they had detected chloramphenicol contamination of 0.075 ppb in Indonesian export shrimp products which entered the EU countries (Setyaningsih, 2004; WHO, 2007). Similarly, the shrimp exports to China and Japan in 2006 and 2007 were rejected on the suspicion of containing chloramphenicol residues (Putro, 2008).

The unawareness of the farmers in regards to the use of antibiotics, especially chloramphenicol is very dangerous. The abuse of the antibiotics resulted in the lagging of chemicals as a residue in shrimp meat that in a certain amount and in a long period of time will cause health problems that are the occurrence of aplastic anemia in the consumer, the cause of gray syndrome in infants and the resistance to the antibiotic (Nisha, 2008; Garrod, 1971). The consumption of food containing chloramphenicol residues bit by bit can make the disease bacteria become more resistant to chloramphenicol and the disease can no longer be treated with chloramphenicol. Consumption of tiger shrimp containing chloramphenicol residue in large quantities and in a long period of time will bring the impact of aplastic anemia illustration (Ismulhayati et al., 2005). Chloramphenicol which broad spectrum in small amounts can also lead to the resistance of previously sensitive bacteria (Setiabudi & Kunardi., 1995).

CONCLUSION

Based on the results of research regarding quality analysis and food safety on the handling and processing of frozen tiger shrimp in Central Java showed that fish processing unit in Central Java has been able to apply the principles of HACCP in the handling and processing process of the frozen shrimps. The results of the laboratory analysis towards the shrimp raw material samples and frozen shrimp final product showed that fish processing units in Central Java are able to maintain organoleptic value of frozen shrimp and decrease the content of TPC, E coli, Salmonella and chloramphenicol frozen shrimp.

REFERENCES


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**Phylogenetic relationship of Phytophthora sp. infected Citrus in East Java of Indonesia using Polymerase Chain Reaction**

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**Abstract**
Soilborne Phytophthora species are the pathogen that causes several diseases on citrus in Indonesia. The objective of this research was to know phylogenetic relationship of Phytophthora sp. causing citrus crown rot disease in East Java Indonesia using Polymerase Chain Reaction. The research was carried out at Phytopathology Laboratory, Indonesian Citrus and Subtropical Fruits Research Institute (ICSFRI). The phylogenetic relationship analysis was based on PCR using ITS (Internal Transcribed Spacer) primer. In the research, 21 cultures of Phytophthora were isolated from infected citrus rootstock at citrus center production (Banyuwangi, Jember, Ponorogo, Blitar, and Tulungagung), 2 culture isolates from non citrus center production (Kraton-Pasuruan and Tlekgung-Bat) and 1 culture isolate from apple rootstock infected by Phytophthora. The result showed that several isolates from Banyuwangi, Jember, Ponorogo, Blitar and Tulungagung have 100% similarity coefficient, while Banyuwangi-2 isolate have 82% similarity coefficient. Ponorogo isolates number 3, 4, and 5 have 100% similarity coefficient. That isolates with other 21 isolates have smallest similarity, i.e. 28%. These data suggest that frequent outbreaks of Phytophthora crown rot in various citrus growing centers might be resulted from other factors rather than from different genetic structure, such as climatic condition which is conducive for the disease epidemic, resistance of citrus rootstock, and plant maintenance.

**Key words**
Citrus, disease, fungi, Phytophthora, variability.

Phytophthora causes the most serious soilborne disease of citrus in Indonesia. The pathogen can infect on all part of citrus, cause root rot, foot rot and gummosis on rootstock, damping off, leaf necrosis and fruit rot. The Phytophthora disease in Indonesia is quite evenly distributed and causes highest mortality after huanglongbing and diplodia diseases. *Phytophthora* sp. isolates have genetic variability and difficult to examine of the differences based on morphological characters. Conventional identification methods based on morphological characteristics using the microscope are tedious, require expertise, need more time and sometimes may lead to wrong identification. According to Burgess et al. (2009) several of the new taxa are closely related to species with similar morphology (e.g., *P*. sp.4 and *P*. *citricola*), but in some new taxa are morphologically indistinguishable from species such as *P*. *citricola*, *P*. *drechsleri*, and *P*. *megasperma*. Forster et al. (2000) state that the antheridial position together with homo- or heterothallic habit does not reflect phylogenetic relationships within Phytophthora because Phytophthora occurs convergent evolution.

Several molecular approaches are used for oomycetes identification such as isozyme analysis, Restriction Fragment Length Polymorphism (RFLP), Randomly Amplified Polymorphic DNA (RAPDs), Single-Strand-Confirmation Polymorphism of rDNA, and PCR of Internal Transcribed Spacer (ITS) (Foster et al., 1995, Ristaino et al., 1998, Kong et al., 2003, Cooke et al., 2000). The ITS coding regions have a critical role in the development of functional rRNA with sequence variations among species showing promise as signature regions for molecular assays, although not translated into proteins (Iwen et al., 2002). The ITS spacer region is being increasingly used as an important tool for classification and differentiation of bacterial species such as on genus Fusocaterium (Conrads et al., 2002). A recent study by a multinational and multilaboratory fungal barcoding consortium, the nuclear ribosomal internal transcribed spacer (ITS) has been selected as the DNA barcode for fungi.
Identification organism at the species level was gain rapidly by DNA barcoding (Mahmoud and Zaher, 2015).

ITS-based Phytophthora identification system has more advantages compared to other methods since the ITS region of rDNA is well characterized. The rDNA evolves in a neutral manner at a rate which often approximates to the rate of speciation, and it has proven successful in distinguishing fungal taxa (Bruns et al., 1991; Lee and Taylor, 1992). These ITS regions are highly variable and can be used to distinguish and relate closely related organisms such as different species in the same genus. Recently, a molecular phylogeny of Phytophthora and related oomycetes was constructed based on the ITS sequences of rDNA (Cooke et al., 2000). Lee and Taylor (1992) published the ITS1 and ITS2 sequences of the tropical Phytophthora species P. palmivora, P. megakarya, P. capsici, P. citrophthora and P. cinnamomi and showed excellent resolution at the species level. According to Ippolito et al. (2004) effectiveness in the identification of P. nicotianae and P. citrophthora from citrus roots and soil and between the molecular analysis uses traditional methods of isolation on selective media were compared using molecular procedures with DNA extraction and amplification showed the same results, although the traditional method requires a lot of time and expertise to identify both types of Phytophthora. At Texas, 22 isolates have been characterized using molecular methods, *Polymerase Chain Reaction* (PCR) with Ph2 and ITS4 primers resulted in a 700 base pair (bp) fragment. This fragment was sequenced and a similarity search at GenBank showed 100% identity with P. nicotianae (Kunta et al., 2007). Genetic diversity among 16 isolates of *P. palmivora* obtained from diseased coconut plants showing nut fall disease were characterized by Random Amplified Polymorphic DNA (RAPD) using nine primers were highly different at 40.6 percent (Mutulo et al., 2007). On *P. parasitica* through this genomic approach and clustering analyses out of a total of 13,285 are available in the *P. parasitica* database, a group of 4,567 clusters was formed, comprising 2,649 singlets and 1,918 contigs. Out of a total of 4,567 possible genes, only 2,651 clusters were categorized; among them, only 4.3% shared sequence similarities with pathogenicity factors and defense (Rosa et al., 2007). The objective of this research was to know phylogenetic relationship of Phytophthora sp. causing citrus crown rot disease in East Java Indonesia using *Polymerase Chain Reaction* based on Internal Transcribed Spacer (ITS).

**MATERIALS AND METHODS OF RESEARCH**

**Isolation and DNA Extraction.** Isolation of pathogen used baiting technique (Erwin and Ribeiro, 1996) with lemons and apple fruit to isolate the fungus from soil, root and infected bark samples from citrus plantation in Indonesia i.e. Banyuwangi, Jember, Ponorogo, Blitar and Tulungagung districts, total 24 isolates on platescontain V8 medium. These plates were incubated at room temperature in the dark for a week. The colonies showing morphological characteristics of Phytophthora were observed under a microscope. This fungus was grown at 24 °C in a 10 ml water culture for DNA extraction.

Similarity analysis was based on PCR technique with universal primer (White et al., 1990). DNA extraction use Goodwin et al. (1992) modified. Phytophthora sp. isolate, 6-10 days was transferred to V8 liquid medium in erlenmeyer. The miselium was harvested after 7-10 days, and filtered through Whatman No. 1 paper, then stored in eppendorf tubes. Then, mycelium crushed in liquid nitrogen and transferred to test tubes that had been given 1 ml of buffer solution (1.4 M NaCl, 20 mM EDTA, 100 mM Tris-HCl (pH 8.0), 2% (w / v) CTAB, 1% β-mercaptoethanol). Having crushed, the mixture was shaken until became homogeneous and incubated at 65°C for 30 minutes. RNASe (10 ml) was added, shaken and then incubated for 1 h at 37°C. After the chloroform and isoamil (24:1) was added with the same volume, it was shaken and centrifuged at 11. 000 rpm for 10 minutes. The liquid phase was transferred to new tubes and then was added to 1000 µl chloroform, shaken and centrifuged at 11. 000 rpm for 10 minutes. Supernatant was removed and transferred to new tubes and added 1000 µl cold isopropanol and shaken, then centrifuged at 11.000 rpm for 10 minutes. Solution was discarded, DNA pellet then added with 200 ml TE (1x), shaken gently and incubated for one hour at 37°C. Then added 0.1 volume of sodium acetate and 2.5 volumes
of absolute ethanol and centrifuged at 14,000 rpm for 10 minutes. DNA pellet was washed with 500 ml 70% ethanol and centrifuged at 12,000 rpm at 4°C for 5 minutes. Ethanol was removed and the pellets were dissolved in 100 μl TE at room temperature and stored at -20°C.

**DNA Amplification.** Extracted DNA was amplified by PCR based on modified method of Trout et al. (1997) using the universal primers ITS 2, ITS 3, ITS4 and ITS 5. The primer pair of ITS 2 (5'-GCT GCG TTC TTC ATC GAT GC-3'), ITS 3 (5'-GCA TCG ATG AAG AAC GCA GC-3'), ITS 4 (5'-TCCTCCGCTTATGATGC -3') and ITS 5 (5'GGAAGTAAAAGTCGTA-AACAAG-3') (White et al., 1990). Amplification was performed in 25 ml containing of: 10x PCR Buffer 1X (2.5μl), 0.4 μM Primer ITS4 (1μl), 0.4 μM Primer ITS5 (1 ml), MMR 10 ml, 50 ng of DNA samples (2 ml), and ddH20 (7μl). The same composition made for the pair of ITS 5 and ITS 2, ITS 3 and ITS 4. DNA amplification using thermo cycler machine (Biometra) with the following thermal profile amplification, according to Trout et al., (1997) modified: initial denaturation at 94°C for 180 seconds, followed by 40 repeated cycles of melting, annealing and extension of DNA at 94°C for 60 seconds, 55°C for 60 seconds, 72°C for 120 seconds, respectively. In the last cycle, the extension step was increased to 10 min. The PCR product were analysed by electroforeisis on agarose gel 1%, contain 10 mg/ml ethidiumbromide. Gel were documented by biodoc gel (Biometra).

**Scoring and Dendogram Analysis.** The scoring is based on the presence of DNA bands in each isolate. DNA bands formed from the results of molecular analysis that is considered as a character that represents a DNA locus. Then, DNA profiles are translated into binary data based on the presence of the band (1) and no DNA bands (0) to build a similarity matrix. Grouping of isolates on the UPGMA dendogram was calculated by using the program NTSys SHAN-PC version 2.10.

**RESULTS AND DISCUSSION**

Phytophthora isolates that used for analysis origin from crown rot disease at the centre of citrus plantation on East Java, Indonesia, i.e Banyuwangi (3 isolates), Jember (4 isolates), Ponorogo (5 isolates), Tulungagung (4 isolates), Tekung (2 isolates), Kraton (1 isolate) and Blitar (4 isolates). Phytophthora isolate that used as comparison isolates origin from apple stem rot disease. Greening symptom of infected plant because root and trunk damage (Fig. 1). First visible symptoms in the root are dark, brown or black sunken areas, which quickly will enlarge. After the cortex is sloughed off often only the inner root strain is left. Above visible symptoms include leaf yellowing, wilting and leaf dropping. This is a result of the complete or partial girdled trunk or by decreased root function cause root damage.

![Figure 1](image-url)

Figure 1 – Crown rot disease on citrus. (a). Symptom on infected plant, (b). Rotting on stem and root, (c) An isolate of *Phytophthora* sp. from citrus, (d) One of character morphology of an isolate.
The results of electrophoresis showed that the genetic variability of *Phytophthora* sp. in citrus plantation is extremely wide. (Fig 2 and Fig 3).

**Figure 2** – Amplification product of *Phytophthora* gene using ITS 5 and ITS 4 primer pairs
L: DNA Leader 1 kb, 1-24: Phytophthora isolates

**Figure 3** – Amplification product of *Phytophthora* gene using ITS 5 and ITS 2 primer pairs (left), ITS 3 and ITS 4 primer pairs (right). L: DNA Leader 1 kb, 1-24: Phytophthora isolates

Phylogenetic analysis among all isolates of *Phytophthora* was based on the amplified fragments generated with the 3 pairs of primer, which was shown in a dendrogram (Fig. 4).

Dendrogram showed that some isolates from Banyuwangi, Jember, Ponorogo, Blitar and Tulungagung have 100% similarity coefficient, that isolates with Banyuwangi 2 isolate has approximately 82% similarity. An isolates from Ponorogo number 3, 4, and 5 have 100% similarity coefficient. These isolates with 21 other isolates have the smallest similarity (28%). An isolate that was origin from apple stem rot have 78% compared to 6 isolates from citrus crown rot disease.
Figure 4 – Dendrogram showing the relationship among 23 Phytophthora isolates from citrus and 1 isolate Phytophthora from apel using 3 pairs primer ITS (Internal Transcribed Spacer). Origin of isolate: BWI (Banyuwangi); TLK (Tiekung); JBR (Jember); PNG (Ponorogo); TLG (Tulungagung); BLTR (Blitar); BNR (Banaran); KRT (Kraton).
According to Kunta et al. (2007) *P. nicotianae* is the most prevalent species in Texas citrus plantation. In Brazil *P. parasitica* is pathogen that causes gummosis on citrus (Rosa et al., 2007). Base on this species, some researchers have concluded that these two names were being applied to a single species, the name of *P. nicotianae* earlier than *P. parasitica*. Often, Phytophthora are most closely related to an isolate origin from different island/country based on ITS, such as Phytophthora causing quick wilt of black peppers in Vietnam and Taiwan (Dung et al., 2014).

The impact of Phytophthora disease can be reduced through manipulation of the environment, such as by reducing humidity in orchards through pruning, weeding and good drainage. Crop rotation, sanitation (especially elimination of infected plant and soil) also provide good control. Planting resistant varieties will be the best option for controlling the disease. However, it is not available for all disease systems on citrus and against all species of Phytophthora. Contribution of genetic relationship of Phytophthora to spread of the disease do not know yet.

**CONCLUSION**

Phylogenetic relationship of *Phytophthora* sp. in East Java Indonesia citrus orchards are diverse and extremely wide Phytophthora crown rot might be resulted from other factors rather than from different genetic structure.

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TECHNICAL EFFICIENCY AND SCALE EFFICIENCY OF SUGARCANE PRODUCTION

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ABSTRACT
Sugar consumption in Indonesia is dominated by households and industry consumption. During 2015-2016, consumption of households was 2.9 MT and industry – 2.7 MT. On the same period, sugar production was 2.497 MT only. The gap between domestic output and demand of sugar increased gradually, and now Indonesia is becoming one of the biggest sugar net-importers. The dependence on large quantity of imported sugar has to be minimized. Scarcities of land and production resources require a strategy to increase agricultural productivity by using resources efficiently. Coelli et al (2002) revealed that the technical efficiency has an important role in productivity and agricultural growth. Therefore, efforts attempt to measure the technical efficiency of farming activities needs to be done in order to obtain an increase efficient productivity. The objective of this study is to analyze how the resource inputs were efficiently used determine scale efficiency of sugarcane farmers. Results show that the average technical efficiency and scale efficiency level are 0.917 and 0.856 respectively. Sugarcane farmers who had low TE scores (technically inefficient) were farmers who allocated their inputs (seed, fertilizer, herbicide and labor) excessively. This study also provides evidence that only 13% of sugarcane farmers in Kediri District who operate on optimal scale (Constant Return to Scale).

KEY WORDS
Sugarcane, technical efficiency, scale efficiency, farmers, production.

Sugar has been a major agro based industry in Indonesia since the 19th century and has made significant contributions in the rural economy of Indonesia. Whereas the sugar industry has taken roots in a number of new regions like Africa and has grown rapidly in countries like India, Brazil and Thailand but has remained stagnant in Indonesia. Sugarcane is the most important commodity; in terms of sugarcane is one of main input in sugar industry. Toharisman and Triantartti (2016) reported that during 2004-2015, the growth of area planted to sugarcane was about 3.5%. Planted area of sugarcane in 2015, the planted area was 466.06 million ha.

The demand of sugar in Indonesia is not only dominated by household consumption but also industry, especially food and beverage industry. During 2015-2016, sugar industry consumption was 5.6 MT. In other hand, on the same period, sugar production was only 2.47 MT. Growth of productivity was relative stagnation (4.09%). Fulfillment of demand sugar in domestic market has led government to import sugar continuously. Sugar consumption per capita 22 kg/capita/year.

Scarcity of sugarcane production resources and land competition require a strategy to increase productivity by using resources efficiently. Coelli, et al (2002) revealed that the technical efficiency has an important role in productivity and agricultural growth. Meanwhile Fried et al. (2008) showed that one way to reduce production costs to increase agricultural production by improving technical efficiency. Therefore, efforts attempt to measure the technical efficiency of farming activities needs to be done in order to obtain an increase efficient productivity.

The measurements of efficiency and the estimation of production frontiers were researched extensively after Farrell's (1957) seminal work. The efficiency of a firm has two components: technical (or physical) efficiency and allocative (or price) efficiency. Technical
efficiency (TE) measures the ability of a farm to produce maximal potential output from a given input. Allocative efficiency (AE) measures the ability of a farm to utilize the cost-minimizing input ratios or revenue-maximizing output ratios. One needs to be technically efficient before one can be allocatively efficient and attainment of both is required for economic efficiency (Coelli, 1995).

Estimation of a production frontier differs depending on the assumptions made about the outer bound of the frontier, which may be deterministic or stochastic, while the technique for estimation may be parametric, or non-parametric. Currently, the stochastic frontier and the deterministic non-parametric methods are the primary approaches and these involve econometric methods and mathematical programming respectively (Coelli, et al., 1995). The choice between these techniques depends on the underlying reasons for estimating productive efficiency. The advantages of deterministic, non-parametric approach using Data Envelopment Analysis (DEA) are it can identify the sources and the level of inefficiency for each farm unit.

This paper attempts to estimate technical efficiency and scale efficiency of sugarcane production in dry land. By conducting technical efficiency analysis it is possible to illustrate whether harvesting more sugarcane is still viable by improving present input use efficiency. Moreover, by conducting scale efficiency (SE) analysis it is possible to draw a clear picture in terms of farm size and technical efficiency (TE) relationship in sugarcane production. In other words, technical efficiency refers to the utilization of production factors in the most efficient way, whereas SE provides information about how optimal sugarcane growing land size should be given the other input resources.

METHODS OF RESEARCH

Data and Sample. The data for this study was obtained from a survey of sugarcane farmers in Kediri District, the largest sugarcane producing region in East Java Province. Sugarcane farmer were then sampled using multistage random sampling. Data was collected using a structured questionnaire, on farmers’ output of sugarcane, inputs used in the production process (land, labor, fertilizer, pesticide and seeds) and the socio-economic characteristics like farmer’s age, level of education, family members, and land size.

The number of sample taken for this research based on the formula promoted by Slovin as follow:

$$n = \frac{N_p}{1 + Ne^2}$$

(1)

Where: \(N_p\) = number of population; \(N\) = sample size; \(e^2\) = margin of error.

Having 1090 of sugarcane farmers in the village, margin error accepted is 9.6 percent; the result of sample size is around 98.7 respondents. Therefore, the data collected are coming from 100 respondents.

Data Analysis. This research is observing the performance of farmers regarding allocation of their resources to produce optimal output. DEA approach is used to estimate production frontier. The production frontier represents maximum output attainable from each input level and it reflects the current state of technology in the farming (Coelli, 1995). This method measures the relative efficiency of the Decision Making Units-DMUs (maize farms in this study) by estimating an empirical production frontier from the actual input and output data from each farm. The efficiency score of a farm is then measured by the distance between the actual observation and the frontier obtained from all the farms under evaluation. This frontier is constructed by the solution of a sequence of linear programming (LP) problems – one for each farm in the sample.

DEA can be either output or input-orientated. The output-orientated DEA method seeks the maximum proportional increase in output production with input levels held fixed. The input-orientated DEA method defines the frontier by seeking the maximum possible proportional reduction in input usage, with output levels held constant. The two measures
provide the same technical efficiency scores when constant returns to scale (CRS) technology applies, but are unequal when variable returns to scale (VRS) is assumed (Färe et al., 1994). This study uses a VRS technology (BCR model) and selected an input orientation because the concern is to minimize input usage to produce an output level, rather than the converse. An output oriented VRS model was developed by Banker, Charnes and Cooper (1984), is defined as:

Maximize $\alpha \theta$

Subject to:

$$-\theta y_i + Y \lambda \geq 0$$
$$X_i' - X_i \lambda \geq 0$$
$$N1'\lambda=1$$
$$\lambda \geq 0$$

(2)

Where $\theta$ is a scalar shows the technical efficiency (TE) score of a sample of farmers. Value of score TE range between 0 with 1. $Y_i$ is the total production of sugarcane from $i^{th}$ farmer, $x_i$ is a vector Nx1 of the number of inputs to $i^{th}$ farmer, $Y$ is a vector is 1xM for production, N is the nxm matrix of production inputs used by farmers, $\lambda$ is the vector of weighted MX1.

The measure of technical efficiency obtained in this model is also named 'pure technical efficiency' as it is free of scale effects. Therefore, the scale efficiency values for each analyzed sugarcane farm can be obtained by the ratio between the scores for technical efficiency with constant and variable returns. Calculation of SE scores is presented by formulation below:

$$SE = \frac{TE_{CRS}}{TE_{VRS}} = \frac{\theta_{CRS}}{\theta_{VRS}}$$

(3)

RESULTS OF STUDY

The characteristics of farmers regarding the age, level of education, family members, land size of sugarcane farming and type of land are shown in Table 1. It is about 85 percent of farmers are less than or equal to 58 years. Most of farmers are graduated from high school level (junior and senior high school), which is about 83 percent, and family members is generally in the range of 1 up to 3 persons. On average, the land size of the farmers in the research location is 5.07 hectare and the standard deviation is about 2.02 hectare. Moreover, type of land is 65% sugarcane farmers work on dry land.

<table>
<thead>
<tr>
<th>No</th>
<th>Characteristics</th>
<th>Category</th>
<th>Number of Farmers (Persons)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td></td>
<td>229-38</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>339-48</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>449-58</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>559-68</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Education</td>
<td>No Education</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elementary School</td>
<td>14</td>
<td>14.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Junior High School</td>
<td>27</td>
<td>27.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Senior High School</td>
<td>56</td>
<td>56.00</td>
</tr>
<tr>
<td>3</td>
<td>Family members</td>
<td>1-3</td>
<td>61</td>
<td>61.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-6</td>
<td>38</td>
<td>38.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7-9</td>
<td>1</td>
<td>1.00</td>
</tr>
<tr>
<td>4</td>
<td>Land Size (Ha)</td>
<td>≤ 2.00</td>
<td>8</td>
<td>8.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.00 &lt; ≤ 4.00</td>
<td>33</td>
<td>33.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.00 &lt; ≤ 6.00</td>
<td>37</td>
<td>37.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.00 &lt; ≤ 8.00</td>
<td>16</td>
<td>16.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 8</td>
<td>6</td>
<td>6.00</td>
</tr>
<tr>
<td>5</td>
<td>Type of Land</td>
<td>Wet</td>
<td>35</td>
<td>35.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dry</td>
<td>65</td>
<td>65.00</td>
</tr>
</tbody>
</table>

Source: Survey data, 2017.
DEA analysis is applied in order to measure score of technical efficiency for every sugarcane farmer in the research location. The results of DEA analysis show almost 64% of samples are inefficient (Table 2). Mean pure technical efficiency (TE VRS) score is 0.9105. It implies on average, the respondents are able to obtain around 91.7% of potential output from a given mix of inputs. This condition also implies that around 8% of sugarcane production, on average, is foregone due to technical inefficiency. In other words, the shortfall of the observed output from the frontier output primarily reflects the inefficient use of the factors that are within the control of the farmers. The technical efficiency levels of the inefficient farms range from 0.704 to 0.995 so there is a potential to increase farm output from between 0.5 and 29.6% from the existing level of inputs.

Table 2 – Distribution of Technical Efficiency Score

<table>
<thead>
<tr>
<th>No</th>
<th>Efficiency Score</th>
<th>Number of Farmers (Person)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.0000</td>
<td>36</td>
<td>36.00</td>
</tr>
<tr>
<td>2</td>
<td>0.927 – 0.999</td>
<td>19</td>
<td>19.00</td>
</tr>
<tr>
<td>3</td>
<td>0.853 – 0.926</td>
<td>20</td>
<td>20.00</td>
</tr>
<tr>
<td>4</td>
<td>0.779 – 0.852</td>
<td>14</td>
<td>14.00</td>
</tr>
<tr>
<td>5</td>
<td>0.704 – 0.778</td>
<td>11</td>
<td>11.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
<td>100.00</td>
</tr>
</tbody>
</table>

**Source:** Survey Data, 2017.

To demonstrate how DEA is used to evaluate the input decisions of technically inefficient farms, and to estimate potential yield gains from reallocating inputs, consider farm 8 with an efficiency score of 0.857. The production practices and its referents (farms 1, 26, 28 and 52) that are efficient are presented in Table 3. The use of all inputs (i.e, land, seed, fertilizer, herbicide and labor) by farm 8 is ‘excessive.’ This comparison would suggest strategies for farm 8 to rationalize the use of its inputs. Values of slack provide a composite farm which would produce the equivalent level of output, but by using lower levels of inputs. Average slack variables also show that input use of farms are excessive.

Table 3 – Input Use Level of Farm 8 and Its Refferent Farms

<table>
<thead>
<tr>
<th>Variables</th>
<th>Input Use of Farm 8</th>
<th>Slack</th>
<th>Input Use of Refferent Farms (1, 26, 28 and 52)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>5600</td>
<td>0</td>
<td>5600</td>
</tr>
<tr>
<td>Land (ha)</td>
<td>5.5</td>
<td>-0.787</td>
<td>4.713</td>
</tr>
<tr>
<td>Seed (kg)</td>
<td>8000</td>
<td>-1.144.82</td>
<td>6 855.18</td>
</tr>
<tr>
<td>Fertilizer (kw)</td>
<td>86</td>
<td>-12.307</td>
<td>73.693</td>
</tr>
<tr>
<td>Pesticide (Lt)</td>
<td>30</td>
<td>-4.293</td>
<td>17.406</td>
</tr>
<tr>
<td>Labor (Person/day)</td>
<td>116.63</td>
<td>-16.69</td>
<td>60.313</td>
</tr>
</tbody>
</table>

**Source:** Survey Data, 2017.

In order to substantiate the nature of scale inefficiencies, the analysis further disaggregated into those farms that exhibit IRS and DRS. Information as to whether a farm is operating at increasing or decreasing returns to scale can prove useful in indicating a potential redistribution of farm resources i.e. increase the input size if IRS and decrease the input size if DRS were prevailing to maximize average productivity. Turning to scale efficiency score of sugarcane farmers, more farms are operate below the optimal scale than farms above the optimal scale (Figure 1). Of the 100 sample sugarcane farmers, 13 farmers are operating at CRS (scale efficient), 83 farmers are operating at IRS and the rest (4) are operating at DRS. This implies that sugarcane farms can reduce cost production further by increasing their scale of operation to increase efficiency.
CONCLUSION

This study showed that there are resource-use inefficiencies in sugarcane production in Kediri District (64% of sample). On average, pure technical efficiency level of sugarcane farmers is 91.7% therefore sugarcane farmers could increase their output by 8% through better use of available inputs by rationalizing the use of input production especially seed, fertilizer and herbicide.

Most of sugarcane farm are not operating in optimal scale (83%). Majority of farms are operate Increasing Return to Scale (IRS) This suggest that sugarcane farms can reduce cost production further by increasing their scale of operation to increase efficiency.

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ANALYSIS OF TECHNICAL EFFICIENCY AND COMPETITIVENESS OF MAIZE FARMING IN GORONTALO PROVINCE, INDONESIA

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ABSTRACT
This research aims to analyze the technical efficiency and the competitiveness level of maize farming in Gorontalo Province, Indonesia. The results showed that there are 3 variables of technical efficiency that influence significantly to maize production, such as planted area, seed quantity and NPK fertilizer. Meanwhile, 6 variables of inefficiency effect (farmer ages, farm experience, education level, member of household, total land area, and total incomes) has no influence to the maize production, significantly. The efficiency of farms is on the level of 0.66 (not efficient) which indicates that maize farm could produce, on average, 34% by using of a given set of inputs. PAM results showed that the maize farming in Gorontalo is no longer competitive because Domestic Resources Cost Ratio (DRCR) and Private Cost Ratio (PCR) were 1.85 and 3.81, respectively. Overall, the output and input policies of government were not effective to increase the production and competitiveness of maize farming in Gorontalo Province. To solve this problem, the government must reorganize the tax policy of commodity, distribution cost subsidy and the most important is the government purchase price policy. The mutual cooperation in farming is better to be a legally by government to solve the inefficiency and high cost problems of farm labor.

KEY WORDS
Maize farming, technical efficiency, stochastic frontier analysis, policy analysis matrix, competitiveness.

Gorontalo maize since 2001 has become a mainstay export commodity. The largest export volume occurred in 2008 of 84 448 tons. Unfortunately, it was decline in the following years. BPS-Statistics data (2010) shows that in the last two years (2009 - 2010) export volume of Gorontalo maize decreased from 42 942.46 tons to 32,187 tons with the value of Freight on Board (FOB) US $ 7,641,544 and decreased in 2011 by 8 400 ton with FOB value of US $ 2,225,040 (BPS-Statistics of Gorontalo Province, 2011). However, in 2014, exports of Gorontalo maize increased by 32 460 tons with a value of US $ 8,516,868. While in 2015, BPS-Statistics noted that Gorontalo maize exports reached 85.25 percent of Gorontalo's total exports in the year which amounted to US $ 31,381,776 (BPS-Statistics of Gorontalo Province, 2016). Meanwhile, the currently export of this commodity was happen in February 2018 with 3 850 000 tons export volume and export value of US $ 1,014,475. This is the first export of Indonesia maize in 2018 (data of Gorontalo Customs, 2018).

The fluctuations of maize exports in Gorontalo that tend to decline every year is thought to be the impact of fluctuations problem in production of maize and decrease of harvested area. The 2016 Agricultural Census Data shows that the harvest area of Gorontalo's maize was decline from 156 436 ha in 2008 to 129 131 ha in 2015. In absolute terms, there was a decrease of 27.31 ha within 7 years. Similarly, production fluctuated during this period, where there was a sharp decline in the last 2 years (2014-2015), from 719 787 tons to 643 512 tons (down 11 tons) (www.bps.go.id, accessible May 22, 2017). In addition, to be said to have competitiveness (especially comparative advantages),
Gorontalo maize should be able to be produced by itself with existing domestic resource condition and have efficiency in production inputs. So that, the region can compete in competitive market with the competitor countries or other regions in Indonesia.

The production and competitiveness are two things that cannot be separated from each other. Because, generally, the increase of production and price of commodity will be followed by the increase of commodity competitiveness and vice versa. In principle, production is a process of transformation of some inputs into a form of output that has an economic value. Thus, Doll and Orazem (1984) argue that the main concepts in the production economy are about the costs of farming, both the input and output costs or the responses between the both, and the use of natural and human resources for profit maximization and / or minimizing cost of production. The relationship and response between mathematically modeled inputs and outputs will produce a function called Production Function (Nicholson and Snyder 2010).

$$Y = f(K,L,M)$$  \hspace{1cm} (1)$$

Where: \(Y\) represents the output of certain goods or products during one production period; \(K\) is capital which used during production period; \(L\) is Labor symbol or work time input, whereas \(M\) is material or raw materials or inputs which used in production process.

Theoretically, Curtiss (2000) stated that in a competitive market economy there exists no \(Y\)-inefficiency. Assume that the transaction costs of firms in dealing with markets are almost identical because of perfect information. The technical efficiency and competitiveness are then closely correlated and the deviations between those two could be predicted by differences between technical and allocative efficiencies. Curtiss (2000) statement based on the theory of firm behavior in a competitive market economy, it is expected that the market system encourages producers to become cost-minimizing and re-optimize their production under the new set of factor prices, in an attempt to make the marginal value product value to the factor price. Principally, Producers operating on a competitive market seek possibilities for maximization of expected profit by increasing production, especially by non-decreasing returns to scale (Jarzębowska and Rembisz, 2013).

Talking about the relationship between technical efficiency and competitiveness, Mango, et al (2015) found that technical efficiency in smallholder maize production could be increased by 35% on average through better use of available resources (e.g. land, fertilizer, seed and labor), given the current state of technology. This could be achieved through improving farmer-specific efficiency factors, which include better and more frequent extension services, smaller household sizes, and the increased involvement of male farmers in maize production. If these achieved, it can be improve the production and competitiveness of maize. They use Stochastic Frontier Analysis (SFA) to estimate the technical efficiency of maize production in Zimbabwe.

The other case showed by Reddy and Bantilan (2012) which analyzed the competitiveness and technical efficiency of groundnut oil in India using Revealed Comparative Advantage (RCA) analysis and SFA. Generally, they found that keeping the competitiveness of production of groundnut, the policy effort needs to focus on reducing huge yield gaps, which will shift the groundnut production frontier upward through the adoption of yield-enhancing low-cost technology like the adoption of improved seeds treated with rizobium and fungicide, micronutrients like gypsum, protective irrigation during stress times and use of mechanical threshers to save labor.

Generally, this research has similar final target with those previous research such a policy recommendation to increase competitiveness of commodity by paying attention to technical efficiency factor and also factor of domestic resource cost which influence production and profit of farming. So that, the aims of this research are to analyze the technical efficiency and the competitiveness of maize farming in Gorontalo Province, Indonesia. This region is one of 5 Provinces as a main exporter of maize in Indonesia (East Java, South Sulawesi, West Nusa Tenggara, Gorontalo and Lampung).
METHODS OF RESEARCH

The research was conducted in Gorontalo Province, Indonesia. Taken 3 districts of 3 regencies as a sample of survey location. The locations are Tibawa District (Gorontalo regency), Anggrek District (North Gorontalo regency) and South Suwawa district at Bone Bolango regency. Sampling method use simple random sampling to determine the respondents of farmers. The respondent quantity of each research location were 40 farmers, assuming that the population of farmers were spread normally. So the total number of respondents in 3 (three) survey location were 120 farmers. The assumption refers to the central limit theorem, where for a large sample size (n ≥ 30), the sampling distribution curve will center on the population parameter value and will have all the properties of normal distribution (Juwono, 2015).

The research is address through two methodological approaches, Stochastic Frontier Analysis (SFA) to estimate the technical efficiency and the Policy Analysis Matrix (PAM) to measure competitiveness. The first methodological approach is the Stochastic Frontier Analysis (SFA), which is used to provide the study with estimates and explanation of inefficiency effects in the production behavior. The second methodological approach utilizes Policy Analysis Matrix (PAM). This methodological framework enables the calculation of different competitiveness indicators. These are then compared in their actual and technically potential terms (Curtiss, 2000).

The stochastic frontier production function used for technical efficiency analysis in this study which based on Cobb-Douglas model, with 9 (eleven) independent variables. These independent variables form the equation model of frontier production function of maize farming, which are as follows:

\[
\ln Y_i = \beta_0 + \beta_1 \ln X_{1i} + \beta_2 \ln X_{2i} + \beta_3 \ln X_{3i} + \beta_4 \ln X_{4i} + \beta_5 \ln X_{5i} + \beta_6 \ln X_{6i} + \beta_7 \ln X_{7i} + \beta_8 \ln X_{8i} + \beta_9 \ln X_{9i} + \nu_i - u_i
\]  

(2)

Where: \( Y_i = \) output yield of maize (kg); \( X_{1i} = \) planted area of maize crop (ha); \( X_{2i} = \) seed quantity (kg); \( X_{3i} = \) N fertilizer quantity (kg/ha); \( X_{4i} = \) NPK fertilizer quantity (kg/ha); \( X_{5i} = \) pesticide quantity (liter); \( X_{6i} = \) herbicide quantity (liter); \( X_{7i} = \) hired labor quantity (work per day); \( X_{8i} = \) family labor quantity (work per day); \( X_{9i} = \) rent of plow tool (per days); \( \beta_0 - \beta_9 = \) estimated parameter coefficients; \( \nu_i = \) random error; \( u_i = \) technical inefficiency components in model.

The expected coefficient value is \( \beta_1, ..., \beta_9 > 0 \). A positive value implies that the increase of inputs on the estimator parameter will also increase the yield of maize.

The next step is the analysis or measurement of technical efficiency. Technical efficiency analysis can be measured using the following formula:

\[
TE_i = \exp(-E[u_i|\nu_i]) \quad i = 1, ..., N
\]  

(3)

Where: \( TE_i = technical\ efficiency\ of\ farmers\ the-i; \) \( \exp(-E[u_i|\nu_i]) = estimation\ value\ of\ u_i\ with\ condition\ \nu_i,\ so\ that,\ 0 \leq TE_i \leq 1 \).

The value of technical efficiency is inversely proportional to the value of the effect of technical inefficiency.

In additional, this research also measured technical inefficiency (\( u_i \)) of maize farming. The model refers to a model developed by Kumbhakar, Ghosh and McGukin (1991), also Battese and Coelli (1995) in Coelli (1996), which considerable of technical inefficiency effect (\( u_i \)) that reflected of farmer’s social aspects. The equation for estimating the value of the effect parameters of technical inefficiency is as follows:

\[
u_i = \delta_0 + \delta_1 Z_1 + \delta_2 Z_2 + \delta_3 Z_3 + \delta_4 Z_4 + \delta_5 Z_5 + \delta_6 Z_6 + \omega_i
\]  

(4)

Where \( u_i = \) technical inefficiency effect; \( \delta = \) estimated parameter; \( Z_1 = \) age of farmers (years old); \( Z_2 = \) crop experience (year); \( Z_3 = \) level of formal education (year);
$Z_1 = \text{member of household (person)}$; $Z_2 = \text{total of planted area (ha)}$; $Z_3 = \text{total of household incomes (IDR/year)}$; $w_i = \text{random error}$.

Equations (2) and (4) are estimated using FRONTIER ver. 4.1, simultaneously, for consistency estimation of technical inefficiency value in equation (4) with estimated value of stochastic frontier production function of maize farming (equation 2). The process of analysis carried out two stages, the first stage is a parameter estimate $\beta_i$ using Ordinary Least Square (OLS) method; the second stage is an estimate of all parameters $\beta_i$, variance $v_i$ and $u_i$ using the Maximum Likelihood (MLE) method. According to Coelli, et al. (2005), the results of FRONTIER 4.1 will give an estimation variance of the expected parameter closes to 1 (one) value. It means that the error term only comes from the result of inefficiency ($u_i$) and not from noise ($v_i$). The FRONTIER 4.1 also result the estimated log value of likelihood MLE and OLS, where likelihood log value is expected with MLE method, so production function with MLE method is good and close to field condition.

Stochastic Frontier Analysis (SFA) is a static analysis, either Policy Analysis Matrix (PAM) which the method to analyze the competitiveness in this research. Tsakok (1990) argued that there are two methods use in measuring the comparative advantage, namely: Domestic Resources Cost Ratio (RBSD) and Net Economic Benefit Ratio (NEBR). The other method or tools use were Revealed Comparative Advantage (RCA). Pearson et al. (2005) argued that Policy Analysis Matrix (PAM) was more comprehensive than the other methods use in measuring the competitiveness. The construction of PAM for an agricultural system allows one to calculate private profitability – a measure of the competitiveness of the system at actual market prices. PAM can know about the comparative and competitive advantages ratio such a Domestic Resources Cost Ratio (DRCR) and Private Cost Ratio (PCR) of commodity system and the impact of the policy.

Monke and Pearson (1989) stated that the central purpose of PAM analysis is to measure the impact of government policy on the private profitability of agricultural systems and on the efficiency of resources use. Meanwhile, social profitability and efficiency are often emphasized by economics planners whose concern is the allocation of resources among sectors and the growth aggregate income in the economy. Both of focuses on the incentive effects of policy and how policy incentives might be altered. The approach is particularly well suited to empirical analysis of agricultural price policy and farm incomes, public investment policy and efficiency, and agricultural research policy and technological change. Hence, PAM and SFA methods are relationship and supported each other.

Table 1 illustrates that PAM consists of three rows, where the first row was calculated by private price (market price), i.e. the price received by farmers. The second row was the social price calculation (shadow price) that is the price that describes the social value or the real economic value for the element of cost and yield. The both rows were calculated the profit of farming (private and social price approached). Profit is the difference between acceptance and cost. The difference in the calculation between private price and social price is due to market failure or entry of government policy located on the third row. If market failure is considered as an uninfluenced factor, so the difference is more due to policy incentives that can be analyzed (Monke and Pearson, 1989).

<table>
<thead>
<tr>
<th>Items</th>
<th>Revenues</th>
<th>Costs</th>
<th>Profits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tradable inputs</td>
<td>Domestic Factors</td>
<td></td>
</tr>
<tr>
<td>Private Price</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>Social Price</td>
<td>E</td>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>Effect of divergences and efficient policy</td>
<td>I = A - E</td>
<td>J = B - F</td>
<td>K = C - G</td>
</tr>
</tbody>
</table>


Notes: $D =$ private profitability; $H =$ social profitability; $I =$ output transfer; $J =$ input transfer; $K =$ factor transfer; $L =$ net transfer.

The matrix has four columns: the first column is revenue, the second column is a cost column that consisted of tradable input (fertilizers, pesticides, seeds, herbicides and tools)
and domestic factors (labor, land and capital) (Monke and Pearson, 1989; Pearson, et al., 2005).

According to Monke and Pearson (1989), the theoretical basis for PAM is the simple general equilibrium model of international trade rather than some social welfare function, and the matrix focuses attention on the identification of efficient patterns of production and prices. The focus of PAM in terms of identification of efficiency in production and prices is very much in line with the targets to be achieved in the analysis of production functions more specifically technical efficiency. The difference may lie only in the analytical point of view where technical efficiency is more focused on the efficiency of input volumes and other factors affecting technical production efficiency, whereas PAM is more concerned with the use of cost and socially and privately increasing production and commodity competitiveness. But actually they can strengthen each other.

RESULTS AND DISCUSSION

Technical Efficiency of Maize Farming. The model of stochastic frontier consist 9 (nine) independent variables as the factors that influenced the production of maize farming. The result of Maximum Likelihood Estimation (MLE) analysis was showed this model (table 2). The MLE method has two stages: the first is Ordinary Least Square (OLS) analysis and secondly, MLE estimation (Coelli, et al. 2005). The OLS estimate explains the average production level. OLS results are used as initial values in subsequent estimates using MLE to determine the best level of production from a combination of variables of production factors.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Variable</th>
<th>OLS</th>
<th>MLE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Std-error</td>
<td>t-ratio</td>
</tr>
<tr>
<td>beta 0</td>
<td>Intercept</td>
<td>6.914</td>
<td>0.409</td>
</tr>
<tr>
<td>beta 1</td>
<td>Planted area (ha)</td>
<td>0.450</td>
<td>0.133</td>
</tr>
<tr>
<td>beta 2</td>
<td>seed quantity (kg)</td>
<td>0.344</td>
<td>0.140</td>
</tr>
<tr>
<td>beta 3</td>
<td>N fertilizer (kg)</td>
<td>0.079</td>
<td>0.071</td>
</tr>
<tr>
<td>beta 4</td>
<td>NPK fertilizer (kg)</td>
<td>0.082</td>
<td>0.028</td>
</tr>
<tr>
<td>beta 5</td>
<td>Pesticide (L)</td>
<td>0.000</td>
<td>0.065</td>
</tr>
<tr>
<td>beta 6</td>
<td>Herbicide (L)</td>
<td>-0.019</td>
<td>0.073</td>
</tr>
<tr>
<td>beta 7</td>
<td>Hired Labor</td>
<td>0.021</td>
<td>0.098</td>
</tr>
<tr>
<td>beta 8</td>
<td>Family Labor</td>
<td>-0.217</td>
<td>0.077</td>
</tr>
<tr>
<td>beta 9</td>
<td>rent of plow tool</td>
<td>-0.159</td>
<td>0.067</td>
</tr>
</tbody>
</table>

Inefficiency model

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Coefficient</th>
<th>Std-error</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>delta 0</td>
<td>-0.159</td>
<td>2.087</td>
<td>-0.076</td>
</tr>
<tr>
<td>delta 1</td>
<td>0.010</td>
<td>0.009</td>
<td>1.077</td>
</tr>
<tr>
<td>delta 2</td>
<td>0.001</td>
<td>0.002</td>
<td>0.385</td>
</tr>
<tr>
<td>delta 3</td>
<td>0.022</td>
<td>0.084</td>
<td>0.265</td>
</tr>
<tr>
<td>delta 4</td>
<td>0.004</td>
<td>0.038</td>
<td>0.115</td>
</tr>
<tr>
<td>delta 5</td>
<td>0.151</td>
<td>0.245</td>
<td>0.615</td>
</tr>
<tr>
<td>delta 6</td>
<td>-0.159E-07</td>
<td>0.392E-07</td>
<td>-0.406</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Coefficient</th>
<th>Std-error</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>sigma-squared</td>
<td>0.238</td>
<td>0.210</td>
<td>0.033</td>
</tr>
<tr>
<td>Gamma</td>
<td>0.348</td>
<td>0.049</td>
<td>7.114</td>
</tr>
<tr>
<td>log likelihood function</td>
<td>-78.906</td>
<td>-71.167</td>
<td></td>
</tr>
<tr>
<td>LR test of the one-sided error</td>
<td>15.478</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data source: output of Front 4.1.

Note: \(^{*}\) = significant at a level 0.05 (5%), t-table =1.6587; \(^{*}\) = significant at a level 0.01 (1%), t-table = 2.36041.

The result of log likelihood function MLE in table 5 is larger than the result of log likelihood function Ordinary Least Squares (OLS). These implies that the model was appropriate or close to field condition (Coelli, 1996).

Table 2 showed that there are 3 (three) variables that influence significantly to maize production. The variables are planted area, seed quantity and NPK fertilizer. It means that if those variables increased, so do the production (cateris paribus assumption). For example, if we increase the maize seed quantity 1% or 1 kg/ha, so the production will be increase 0.46%
or 0.46 kg/ha, and so on. The gamma value in table 4 indicates that it’s only 35% variation in output of maize farming system are attributed to technical inefficiency. The other explanation can be stated that there’s 65% of external factors that influence the efficiency. It can be climate factor, pest and disease attack, water infrastructure etc. In additional, the value of sigma-square was significant at the 1% level (same with gamma value). It is indicates that there’s correctness of the specified assumption of the composite error term distribution.

While the variables of the pesticide quantity (beta 5), family labor (beta 7) and hired labor (beta 8) and the rent of plow tool (beta 9) has negative coefficient sign, although not significant to production. The negative sign means that if adding one unit of these variables will actually decrease the production of maize as a coefficient values of each variable. For example, variable beta 8 (hired labor) have a coefficient value -0.182, it means that if we increase 1 unit work hour of hired labor, then the production will be decrease about 0.2 kg/ha or 0.2 %, and so on.

The fact on the field and based on the PAM results in Table 5 showed that labor variables, both family labor and hired labor, are the variables that spend the most cost and time of farming. As a result there is a waste of farm costs that have an impact on the increasing of production costs. Thus, it’s happen of inefficiency financially and economically. Obviously, the competitiveness level of maize was influenced, directly. Related with it, Ojo (2007) argued that family labor not being use productively due to lack of adequate control during use because there was no immediate cost involvement, the tendency to over use labor from this source can’t be ruled out. Therefore, if the labor will be used productively and efficiently, there should be awareness of financial commitment which only hired labor can ensure. Thus hired labor should be encouraged for improved technical efficiency. However, the Ojo (2007) statement opposite with this research found in the field, where mutual cooperation in farming can reduce labor costs and use the work time more efficiently. So the findings can be a solution to the problem of agricultural labor and also it can be recommended as an alternative policy to local governments. This fact was happened in South Suwawa District of Bone Bolango Regency (one of the survey locations).

Six variables of inefficiency effect in table 2 has no influence to the maize production, significantly. Even though, only total incomes variable (delta 6/z6) which had negative sign in the coefficient. It means that variable Z6 has a negative influence to inefficiency effect or have a positive effect to the technical efficiency. In the other words, total incomes of farmer household have a positive contribution to the increasing of technical efficiency. It is influence to the production, directly. The fact is the farmers has a several alternative livelihoods besides farming (maize farming). Usually, they use it for farm capital too.

According to the table 3, it can be argued that actually, the age factor of farmers should not be the factor that cause of technical inefficiency of maize farming, because most farmers are in the range of productive age, which is between 20 - 50 years or 43 years on average.

<table>
<thead>
<tr>
<th>Ages</th>
<th>Sum of farmers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 20</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>20 - 30</td>
<td>15</td>
<td>13%</td>
</tr>
<tr>
<td>30 - 40</td>
<td>28</td>
<td>23%</td>
</tr>
<tr>
<td>40 - 50</td>
<td>38</td>
<td>32%</td>
</tr>
<tr>
<td>50 - 60</td>
<td>28</td>
<td>23%</td>
</tr>
<tr>
<td>&gt;60 years old</td>
<td>5</td>
<td>4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of formal education</th>
<th>Sum of farmers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ( no schooling)</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>1 - 3 years</td>
<td>8</td>
<td>7%</td>
</tr>
<tr>
<td>4 - 6 years</td>
<td>80</td>
<td>67%</td>
</tr>
<tr>
<td>7 - 9 years</td>
<td>19</td>
<td>16%</td>
</tr>
<tr>
<td>10 - 12 years</td>
<td>12</td>
<td>10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Farming experience</th>
<th>Sum of farmers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 10 years</td>
<td>36</td>
<td>30%</td>
</tr>
<tr>
<td>10 - 20 years</td>
<td>47</td>
<td>39%</td>
</tr>
<tr>
<td>20 - 30 years</td>
<td>14</td>
<td>12%</td>
</tr>
<tr>
<td>30 - 40 years</td>
<td>16</td>
<td>13%</td>
</tr>
<tr>
<td>40 - 50 years</td>
<td>7</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: primary data (2018).
Actually, if the farmer ages was in the productive range, they able to explore their ability to develop or expand the scale of farming system. The low level of education of the peasants, who mostly only attended school for 4-6 years or on average for only 7 years or only graduated from elementary school (Table 3). This condition causes them cannot develop and expand the farming scale. This is due to limited managerial ability and access to capital provider institutions. The variable of family members also greatly affect to the technical efficiency of maize farming. Logically, if the number of family members is large enough, then the head of household cannot depend household income on a single livelihood, such as corn farming. So the concentration of work becomes divided or just focus more on livelihoods that have a large income level.

Support those statements, Mango et al. (2015) found that household size, the region and the treatment were expected to have an ambiguous influence. A larger household could be a source of labor, which could improve efficiency. But household size could also mean high dependency on the household head, which could contribute to poverty. Poorer households are likely to be inefficient, as their economic status prevents them from acquiring the necessary inputs. Age is expected to be negatively associated with technical efficiency. So do Goldman (2013) in Mango et al (2015) who finds that older farmers tend to be more technically inefficient than younger ones. Obviously, it can be happen, because age of farmer will be influence too to the productivity of work.

Table 4 shows that the technical efficiency of maize farming in Gorontalo Province is at an inefficient level.

<table>
<thead>
<tr>
<th>Efficiency Level</th>
<th>Sum of farmers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.35 - 0.40</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>0.41 - 0.50</td>
<td>16</td>
<td>13%</td>
</tr>
<tr>
<td>0.51 - 0.60</td>
<td>27</td>
<td>23%</td>
</tr>
<tr>
<td>0.61 - 0.70</td>
<td>26</td>
<td>22%</td>
</tr>
<tr>
<td>0.71 - 0.80</td>
<td>29</td>
<td>24%</td>
</tr>
<tr>
<td>0.81 - 0.90</td>
<td>18</td>
<td>15%</td>
</tr>
<tr>
<td>0.91 - 0.92</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>100%</td>
</tr>
</tbody>
</table>

Mean of efficiency 0.66
Standard Deviation 0.13
Minimum 0.35
Maximum 0.92

Source: output of Frontier 4.1.

Theoretically, it is proposed that a farm or production process can be technically efficient if the value of TE = 1 (full efficiency) (Coelli, et al, 2005; Kumbhakar, et al. 2000). However, the results obtained in Table 6 show that the average value of technical efficiency is below of 1 (one). So it is assumed that there are constraints in increasing the productivity of maize farming in Gorontalo. The similar phenomena was found by Kitila and Alemu (2014), which found the TE value < 1. They stated that the value indicates that most farmers are not technically inefficient in producing Maize crop in the study area in that on average farmers can boost the output they are getting without increasing the existing level of inputs.

PAM analysis of maize farming competitiveness. Based on financial and economic analysis results, the net financial income earned IDR -19,479,929/year and the RC-ratio was 0.39, while the economic net income was IDR -10,433,635/ year and the RC-ratio was 0.70. This implies that maize farming in Gorontalo Province is not better financially and economically. It means that actually, the maize farming was not profitable for the farmer individually. Even though, the farmers still planted the commodity, because maize is not just a crop but it’s a cultural plant for them. So, the farmers are still planting, even they get losses (personal communication with key informants).
Table 5 – PAM of Maize farming of Gorontalo Province, Indonesia

<table>
<thead>
<tr>
<th>Items</th>
<th>Revenues</th>
<th>Inputs Tradable</th>
<th>Domestic Factors</th>
<th>Profits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Labor</td>
<td>Land &amp; Capital</td>
</tr>
<tr>
<td>Private</td>
<td>12,231,585.68</td>
<td>5,305,483.48</td>
<td>18,689,065</td>
<td>7,716,966</td>
</tr>
<tr>
<td>Social</td>
<td>24,863,862.42</td>
<td>12,581,422.87</td>
<td>15,740,255</td>
<td>6,975,819</td>
</tr>
<tr>
<td>Divergence</td>
<td>-12,632,276.75</td>
<td>-7,275,939.39</td>
<td>2,948,810</td>
<td>741,147</td>
</tr>
</tbody>
</table>

Source: primary data (analyzed).

Table 5 shows that labor cost is the largest cost component of maize production in Gorontalo, followed by costs of input tradable components (fertilizers, seeds pesticides and herbicides). This result supported by MLE estimation in table 2 that explained about technically inefficient of labor variables. Moreover, the value of production cost components are greater than the revenues obtained. It can be argued that the production costs incurred by each farmer for two seasons can’t be covered by the sale price of maize. Inefficiency of production cost will be influence to commodity production, directly. Hence, the maize competitiveness will be impacted too.

Consequently, tables 5 and 6 show that the value of private profitability below zero (D < 0) means that the commodity system earns below of normal profit. It’s categorized as not yet profitable financially or unable to expand farming, while input producers earn more (personally farmers). While the value of social profitability below zero (H < 0) means that the commodity system is not able to compete without assistance or government intervention. Furthermore, the farm is not profitable economically or there is economic inefficiency. Private profitability of maize farms is smaller than social profitability is thought to be the result of monopsony practices in the study sites. The reality condition explained that there is a dependence of the farmers on the traders or in other words collecting traders to be the only buyers of crops and farmers’ places to indebted (the financial aspect) and the procurement of inputs. So that the collecting traders have the power to controlling the input and output markets, consequently the selling price of input becomes high while the purchase price of output is suppressed. This indicates a market failure.

Pearson et al. (2005) suggests that one of the causes of divergence is market failure. The market is said to fail if it is not able to create competitive pricing and create efficient allocation of resources and products. There are three types of market failures that cause divergences: (1) monopolies (market-price sellers) or monopsonies (buyers control market prices), (2) negative externalities of cost, where the party that incurs the cost cannot be burdened the resulting or positive externalities of benefit, whereby the beneficiary cannot receive compensation or rewards for the benefits it generates), and (3) the imperfect domestic factor market, in the absence of an institution capable of providing competitive services and information complete.

Table 6 – PAM Coefficients

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Profitability (PP)</td>
<td>-19,479,928.79</td>
</tr>
<tr>
<td>Social Profitability (SP)</td>
<td>-10,433,634.76</td>
</tr>
<tr>
<td>Output Transfer (OT)</td>
<td>-12,632,276.75</td>
</tr>
<tr>
<td>Input Transfer (IT)</td>
<td>-7,275,939.39</td>
</tr>
<tr>
<td>Factor Transfer (FT)</td>
<td>3,689,956.67</td>
</tr>
<tr>
<td>Net Transfer (NT)</td>
<td>-9,046,294.02</td>
</tr>
<tr>
<td>Private Cost Ratio (PCR)</td>
<td>3.81</td>
</tr>
<tr>
<td>Domestic Resource Cost Ratio (DRC)</td>
<td>1.85</td>
</tr>
<tr>
<td>Nominal Protection Coefficient (NPC):</td>
<td></td>
</tr>
<tr>
<td>On Tradable Outputs (NPCO)</td>
<td>0.49</td>
</tr>
<tr>
<td>On Tradable inputs (NPCI)</td>
<td>0.42</td>
</tr>
<tr>
<td>Effective Protection Coefficient (EPC)</td>
<td>0.56</td>
</tr>
<tr>
<td>Profitability Coefficient (PC)</td>
<td>1.87</td>
</tr>
<tr>
<td>Subsidy Ratio to Producers (SRP)</td>
<td>-0.36</td>
</tr>
</tbody>
</table>

Source: analysis output of PAM.
The output transfer in Table 6 has a negative sign. It means that the output price in the domestic market is lower than the international price. This indicates that producers (farmers) accept output prices lower than their international prices. On the other hand, these results also indicate the existence of tax policy or levies on outputs imposed on farmers producers indirectly. This result is in accordance with the reality in the field, where the actual price of maize at the farm level (local market) averaged only IDR 2,540 / kg. Whereas based on the calculation of social prices (near the world price) the farmers should get the average price of IDR 5,162 / kg at the farming level, while the actual world price is IDR 3,111/kg (http://bappebti.go.id/harga_komoditi_bursa, accessed April 26th 2018).

Theoretically, this phenomenon shows about the existence of consumer surplus but minus for the producers (farmers). Simply, farmers as producers accept the price of output (yield of maize) is lower than the price that should be. These results clearly illustrate the phenomenon of price imbalances received by farmers, so it is reasonable if then farmers suffered losses due to high production costs are not followed by high product sales prices as well. Thus, the policy that must be taken immediately by the government is to reorganize the corn trade by imposing a government purchase price (HPP) of maize which neared to the world price.

While the input transfers in Table 6 indicates about incentives from input producers to farmers. Factor transfer (FT) in the table 3 means that there’s protection to the input producer or domestic factors. The value of FT was larger than zero or positive sign, it means that there’s transfer from producers (farmers) to the producers of input non tradable. On the other words, there’s government policy to protect the producer of domestic factors (non-tradable inputs) with positive subsidies. Meanwhile net transfer result indicated that there’s decreasing of surplus producers (farmers). On the other words, the government policy cause of market distortion in output and input which happen losses for the farmers. In additional, Olagunju (2015) stated that a negative divergence between private and social profits (net transfer) indicating a tax effect for the producers. The tax effect can be from government intervention or market imperfection or both.

Private Cost Ratio (PCR) and Domestic Resources Cost Ratio (DRCR) are main indicators of competitiveness, which approached at private and social price. Table 4 shows that maize farming in Gorontalo have not competitive advantages according to PCR value. The value explains that maize farming can’t to finance the domestic resources privately. Financially, the maize farming is not profitable for farmers. Meanwhile DRCR > 1, it means that commodity system is not efficient to finance the domestic factors in social price level, or a waste of the cost of domestic resources. Furthermore, the commodity does not have a comparative advantage and it is more profitable to import than produced domestically (in Gorontalo), because to produce the maize in Gorontalo requires the cost of domestic resources of 185% to the required import cost. In other words, every US $ 1.00 cost which needed to import maize, equivalent to US $ 1.85 of domestic resource costs to produce the commodity domestically. Thus, it is cheaper to import maize than produce it on its own. However, DRCR is a better indicator of efficiency in resource utilization as it corrects for price distortions (Briones, 2015; Monke & Pearson, 1989).

Another competitiveness indicator which is an indicator of the impact of government policy is Nominal Protection Coefficient (NPC) both output and input (NPCO and NPCI). Based on the value of NPCO can be explained that the policy is disincentive to output or not protective of output, while the value of NPCI in table 6 implies that government policy is protective in input (subsidy for tradable input). Unfortunately, the subsidy policy of input such as fertilizer subsidy is not effective because the farmers still spend extra budget to buy the fertilizer. For example, urea (N fertilizer) price that subsidized was IDR 1800/kg but the farmers should be buy in the level price about, on average, IDR 1900 – 2000/ kg, because they have to pay the distribution cost. So, it’s better for the government to change the subsidy for fertilizers from subsidy of gas material to subsidy of distribution or transportation costs.

While the EPC result implies that the level of government protection is low for protect the maize product, or policy has not been effective in protecting the maize products of
farmers. In this case, protection policy is situational, where only export commodities, such as maize can obtain protection while imported commodities should not be protected. Supporting this statement, Salam and Tufail (2012) found that wheat commodities do not receive protection or incentives when they become imported commodities. This is understandable as import commodities can threaten the survival of domestic commodity farming. Therefore, the policy of import tariff, especially for imported food commodities is often carried out by developing country governments, solely to protect the same commodities produced by local farmers.

The value of Profitability Coefficient (PC) and Subsidy Ratio to Producer (SRP) in Table 6, respectively, means that the policy of input subsidy is detrimental to farmers (transfer of farmers is bigger to consumers) and the policy has been making farmers expend more cost in maize production.

Overall, according to those results, the output policy, input policy and input-output policy of government were not effective to increase the level of maize competitiveness. The government must reorganize the tax policy of commodity, distribution cost subsidy and the most important is the government purchase price policy.

CONCLUSION

The results of this research indicate a close relationship and mutual influence between technical efficiency with competitiveness aspects of a farm. In the case of maize farming in Gorontalo Province, several things that can be concluded are as follows:

Maize production in Gorontalo Province is significantly influenced by planting area, seed quantity, and NPK fertilizer quantity. Meanwhile, other production factors such as N fertilizer, pesticide, herbicide, hired labor, family labor and rent of plow tool, have no effect on maize crop in Gorontalo.

Although, hired labor, family labor, rent of plow and pesticide quantity were not significant effect on maize production, but has a negative coefficient sign in the model, which means that the addition of the use of these variables will actually sharpen the decrease of maize production.

Second conclusion is relates to the results of the PAM analysis that places the labor factor as one of the two most inefficient production factors in production costs. Other production factors that wasteful of cost are tradable inputs (seeds, fertilizers and pesticides/herbicides).

Excessive production inputs make maize farmers in Gorontalo on average inefficiently technical in their farming activities. As a result, the maize farming system in Gorontalo is not able to finance its domestic resources, both privately (financially) and socially (economically). This has an impact on the decline of Gorontalo maize competitiveness, both competitively and comparatively.

Policy implications. The policy that the government should immediately take is to reorganize the maize trade by imposing a government purchase price (HPP) of maize close to world prices (international price). In order to protect the yields of local farmers can be more effective, but considering that Indonesia has ratified several global free trade agreements such as WTO, AFTA and MEA, the implementation must be done carefully so that Indonesia will not be harmed by the claim of other producer countries that are also members of those free trade organizations.

To solve the inefficiency and high cost problems in farm labor, it’s better for the government to make legal rules of the mutual cooperation in farming. Because it can be reduce labor costs and use the work time more efficiently.

REFERENCES

EVALUATION OF CHLOROPHYLL, TANIN, GROSS ENERGY AND THE WOMB NUTRIENTS ON THE LEAVES AND THE SEEDS OF INDIGOFERA SP.

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ABSTRACT
This research aims to evaluate the seeds and leaves of with the optimal level to the addition of material feeds in the form of Indigofera sp. flour. The result showed that the womb of chlorophyll of Indigofera sp. for its seeds were 159.5p glg, while for its leaves were 339.3p glg. Tanin’s identification of Indigofera sp. for its seeds were 0.84 ± 0.02 and for its leaves were 1.47 ± 0.01. The results of gross energy on Indigofera sp. were 4,421 for its seeds and 4,229 for its leaves.

KEY WORDS
Chlorophyll, tanin, gross energy, proximate analysis, Indigofera sp.

Indigofera sp plants have high productivity and the womb nutrient was good enough, especially the high protein of its womb. Tarigan et al. (2010) stated that the production of dry matter of Indigofera sp plant which was cut at 60 days old with 1.0 m cutting height was 31.2 ton / ha / year, which was the highest production when it compared to the age of the older cutting or the younger ones. Then, at 60 days of cutting age, higher crude protein content was found to be higher if it compared to 90 days or 30 days.

This plant was also very tolerant for dry season and puddles that can be planted in the territory of Indonesia. This plant can be used as animal feed rich in nitrogen, phosphorus and calcium. Indigofera sp. was very well used as forages of animal feed and contains crude protein 27.9%, crude fiber 15.25%, 0.22% calcium and 0.18% phosphorus. Legum Indigofera sp. has high protein content, tolerance to drought, waterlogging and salinity tolerance (Hassen et al., 2007). Tarigan (2010) mentioned that the content of crude protein, calcium, and phosphorus decreased with increasing cut interval, while the organic matter content, NDF, ADF was higher with increasing cut interval.

The decrement in the womb of nutrient with increasing age of plants can be illustrated by the ratio of leaves / stems to plant. Leav’se blade have higher womb of protein when its compared to the stem part of the plant (Whitehead 2000). This also means that the protein content of the stems tends to be lower than that of the leafy fraction protein. White et al. (2001) suggested that yields were more responsive for spacing compared to the plant populations. Shortening the spacing from 100-70 cm will increase the production of Navy Bean by 17%.

Akbarillah et al. (2002) reported that nutritional value of Indigofera sp flour as follows: crude protein 27.97%; crude fiber 15.25%. Indigofera sp spoons were a source of protein and contain high pigments such as xanthophils and carotenoids. In vivo digestibility test of the potential of Indigofera sp leaves as Boerka goat feed has been investigated by Tarigan (2010). Indigofera sp feed given the result of interval treatment and the best cutting intensity that was cutting interval 60 days and cutting height of 1.5 meter. Based on the above background, this research was conducted to evaluate the best womb nutrient between the seeds and the leaves of Indigofera sp.
MATERIALS AND METHODS OF RESEARCH

Laboratory Service Unit MRCPP Ma Chung University Malang, Clinical Pathology Laboratory Faculty of Medicine Universitas Brawijaya Malang, Chemistry Laboratory Universitas Brawijaya Faculty of Mathematics and Natural Sciences.

Leaves Flour Production Procedure Indigofera sp. The materials used in the study were *Indigofera* sp leaves harvested at 60 days. *Indigofera* sp. beginning with the harvesting of *Indigofera* sp plants that have 60 days defoliation age, by cutting the shoots <0.5 cm in diameter. Then followed by drying the leaves of *Indigofera* sp in greenhouse to dry in order not to cause green color change. It was further ground into flour, and ready for use in the preparation of feed.

The Procedure of Making *Indigofera* sp. The material used in the research was the seeds of *Indigofera* sp which have been harvested in the drying and then peeled from the skin, then milled to become flour and ready for use in the preparation of feed.

Procedure Chlorophyll Level. The procedure for determining chlorophyll concentration is done by the International Rice Research Institute (IRRI) method modified by Balitbio Bogor (Alsuhendra, 2004). A total of 0.1 g of green cincau leaves, pegagan leaf, katuk leaf, mulberry leaf, which has been chopped (about 2 mm in size), put into a test tube, then 20 ml of acetone added. The mixture is shaken sufficiently, and then stand for 2 × 24 hours. The extract obtained was then analyzed by concentration of chlorophyll a and chlorophyll b using spectrophotometer, each at 645 and 663 nm wavelengths.

Procedures Determination of Total Tannin. The procedure of determining the womb of tannin was done with, as much as 50.0 mg of ethanol extract 70% Leaf *Indigofera* sp dissolved with aqua demineralisata until volume 50.0 ml. The extract solution obtained was then dipet a certain amount and added 1 ml of Folin Ciocalteu reagent, then shaken and allowed to stand for 5 minutes. To the solution plus 2 ml of 15% Na 2 CO 3 solution, shake homogeneously and stand for 5 minutes.

Furthermore, aqua demineralisata added to volume 10.0 ml, let stand in stable time range obtained. Absorbance of the extract solution was observed at maximum wavelength. The concentration obtained was replicated twice. Total tannin content was calculated equivalent to galic acid (Gallic Acid Equivalent / GAE).

Gross Energy Determination Procedure (GE). The procedure of determining gross energy by using the Bomb Calorimeter method, principally by the amount of heat measured in calories, produced when a material or sample was completely oxidized in a calorimeter bomb as called the total energy of the material or sample. In the determination of this total energy occurs the conversion of chemical energy in a material or sample.

RESULTS AND DISCUSSION

Chlorophyll levels. Chlorophyll was a pigment compound that plays a role in selecting the wavelength of light that energy is being taken in photosynthesis. Actually, the leaves also have other pigments, such as carotene (colored orange), xantofil (yellow), and anthocyanin (red, blue, or purple, depending on the degree of acidity) (Anonymous 2006). All types of plastids including chlorophyll were derived from protoplastids, a colorless organelle found in plant cells that grow in dark and light (Lakitan 2001).

The synthesis of chlorophyll a from chlorophyll a does not require light. The change of protoklorofilid to chlorophyll a in Angiospermae absolutely requires light, but on Gymnospermae (some ferns and algae, chlorophyll can be formed in dark circumstances. The degree of the leaves development was the synthesis of chlorophyll b from chlorophyll a with a large number, followed by the development of the leaf. Chlorophyll synthesis b continues along with

The development of leaves characterized by the change of green leaf color to dark green. The womb of Chlorophyll in dark green leaf was 72% larger than the leaves of light green color. Chlorophyll b was formed from chlorophyll a or chlorophyll a Chlorophyll a and b are the main pigments contained in the thylakoid membrane. In addition to these two
pigments there were also yellow to orange pigments called carotenoids. There were two types of carotenoids: carotene (pure hydrocarbons) and xantofil (containing oxygen) (Lakitan 2001).

This research uses HPLC method where to determine the level of Chlorophyll on Indigofera sp plant the sample used in this research is the seeds and leaves of Indigofera sp. Based on Table of Chlorophyll content on Indigofera sp plant seeds 159.5p ggl while on leaf 339.3p ggl and based on the analysis on leaf Chlorophyll content is highest compared with Indigofera sp seeds (Table 1). Factors that affect chlorophyll formation include gene, light (Subandi 2008).

Table 1 – Sometimes Chlorophyll Leaves and Seeds of plants Indigofera sp.

<table>
<thead>
<tr>
<th>Plant</th>
<th>Leaf</th>
<th>Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigofera sp</td>
<td>339.3p ggl</td>
<td>159.5p ggl</td>
</tr>
</tbody>
</table>

Source: MRCPP MACHUNG Malang Laboratory.

Tanin levels. Tanin was a very complex organic substance and consists of many phenolic compounds found in various plants. Generally, tannin was scattered almost in all parts of the plant as in the bark, stems, leaves, seeds and fruit (Sajarutud, 2013). Tanin is an active compound of secondary metabolites that are known to have several properties such as astringent, anti diarrhea, antibacterial and antioxidants (Desmiaty et al., 2008). The results of the experimental species of tannins of Indigofera sp on seeds and leaves can be seen in Table 2.

The result of identification of tannin species of Indigofera sp on seeds 0.84 ± 0.02 and leaf 1.47 ± 0.01 based on the analysis on Indigofera sp plant tannin content on leaves was higher than the seeds. This was comparable to previous research has been done determination of tannins and total tannin content on the leaves and seeds of Indigofera sp plant by colorimetry (Desmiaty et al., 2008) and the determination of the womb of tannin on the leaves of Indigofera sp by permanganometri and kolorimetri. This research was used the part of the leaves from Indigofera sp plants that were old to see the levels of tannin compounds because the leaves were still old containing compounds of tannins were relatively higher.

Table 2 – Tanin Level on Indigofera sp.

<table>
<thead>
<tr>
<th>Plant</th>
<th>Leaf</th>
<th>Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigofera sp</td>
<td>1.47 ± 0.01</td>
<td>0.84 ± 0.02</td>
</tr>
</tbody>
</table>

Source: UPT Analytical Service and Measurement Department of Chemistry FMIPA Universitas Brawijaya Malang.

Gross energy. The energy needs of livestock met from food, therefore the first step that needs to be considered in preparing the ration was to provide for the needs of the fodder substances, and the second one was to choose the food that will be used to meet those needs. One example was the feed material from Indigofera sp. The stages in this study distinguish between seeds and leaves of Indigofera sp plant which can be seen in table 3.

The results showed that GE (Gross Energy) on Indigofera sp were 4,421 and 4,229 for its leaves. Many factors affect the results of livestock research or nutrients from plants. Among them depends on the type, age on the plant. Energy determination total samples to be analyzed were usually in solid form and comprise organic and inorganic compounds. In the event of combustion of the material, the organic compounds are usually composed of elements C, H, O, N, P and S.

Table 3 – Gross Energy Analysis of Plants Indigofera sp.

<table>
<thead>
<tr>
<th>Plant</th>
<th>Leaf</th>
<th>Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigofera sp</td>
<td>4.229</td>
<td>4.421</td>
</tr>
</tbody>
</table>

Source: Chemistry Laboratory State University of Malang (UM).
**Food Analysis based on Proximate Analysis.** The results of the study based on the proximate analysis on *Indigofera* sp sample samples that distinguish parts of the seeds and leaves were shown in Table 4. The quality of a plant to be used as a feed can be determined by looking at the content of food substances in the plant. The content of a plant's food substances can be obtained through proximate analysis methods in the laboratory.

<table>
<thead>
<tr>
<th>Feed ingredients</th>
<th>Dry matter (%)</th>
<th>Ash (%)</th>
<th>Crude protein (%)</th>
<th>Coarse fiber (%)</th>
<th>Rough fat (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaves of <em>Indigofera</em> sp</td>
<td>93.30</td>
<td>12.16</td>
<td>25.77</td>
<td>13.45</td>
<td>2.52</td>
</tr>
<tr>
<td>Seeds of <em>Indigofera</em> sp</td>
<td>91.55</td>
<td>5.51</td>
<td>28.50</td>
<td>16.71</td>
<td>1.41</td>
</tr>
</tbody>
</table>


**Dry Material.** Based on the variance analysis in table 4, the dry matter proximate test showed that the *Indigofera* sp on the seeds showed 91.55 and the leaves showed 93.30. The high content of dry ingredients affects the low water content in the feed. The high moisture content of young plants because in the young plants there are more active cells when compared to old plants that have more cells damaged or dead in it. The water itself in the leaf cell is required as a substrate or reactant for various biochemical reactions such as photosynthesis. In addition, water also serves as a nutrient solvent so that it can transport nutrients to the leaves (ishaq, 2001).

**Ash Content.** Result of Proximate Analysis of ash content in table 4, *Indigofera* sp plant showed that on leaf 12,16 and at seed 5,51. The high ash content on the leaf plant because the plant part of the leaf there are more active cells when compared to seed plants that have more cells damaged or die in it, so that the nutrients absorbed by the roots were all brought to the leaves.

Ash content on the part of the seeds were not go up because of the seeds in the death of cells. The death of these cells causes the nutrients absorbed by the roots that can not be maximally brought to the seeds (ishaq, 2001).

**Crude protein.** Raw protein analysis results in Table 4, proximate test of *Indigofera* sp showed that the leaves were 25.77 and the seeds were 28.50. The high levels of plant protein part of the seeds were caused by the function of proteins used as the forming of cells, tissues, and plant organs as well as functioning as synthetic materials of chlorophyll, enzymes, and amino acids are more common in seed plants than leaves (ishaq, 2001).

**Coarse Fiber.** Result of analysis of crude fiber in table 4, proximate test of *Indigofera* sp showed that leaves were 13.45 and the seeds were 16.71. The high levels of crude fiber in the seeds happen because the content of coarse fiber was closely related to the age of the plant. The older the age of the plant was increasing the content of coarse fiber, especially in the seed plant (ishaq, 2001).

**Rough Fat.** Result of analysis of crude fat in table 4, proximate test of *Indigofera* sp leaf part 2,52 and seed part 1.41. Classification of fats and oils According to Harris et al (2000), based on its structure the fat consists of simple lipids Fatty alcohol esters for example: glyceride, fat, and night esters; composite lipids and sphingolipids Non-alcohol fatty esters for example: phospholipids, glycolipids, aminolipids, lipoproteins; derived lipids for example: fatty acids, glycerol, ketones, hormones, fat soluble vitamins, steroids, carotenoids, fatty acid aldehydes, waxes and hydrocarbons.

**CONCLUSION**

Based on the results of this research on *Indigofera* sp plant, between seeds and leaves showed that *Indigofera* sp flour was the best plant because it has the high womb of chlorophyll, and also the chlorophyll can aim to affect egg quality, and *Indigofera* sp leaves have high content of Tanin, BK, Abu, and LK levels compared to seeds *Indigofera* sp, but leaves *Indigofera* sp have low GE, PK, SK content compared to seeds *Indigofera* sp.
REFERENCES


THE ROLE OF SEED SIZE AND NITROGEN IN THE DEVELOPMENT OF GLYCINE MAX (L.) MERRILL

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ABSTRACT
This research aimed to study the role of sink capacity approached from genotype with the seed size in the development and the result of soybean (Glycine max (L.) Merrill). This research was conducted during October 2017 - January 2018 at Indonesian Legume and Tuber Crops Research Institute of East Java. The experimental field sat at 400 meters above sea level, its type of soil was regosol with brown-gray color. This research result concluded that there was no interaction between seed size and nitrogen dose to the growth or result of soybean, sink capacity approached from seed size has an influence on the growth and the result of soybean: plant height, total leaves, weight of wet stover, weight of dry stover, total root nodules, number of nodes, number of productive branches, harvest dates, number of pods per sample, weight of 100 g seed.

KEY WORDS
Seed size, nitrogen, soybean, plant growth, legumes.

Soybean (Glycine max (L.) Merrill) is one of the important food crops in Indonesia because of containing nutrition which among other is protein reaching up to 30 - 50%, carbohydrate by 35% and fat by 15%. Soybean is one of the sources of vegetable protein, as the raw material of agro industry like tempeh, tofu, tauco, soy sauce, soybean milk and for livestock food needs (Rohmah and Saputro, 2016). The massive soybean utilization causes the domestic demands are getting higher regarding the increase of total people and society’s knowledge. This continuously-increasing demands cannot be fulfilled yet by domestic production since the productivity of soybean is still low and tends to not be stable. Soybean production in 2015 was amounting to 963.183 ton ha⁻¹, while the soybean needs per year were less than of 2,300,000 ton seeds. The lack of those needs must be completed by an importing policy (Anonymous, 2015).

One of the obstacles of soybean culture is the problem variety since every variety has a different genetic variation so that resulting in a different characteristic of production ability. For that matter, variety selection holds an important role in the soybean cultivation to achieve high productivity level. Therefore, the use of high-quality variety is the most basic way to increase plant production Sumarno and Hananto (as quoted in Efendi, 2010).

One of the physiological approaches for plant productivity improvement is using the concept of source and sink. The source is an organ or tissue generator or photosynthates exporter, while the sink is the importer or the receiver of photosyntheate. Sink capacity and source strength is a physiological characteristic considered the main controller of soybean result. The main source of soybean is leaves, while its main sink is seed.

Seed is one of the factors that determine the success of plant cultivation whose role cannot be changed by another factor since it functions as plant material and genetically potential. Haznah’s (2013) research shows that seed size has a significant influence on the plant growth. Large seed influences the best height growth compared to the medium and small seed. Good seed growth will bring the good growth and the result as well.

Indonesia's soybean is categorized having higher protein content than imported soybean. The protein content of local soybean is 39-40% while imported soybean is only 35-37% Banaszkiewica (as quoted in Sarama, Anas, and Asrida, 2014). High content of protein of soybean seed indicates that soybean needs high trace element, but soybean's needs of
nitrogen is different depending on the variety cultivated, thus, Efficiency of Nitrogen Uptake (ENU) in soybean needs to be known to determine the dose of fertilizer use which is in accordance with plant needs, to increase the efficiency of nitrogen uptake by soybean and the resulting productivity.

This research aims to: (1) learn sink capacity approached from genotype with seed size to the result and growth of soybean (Glycine max (L.) Merrill), (2) learn the role of source strength approached by nitrogen providence to the growth and result of soybean (Glycine max (L.) Merrill).

METHODS OF RESEARCH

This research was conducted in October 2017 until January 2018 at Indonesian Legume and Tuber Crops Research Institute (ILETRI) in Kendal Payak Village, Pakisaji Sub-district, Malang District - East Java. The experimental field sat at 400 meters above sea level, its type of soil was regosol with brown-gray color. The average weather was 22 - 28°C. The average humidity was 83.2 % per year, the average relative humidity was 82-93.5% and the average rainfall was 1.255–1.845 m³ dt⁻¹. Materials used to conduct this research were 6 varieties, i.e. Brawijaya 1 and Grobogan variety (large seed), Brawijaya 2 and Gema variety (medium seed), Tidar and Ringgit variety (small seed), fertilizer urea, TSP fertilizer, KCL fertilizer and manure, insecticide, pesticide.

This research used Randomized Complete Block Design (RCB) arranged in a factorial way with 3 repetitions within treatment placement in an experimental plot. The treatment consisted of 2 factors, the first factor was the seed size with 3 levels: Small Seed (Brawijaya 1 and Grobogan), Medium Seed (Brawijaya 2 and Gema), Small Seed (Tidar and Ringgit), the second factor was nitrogen dose: N1 (50 kg N ha⁻¹, 50 kg P ha⁻¹, 50 kg K ha⁻¹), N2 (manure, 100 kg N ha⁻¹, 50 kg P ha⁻¹, 50 kg K ha⁻¹). The entire total of the experimental plot was 36 plots.

The field research was processed using a plow. Weed and stover were sunk into the ground and then left for a week, and was processed once again using a harrow. The next step was making a 1.6 x 3.7 m bed. Among the bed was created a drainage channel by 30 cm x 50 cm deep. The plantation was conducted using dibble, within a 2 cm deep, the planting distance was 40 cm x 15 cm, every planting whole was grown one similar plant. The ingrown seed was replaced after 4-7 days old. Fertilizer application was applied based on the treatment. N1 (50 kg N ha⁻¹, 50 kg P ha⁻¹, 50 kg K ha⁻¹) treatment, fertilizer application was conducted 3 times, the first fertilizer application was doing when planting time, consisting of 9.8 gram of urea, 29.6 gram of TSP and 29.6 gram of KCL for each plot; the second and the third fertilizer application was using nitrogen fertilizer for each 19.73 gram/plot.

N2 (manure, 100 kg N ha⁻¹, 50 kg P ha⁻¹, 50 kg K ha), fertilizer application was conducted three times; the first application was at the planting stage consisting of manure by 1.776 kg/plot, nitrogen fertilizer by 19.73 gram/plot, TSP and KCl was 29.6 gram/plot for each; the second and the third application was using nitrogen fertilizer for each 19.73 gram/plot.

Plantation maintenance covers: (1) irrigation was carried out by damming drainage channels among the dam until the water flood the bed, and then was opened again. Flooding can be carried out every week or 5 times when it 0,14, 28, 42 and 56 days old after planting, or 3 times at 0, 14, and 28 days after planting, (2) replacing was carried out a week after planting to replace dead seeds or having bad growth with the new ones have been prepared with various condition, (3) hand weeding was carried out 2 times, that was 2-4 weeks after planting and the flower bloom, (4) pest and disease handling was carried out if there was an attack indication by spraying pesticide. The observation was applied to the 8 samples. The changer observed in this research was: (1) plant height, (2) numbers of pods per sample, (3) total leaves, (4) leaf area, (5) weight of wet stover, (6) weight of dry stover, (7) total root nodules, (8) number of nods, (9) number of productive branches, (10) chlorophyll content, (11) short flowering, (12) harvest dates, (13) numbers of pods per sample, (14) seed weight per sample, (15) weight of 100 seeds.
RESULTS OF STUDY

**Plant Height.** There was no interaction between the combination of seed size and N dose to the plant height. Seed size had an influence on the plant height by 3, 4, 5, 6 weeks after planting (WAP), Nitrogen dose had an influence on plant height by 4, 5, and 6 WAP. The average plant height can be seen in Table 1. The research result revealed that the large seed represented by Brawijaya 1 and Grobogan variety produced higher plant than that of medium seed (Brawijaya 2 and Gema variety) and small seed (Tidar and Ringgit variety) on average. Table 1 above indicates that the average highest plant height is obtained in V1 treatment (Brawijaya 1).

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Plant Height (WAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>18.60 e</td>
</tr>
<tr>
<td>V2</td>
<td>16.85 cd</td>
</tr>
<tr>
<td>V3</td>
<td>17.42 de</td>
</tr>
<tr>
<td>V4</td>
<td>15.15 b</td>
</tr>
<tr>
<td>V5</td>
<td>11.71 a</td>
</tr>
<tr>
<td>V6</td>
<td>15.44 bc</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>1.414</td>
</tr>
</tbody>
</table>

**Nitrogen Dose**

<table>
<thead>
<tr>
<th>Nitrogen Dose</th>
<th>Plant Height (WAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>15.67</td>
</tr>
<tr>
<td>N2</td>
<td>16.05</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>nd</td>
</tr>
</tbody>
</table>

Note: the same number in the same column shows no significant difference according to the LSD test 5% level; nd = no significant difference at LSD test of 5% level.

According to Table 1, the supply of 100 kg N ha\(^{-1}\) results in higher plant and very significance different compared to the fertilizer supply of 50 kg N ha\(^{-1}\). This research result revealed that the higher the dose of nitrogen supplied, the higher the soybean height.

**Total Leaves.** There is no interaction between the combination of seed size and N dose to the soybean total leaves. Seed size had a significant influence on the total leaves at 3, 4, 5, and 6 WAP, N dose had a significant influence on the total leaves at the age of 3 and 4 WAP. The average total leaves can be seen in Table 2.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Total leaves (WAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>10.42 a</td>
</tr>
<tr>
<td>V2</td>
<td>12.33 b</td>
</tr>
<tr>
<td>V3</td>
<td>10.98 a</td>
</tr>
<tr>
<td>V4</td>
<td>9.33 a</td>
</tr>
<tr>
<td>V5</td>
<td>9.63 a</td>
</tr>
<tr>
<td>V6</td>
<td>12.42 b</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>1.875</td>
</tr>
</tbody>
</table>

**Nitrogen Dose**

<table>
<thead>
<tr>
<th>Nitrogen Dose</th>
<th>Total leaves (WAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>10.29 a</td>
</tr>
<tr>
<td>N2</td>
<td>22.41 b</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>1.083</td>
</tr>
</tbody>
</table>

Note: the same number in the same column shows no significance different according to the LSD test 5%; nd = no significant difference at LSD test 5%.

According to table 2, at the age of 3 and 5 WAP, the average total leaves of V2 (Grobogan variety) and V6 (Ringgit variety) is no significance different, however; the average total leaves of those two varieties was significance different with other fourteen varieties. The
average total leaves of V1, V2, V4 and V5 was not significance different. At the age of 4 WAP, the average total leaves in V2 (Grobogan variety), V3 (Brawijaya 2) and V6 (Ringgit variety) was no significance different, however; the average total leaves of those three varieties was significance different with other three varieties (V1 = Brawijaya, V4 = Gema, V5 = Tidar). At the age of 6 WAP, V5 (Tidar) and V6 (Ringgit) produced the highest total of leaves, but was no significance different with V2 (Grobogan) and V3 (Brawijaya 2). The average lowest total leaves were resulted by V1 plant (Brawijaya 1), even though no significance difference with V3 (Brawijaya 2) and V4 (Gema). The research result showed that generally small and large seed produced relatively more leaves than that of medium seed. Nitrogen dose gave the average total leaves significance different. The application of 100 kg N ha\(^{-1}\) resulted the average total leaves was more than the supply of 50 kg 100 kg N ha\(^{-1}\).

Leaf Area. Treatment combination of seed size and nitrogen dose revealed the occurrence of interaction in the observation result of leaf area. Seed size also had no influence on leaf area of soybean. Nitrogen dose had an influence on leaf area. According to Table 3, the application of 100 kg N ha\(^{-1}\) resulted in the average leaf area from the supply of 50 kg N ha\(^{-1}\).

Table 3 – The Average Leaf Area of the Influence of Seed Size and Nitrogen Doze

<table>
<thead>
<tr>
<th>Nitrogen Dose</th>
<th>Leaf Area (cm(^2))</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>918.98 a</td>
</tr>
<tr>
<td>N2</td>
<td>1,353.07</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>364.121</td>
</tr>
</tbody>
</table>

Note: the same number in the same column shows no significance different according to the LSD test 5%; nd = no significance different at LSD test 5%.

Weight of Wet Stover. Treatment combination of seed size and nitrogen dose showed an interaction towards soybean’s weight of wet stover. Seed size had a significant influence on the weight of wet stover at all observation ages, while nitrogen dose had a significant influence on the weight of wet stover at the age of 6 WAP.

Table 4 – The Average Wet Stover Weight of the Influence of Seed Size and Nitrogen Dose

<table>
<thead>
<tr>
<th>Treatment</th>
<th>4 WAP</th>
<th>6 WAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Variety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>20.06 e</td>
<td>75.03 c</td>
</tr>
<tr>
<td>V2</td>
<td>16.06 de</td>
<td>68.10 bc</td>
</tr>
<tr>
<td>V3</td>
<td>14.26 cd</td>
<td>73.53 c</td>
</tr>
<tr>
<td>V4</td>
<td>11.75 bc</td>
<td>63.75 ab</td>
</tr>
<tr>
<td>V5</td>
<td>6.33 a</td>
<td>58.41 a</td>
</tr>
<tr>
<td>V6</td>
<td>10.16 ab</td>
<td>65.85 abc</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>4.047</td>
<td>9.603</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nitrogen Dose</th>
<th>4 WAP</th>
<th>6 WAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>12.37</td>
<td>64.50 a</td>
</tr>
<tr>
<td>N2</td>
<td>13.83</td>
<td>70.40 b</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>nd</td>
<td>5.544</td>
</tr>
</tbody>
</table>

Note: The same number in the same column revealed no significance difference at 5% LSD test.

According to Table 4, large seed, Brawijaya 1 (V1) and Grobogan (V2) variety, resulted in heavier wet stover weight than that of medium and small size, later on, medium size like Brawijaya 2 (V3) and Gema (V4) variety resulted in heavier wet stover weight than that of small seed, that was Tidar (V5) and Ringgit (V6). Nitrogen supply by 100 kg N ha\(^{-1}\) (N2) provided heavier wet stover weight than the supply of nitrogen by 50 kg N ha\(^{-1}\) (N1).

Weight of Dry Stover. Treatment combination of seed size and Nitrogen dose did not show an interaction to the dry stover weight of soybean. Seed size had a significant influence on dry stover weight at the age of 4 WAP, while the Nitrogen dose had no significant influence on dry stover weight. According to table 5, large seed, Brawijaya 1 (V1) and Grobogan (V2) variety resulted in heavier dry stover weight than that of medium and small
seed, moreover; medium seed like Brawijaya 2 (V3) and Gema (V4) resulted in heavier dry stover weight than small seed, that was Tidar (V5) and Ringgit (V6).

Table 5 – The Average Dry Stover Weight of The Influence of Seed Size and Nitrogen dose

<table>
<thead>
<tr>
<th>Type of Variety</th>
<th>Dry Stover Weight At The Age of 4 WAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>4.92 e</td>
</tr>
<tr>
<td>V2</td>
<td>4.20 de</td>
</tr>
<tr>
<td>V3</td>
<td>3.76 cd</td>
</tr>
<tr>
<td>V4</td>
<td>2.97 bc</td>
</tr>
<tr>
<td>V5</td>
<td>1.59 a</td>
</tr>
<tr>
<td>V6</td>
<td>2.66 b</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>0.868</td>
</tr>
</tbody>
</table>

Note: the same number in the same column shows no significance different according to the LSD test 5%; nd = no significance different at LSD test 5%.

Total Root Nodules. Treatment Combination of seed size and Nitrogen dose did not indicate interaction to the total root nodules. Seed size had a significant influence on total root nodules at all observation ages, while nitrogen dose had a significant influence on total root nodules at an observation of 4 WAP. According to Table 6, it could be explained that large and medium seed resulted in more average total root nodules than that of smaller one. The lowest total root nodules were gotten from smaller seed. The average total root nodules resulted in the supply of 50 kg N ha⁻¹ nitrogen was higher and significance different from the 100 kg N ha⁻¹ nitrogen supply.

Table 6 – The Average Total Root Nodules of the Influence of Seed Size and Nitrogen Dose

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Total Root Nodules</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 WAP</td>
</tr>
<tr>
<td></td>
<td>6 WAP</td>
</tr>
<tr>
<td>Type of Variety</td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>26.71 b</td>
</tr>
<tr>
<td>V2</td>
<td>29.13 b</td>
</tr>
<tr>
<td>V3</td>
<td>32.50 b</td>
</tr>
<tr>
<td>V4</td>
<td>27.79 b</td>
</tr>
<tr>
<td>V5</td>
<td>16.17 a</td>
</tr>
<tr>
<td>V6</td>
<td>18.38 a</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>8.286</td>
</tr>
<tr>
<td>Nitrogen Dose</td>
<td></td>
</tr>
<tr>
<td>N1</td>
<td>28.40 b</td>
</tr>
<tr>
<td>N2</td>
<td>21.82 a</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>4.784</td>
</tr>
</tbody>
</table>

Note: the same number in the same column shows no significance different according to the LSD test 5%; nd = no significance different at LSD test 5%.

Number of Nodes. Treatment combination of seed size and nitrogen dose did not show interaction to the number of nodes. Seed size and Nitrogen dose had a significant influence on the number of nodes.

Table 7 – The Average Number of Nodes of the Influence of Seed Size and Nitrogen Dose

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Number of Nodes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of Variety</td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>16.48 bc</td>
</tr>
<tr>
<td>V2</td>
<td>13.21 a</td>
</tr>
<tr>
<td>V3</td>
<td>17.52 c</td>
</tr>
<tr>
<td>V4</td>
<td>14.21 ab</td>
</tr>
<tr>
<td>V5</td>
<td>27.50 d</td>
</tr>
<tr>
<td>V6</td>
<td>26.04 d</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>3.031</td>
</tr>
<tr>
<td>Nitrogen Dose</td>
<td></td>
</tr>
<tr>
<td>N1</td>
<td>18.05 a</td>
</tr>
<tr>
<td>N2</td>
<td>20.27 b</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>1.750</td>
</tr>
</tbody>
</table>

Note: The same number in the same column revealed no significance difference at 5% LSD test.
According to the Table 7, it could be explained that small seed resulted in a higher number of nodes than that of medium and small seed on average. The lowest number of nodules was obtained within the larger seed, which was Grobogan variety (V2), even though no significance different from the number of nodes at Gema variety (V4). Tidar (V5) and Ringgit (V6) variety, those two resulted in a larger number of nodules. The average number of nodules obtained in the supply of 100 kg N ha\(^{-1}\) nitrogen was higher by 20.27 nodes and significance different from nitrogen supply by 50 kg N ha\(^{-1}\) that was 18.05 nodes.

Total productive Branches. Treatment combination of seed size with nitrogen dose did not show an interaction to the total productive branches. Seed size and nitrogen dose of each has a significant influence on the total of productive branches.

**Table 8 – The Average Total Productive Branches of the Influence of Seed Size and Nitrogen Dose**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Total productive Branches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Variety</td>
<td>Total productive Branches</td>
</tr>
<tr>
<td>V1</td>
<td>3.21 b</td>
</tr>
<tr>
<td>V2</td>
<td>2.23 a</td>
</tr>
<tr>
<td>V3</td>
<td>3.35 b</td>
</tr>
<tr>
<td>V4</td>
<td>3.15 b</td>
</tr>
<tr>
<td>V5</td>
<td>4.17 c</td>
</tr>
<tr>
<td>V6</td>
<td>4.29 c</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>0.506</td>
</tr>
<tr>
<td>Nitrogen Dose</td>
<td>Total productive Branches</td>
</tr>
<tr>
<td>N1</td>
<td>3.20 a</td>
</tr>
<tr>
<td>N2</td>
<td>3.60 b</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>0.292</td>
</tr>
</tbody>
</table>

*Note: The same number in the same column shows no significance different according to 5% LSD test.*

Table 8 shows that the seed of Grobogan variety (V2) resulted in the lowest average of total productive branches, Tidar (V5) and Ringgit (V6) variety produced the highest average of total productive branches. The application of 10 kg N ha\(^{-1}\) resulted in the lowest average of total productive branches.

Chlorophyll Content. Treatment combination of seed size and Nitrogen dose indicated the interaction to the chlorophyll content of soybean, so did the separated treatment of seed size. Nitrogen dose separately revealed the significance influent of chlorophyll content.

**Table 9 – The Average Chlorophyll Content of the Influence of Seed Size and Nitrogen Dose**

<table>
<thead>
<tr>
<th>Nitrogen Dose</th>
<th>Chlorophyll Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>1.94 a</td>
</tr>
<tr>
<td>N2</td>
<td>2.15 b</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>0.189</td>
</tr>
</tbody>
</table>

Short Flowering. Treatment Combination of seed size and Nitrogen dose did not indicate an interaction to the short flowering of soybean, so did each separated nitrogen dose.

Harvest Dates. Treatment Combination of seed size and nitrogen dose did not indicate an interaction to the harvest dates. Each seed size and Nitrogen dose separately had an influence on the harvest dates.

**Table 10 – The Average Harvest Dates of the Influence of Seed Size and Nitrogen Dose**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>harvest dates (DAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Variety</td>
<td>harvest dates (DAP)</td>
</tr>
<tr>
<td>V1</td>
<td>86.33 b</td>
</tr>
<tr>
<td>V2</td>
<td>80.00 aa</td>
</tr>
<tr>
<td>V3</td>
<td>86.50 b</td>
</tr>
<tr>
<td>V4</td>
<td>77.50 a</td>
</tr>
<tr>
<td>V5</td>
<td>79.00 a</td>
</tr>
<tr>
<td>V6</td>
<td>98.17 c</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>4.212</td>
</tr>
<tr>
<td>Nitrogen Dose</td>
<td>harvest dates (DAP)</td>
</tr>
<tr>
<td>N1</td>
<td>83.22 a</td>
</tr>
<tr>
<td>N2</td>
<td>85.94 b</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>2.432</td>
</tr>
</tbody>
</table>

*Note: the same number in the same column revealed no significance different according to the test of 5% LSD.*
Table 10 explains that the seed of Grobogan (V2), Gema (V4) and Tidar (V5) variety resulted in quicker harvest dates, followed by Brawijaya 1 (V1) and Brawijaya 2 (V3) variety. Ringgit (V6) variety had lower harvest dates, that was 98.17 dap. Nitrogen supply of 100 kg N ha\(^{-1}\) caused longer harvest dates on average than the supply of 50 kg N ha\(^{-1}\) nitrogen.

**Number of Pods per Sample.** Treatment combination between seed size and nitrogen dose revealed an interaction to the number of pods per sample. Each of seed size and nitrogen dose showed a significant influence on the number of pods per sample. Table 11 indicates that the seed of Grobogan (V2) variety produces the lowest average number of pods per sample compared to other varieties. Tidar (V5) and Ringgit (V6) variety results in the highest average of the number of pods per sample.

Table 1 – The Average Number of Pods per Sample of the Influence of Seed Size and Nitrogen Dose

<table>
<thead>
<tr>
<th>Treatment Type of Variety</th>
<th>Number of Pods Per Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>56.63 b</td>
</tr>
<tr>
<td>V2</td>
<td>30.67 a</td>
</tr>
<tr>
<td>V3</td>
<td>51.69 b</td>
</tr>
<tr>
<td>V4</td>
<td>47.69 b</td>
</tr>
<tr>
<td>V5</td>
<td>84.83 c</td>
</tr>
<tr>
<td>V6</td>
<td>79.13 c</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>9.187</td>
</tr>
</tbody>
</table>

*Note: The same number in the same column shows no significance different according to 5% LSD test.*

**Weight of Seed per Sample.** Treatment combination between seed size and nitrogen dose did not show an interaction towards weight of seed, so did the separated seed size treatment. Nitrogen dose separately indicated a significant influence on weight seed per sample.

Table 12 – The Average Weight Seed per Sample of the Influence of Seed Size and Nitrogen Dose

<table>
<thead>
<tr>
<th>Nitrogen Dose</th>
<th>Weight Seed per Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>11.18 a</td>
</tr>
<tr>
<td>N2</td>
<td>13.02 b</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>1.110</td>
</tr>
</tbody>
</table>

*Note: The same number in the same column shows no significance different based on the 5% LSD test; nd = no significance different at the 5% LSD test.*

Table 12 shows that the supply of 100 kg N ha\(^{-1}\) nitrogen resulted in a higher average weight of seed than the supply of 50 kg N ha\(^{-1}\) nitrogen.

**100 Seeds Weight.** Treatment of seed size and nitrogen dose jointly did not indicate an interaction towards weight of 100 seeds. Seed size is significance different, while nitrogen dose did not significantly influence the weight of 100 seeds. Table 13 indicates that the seed of Grobogan (V2) variety produces the highest average of 100 seeds weight compared to other varieties. Tidar (V5) and Ringgit (V6) produce the lowest average of 100 seeds weight.

Table 13 – The Average of 100 Seeds Weight of the Influence of Seed Size and Nitrogen Dose

<table>
<thead>
<tr>
<th>Treatment Type of Variety</th>
<th>100 Seeds Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>12.22 b</td>
</tr>
<tr>
<td>V2</td>
<td>21.77 c</td>
</tr>
<tr>
<td>V3</td>
<td>11.87 b</td>
</tr>
<tr>
<td>V4</td>
<td>11.05 b</td>
</tr>
<tr>
<td>V5</td>
<td>6.08 a</td>
</tr>
<tr>
<td>V6</td>
<td>6.47 a</td>
</tr>
<tr>
<td>LSD 5%</td>
<td>1.927</td>
</tr>
</tbody>
</table>

*Note: The same number in the same column shows no significance different based on the 5% LSD test; nd = no significance different at the 5% LSD test.*
DISCUSSION OF RESULTS

Actually, the research result shows that the larger the seed size, the higher the plant and the more the total leaves. This is caused by a larger seed has a much more food reserve, thus resulting in much more energy for the growth process. This is line with what Magagula and Ossom’s (2011) have explained that seed growth is truly influenced by total food reserves stored within the seed. Rahmawati and Saemong (2010) have also explained that seed size shows a food reserve, protein, mitochondria, speed/respiration ability/ ATP production and growth potential. Haznah’s (2013) research revealed that seed size has a significant influence on the plant height growth from seed.

Leaf is the main source of the assimilate-producer plant. High-low source activity is characterized by photosynthesis ability. Photosynthesis activity is in relation to the source capacity characterized by a growth rate of leaf area index and chlorophyll content, which play an important role in determining soybean ability to absorb radiation and water photolysis process. This is in line with what Purnawati and Manshuri (2015) have said, through a photosynthesis process, plant assimilates carbon dioxide, assimilates result is then spread to all plant part for growth and development process. Assimilate is resulted from source, playing a role to hold metabolism, the source also functions to supply non-photosynthetic plant.

Assimilate produced by leaf is then translocated through phloem into the sink. Sink needs assimilate to its growth and the remaining is kept. The amount of photosynthates resulted by leaf is directly proportional to the sink size, divided into the vegetative and reproductive sink. Leaf activity improvement influences photosyntheate quantity translocated into the sink, as a result, the sink size is getting larger, indicated by wet stover weight and dry stover weight, total root nodules, number of nodes, total productive branches, total nodes per sample and seed weight. Seed size has an influence on the rate growth and production. The amount of protein content within a plant is among other influencing growth rate and root development so that the root will grow bigger and result in a heavier weight.

The relationship between source capacity from the top of an active leaf and sink capacity influence dry goods production and determine field production (Kato et al, 2003). The sink's assimilate needs is a factor that determines photosynthesis rate, in addition to the environmental factor. After the canopy completely grows, CER is still able to increase and decrease in light to the sink needs change. If the sink strongly absorbs the assimilate, it causes carbohydrate gradient between source and sink is getting higher, this stimulates source to be more productive Gifford and Evans (as quoted in Yudiwanti et al, 2007). At the first of vegetative growth, the young foliage and root are the major sink in which at the part of the plant, the canopy dominates more root to obtain assimilate. At the reproductive stage, the growth and development of fruit and seed dominate canopy growth (Mardlaw, 1991).

The result of the future research shows that nitrogen dose has an influence on the height plant, total leaves, leaf area, root dry weight, wet stover weight, total root nodules, number of nodes, harvest dates, total productive branches, total nodes per sample and seed weight per sample. This is initiated by the sufficiency of nitrogen that can accelerate photosynthesis process so that the formation of leaf organs becomes quicker, and stomata conductivity towards CO2 and respiration rate. Even though given that trace nitrogen contained in the leaf does not directly play role in the photosynthesis, but this element is a photosynthesis compilation, the raw material in the photosynthesis process. According to Wibowo et.al (2012), total leaf area illustrates photosynthesis process running. The larger the total leaf area, the higher the photosynthesis process running, so that the formed photosynthesis will be much more.

This is supported by Hardianti’s (2016) opinion that one of the factors influencing soybean growth is nitrogen element within the soil, in which needs for nitrogen must be sufficient for plant growth. According to Salisbury and Ross (1995), Adisarwanto (2005), that nitrogen is also an element of chlorophyll compilation as a machine of the photosynthesis process. Nitrogen is also a factor influencing photosynthesis rate. Limited nitrogen stock will prevent the formation chlorophyll and decrease the photosynthesis rate, as well as disturb plant metabolism. The similar opinion was proposed by Prawiranata et. al (1991), that
nitrogen element supply can increase photosynthesis rate so that can stimulate plant's vegetative growth. The increase of nitrogen amount within the soil results in a large amount of protein within the plant.

CONCLUSION

There is no interaction between seed size and nitrogen fertilizer dose to the growth or soybean result (Glycine max (L.) Merrill).

Sink capacity approached from seed size had an influence on the growth and soybean result: (1) plant height, (2) total leaf, in which at the age of 6 WAP, V5 (Tidar) and V6 (Ringgit) result in the highest total leaves, while the lowest total leaves resulted by V1 (Brawijaya 1), (3) root wet weight, in which V1 (Brawijaya 1 variety) and V2 (Grobogan variety) produce the heaviest weight, (4) root dry weight, large seed represented by Brawijaya 1 (V1) and Grobogan (V2) variety has a heaviest root dry weight, (5) wet stover weight, Brawijaya 1 (V1) and Grobogan (V2) variety result in heavier wet stover weight, (6) dry stover weight is larger, that is Brawijaya (V1) and Grobogan (V2) result in heavier dry stover weight, (7) total root nodules, large and medium seed produce larger total root nodules on average than that of the small, (8) number of nodes, (9) number of productive branches, (10) harvest dates, (11) number of pods per sample, (12) weight of 100 seeds.

Source strength approached by nitrogen dose has an influence on soybean growth: (1) plant height, in which the highest average is obtained from the supply of 100 kg N ha⁻¹, (2) total leaves, the highest average is obtained from the application of 100 kg N ha⁻¹, (3) leaf area, the highest average is obtained from the application of 100 kg N ha⁻¹ (4) root dry weight, the highest average is obtained from the application of 100 kg N ha⁻¹, (5) wet stover weight, the highest average is obtained from the application of 100 kg N ha⁻¹ (6) total root nodules, the highest average is obtained from the application of 50 kg N ha⁻¹, (7) number of nodes, (8) total productive branches, (9) chlorophyll content, (10) harvest dates, (11) number of pods per sample, (12) seed weight per sample.

REFERENCES


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