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ECONOMIC GROWTH AND EMPLOYMENT
IN AGRICULTURAL SECTOR ON POVERTY IN ACEH PROVINCE

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Abstract

This empirical study aims to analyze the impact of economic growth and employment in the agricultural sector on poverty in Aceh Province. The study is conducted on annual time series data for the period of 1995-2017 while to explain the research objectives used Autoregressive Distributed Lag (ARDL) model and Granger Causality. The results found, in the short term, only employment in the agricultural sector has a significant effect on poverty. Meanwhile, in the long term, economic growth has a profound and negative impact on poverty. On the contrary, the absorption of labor in the agricultural sector tends to increase poverty. In addition, the results obtained that economic growth has a unidirectional relationship with employment in the agricultural sector. It was, therefore, suggested that the government should prioritize economic development in regions that have relatively high poverty rate and build an agro-industry in Aceh to increase agricultural value added and also absorb more labor so it can enable to reduce the poverty rate.

Keywords: economic growth; agricultural sector; poverty; ARDL; granger causality

INTRODUCTION

Aceh Province as a province that has regional autonomy then should be motivated to increase economic growth independently. The ideal economic growth expected by the government is economic growth that can solve macroeconomic issues in Aceh Province.

Economic growth and development cannot be separated from poverty. Edwards (1995) cited by Ijaiya et al. (2011) and Faroh (2013) states economic growth as one of the main drivers of poverty reduction in two ways. First, economic growth can increase employment and the chance of poor people on productive activities. Second, economic growth can increase labor productivity that will increase wages. It shows that the existence of economic growth is very important in improving the quality of the poor's life in the form of per capita income, welfare, and quality of social services so that poverty will decrease.

On the other hand, economic growth does not always improve the lives of poor people, if followed by a high rate of population growth. Many developing countries have even suffered from high poverty despite achieving higher economic growth in the 1960s so that the benefits of economic growth do not directly reduce poverty. This phenomenon is often known as the "trickle-down effect" which means that the benefits of economic growth expected to trickle into the poor are not working properly (Arsyad, 1997). Therefore, in a concept of modern economic development no longer focuses on the ultimate goal of development to GDP growth or GRDP, but focuses on alleviating poverty, reducing income inequality and providing employment (Rimbawan, 2012).

During the last seven years, economic conditions in Aceh Province have faced very volatile and declining. In the same period, economic growth was quite effective in reducing poverty. It can be seen from the rise in the economy of Aceh in 2012 and 2016 cause poverty to fall by 0.11 percent and 0.35 percent (Figure 1).

According to Niyimbanira (2017), economic growth has various impact on poverty. The extent to which economic growth may reduce poverty depends on the level of poverty and how much poor people are involved productively in economic activities. Numerous studies have also proven this, pro-poor sectors, especially agriculture, have more influence on poverty reduction in Latin American countries, Southern Asia and Africa

(Berardi & Marzo, 2015 and Hasan & Quibria, 2002 in Jayadi & Bata, 2016). Thus the agricultural sector is one sector can affect poverty.

The agricultural sector is considered a source of poverty because the majority of Acehnese who works in the agricultural sector are rural people that mostly poor people. Based on the type of employment, the absorption of labor in the agricultural sector is the highest compared to workers in other sectors. The agricultural sector is able to absorb most of the labor in 2016, which is 735,063 people (35.22 percent) of the total labor force in Aceh Province (BPS, 2017). However, agricultural sector would be expected to absorb more labor but it has not shown a great performance in Aceh, because the labor productivity in the agricultural sector is still low due to limited capital and resources so that the potential for lower income has implications for poverty.

From the explanation above, it can be concluded that one of the development problems in Aceh Province is the high level of poverty in most areas caused by the capacity of Aceh's economic growth has not been optimal to overcome the causes of poverty. Other problems are low labor productivity in the agricultural sector compared to other sectors, low welfare of farmers and lack of support from government and private sector to manage natural resources in the agricultural sector. Based on these problems, this study discusses the impact of one economic sector, namely agriculture and economic growth in overcoming the problem of poverty in Aceh, which is expected to provide alternative solutions for policymakers in the future

METHODS

This study used secondary data on poverty levels, economic growth and the number of workers in the agricultural sector in the form of annual time series data from 1995 to 2017 period obtainable from The Central Bureau of Statistics (BPS).

The Autoregressive Distributed Lag (ARDL) model is used as a parameter to analyze the impact of economic growth and the number of employees in the agriculture sector on poverty in Aceh Province. ARDL model plays an important role in testing econometric models because it can change the nature of economic theory from static to dynamic so that independent variable we know the difference of response between long-term and short-term due to changes in the value of explanatory variables by one unit (Gujarati, 1995). The ARDL method was first introduced by Pesaran et al. (2001). This method has three advantages over previous traditional cointegration methods. The first is not all variables examined must have integration in the same order and this can be applied when integrated variables in order one I (1) or order zero I (0). The second advantage is that ARDL testing is more efficient in this case it can be used for small data and limited samples. The third advantage is by applying the ARDL method so that the long-term estimates obtained are unbiased (Harris & Sollis, 2003).

This study employs a model based on Chani et al. (2011), Nindi & Odhiambo (2015), and Khemili & Belloumi (2018) who also use the ARDL approach. To distinguish this study from the previous one, the researcher included an explanatory variable such as agricultural employment. The addition of the employment in agricultural sectors variable refers to Martin & Taylor (2003), Otchia (2014), Khan et al. (2015), Eseyin et al. (2016), Kadir & Rizki (2016) and Jayadi & Bata (2016). The results of the study concluded that the agricultural sector was effective in reducing poverty. For the purpose of the analysis, the model captures the employment in the agriculture sector and economic growth as explanatory variables and poverty rate as a dependent variable. So this relationship is specified as follows.

$$TK = \beta_0 + \beta_1 PE + \beta_2 LTSP + \varepsilon \ \ ....(1)$$

Where:
TK = Poverty level;
β_0 = Constant;
β_1, β_2 = Estimation coefficient;
PE = Economic growth;
TSP = Agricultural sector employment;
ε = Error term.

In general, ARDL model can be given by the following equation:

$$\Delta Y_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta Y_{t-i} + \sum_{i=1}^{k} \beta_2 \Delta X_{1t-i} + \sum_{i=1}^{k} \beta_3$$
$$\Delta X_{2t-i} + \theta_1 Y_{t-i} + \theta_2 X_{1t-i} + \theta_3 X_{2t-i} + \varepsilon_t \ ....(2)$$

Where:
β_0 = Constant;
$\beta_1 \ \beta_2 \ \beta_3$ = Short term coefficient,
$\theta_1 \theta_2 \theta_3$ = Long term coefficient,
L = Logarithm
Δ = First difference,
k = Lag lenght,
i = Lag order,
ε_t = Error term.

The ARDL model form in equation (2) if formulated into this study is:

$$\Delta TK_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta TK_{t-i} + \sum_{i=1}^{k} \beta_2 \Delta PE_{1t-I} + \sum_{i=1}^{k}$$
$$\beta_3 \Delta LTSP_{2t-i} + \theta_1 TK_{t-i} + \theta_2 \ PE_{1t-i} + \theta_3$$
$$LTSP_{2t-i} + \varepsilon_t \ ....(3)$$

Where:
TK_{t-i} = lag of Poverty level (%)
PE_{t-i} = lag of Economic growth (%)
$LTSP_{t-i}$ = lag of Agriculture sector employment (People)

The long-term effect of this research can be written:

$$\Delta TK_t = \beta_0 + \theta_1 TK_{t-i} + \theta_2 PE_{1t-i} + \theta_3 LTSP_{2t-i} + \varepsilon_t \ ..(4)$$

While the short-term effect can be written:

$$\Delta TK_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta TK_{t-i} + \sum_{i=1}^{k} \beta_2 \Delta PE_{1t-i} + \sum_{i=1}^{k} \beta_3 \Delta LTSP_{2t-i} + \delta ECT_{t-i} + \varepsilon_t \ ....(5)$$

Description: δ is the coefficient of Error Correction Term (ECT) which describes the speed of adjustment from the short term to the long term balance.

In this study also conducted causality testing using Granger Causality to determine the relationship of a variable to other variables whether bi-directional, only one direction or no relationship with each other.

RESULTS

The first step that should be done is to test the stationary level of data. Stationary data is very important to result in great regression. In this paper, stationary testing was carried out by using Kwiatkowski-Phillips-Schmidt-Shin (KPSS) approach.

Table 1 presents the results of stationary test, where at the level I (0) poverty and economic growth are stationary, as proved by statistical value is smaller than the critical value at one percent significance level, so hypothesis Ho can be accepted. Whereas for the employment of agricultural sector is not stationary at level I (0), which means that this variable has a unit root so that it needs to be addressed in the first difference. The results obtained that variable is stationary in the first difference I (1) at one percent significance level and the statistical value is smaller than the critical value, so Ho is accepted. Thus, all variable has met stationary requirements according to Pesaran et al. (2001), where there are no integrated variables in I (2).

The next stage in estimating the research model is determining the optimal lag. In this study, the optimal lag chosen is based on the Akaike Information Criteria (AIC). As the AIC criteria in Table 2, the lag length that produces the best model in lag 1. This result is in line with the optimal lag test conducted by Chani et al. (2011).

The further stage is co-integration testing following the model of Pesaran & Shin (1997), which states that the co-integration test provides information about the existence or absence of co-integration on non-stationary variables. The co-integration test used in this study is Bound Test Co-integration.

The co-integration test results based on the bound test approach in Table 3 shows the calculated F-statistic is 6.308293 greater than the upper limit of 4.85 at one percent significance level. The null hypothesis regarding there is no co-integration is rejected, which means that there is a co-integration relationship on the variables in the model. This, therefore, implies that any short-term deviation will return to long-term equilibrium.

The impact of economic growth and employment in the agricultural sector on poverty in Aceh Province is presented in Table 4. The poverty rate is significantly affected by two explanatory variables that are economic growth in the previous period and employment in agricultural sector. In addition, the coefficient of determination (R2) obtained is 0.351460. This means that economic growth and employment in the agricultural sector can affect poverty by 35.14 percent, while the remaining 64.85 percent is influenced by other variables.

The results of short-term and long-term effects based on the ARDL model can be shown in Table 5. The results of long-term and short-term estimates along with the error correction term (ECT or CointEq(-1)). Based on the results of the short-term estimation, it is found that the employment variable in the agricultural sector has a significant effect on poverty in Aceh Province at five percent significance level. While the economic growth has no significance in poverty.

Furthermore, the value of ECT describes the speed of adjustment from the short-term to the long term equilibrium. The ECT value must be significant and negative sign to prove the existence of a long-term stable relationship (Banerjee in Chani et al., 2011). This result shows that ECT value has a negative and significant at one percent significance level of -0.913401 that means there is an equilibrium in the poverty in long-term in Aceh Province which will adjust about 0.91 percent annually. Negative ECT values were also found in Chani et al. (2011) and Khemili & Belloumi (2018).

While the long-term estimation results indicate that economic growth and employment in agricultural sector variables have a significant effect at 5-10 percent of significance level. In other words, if there is a change in both of these variables, either the increase or decrease will affect poverty in Aceh Province.

Pesaran et al. (2001) stated that the ARDL model can be estimated using OLS when the ARDL order is found. OLS method is related to the assumption of classical linear regression models such as normality, autocorrelation and heteroscedasticity tests. If this assumption is fulfilled, the estimation results have an estimator that is Best Linear Unbiased Estimator (BLUE). Therefore, assumption testing to obtain a BLUE model can be done by testing the diagnosis of residual values. In this case, the normality was tested by using Jarque Bera Test, while heteroscedasticity and autocorrelation can be tested by applying the Breusch-Godfrey LM test and Breusch Pagan test, respectively.

The diagnosis test results in Table 6 show that this research model does not have classical assumption problems, as evidenced in the probability value above five percent significance level in all the tests performed. It indicates that the model is valid (BLUE).

In the ARDL, CUSUM and CUSUMQ methods are conducted to see whether the parameters estimated to be stable or not at five percent significance level. The results from CUSUM and CUSUMQ test will be in the form of a line plot at five percent significance level, if the cumulative sum is outside the line then the estimated parameters are not stable.

The results of the CUSUM and CUSUMQ test plots (Figure 2) show that the estimated model has a stable parameter, it can be seen in the model has a cumulative sum stays within the line plots at five percent significance level. This result is in line with the stability test obtained by Khemili & Belloumi (2018).

As mentioned previously, this study also measures a Granger causality test. This test is used to see the causality relationship between variables in the study, including poverty, economic growth, and employment in the agricultural sector. If the results show Ho is rejected, then there is a causality relationship among these variables. The lag length used is lag 1 consistent with the results of the optimum lag test.

The results of Granger causality presented in Table 7 show a unidirectional relationship from economic growth to the employment of agricultural sector at five percent significance. This result was confirmed by Daud (2017) stating that the growth in primary and secondary sectors directly affected employees. As we know that an increase in output of economy can be achieved if labor input increases. In addition, the shift of labor from the agricultural sector to other economic sectors also occurs when the economy grows and develops which is reported by the Asian Development Bank (2013: 13).

DISCUSSION

The results of the analysis show that in the long run, economic growth has a negative sign and statistically significant on poverty at 10 percent. The value of economic growth is -0.545310 as expected a priori theoretical sign of negative, it means that if economic growth rises by one percent, the poverty rate falls by about 0.54 percent. The increases in GDP volume shows that the increase in output produced which reflects better economic performance. It has a significant impact on reducing poverty. This finding confirms previous research conducted by Niyimbanira (2017) which concluded that when the economy grows, it can create much employment so that unemployed people will get jobs, and the income earned will reduce poverty. This is consistent with the research of Siregar & Wahyuniarti (2008) which argued that economic growth plays an important role in reducing poverties. Other studies that supported this research include Nandori (2010), Chani et al. (2011), Faroh (2013), Vijayakumar (2013), and Jayadi & Bata (2016). In contrast to the long-term results, economic growth has an insignificant coefficient statistically in the short

term. This indicates that increasing economic growth in the short term does not directly affect to decline in the number of poor people.

This result is in line with the research of Ijaiya et al. (2011) who analyzed the impact of economic growth on poverty reduction in Nigeria. One of the conclusions is that at the beginning of economic growth is not vulnerable to poverty, due to the lack of improvement in household consumption expenditure in Nigeria. Regarding the Aceh conditions, as well as the economic structure in most developing countries, the structure of Acehnese's economy was still supported by household consumption of 62.65 percent compared to other sectors in 2017. Almost half or about 29.25 percent of the total of 62.65 percent of household consumption is used to purchase food needs (BPS Aceh, 2018b). The economic structure that is dominated by consumption components such as in Aceh is not ideal, because it has the potential to cause a bubble economy, where the demand for goods and services for consumption is greater than the supply of goods and services produced from investments. The impact will occur when the prices of goods and services in Aceh push inflation rate in high levels (Bank of Indonesia, 2008).The insignificant effect was also proved by Nindi & Odhiambo (2015) in their article when income inequality was too high in a region, economic growth does not to trickle down to the poor so that relying on economic growth alone did not ensure a decline in poverty. Aceh's Gini ratio in 2017 is 0.329 points. This Gini ratio includes low inequality. However, this low ratio is not meaningful either because it is still dominated by low-income poor groups, where the lowest expenditure distribution of 40 percent population is 20.33 percent in March 2017. This finding is similar to the ones by Afandi et al. (2017) mentions that economic growth as measured by Gross Domestic Product (GDP) does not play an important role in improving people's welfare.

The results of the analysis show that the impact of employment in the agricultural sector on poverty in Aceh Province is positive and significant both in the short and long term. The coefficient value in the short term is 43,865,247 and the long term is 49.024094. The positive sign of this variable is the opposite in the theory. This means that a one percent increase in employment in the agricultural sector will be followed by an increase in the number of poor people by 43 percent and 49 percent respectively.

One of the factors that might underlie is the low of productivity of the Acehnese who work in the agricultural sector, this is understandable most of them live below the poverty line living in rural areas. The limitations of capital and the resources they have are not able to increase their income. It was is emphasized by recent findings of Susilastuti (2018), which stated that narrow land ownership makes people only work as farm labors, not as landowners. In addition, Vijayakumar

(2013) added that a climate change with an abnormal pattern for farmers such as drought and natural disasters disrupts agricultural production which then triggers the price of agricultural products to fluctuate. This situation is further disrupted by the benefits that are more often enjoyed by the agent while much agricultural employment is paid very low. This has really suffered the employment of agricultural sector in rural areas, and finally, the number of poor people is increasing.

The results of this study contradict with Martin & Taylor (2003), Otchia (2014) found, Khan et al. (2015), Eseyin et al. (2016), Siregar & Wahyuniarti (2008), Kadir & Rizki (2016), and Jayadi & Bata (2016) that agricultural development has a negative effect on poverty.

CONCLUSIONS

The results obtained by an ARDL model and Granger Causality approach indicate short-term and long-term relationships between the variables of the study. In the short term, only the agricultural sector workers have a significant effect on the level of poverty in Aceh Province. Meanwhile, in the long term, economic growth has a negative impact on poverty, means that the economic growth is quite effective in reducing poverty. Conversely, the absorption of employment in agricultural sector tends to increase poverty in Aceh Province, this is due to limited capital and resources, climate factors and low earnings of agriculture employment make it harder many of them to get a higher income. In addition, the results obtained that economic growth has unidirectional causality against employment in the agricultural sector in Aceh Province.

Based on the conclusions, the authors put forward some suggestions as it is necessary to accelerate economic development in the entire of Aceh province by fostering areas that have relatively high poverty populations. Economic growth with equity distribution will stimulate regions to pursue retardation so they can minimize the gap between the poor and rich people and finally poverty rate can be eliminated. The government of Aceh must optimize the potential of agricultural subsector by increasing its human resource capabilities, especially education, providing capital and production facilities to commodity marketing. In addition, it is necessary to develop other sectors that support the agricultural sector, for example, the industrial sector that processes agricultural products (agro-industry) in Aceh to increase the added value of agricultural products and absorb a wider workforce, so that it is possible to alleviate poverty in Aceh Province.

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Table 1. Stationary test using
Kwiatkowski-Phillips-Schmidt-Shin (KPSS)

Variable	LM Statistics of KPSS		Result
	At Level	First Difference	
TK	0.153601***	-	I(0)
PE	0.136857***	-	I(0)
LTSP	-	0.161014***	I(I)

Note: ***, **, * significant at 1%, 5%, 10%
Source: Results of research (2018)

Table 2. Optimal Lag Length Determination

Lag	AIC	SC	HQ
0	10.81138	10.96015*	10.84642*
1	10.78665*	11.38177	10.92684

Source: Results of research (2018)

Table 3. Bound Test Cointegration

F-statistics:	Critical Values		Result
6.308293	Lower Bound	Upper Bound	
1% significance level	5.15	6.36	Co-integrated
5% significance level	3.79	4.85*	
10% significance level	3.17	4.14	

Source: Author's computations using Eviews 9 (2018)

Table 4. ARDL Model Estimation

Variable	Coefficient	t-statistic	Prob.
TK (-1)	0.086599	0.465531	0.6475
PE	-0.084782	-0.498440	0.6246
PE (-1)	-0.413305	-2.183521	0.0433**
LTSP	43.86525	2.663159	0.0164**
C	-578.8844	3.944029	0.0109
R square = 0.351460		DW statistic = 1.725785	
Adj. R square = 0.198862		F-statistics = 0.100497	

Note: ***, **, * significant at 1%, 5%, 10%,
Source: Results of research (2018)

Table 5. Short and Long-term Effects

Short term effect			
Dependent Variable : D(TK)			
Variable	Coefficient	t-statistic	Prob.
D(PE)	-0.084782	-0.498440	-0.6246
D(LTSP)	43.865247	2.663159	0.0164**
CointEq(-1)	-0.913401	-4.910167	0.0001***
Long term effect			
Dependent Variable : TK			
Variable	Coefficient	t-statistic	Prob.
PE	-0.545310	0.264479	0.0549*
LTSP	49.024094	19.920061	0.0275**
C	-633.768168	272.287068	0.0325

Note: ***, **, * significant at 1%, 5%, 10%,
Source: Results of research (2018)

Table 6. Diagnostic test

Testing	Statistics value	p-value
Normality (Jarque-Bera test)	0.679908	0.711803
Autocorrelation (LM Lagrange Multiplier)	0.084233	0.7716
Heteroscedasticity (Breusch Godfrey test)	6.985514	0.1367

Source: Results of research (2018)

Table 7. Granger Causality

Dependent Variable	F-statistic			
	TK	PE	LTSP	Decision
TK	-	0.64790 [0.4308]	1.94535 [0.1792]	Accepted H_0
PE	1.59913 [0.2213]	-	1.35764 [0.2584]	Accepted H_0
LTSP	0.00992 [0.9217]	8.57536 [0.0086]*	-	Rejected H_0 (PE→LTSP)

Note: * denote a causal relationship at 5% significance level.
[ ] = probability value; Lag 1.
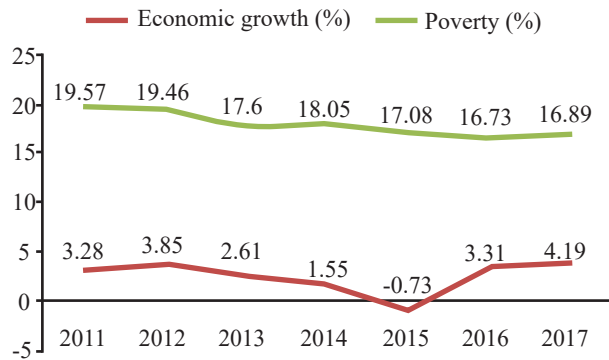Source: Results of research (2018)

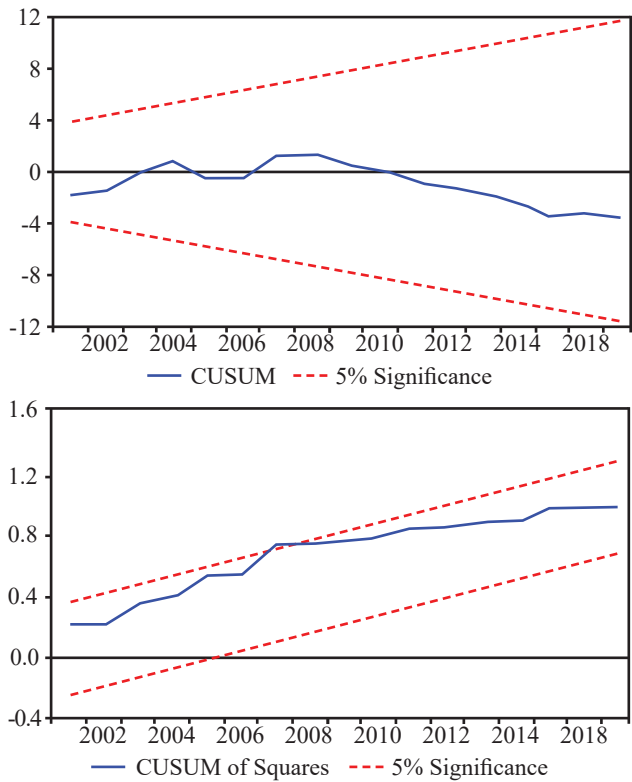Figure 1. Economic growth and poverty
in Aceh Province, 2011-2017

Figure 2. The result of Cumulative Sum (CUSUM) of Recursive Residuals and Cumulative Sum of Squares (CUSUMSQ) of Recursive Residuals

INFRASTRUCTURES' EFFECT ON ECONOMIC GROWTH IN SOUTHEAST SULAWESI

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Abstract
The aim of the research is to analyze the effect of infrastructures on economic growth in Southeast Sulawesi. The data used the secunder data which formed time series-based. The data was obtained by publication and legal documents of Statistic Center Unit and relevant institution. The method of analysis used ordinary least squares with panel data. Thus, the data analysis of this research was regretion model with panel data. To estimate regretion of panel data, the researcher used common effect, fixed effect and random effect method. The findings of this research showed that insfrastructures comprised road, harbor, water and electicity simultaniously and significantly influenced the economic growth in Southeast Sulawesi. Partially, only harbor and electricity significantly affected on the economic growth Southeast Sulawesi.

Keywords: *infrastructures; economic growth*

INTRODUCTION

Infrastructure is very big influence on the development or economic growth of a region, where adequate infrastructure will affect the process of acceleration or development of a city or region. As an organization, local governments have local revenue to finance public expenditure. Government expenditures are allocated for the financing of various sectors of community life including the financing of infrastructure development. Logical consequence, government expenditure can influence either directly or indirectly to the growth of regional economy marked by the amount of GRDP. This also raises the critical question, how much influence the government expenditure specifically in the field of infrastructure to PDRB.

The influence of fiscal policy, the composition of government spending on economic growth has been the object of research and deepening by economists since a long time ago. Semler, Willi (2007) who concluded that the increase in economic growth is largely determined by the amount of public spending, among others in terms of infrastructure development such as roads and bridges. The development of infrastructure in the transport, irrigation, agriculture, education, health sectors has the potential to increase economic growth

by Ghosh, (2005: 81). Meanwhile, the opinion expressed by Vu Le (2005) that public spending is an important instrument for the government to promote economic growth. In addition, public investment is also a factor that contributes to the accumulation of capital. The importance of the infrastructure role, both infrastructure built by the government and by the private sector, in support of development begins with the introduction of the growth model by Rostow. According to Rostow, one of the many economic development strategies is spending to finance adequate infrastructure to accelerate the pace of economic growth. Capital accumulation occurs when a portion of the income is saved and reinvested in order to increase output and income in the future (Todaro, 2007).

With regard to Rostow's growth model, Southeast Sulawesi's economic growth, GDP growth rate continues to increase significantly from year to year, even in 2012 Southeast Sulawesi's economic growth reached 10.41 percent. This can be seen in Figure 1.

Infrastructures are not only needed by household, but also industry, so the improvement of infrastructures will bring the prosperity and the accelaration of economic growth. Region or city with good infrastructures will give bigger benefits in attracting an investor to invest in the region or city. The previous researches from Halu

Oleo University and World Bank (2012) reported that the adequate infrastructures, such as elictricity, clean water, and santation in poor household in Southeast Sulawesi were still low. Then, the road of the province was still under average of the national calculation. Besides, the roads province performance did not show the good improvement especially the surface of asphalt roads. However, the length ratio of the national roads and regency roads per weidth in Southeast Sulawesi were higher than national . average. While, the harbor infrastructure showed the improvement namely in Harbor of Marhum Bau-Bau, Pomala Kolaka and Kendari.

Based on the empirical and theoretical reviews, the extent to which the influence of road infrastructure, ports, water and electricity on economic development in Southeast Sulawesi is very important to be analyzed and studied more deeply in this research.

Todaro (2007) defined infrastructure as one of the important factors which decides the economic growth. The underlying amount of physical and financial capital embodied in roads, railways, waterways, airways, and other forms of transportation and communication plus water supplies, finacila instituons, electricity, and public services such as health and education. The level of infrastructural development in a country is a crucial factor determing the pace and diversity of economic development.

According to Stiglitz (2000), public goods which are provided by the government are infrastructures, such as road, harbor, water and electricity. The infrastructures here are not pure public goods because road, harbor and electricity have small marginal costs, but not zero.

Munnel (1990) stated that infrastructures such as road, electricity, water, school and hospital created positive externality which leads to the improvement of economic. In other sides, infrastructure is long-term investation which can support the economic growth.

The role of the government in providing the infrastructures can decrease the income discrepancy and long-term effect of Bruto Domestic Product per kapita improvement. In one side, infrastructures development program in each country concluded that the program focused on the basic need and human conectivty namely water, electricity, energy, and transportation (roads, train, harbor, and airport). Weil (2009) stated that disparity of infrastructures availability and human capital will influence the economic growth of the country. Wu (1998) said that disparity degree among regions in China was different from Coastal region, central and western. While, Demurger (2001) used 24 provinces in china as data collection and concluded that infrastructures condition significantly influenced toward the disparity of regional development. Calderon (2011) stated that economic growth had positive relationship

and significantly affected on the stock and the quality of the infrastructures in the region or city.

In Indonesian, the previous researches on infrastructures toward economic growth namely conducted by Sibrani (2002), Yanuar (2006), Prasetyo (2008), and Prasetyo and Firdaus (2009). The first, Sibarani (2002) found that infrastructures (electricity and education) positively and significantly influenced on income per capita of Indonesians, while road and telephone were not significant. The policy of infrastructures development centered in Java and East Indonesia.The second, Yanuar (2006) which used panel data in 26 provinces showed that physics capital, road infrastructures, telephone, health, and education gave the positive impact on economic output. The third, Prasetyo (2008) inferred that electricity, length of the road, modal stock, and region otority positively affected on economic growth in west Indonesia, while water did not give the positive effect. The fourth, Prasetyo and Firdaus (2009) found that the economic growth of Indonesia was influenced by the availability of infrastructures, such as electricity, roads (asphalt), and clean water.

METHODS

The method of analysis was ordinary least squareswith panel data. Gujarati (2010) and Agus Widarjono (2013) stated that in estimating the regretion of panel data, there were three techniques namely common effect, fixed effect and random effect. For more details, it can be seen below:

Common Effect(CE).
$$Y_{it} = \beta_1 + \beta_2 X_{2t} + \cdots + \beta_n X_{it} + \mu_{it} \quad ....(1)$$

Fixed effect(FE).
$$Y_{it} = \alpha_1 + \alpha_2 D_2 + \cdots + \alpha_n D_n + \beta_2 X_{2t} + \beta_n X_{it} + \mu_{it} \quad ......(2)$$

Random effect(RE).
$$Y_{it} = \beta_1 + \beta_2 X_{2t} + \cdots + \beta_n X_{it} + \varepsilon_{it} + \mu_{it} \quad ....(3)$$

There are three tests which used to decide the appropriate technique to estimate the regretion of panel data as follows. F statistical test is used to decide whether common effect or fixed effect model. Langrange Multipler (LM) testis used to decide wheteher common effect or random effect model. Hausman test is used to decide whetherfixed effect or random effect.

Langrange Multipler (LM) is used to decide wheteher common effect or random effect model. Significance test of Langrange Multiper (LM) is developed by Breusch-Pagan. Metode Breusch Pagan to test the significance of random effect model which is based on the residu value of common effect model. The formulation of LM as follows.

$$LM = \frac{nT}{2(T-1)}\left(\frac{\sum_{i=1}^{n}(\sum_{i=1}^{T}e_{it})^2}{\sum_{i=1}^{n}(\sum_{i=1}^{T}e_{it}{}^2)} - 1\right)$$

$$= \frac{nT}{2(T-1)}\left(\frac{\sum_{i=1}^{n}Te_{it}}{\sum_{i=1}^{n}(\sum_{i=1}^{T}e_{it}{}^2)} - 1\right)\dots\dots\dots\dots(4)$$

LM test is based on the distribution of chi-squares with the degree of freedom as the number of independent variable. If the score of LM is higher than the score of chi-square critics, the null hypothesis is rejected. It means that the the suitable estimation for the regretion of panel data is random effect than common effect model. In contrast, If the score of LM is lower than the score of chi-square critics, the null hypothesis is accepted. It means that the the suitable estimation for the regretion of panel data is common effect model.

Hausman test is used to decide whetherfixed effect or random effect. Hausman test is based on the consistence of both methods of OLS and GLS, but OLS is not efficient in null hypothesis. In other sides, alternative hypothesis of OLS is consistent, but GLS is not consistent. Thus, its null hypothesis test for the the estimation result is not different, so Hausman test can be done based on the estimation difference. Hauman test can be explained by using matrix covarian for vector difference [βOLS – βGLS] :

$$var[\beta_{OLS}\text{-}\beta_{GLS}] = var(\beta_{OLS}) + var(\beta_{GLS}) - cov(\beta_{OLS}\,\beta_{GLS})$$
$$- cov(\beta_{OLS}\,\beta_{GLS})\dots\dots\dots\dots\dots(5)$$

Because the difference of covariance from effecient estimator and not efficient estimator is zero, so:

$$cov[\beta_{OLS}\text{-}\beta_{GLS},\beta_{GLS}] = cov(\beta_{OLS}\,\beta_{GLS}) - var(\beta_{GLS}) = 0$$
$$\dots(6)$$

Then, formula (1) which is inserted in formula (2) will get matrix covariance as follows.

$$var[\beta_{OLS}\text{-}\beta_{GLS}] = var(\beta_{OLS}) + var(\beta_{GLS}) = var(q)\ \dots.(7)$$

Next, Based on Wald criterion, Hausman test will follow chi-square distribution as follows:

$$m = q\ var(q)^{-1}\ q\ \dots\dots\dots\dots(8)$$

Where, q = [β_{OLS} − β_{GLS}] and var (β_{OLS}) - var(β_{GLS})

Hausman test follows chi-square distribution with degree of freedom as the number of k. Where, k is the number of independent variable. If null hypothesis is rejected, it means that the score of Hausman test is higher than its critics score or value and it indicates that the appropriate model is fixed effect. In contrast, if the null hypothesis is accepted, it means that score of

Hausman test is lower than its critics score or value and it indicates that the appropriate model is random effect.

This research used an analysis of regretion of panel data as analysis tool. For more details, it can be seen as follows:

$$Y_{it} = \beta_0 + \beta_1\,X_{1t} + \beta_2\,X_{2t} + \cdots + \beta_n\,X_{it} + \varepsilon_{it}\ \dots\dots(9)$$

(Gujarati, 2010)
Where :
Y_{it} = Dependent variable
X_{it} = Independent variable
i   = Cross section
t   = Time series
ε   = Error term

Based on the regretion model of panel data which is elaborated by Gujarati (2010), the researche or writer replicates its model. The model of panel data regretion as follows.

$$LOG(PDRB_{it})=\beta_0+\beta_1 JALAN_{1t}+\beta_{\_2} PELABUHAN_{2t}+\beta_3$$
$$AIR_{3t}+\beta_4 LISTRIK_{4t}+\varepsilon_{it}\ \dots\dots\dots(10)$$

Where :
$LOG(PDRB_{it})$ = Economic growth
$JALAN_{1t}$ = Road infrastructure
$PELABUHAN_{2t}$= Harbor infrastructure
AIR_{3t} = Water infrastructure
$LISTRIK_{4t}$ = Electricity infrastructure
i   = Cross section
t   = Time series
ε_{it} = Error term

RESULTS AND DISCUSSION

Based on the results test between common effect and fixed effect, it was found that fixed effect is appropriate method, it can be proved by looking at the F test result, where F-statistic score is 41,278740 with the score of F-tablein d.f (11,44) α = 5 % is 5.32, so the score of F-statistic is higher than F-table. Therefore, the suitable model of panel data is fixed effect.

Thus, fixed model effect with panel data technique can be used to know the effect of road, harbor, electricity and waterinfrastructures on economic growth in Southeast Sulawesi. The estimation result by using fixed effect model can be found the regretion of panel data in Table 1.

Tabel 1 showed that road, harbor, water and electricity infrastructures significantly affected on economic growth at regency or city in Southeast Sulawesi. It can be proved by looking at the probability score or F score is 0,00000 which lower than α five per cent maupun α one per cent.

The contribution of infrastructures (road, harbor, water and electricity) toward the economic growth can be seen from R^2-adjusted.

Based on estimation result, R^2-adjusted is 0.970767. It indicated that 97,07 per cent the economic growth of Regency or city in Southeast Sulawesi was decided by the ratio of infrastructures (road, harbor, water and electricity). In other words, the effect of infrastructures (road, harbor, water and electricity) on economic growth of Regency or city in Southeast Sulawesi was 97,07 per cent. And the rest was 2,93 per cent decided by other variables.

Partially, independent variables (harbor and electricity infrastructures) significantly influenced on economic growth of Regency or city in Southeast Sulawesi. Economically, this thing is possible because Indonesia is dominated by sea and Indonesia has many islands, thus, harbor infrastructure has an important role as national connectivity door for national and international trade. Besides, the economic growth in Southeast Sulawesi is more dominated by primer sector, so harbor infrastructure has essential role. However, other two independent variables namely road and water infrastructures did not significantly influenced on the economic growth of Southeast Sulawesi.

CONCLUSION

Based on the research results and discussion, it can be concluded that infrastructures (road, harbor, water and electricity) were simultaniously and significantly affected on the economic growth of Southeast Sulawesi. However, partially, only harbor and electricity significantly influenced on the economic growth of SoutheastSulawesi because water and road infrastructures had still obstacles. For example, the distribution of clean water to consumen is not optimum. Then, the condition of the road in regency or city does not have good quality until now.

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Tabel 1. Research result with Data Panel 2009 – 2015

Fixed Effects	
(Cross)	
BAUBAU_C	-0.1803420
KONSEL_C	0.3758120
WAKATOBI_C	-0.8249380
KOLAKA_C	1.0503040
KOLUT_C	0.3038020
KONAWE_C	0.2230470
MUNA_C	0.3872010
BOMBANA_C	-0.3808600
KENDARI_C	0.3512910
BUTON_C	-0.0250370
BUTUR_C	-0.4692650
KONUT_C	-0.8110160

R-squared	0.9782	Mean dependent var	15.23854
Adjusted R-squared	0.9708	S.D. dependent var	4.74865
S.E. of Regression	0.1181	Sum squared resid	0.61365
F-statistic	131.6159	Durbin-Watson stat	0.83492
Prob (F-statistic)			

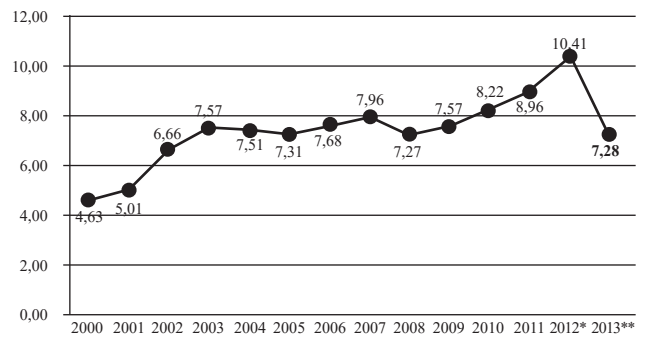| Unweighted Statistics			
R-squared	0.977643	Mean dependent var	13.60499
Sum squared resid	0.649037	Durbin-Watson stat	0.77713

Source : Output Eviews 7.0

Figure 1. The Economic Growth of Southeast Sulawesi

MANAGING COMPANY'S FOREIGN CURRENCY LOAN TO INCREASE PERFORMANCE THROUGH ECONOMIC VALUE ADDED

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Abstract

One impact of global crisis, is increasing foreign currency rate of Indonesian IDR. Company with foreign debt exposures will suffer financial losses, if the exchange rate of the foreign currency becomes stronger. These losses will reduce the company Economic Value Added (EVA), and reduce the financial performance. Then, the purpose of this research is to calculate the effect of changes in foreign currency rates on the company's economic value added. Research method used in this study is Causal method. This study used company secondary data, based on Indonesian Stock Exchange. Based on research conducted, the result of this research proves that the changes in foreign currency rates on foreign liabilities affected significantly (with α = 5%) on company's economic value added. In PT. KF case, revenues earned by the company could cover all cost incurred including cost to cover the loss of exchange rate gap of foreign debt and capital cost.

Keywords: foreign currency rates; company's foreign debt; economic value added; foreign currency loss; company's performance

INTRODUCTION

The impact of technological progress gave very positive effect in the business world. Transactions can be done easily between buyers and sellers, or between producer – distributors – and consumers (Marshall, 2012). On the contrary, there is other impact on business. It is the competition in business increasingly sharp both domestically and overseas; this fact encouraged companies to increase their efficiency. Increasing volume of foreign transactions will also increase macroeconomic growth (Kompas, 02.03.17: 17).

Kurniasari's research (2017) concluded that one factor that can be influenced economic growth is foreign loan. Increasingly in economic growth could be increased productivity of the company and created value added and welfare of the society in general.

Generally, foreign trade transactions affected the situation of foreign economic. One of the influencing factor is global economic crisis, which has caused the fall of purchasing power of IDR in Indonesia currency; this happens because of the soaring exchange rate against US $. As Ricardo (2014) quoted that unexpected currency fluctuation impact on future company's cash flow and can greatly affect the company's competitive position. US $ currency is an international currency, which is often used internationally. It is because US $ is considered relatively stable in the economy. For the company which is has foreign debt, the fluctuation of foreign currency rate will make them suffering of financial loss and decrease their performance.

In this research, company's performance is in proxy through EVA. Triyono's research (2008) stated that government should do something so that the exchange rate can be kept under control with the support of increased in export and minimized import. The effect of changes in foreign company's debt on company's value is concluded to be very significant, just like Orientati's research (2014).

This research is different from previous research, for example, Suripto (2011) has already done a research on the influence of Capital structure on Value-based management (EVA), with a conclusion of positive and significant effect. It is also different from Kurniasari's research (2017) which stated that the examination of the impact of debt on macroeconomic growth. It is also different from Orientati's research (2014), about manufacturing sector. The article about Determining Economic value from Standford University (2018) also had a different result, stating that fluctuating in domestic market will expressed in domestic currency and will impact on incremental company's Net income. It's very clear that fluctuating in foreign currency will impact on company's profit significantly, as the result

of Mamun's and Mansor's (2012) research. Therefore, the motivation on this research focuses on testing and analysis of the effect of foreign debt on EVA, which means that if debt is managed well, so it will not harm the company so that the company's performance can be improved.

Companies are always trying to improve their performance (William et. al, 2-15). To attract investors and creditors, performance that has been achieved by a company can be examined on their EVA Statement. If the EVA value is positive and increasing, then the company's performance will be better (Young and O'Byrne: 2001 in Suripto: 2011). Company needs more fund with the company's growing operations. To earn the fund, they need to earn it from either domestic or overseas financial institutions. Foreign exchange rate in foreign currency often fluctuates and company with debt exposure will suffer financial loss if the exchange rate of foreign currency becomes stronger. Based on this explanation, the objectives of this study are: (1) Calculating the impact of exchange rate fluctuating in foreign debt company, (2) Calculating company's performance based on EVA, (3) identifying the impact of exchange rate fluctuation on company performance.

Transactions that use foreign currencies are those transactions that buy or sell products or services with price denominated in foreign currencies (SAK: 2018). Transactions in foreign currencies are recorded using the exchange rate at the time of the transaction (spot rate). Accounting treatment at each Balance Sheet date, for monetary assets and liabilities in foreign currencies are reported in IDR at the exchange rate at the Balance Sheet date (Figure 1).

Inherent value determined by accounting standards, and if the exchange rate becomes stronger between transaction date and settlement date of foreign debt will be recognized immediately if it happens in one period. But if exchange rate fluctuated occurs in the next period then the recognition of gain or loss of exchange rate fluctuation is in several periods (SAK, 2018).

Foreign debt account will appear in Balance Sheet when the company does foreign sales or purchase transaction; or also when company makes foreign loan from foreign financial institutions. Exchange rate fluctuation will impact the value of foreign debt company's accounts, and company will suffer losses if IDR much weaker. Therefore, the foreign debt accounts must be managed properly to minimize company's financial loss. (Brigham et. al, 2013). Another research also quoted that Exchange rate fluctuation will impact company's performance through decreasing investor returns, therefore investors will release their shares (Daley, 2018). Similar with Daley (2018), Asogawa and Nkolika (2013) quoted that Real exchange rate and the degree of trade openness impact positively on the growth of investment.

Various procedures are formed by the company to reduce losses due to changes in exchange rate. One of the procedure, for example is hedging. Hedging protect currencies from foreign exchange exposure during the specified time period. As Weygand (2015) said, Hedging a particular currency exposure means establishing an offsetting currency position such that whatever is lost or gained on the original currency exposure is exactly offset by a corresponding foreign exchange gain or on the lost on the currency hedge.

EVA is a performance measurement based on economic value added by the company (Suripto, 2011). And according to Mariuki and Gatobu (2013) EVA is the incremental differences in the rate of return over the company's cost of capital. EVA value is obtained from the company's net income after tax and minus capital cost. EVA has been developed by Steward (2001 cited by Suripto: 2011) which was generally influenced by investment policy and funding policy/ Capital resources. Funding policy are often proxyed by the capital structure, which includes company's domestic or foreign debt. Therefore, changes in foreign currencies debt can directly affect the company's EVA or affect the company's performance.

Economic Value Added concept (Steward, 2001 in Suripto, 2011), is the measurement of the amount or profit remaining after counting for the return expected by the firm's investors. The steps in determining economic value added in general are: (1) Adjusting the balance sheet using capital employment concept to calculate invested capital; (2) Calculating cost of capital; (3) Calculating the capital charges; (4) Adjusting NOPAT based on EVA; (5) Calculating EVA.

According to Nelson (2015)'s opinion, EVA is calculated by: EVA = NOPAT – (WACC x Capital Invested); where, NOPAT = Net Operating Profit after Tax; Capital Invested = Equity + Long term debt at the beginning capital; while WACC = ke*E/(E+D)+ kd(1-t)*D/ED. Where ke = required return on Equity and kd(1-t) = after tax return on Debt.

And according to Young & O'Byrne (2001 cited by Suripto, 2011), to calculate EVA as shown in table 2 below, with the approach of comparing between conventional Statement of Financial position and Statement of Financial Position based on EVA.

The interpretation of EVA calculation result, such as if EVA value is positive, it means the company has been produced economic added value. And if EVA value is negative, it means company has not been produced economic added value, because the profit generated by the company could not cover all expenses including capital cost; so that negative EVA doesn't meet the expectations of all shareholders. If EVA value equals to zero, then from the economic point of view is a break event condition, where all revenues is used to recover all expenses included capital cost (Young and O'Byrne, 2001 cited by Suripto, 2011).

The use of EVA is generally to achieve organizational

goals, or to measure company's performance, to determine bonus for employees, to communicate company's performance with shareholder's and investors, to encourage manager's motivation, to determine capital budgeting, corporate valuation, and capital analysis (Young and O'Byrne, 2001 in Suripto, 2011). The main focus of EVA is to reevaluate company's performance through calculating company's added values: value creation. And with using EVA method, managers will try to act to create value for owners. Although EVA has very advantages, there are also some weaknesses of EVA, such as EVA only calculates one period of company's value creation. Therefore, if we add all value of EVA in several periods, the result may come up to negative value of EVA; and another weakness is that implementing EVA is not easy.

METHODS

The method used in this research is causal method, which is used to determine the causal relationship of the variables studied, for example changes in debt value due to changes in exchange rate, and their relationship with the performance of the company based on EVA.

For illustrative calculation, this study uses secondary data types obtained through Indonesian Stock Exchange official website. The secondary data mentioned before, refers to the financial statement of PT KF in 10 quarter periods. Besides, other data collection techniques used are using references from books and relevant previous researches. The variables studied are: (1) changes in exchange rate between transaction date and settlement date in this research refers to the changes of foreign debt in PT. KF; (2) EVA which measures the company's performance based on value creation.

Data analysis technique used in this study is linear regression, calculated by supporting software namely Statistical Package for Social Sciences V.23 (SPSS). The analysis and interpretation of data processed result will be compared to the right theory and to the relevant previous research result.

RESULTS

From the calculation of EVA of PT. KF from periods of 31 March 2004 – 30 June 2006, we found out that all value of EVA is positive. It means the revenues earned by the company could cover all costs incurred, including the cost to cover the loss of exchange rate gap of foreign debt, also cost of capital.

Table 3 showed that the different rate currency as entered variable and there is no removed variable, then the data has qualified enough to produce models.

DISCUSSION

The calculation result from Table 1 and 2 showed us that there is gain or loss affected by foreign currency changes in foreign debt. Although the company suffer financial losses from exchange rate changes, but the EVA still have positive value. This means the total income used to recover all operation expenses in company including loss of exchange rate fluctuation in June, September, and Desember (in Quater 2, 3, and 4), even revenues can still pay cost of capital, so company still can create increasing values to the shareholders.

Regression model resulted from the calculation is (Table 3):

$$Y = 325{,}427{,}298{,}718 - 3.749X$$

In which: X = the different rate of foreign debt currency, and Y = Economic Value Added (EVA); Regression Coefficient value (b) is negative amount 3.749 indicates when exchange rate fluctuation occurs then foreign debt value will increase, on the contrary EVA value will decrease. So, it is very important for company to manage their foreign debt to prevent company from greater financial losses of foreign exchange rate in their foreign debt account. Correlation Coefficient (r) = -0.690; the value of negative 0.690 as correlation coefficient shows that foreign exchange rate and EVA move in different and contradictive way. Therefore, if exchange rate fluctuation has an impact to increase foreign debt value, EVA value will decrease. This indicates that company's performance has decrease too. Correlation coefficient value equals to negative 0.690, which means the relation between variable EVA and foreign debt is fluctuating in the moderate level correlation.

Therefore the change in exchange rate in foreign loan post of the company significantly affects EVA. This was proved by significant value of 2.7% which means changes in foreign currency affected EVA significantly.

Significant value (ρ value) of 2.77% is smaller than α=10%. Therefore it means changes in foreign currency in company's debt has significant impact on EVA, which shows that ρ value = 2.77% means the chance to make a mistake of 2,7% or in other words about 87.3% is believed that the correct conclusion has been drawn. This research result is not different with Kurniasari's (2017) research that quotes that foreign debt significantly impact the economic value growth.

Determinant coefficient (R Square) in this case is 47.7%, which means 47.7% of the company's EVA can be explained by the difference of the exchange rate of foreign loan post variable. Other factors that affect a company's EVA is the company's operation itself and the company's management performance because the value of EVA is calculated by deducting the capital cost from its Net Operating Profit after tax (NOPAT). As long as the company's management is done, their operation with efficiently and effectively (so the company's NOPAT

is high and can cover the company's capital cost), the value of EVA will always be positive and increase, and will also increase company's performance. This result is not different with Orientati's (2014) who stated that company's debt has significant impact on company's value. Also similar to the result research of Duma (2016) who quoted that the fluctuating in exchange rate of the US Dollar and the Euro tended to lead to change the company's performance.

Due to how significant the effect of company's foreign debt on EVA, especially when there are currency rate changes, the company has to manage their foreign debt seriously. Company has to invest their foreign debt to their productive operations/ investment, and make better return for paying their interest expenses, pay cost of capital and also make recovery from company financial suffering when there is loss from exchange rate fluctuation. Hedging also recommended, because Hedging protects the currency from foreign exchange rate exposure.

CONCLUSIONS

From what has been researched, it can be concluded that, the company gets most of its foreign fund from banks, which are The Royal Bank of Scotland plc., Singapore; and loan facility that was obtained from subsidiary of Citibank, N.A., Jakarta, PT Indosuez Indonesia Bank, PT Bank Lippo Tbk., and Commonwealth Bank, Jakarta. The changes in exchange rate in foreign debt of the company significantly affects EVA. This was proved by significant value of 0.027, and has moderate relation. And due to how significant the effect of company's foreign debt on EVA, the company has to manage their foreign debt seriously. Company has to invest their foreign debt to their productive operations/ investment, and make better return for paying their interest expenses, paying cost of capital and also make recovery from company financial suffering when there is loss from exchange rate fluctuation. Hedging is also recommended, because Hedging protects the currency from foreign exchange rate exposure.

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Tabel 1. EVA PT K F Tbk.

Year	31 Mart	30 June	30 September	31 Desember
04:NOPAT	IDR148,569,484,163	IDR252,051,993,157	IDR417,505,114,796	IDR612,055,310,412
- cost of capital	IDR 46,338,785,608	IDR101,177,168,195	IDR160,431,686,468	IDR181,355,233,668
EVA	IDR102,230,698,555	IDR150,874,824,962	IDR257,073,428,328	IDR430,700,076,744
05:NOPAT	IDR314,270,809,903	IDR398,533,443,154	IDR644,920,558,916	IDR830,992,205,384
- Cost of capital	IDR 61,003,221,123	IDR117,576,008,856	IDR203,170,683,175	IDR242,985,133,441
EVA	IDR 253,267,588,780	IDR 280,957,434,298	IDR 441,749,875,741	IDR 588,007,071,943
2006: NOPAT	IDR 207,075,681,694	IDR 469,788,579,536		
- cost of capital	IDR 56,423,249,794	IDR 122,522,793,056		
EVA	IDR 150,652,431,900	IDR 347,265,786,480		

Source: Thanks to Sylvina Y. for sharing the data.

Tabel 2. Exchange rate changes in Foreign Debt and EVA at Year End In Period of 31 Maret 2004 – 30 Juni 2006

Period	Gain (Loss) of exchange rate changes	EVA
31 March 2004	48,012,521,390	102,230,698,555
30 June 2004	7,400,903,361	150,874,824,962
30 September 2004	20,351,665,024	257,073,428,328
31 Desember 2004	11,508,562,049	430,700,076,744
31 March 2005	6,868,327,579	253,267,588,780
30 June 2005	(9,836,653,216)	280,957,434,298
30 September 2005	(52,541,921,948)	441,749,875,741
31 Desember 2005	(16,233,644,578)	588,007,071,943
31 March 2006	35,342,086,032	150,652,431,900
30 June 2006	16,207,401,955	347,265,786,480

Source: calculating process.

Table 3. Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	325427 298718 .710	38247 276623 .230		8.509	.000
Different rate	-3.749	1.389	-.690	-2.700	.027

a. Dependent Variable: EVA

Total Assets	Liabilities& Equities	Net Asset	Invested Capital
Cash	Current Liabilities	Cash	Current Liabilities
Accounts Receivable + Inventories + Prepaid Expense	Short term NIBL		
	Long term Liabilities	WCR	Long term Liabilities
Fixed Assets	Other Long term liabilities	Fixed Assets	Other Long term liabilities
	Stockholders Equity		Stockholders Equity

Traditional Statement of Financial Position based on EVA

Statement of Financial Position

Notes:

WCR = Working Capital Requirement;

WCR = (Inventory + Accounts Receivable + other current assets + operating cash) – (Liabilities + due date expense + advanced receive/revenue);

NIBL = Non-Interest Bearing Liabilities

Source: S. David Young and Stephen O'Byrne (2001 cited by Suripto: 2011)

Figure 1. The Comparison of Traditional Statement of Financial Position and EVA-Statement of Financial Position

DETERMINANTS OF GROSS REGIONAL DOMESTIC PRODUCT IN EASTERN INDONESIA REGION 2011-2016

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Abstract

Regional income equality has been a major development goal. However, GRDP in Western Indonesia is higher than that in Eastern Indonesia. Therefore, the government should encourage development and increase economic growth in Eastern Indonesia. There are inequalities between those provinces. The purpose of this research is to analyze the effect of labor, domestic investment, foreign direct investment, and government expenditure on GRDP in Eastern Indonesia Region. This study employed regression on panel data of 12 provinces from 2011 to 2016. The results found that labor, domestic investment, foreign direct investment, and government expenditure have positive and significant effect to GRDP. The results imply that all of the independent variables shuld be increas to promote economic growth in The Eastern Indonesia Region.

Keywords: regional income disparity; GRDP; labor; domestic investment; foreign direct investment; government expenditure; eastern indonesia region

INTRODUCTION

There are several indicators to measure the success of development, one of which is economic growth. Economic growth is a concept of an increase in output per capita in the long term, both at national and at lower levels at the provinces and districts/municipalities. Economic growth indicates the extent to which economic activity will generate additional income for a given period of time. In other words, the economy is said to have grown when the real income of society in a given year is greater than the actual income of the community in the previous year.

The main purpose of economic development besides creating the highest economic growth should also reduce poverty, income inequality and unemployment (Todaro & Smith, 2011). Employment opportunities will provide income to meet the needs. Therefore, the results of development should be enjoyed by all people in a fair and equitable way. However, sometimes the results of development are not evenly distributed between regions.

Development regions in Indonesia are divided into two areas, namely the western region and eastern region. The Western region includes Sumatera, Java, Kalimantan, and Bali, while the Eastern region includes Sulawesi, Maluku, Papua, and Nusa Tenggara. Indonesian development has been dominated by provinces that belong to the Western region of Indonesia, which makes development in Eastern Indonesia left behind (BPS, 2016). BPS shows that 80 percent of Indonesia's Gross Domestic Product (GDP) is dominated by provinces in Western Indonesia, while the remainder is distributed throughout provinces in Eastern Indonesia. In fact, the fundamental issue is not only to grow GRDP, but rather to who will grow the GRDP. If only a few wealthy people who grow GRDP, then the benefits of growth are only enjoyed by them alone so that poverty and income inequality will get worse. GRDP in Western Indonesia region and Eastern Indonesia region can be seen at Figure 1.

Figure 1 indicates that the GRDP in Western Indonesia is higher and grows faster than that in Eastern Indonesia. One of the government policies to reduce the level of development gap between regions is the implementation of development policies through the concept of potential regions (kawasan andalan). Through this policy, it is expected that there will be a balance in economic growth between regions in order to close the gap between the economic development of Java and other islands. Figure 1 also shows that in

the last six years the GRDP of provinces in Eastern Indonesia increases every year. However, there has been inequality between those provinces. The lowest GRDP is observed in the province of North Maluku and the highest GRDP is in the province of South Sulawesi.

According to traditional neoclassical growth theory, growth of output results from the increase in one or more of these factors: labor quantity and quality (through population growth and education), capital (through saving and investment), and improved technology (Sukirno, 2010, p. 44; Todaro & Smith, 2011, p. 30). According to Keynesian perspective, government spending stimulates aggregate demand. Conversely, the neoclassical approach assumes that government spending does not influence economic growth (Kaminsky, 2009). This research aims to test whether labor quantity, domestic investment, foreign direct investment, and government expenditure explain the variation of output in the Eastern Indonesian region.

METHODS

This research is a quantitative research, defined as a type of research that produces findings that can be achieved by using statistical procedures or other means of quantification/measurement (Sujarweni, 2014). Using secondary data from The Central Bureau of Statistics (BPS), this research covers 12 provinces in Eastern Indonesia over the period of 2011-2016. The Provinces in Eastern Inodonesia includes North Sulawesi, South Sulawesi, Central Sulawesi, Southeast Sulawesi, Gorontalo, West Sulawesi, Maluku, North Maluku, Papua, West Papua, East Nusa Tenggara, and West Nusa Tenggara. The dependent variable is GRDP and the independent variables are labor, domestic investment, foreign direct investment, and government expenditure. This research analyzes the effect of labor, domestic investment, foreign direct investment and government expenditure on GRDP of Eastern Indonesia region using time series data for six years represented by annual data from 2011-2016. Data were then analyzed by panel data regression. The panel data regression can be calculated with the following formula (Gujarati & D C Porter, 2012):

$$\log Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 dX_{2it} + \beta_3 X_{3it} + B_4 \log X_{4it} + \varepsilon_{it}$$

Where Y is GRDP, X1 is labor, X2 is domestic investment, X3 is FDI, X4 is government expenditure, i is cross section, t is time series, β_0 is constant, B1-4 is coefficient, and ε is eror term. To find out which model is the best whether to use Common Effect (Cem), Fixed Effect (FEM), or Random Effect (REM), chi square analysis is performed. In this research, REM cannot be applied because the number of i is less than the number of t (Nachrowi & Usman, 2006).

RESULTS

Figure 2 shows that in general GRDP in Eastern Indonesia during 2011-2016 has increased every year. The highest GRDP was observed in South Sulawesi. South Sulawesi plays an important role as the gateway of Eastern Indonesia region. The role of South Sulawesi province is very strategic in supporting Sulawesi Island as a center of production and processing of agricultural, plantation, fishery, and nickel mining, especially as food agriculture node, fishery node, and industrial cluster (BAPPENAS, 2015).

Figure 3 shows that the province of South Sulawesi has the highest number of labor among other provinces. The number of small-scale industries in South Sulawesi Province in 2013 is mostly in the food, beverage and tobacco industries of 174 companies with a total workforce of 4,621 people. The biggest employment of large medium-scale industry group is in wood (6,665 persons) and non-metal mining industries (6,805 persons), respectively. Industrial sector development in South Sulawesi is increasing every year (BAPPENAS, 2015).

Figure 4 presents the data on domestic investment in Eastern Indonesia Region during 2011-2016. In general, the provinces in Eastern Indonesia have a relatively low domestic investment inspite of larger area and bigger potential of natural resources.

Figure 5 shows that foreign direct investment varies greatly among provinces and has been fluctuating during 2011-2016. Foreign direct investment is expected as one of the financing sources in development that can be used to build infrastructure such as ports, electricity, clean water, roads, railways and others, and to transfer technology.

Figure 6 shows that government expenditure in every province in Eastern Indonesia Region fluctuated during the period of 2011-2016. Southeast Sulawesi is the province with the highest government expenditure.

Chow test is a test for model selection to select between common effect and fixed effect. The value of error probability (0.0000) is smaller than 0.05, it means H_0 is rejected and H_1 is accepted, meaning that the model used is fixed effect. Hausman test is used to select between fixed effect and random effect model. The value of error probability (0.0000) is smaller than 5%, it means H_0 is rejected and H_1 is accepted, the model used is fixed effect. According to Gujarati & Porter (2012), model selection between fixed effect or random effect model on panel data can be done by observing total number of time series (t) and cross section (n). When t is greater than n, fixed effect is used, and when n is greater than t, the model used is random effect. In this research, t is greater than n (10 > 8), so fixed effect model should be chosen. The hausman test also suppports the decision.

The regression analysis of the factors that affect GRDP in Eastern Indonesia Region as seen in Table 1, shows an equation as follows:

$$LogGRDP = 1.549254 + 0.00000113Labor_{it} + 0.00000904dDi_{it} + 0.000033FDI_{it} + 0.535283LogGovex_{it} + e_{it}$$

Based on the output, the value of adjusted R square obtained is 0.996387. The value is close to 1 which indicates that the GRDP in Eastern Indonesia Region can be explained by labor, domestic investment, foreign direct investment and government expenditure by 99.6%. The results of fixed effect model regression obtained prob (F-statistic) of 0.000000, so it can be concluded that labor, domestic investment, foreign direct investment and government expenditure simultaneously have significant influence on GRDP in Eastern Indonesia Region.

t test aims to determine wheither each independent variable is individually influential to the dependent variable. In this test the significance level used is α = 0.05. The test results of t test are as follows:

Labor has t statistic of 6.942344 > t table (2.00324), and has p-value of 0.0000 < 0.05. Therefore, labor has a positive significant effect on the GRDP in Eastern Indonesia Region.

Domestic Investment (DI) has t statistic of 2.881244 > t table (2.00324), and has p-value of 0.0061 < 0.05. Therefore, DI has a positive significant effect on the GRDP in Eastern Indonesia Region.

Foreign Direct Investment (FDI) has t statistic of 3.660697 > t table (2.00324), and has p-value of 0.0007 < 0.05. Therefore, FDI has a positive significant effect on the GRDP in Eastern Indonesia Region.

Government expenditure has t statistic of 9.755265 > t table (2.00324), and has p-value of 0.0000 < 0.05. Therefore, Govex has a positive significant effect on the GRDP in Eastern Indonesia Region.

DISCUSSION

The result of this study shows that labor has positive and significant effect on GRDP. It can be concluded that the increasing labor will increase the GRDP. This research supports the previous research by Rahman et al. (2016), Aziz & Azmi (2017), and Siddique et al. (2017) who found that labor has positive significant effect on GRDP. An important factor that determines the prosperity of a society is the level of income. The income reaches maximum if full employment usage levels can be realized. By increasing the unempoyment rate in an area, it will cause economic and social problems to people who experience it. The absence of income causes the unemployed to reduce the Eastern Indonesia region consumption, which ultimately results them to reduce the income in the Eastern Indonesia region.

The result of this study shows that domestic investment has insignificant effect on GRDP. Infrastructure becomes the key to achieving a higher GRDP. Infrastructure, especially the means of transportation, will both reduce distribution costs and economize the economy. This research is supported by previous research by Asiyan (2013) and Mefi Hukubun et al. (2015) starting that domestic investment has no significant effect on GRDP, as an example of the fact that PT Freeport Indonesia only benefits its investors and the profits from Freeport do not affect the welfare of Indonesia, especially the local people in Papua province.

The realization of investment in Indonesia until now is still stored in Western Indonesia region. While in Eastern Indonesia region, the realization of investment is still very small. There is still a lot of overlapping licensing between the central government and local government to make investors reluctant to invest.

The result of the research shows that foreign direct investment has positive and significant effect to GRDP. It can be concluded that the increase of foreign direct investment will increase the GRDP. This research is supported by previous research of Iqbal et al. (2014), Agrawal (2015), Rahman et al. (2016), Aziz & Azmi (2017), and Siddique et al. (2017) who found that domestic investment has a positive effect on GRDP. Investment is a major componen in moving the wheels of a country's economy. Theoretically, the increase in investment will encourage trade volume and production volume which in turn will broaden productive employment opportunities and will increase the income per capita, GRDP and also can improve the welfate of the community. In country with an Export Promotion policy, FDI stimulates human resource development through training, education, technology transfer, more employment and other spillover effects on the host country economy (Iqbal et al., 2014). Hence, if economic growth is likely to attract more FDI inflows, then various policies to attract inward FDI could become unnecessary. Therefore, efforts should also be made to encourage the other potential sources of economic development (Agrawal, 2015). FDI is a key driver of economic growth and development and that FDI not only boosts capital formation but also enhances the quality of capital stock (Evans, Frank, & Rebecca, 2017).

The result also shows that government expenditure has no effect on GRDP. Small government consumption expenditure will harm economic growth, proportional government expenditure will increase economic growth and consumption expenditure wasteful government will hamper economic growth. In general government expenditure has a positive impact on economic growth. The proportion and development of realization of public expenditure which is relatively smaller compared with the realization of regional apparatus expenditure indicates that the budget allocation is mostly used for the

benefit of consumption (Szarowsk, 2013). This situation causes the realization of large regional expenditure has not pushed the economic growth of the Province in Eastern Indonesia Region significantly. GRDP is an indicator or benchmark of economic growth which means if the economic growth of an area is low then the GRDP of a region is also low. Musaba et al. (2013) showed that there were no significant relationship between government sectoral expenditure variables and economic growth in the short-run. However, the long run results indicated that government expenditure on agriculture and defense have significant positive impacts on economic growth. Government expenditure on education, health, social protection, and transport and communication were significant but negatively related to economic growth. This implies that expenditure on education, health, social protection, and transport and communication were not contributing to economic growth. In other words, government expenditures in these sectors concentrated more on unproductive activities than productive activities. In order to boost economic growth the government should address the factors causing the negative impact on growth. A well-defined expenditure policy should be pursued and efficient management of resources in the development of education, health, social protection, and transport and communication services should be emphasized.

CONCLUSIONS

Labor and foreign direct investment have a positive and significant effect on GRDP in Eastern Indonesia Region 2011-2016, domestic investment and government expenditure has a positive and insignificant on GRDP in Eastern Indonesia Region 2011-2016, and the most influential variable on GRDP in Eastern Indonesia Region is labor.

Based on the conclusion of this research, local governments are expected to increase labor productivity through increased budget allocation for education to improve the quality of workforce, provide training for the workforce and expand employment opportunities so that output increases and ultimately can boost GRDP. The investment is strongly influenced by the provision of adequate infrastructure and human resources, so the government needs to improve infrastructure while improving the quality of human resources through education and training.

Basically, the foreign investment climate is most vulnerable to economic, social, political, and cultural issues. Therefore, the government should increase the confidence of foreign investors by maintaining good economic, political, social and cultural stability in the country, as well as by increasing the ease of bureaucracy. The government in Eastern Indonesia is expected to allocate proportional spending between consumptive routine expenditure and development expenditure so as to give positive effect to GRDP in the Eastern Indonesia Region.

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Table 1. Regression results with fixed effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LABOR	1.13E-06	1.63E-07	6.942344	0.0000
DI	9.04E-06	3.14E-06	2.881244	0.0061
FDI	3.30E-05	9.03E-06	3.660697	0.0007
Govex	0.535283	0.054871	9.755265	0.0000
C	1.549254	0.606272	2.555378	0.0141

Source: Data processed, 2018
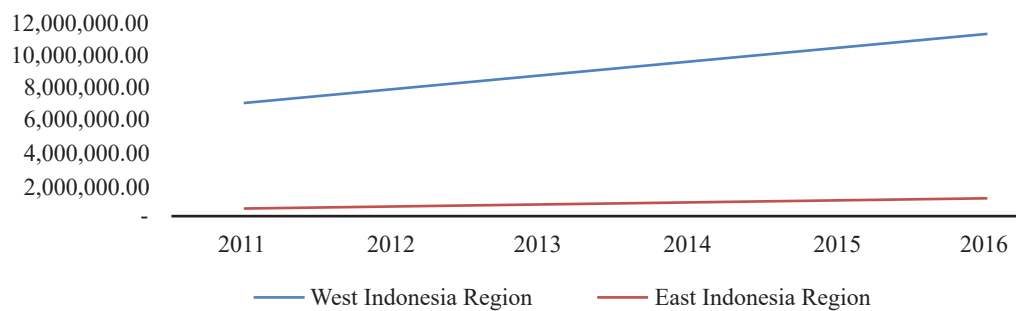
Source: The Central Bureau of Statistics, 2018

Figure 1. GRDP at current prices by province (Billion Rupiah) in Western and East Indonesia region 2011-2016
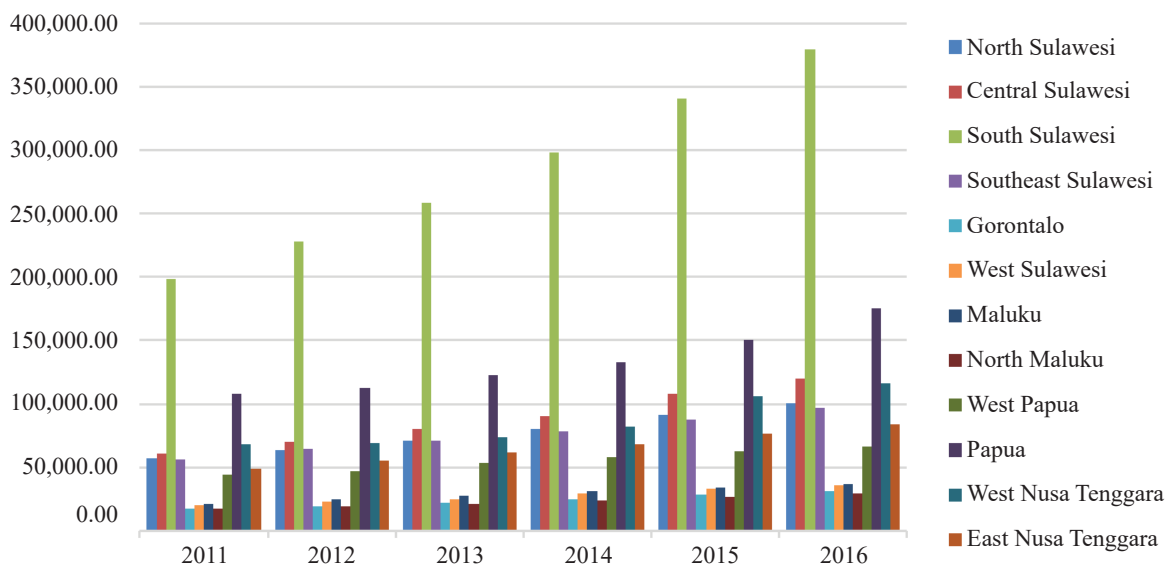
Source: The Central Bureau of Statistics, 2018

Figure 2. GRDP in Eastern Indonesia Region 2011-2016
(Billion Rupiah)
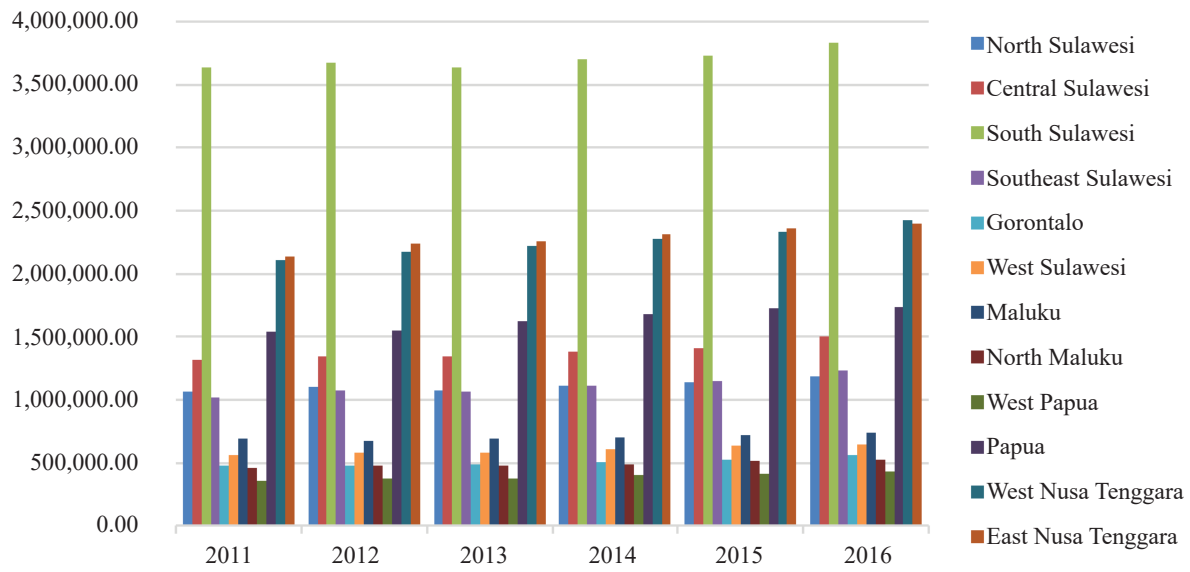
Source: The Central Bureau of Statistics, 2018

Figure 3. Labor in Eastern Indonesia Region 2011-2016 (people)
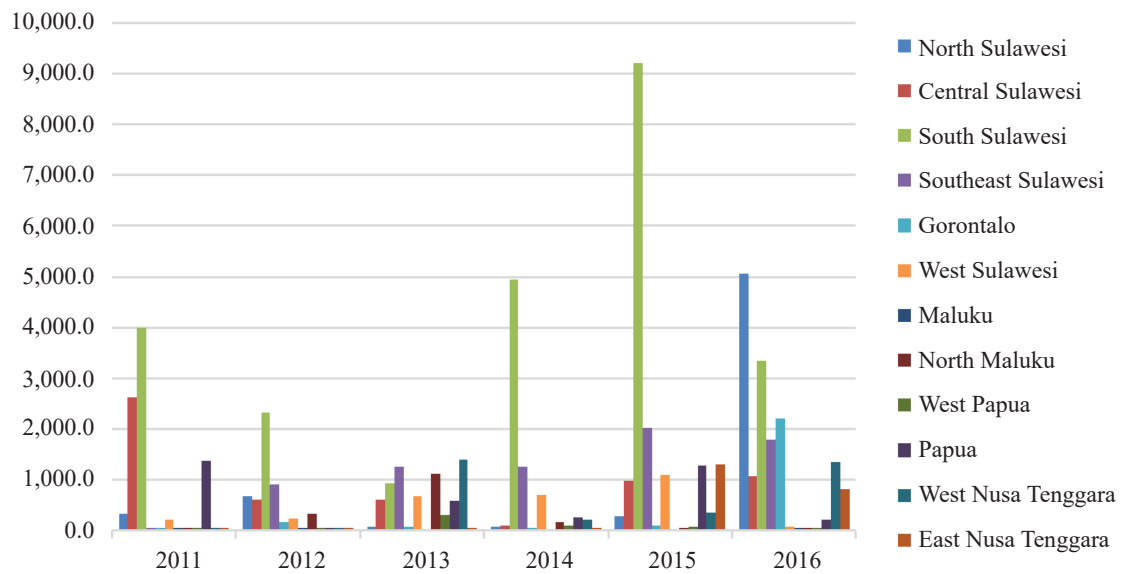
Source: The Central Bureau of Statistics, 2018

Figure 4. Domestic Investment in Eastern Indonesia Region 2011-2016 (Billion Rupiah)
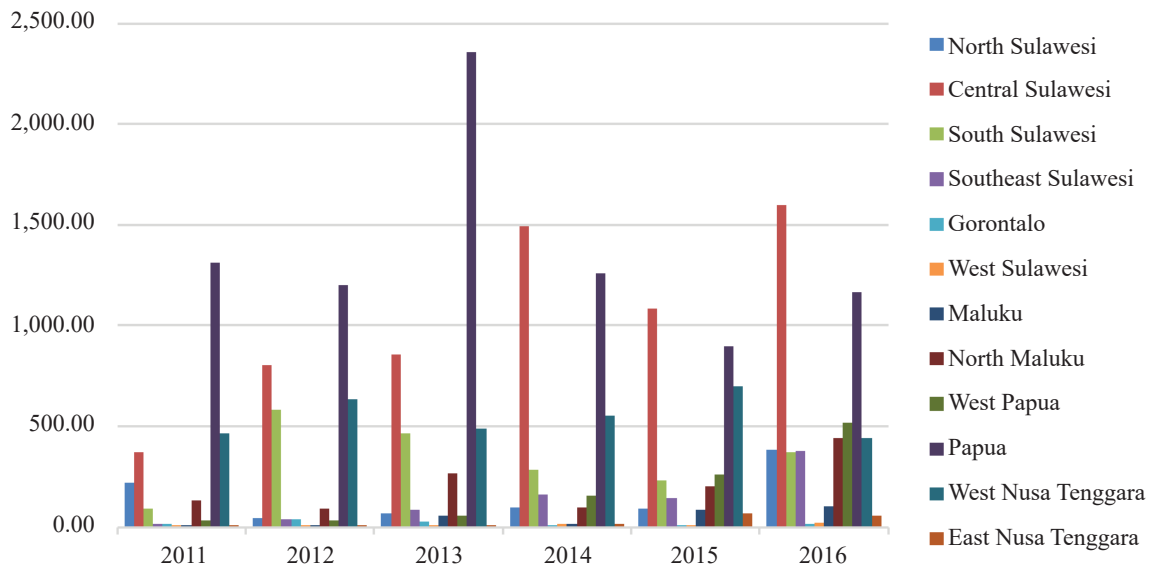
Source: The Central Bureau of Statistics, 2018

Figure 5. Foreign Direct Investment in Eastern Indonesia Region 2011-2016 (Million USD)

Source: The Central Bureau of Statistics, 2018

Figure 6. Government Expenditure in Eastern Indonesia Region 2011-2016 (Billion Rupiah)

PERFORMANCE ANALYSIS OF STATE ELEMENTARY SCHOOL HEADMASTERS THROUGH TRAINING AND WORK ENVIRONMENT WITH MOTIVATION AS INTERVENING

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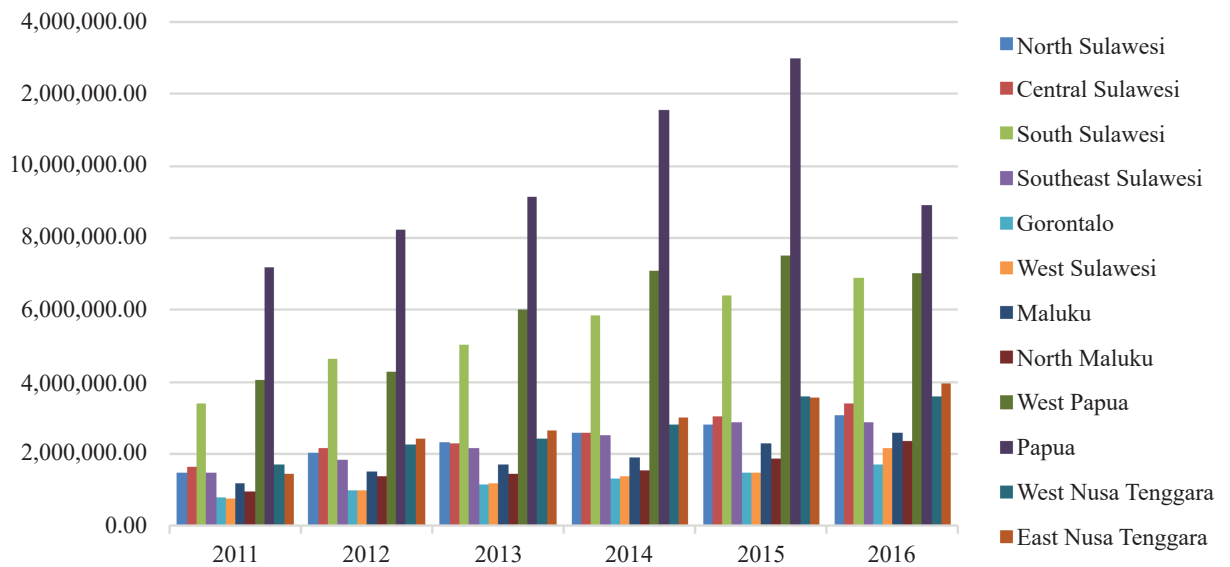Jl. Mr. Sartono No.97, Nusukan, Kec. Banjarsari,
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Abstract

This study aims to determine the effect of training and work environment on the performance of the heads of public elementary schools in sub-district Banjarsari of Surakarta city with motivation as an intervening variable. Methods of collecting data with questionnaires on a sample of 30 elementary school. Path analysis results conclude that: 1. The direct effect of training on performance of is greater than the indirect effect of training on performance with motivation mediation, meaning that motivation cannot function as an intervening variable. 2. The indirect effect of the work environment on motivation mediation performance is greater than the correlation between the work environment with motivation, motivation correlation with a performance, meaning that motivation cannot function as an intervening variable. 3. The total effect of training on performance is greater than the total effect of the work environment on performance. Test results concluded that to improve performance is most effective through increasing training without going through intervening variables.

Keywords: training and education; work environment; motivation; performance

INTRODUCTION

Leader is a person who must have responsibility, be able to do positive and advance the institution he leads. The responsibility of the leader is not only the physical but also the mental and moral of the employee he leads. Organizations that have good leaders will most likely become advanced organizations, and vice versa. Good or not the leader is also usually seen from the performance, achievement or output produced, not only is the process being undertaken to be good. A work process undertaken by a leader will determine the quality of performance results obtained and the output produced. In the process, the performance of a leader is influenced by various supporting factors.

In elementary school institutions, school leaders, namely principals play an important role as leaders. The Principal Performance Assessment is regulated in Permendiknas no. 13 of 2007 concerning Standards for Principals / Madrasas and Permendiknas No. 28 of 2010 concerning Assignment of Teachers as Principals in Article 12 states that: (1) Evaluation of the performance of principals/madrasas is conducted regularly every year and cumulatively everyfour years; (2) Annual performance assessments carried out by school/madrasah

supervisors; (3) Four-year performance appraisal is carried out by direct supervisors by considering performance appraisal by an assessment team consisting of school/madrasah supervisors, educators, education staff, and school/madrasah committees from their place of duty; (4) The results of performance appraisal are categorized as very good, good, sufficient, moderate or lacking.

To realize good judgment and progress, performance must be maximal to reach maximum performance. The performance of principals to bring progress and good performance is influenced by various factors including education and training (training), motivation and work environment.

Minimum education for a Principal is regulated in Minister of Education Regulation No. 13 of 2007. A school principal may not be chosen randomly but must have a minimum S1 education criteria. Education alone is not in carrying out the duties as the principal. The number of challenges and developments and changes in the curriculum need to be followed by training in order to master the demands given. Training as "an effort to improve the performance of employees in their current work or in other jobs that they will soon occupy". Training (training) is "a systematic process to change

the work behavior of a person/group of employees in an effort to improve organizational performance (Ivancevich, 2008). Education and training helps employees to find out their jobs better. (Deming, 1982). Employees learn from practical experience better than knowledge from books. Education and training reduce costs and save time for companies (Flynn et al., 1995; Kaynak, 2003; Heras, 2006).

Work environment according to Sedarmayati (2009) is the entire tooling equipment and materials faced, the surrounding environment in which a person works, the method of work, and work arrangements both as individuals and as a group. The working environment conditions are said to be good or appropriate if humans can carry out activities optimally, healthy, safe, and comfortable. The suitability of the work environment can be seen as a consequence in the long run the working environments that are less good can require more labor and time and do not support the obtaining of an efficient work system design. An effective work environment is an environment where results can be achieved as expected by management. (Pedler, 2010; Shikdar, 2004). The physical environment influences how employees in the organization interact, carry out work and can be directed. The physical environment as an aspect of the work environment directly affects human sensitivity and changes personal interactions to be productive. This is because the characteristics of a meeting place or room for a group can result in productivity and satisfaction levels. The work environment is the most critical factor in maintaining employee satisfaction in today's business world. Today's work environment is different, varies and changes constantly. Employee relations/traditional employers have changed. Employees live in a growing economy and have unlimited employment opportunities. These combination factors create an environment where businesses need more employees than employees need business (Smith, 2011).

Wibowo (2014) states that motivation is a driver to deal with the many human behaviors based on direction, intensity and enthusiasm to achieve goals. Job motivation and satisfaction can strengthen organizational commitment and performance. Motivation is the impulses to act through a series of human behavior by considering the direction, intensity and persistence in achieving goals. Motivation and job satisfaction can foster the strengthening of the organization's commitment and the implications on performance. Motivation is something that encourages a school principal to carry out the task as well as possible. The better the motivation possessed, the more optimistic and enthusiastic a school principal is to carry out tasks that must be completed. (Adair, 2007: 192).

The purpose or research are: 1). To find out empirically the effect of education and training on the motivation of elementary school principals in the banjarsari sub-district of Surakarta, 2). To find out empirically the influence of the work environment on the motivation of elementary school principals in the Banjarsari sub-district of Surakarta City, 3). To find out empirically the influence of education and training on the performance of elementary school principals in banjarsari sub-district, Surakarta, 4). To find out empirically the influence of the work environment on the performance of elementary school principals in banjarsari sub-district, Surakarta, 5). To find out empirically the effect of motivation on the performance of elementary school heads in the Banjarsari sub-district, Surakarta city.

METHOD

The location of the study was conducted in the Banjarsari sub-district with the object of research being the head of the Banjarsari sub-district elementary school, Surakarta city. The population consists of 60 principals. The sample of this study amounted to 30 people. The data used in this study were primary data obtained from the head of the Banjarsari sub-district elementary school Surakarta city. The technique of collecting data was done through a questionnaire to the head of the Banjarsari sub-district of Surakarta Elementary School Public Elementary School which had been selected as a sample using a Likert scale 1-5.

Measurable of variable are as follows : Training and education is an effort to change attitudes, knowledge and expertise to improve performance and service in the field of education. Education and training are measured by 1). The essence of training material is measured by indicators of how education and training are useful for improving the learning process, information about systematic, practical and coherent educational innovations, 2). Training incentives are measured by pocket money indicators and certificates, 3). Training facilities are measured by standard facilities and facility use indicators, 4). Training structures are measured by competency indicators and material delivery, 5). The impact of training on the learning process is measured by indicators applying the results of training and teaching materials.

Motivation is measured by indicators: 1). The need for achievement is measured by indicators of encouragement of responsibility, risk taking and high achievement. 2). The need for power is measured by indicators of challenging work, job security, freedom of work, trust in institutions to work, and respect for fellow colleagues. 3). The need to be affiliated/related is measured by indicators of social interaction, cooperation, recognition of ability and sportsmanship at work.

The work environment in the form of a non physical work environment is measured by: 1). Social factors are measured by indicators of family status, number of families, level of welfare. 2). The social status factor is measured by the indicator that the higher the position

of a person the higher the authority and flexibility in making decisions. 3). Factors of work relations in organizations are measured by indicators of employment relations between employees and other employees and between employees and superiors/leaders. 4). Information system factors measured by indicators will interact, understand each other, understand each other can eliminate misunderstanding disputes.

The physical work environment is measured by 1). Work environment governance factors are measured by indicators of good working space and make it comfortable. 2). The cleanliness and neatness of the workspace is measured by indicators of a clean, neat, healthy and safe workspace.

Performance is measured by: 1). Ability is measured by indicators of material mastery, mastery of teaching methods. 2). Initiatives or initiatives are measured by indicators of positive thinking, realizing creativity, and achievement. 3). Timeliness is measured by indicators of utilization of arrival time and utilization of return time. 4). Quality of work results are measured by indicators of student satisfaction, student understanding, work performance. 5) Communication is measured from the quality indicators of material delivery, and mastery of class conditions.

Data analysis technique for testing Instrument is validity test by looking at the significance value and reliability test with cronbach alpha technique. The test results on questionnaire questions proved to be valid and reliable with the results of the validity test of the significance value <0.05 and the calculated r value> r table. The test results are proven to be entirely reliable with cronbach's alpha coefficient > 0.06.

The hypothesis testing used are : 1). t test to determine the significance of the effect of independent variables on the dependent variable. 2). F test to determine the effect of significance between the independent variables and the dependent variable together. 3). Analysis of the determination coefficient (R^2) to determine the contribution size of the influence of independent variables on the dependent variable. 4). Linearity test to determine linear status or not a distribution of research data. 5). Pathanalysis to determine the direct effect of one independent variable on the dependent variable, without going through another dependent variable. And to find out the indirect effect of independent variables on the dependent variable through intervening variables (intermediary variables) using Pearson correlation.

Hypotetical framework are arranged as follows: H1 = Training and education has a significant effect on the performance of the head of the Public Elementary School in the Banjarsari sub-district; H2 = Work environment has a significant effect on the performance of the head of the Public Elementary School in the Banjarsari sub-district; H3 = Training and Education has a significant effect on the motivation of the head of the Public Elementary School in the Banjarsari sub-

district; H4 = Work environment has a significant effect on the motivation of the head of the Public Elementary School in the Banjarsari sub-district; H5 = Motivation has a significant effect on the performance of the head of the Public Elementary School in the Banjarsari sub-district (Figure 1).

RESULTS AND DISCUSSIONS

Path analysis is done by using two equations with result 1). First equation states that training and work environment have a positive effect on motivation, if the training and work environment is increased then motivation will increase. 2). Second equation states that training and motivation have a positive effect on performance, if training is increased then performance will increase, while the work environment has a negative effect on performance, if the work environment decreases or is not good then performance will increase.

The partial hypothesis test (t-test) gets the result as follows (Table1): H1. Training and education had a significant effect on the performance of the head of the Public Elementary School in the Banjarsari sub-district (proven hypothesis), H2. The work environment has no significant effect on the performance of the head of the Public Elementary School in the Banjarsari sub-district (hypothesis is not proven). H3. Training and education has a significant effect on the motivation of the head of the Public Elementary School in the Banjarsari sub-district (proven hypothesis). H4. The work environment has a significant effect on the motivation of the head of the Public Elementary School in the Banjarsari sub-district (proven hypothesis). H5. Motivation has no significant effect on the performance of the head of the Public Elementary School in the Banjarsari sub-district (hypothesis is not proven).

Simultaneous test (Test - F) shows that the independent variables influence the performance of the head of the Public Elementary School in the Banjarsari sub-district. The coefficient of determination (R^2) shows the results of a total R square value of 0.999 which means that employee performance is explained by training and work environment with motivation as an intervening variable of 99.9% and the remaining 0.1% is explained by other variables outside the research model.

The relationship between variables (Table 2) with pearson correlation to find out the relationship between variables obtained the following results: 1). Training and education with employee performance is 0.990 and sig = 0.000 means the relationship between training and performance is very strong and significant. 2). The work environment with employee performance is 0.565 and sig = 0.001 means the relationship between the work environment with strong and significant performance. 3). Motivation with employee performance is 0.637 and sig = 0.000 means the relationship between motivation and performance is strong and significant. 4). Training

and education with employee motivation is 0.634 and sig = 0.000 means the relationship between training and motivation is strong and significant. 5). Work environment with employee motivation is 0.714 and sig = 0.000 means the relationship between work environment with strong and significant motivation.

The direct effect of training on performance of 0.987 is greater than the indirect effect of training on performance with motivation mediation of 0.888 and has a very strong correlation, so that to improve employee performance direct paths are chosen (Table 3). It can be said that motivation cannot function as an intervening variable between training and employee performance.

Indirect influence of work environment on motivation mediation performance is -0.030 and the correlation between work environment with strong motivation is (0.714) and motivation correlation with strong performance is (0.637) smaller than the direct effect of work environment on performance of -0.030 and has a correlation amounting to 0.565, so that to improve the performance of employees the direct line is chosen. It can be said that motivation cannot function as an intervening variable between work environment and employee performance.

The total effect of training on performance of 0.888 has a greater effect than the total effect of the work environment on performance by 0.0144. So as to improve performance more effectively through training improvement.

CONCLUSIONS

The direct effect of training on performance is greater than indirect influence and has a very strong correlation, so that to improve the performance of principals more effectively through direct channels. Training and education has a positive and significant effect on the performance of principals. If training is improved, the performance of the principal will increase. The direct influence of the work environment on performance is greater than the indirect influence of the work environment on performance, so that to improve the performance of employees (principals) direct paths are chosen, namely improving the work environment to improve performance. The work environment has a negative and significant effect on performance. If the work environment is improved the performance will increase. Motivation has a positive and significant effect on performance. If motivation is increased, the Head of Public Elementary School in Banjarsari District will carry out the task appropriately. The effect of training on performance is the most dominating because it has the greatest value compared to the influence of other variables on performance.

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Tabel 1. Results of Conclusion of Path Regression Analysis

No	Direction of Relationship	Regresi		Correlation	
		Beta	Sig	r	Sig
1	X_1 to Y	0,987	0,000	0,990	0,000
2	X_2 to Y	-0,030	0,457	0,565	0,001
3	X_3 to Y	0,033	0,446	0,637	0,000
4	X_1 to X_3	0,333	0,038	0,634	0,000
5	X_2 to X_3	0,521	0,002	0,714	0,000

Tabel 2. Coeficient Correlations

		Training and education	Work Enviro- nment	Motiva- tion	Perfor- mance
Training and educa- tion	Pearson Correlation	1	.579**	.634**	.990**
	Sig. (2-tailed)		.001	.000	.000
	N	30	30	30	30
Work Env.	Pearson Correlation	.579**	1	.714**	.565**
	Sig. (2-tailed)	.001		.000	.001
	N	30	30	30	30
Motiva- tion	Pearson Correlation	.634**	.714**	1	.637**
	Sig. (2-tailed)	.000	.000		.000
	N	30	30	30	30
Perfor- mance	Pearson Correlation	.990**	.565**	.637**	1
	Sig. (2-tailed)	.000	.001	.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Tabel 3. Influence table between variables

| No	Variable	Direct Influence	Indirect Effects	Total Influence
1	Training on Performance	0,987		
2	Work environment for performance	-0,030		
3	Training through motivation towards performance		0,333x - 0,030 = -0,099	
4	Work environment through motivation towards performance		0,521x - 0,030 = 0,0156	
5	Training on performance through motivation			0,987 - 0,099 = 0,888
6	Work environment for performance through motivation			0,030 - 0,0156 = 0,0144
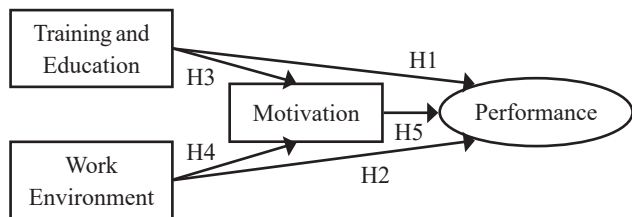
Figure 1. Research Paradigm

STORES ATMOSPHERE AND PROMOTION ON CUSTOMER SATISFACTION AND ITS IMPACT ON CONSUMER LOYALTY

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Abstract

This study aimed to determine the effect of store atmosphere and promotion on consumer satisfaction simultaneously and partially and its impact on loyalty of Le Delice Café and Bakery. The research method used were descriptive and verificative statistics. The results showed that the store atmosphere, satisfaction and loyalty were in a fairly good category, while promotion was good. Based on the analysis, store atmosphere had a greater effect than promotion on customer satisfaction, however promotion had a greater influence on loyalty. Other analysis results showed that store atmosphere and promotion had greater direct effect on consumer loyalty than indirect effect through satisfaction.

Keywords: *store atmosphere; promotion; consumer satisfaction; consumer loyalty*

INTRODUCTION

Restaurants and cafes are service businesses of food and beverage which described in UU 10/2009, states that what is meant service business of food and beverage is a business providing food and beverage services equipped with equipments and supplies for the manufacturing process. These can be in the form of restaurants, cafes, catering services, and bar/tavern. Regulation of Minister of Culture and Tourism Number PM.87/HK.501/ MKP 2010 provides a definition that restaurants and cafes are food and beverage provider businesses equipped with equipments and supplies for the process of making, storage and/or serving, in a non-moving place. The development of culinary tourism in the city of Bandung is currently experiencing rapid progress as shown in Table 1.

The phenomenon of the rise of cafe and bakery also occurs in the city of Bandung as a manifestation of lifestyle in Table 2, while Table 3 shows the growth of cafe visitors. Le Delice Cafe and Bakery occupies the 19th position of a similar business with a rating of 3.9 (www.zomato.com Bandung, 2017) This cafe was established in September 2014, and to date has 25 employees.

The store atmosphere is the reason for consumers to visit and buy. If consumers feel satisfied when visiting, it will encourage the formation of consumer loyalty at the place they visited. Pre survey results showed that the atmosphere of the store is not truly interesting and different.In terms of lighting, aesthetics of equipment preparation, music and layouts do not compel consumers to linger and promotions provided by Le Delice Cafe and Bakery are still lacking.

The first dominant factor is the store atmosphere, this is according to Utami (2010) which stated that the store atmosphere is designed and made in aiming to provide comfort and satisfaction for consumers in making purchases. The second dominant factor is promotion, in accordance with the theory by Kotler and Armstrong (2015), promotion is corporate communication to consumers on products or services produced in an effort to build profitable relationships.

Another dominant factor is consumer loyalty and customer satisfaction where these two factors influence each other in accordance with Tjiptono's theory (2014). Customer satisfaction is the customer's response to the evaluation of discrepancies or disconfirmations that were felt between previous expectations. This is supported by Prasetyo (2016) which concluded that consumer satisfaction is the biggest variable that influences consumer loyalty, and that customer satisfaction is a factor that mediates in the relationship between the store atmosphere and customer loyalty. As the results of the study, Khan et. al. (2012) also showed that there is a positive effect of promotion on customer satisfaction.

Store atmosphere is one element of retailing mix that must be considered by a retail business. According to Levy & Weitz (2014), atmosphere is designing an

environment through communication of visual, lighting, color, music, and smell to stimulate perceptions and emotions from customers and ultimately influence their buying behavior. Whereas Berman and Evan,which was translated by Lina Salim (2014) and Utami (2010) revealed that the store atmosphere includes variouslayouts; interior, exterior, store internal traffic, comfort, air, service, music, uniform, length of goods and so on. These evoke attraction to consumers and arouse the desire to buy.

Lamb in Kotler and Keller, translated by Bob Sabran (2012) suggested the purpose of store atmosphere are: a. retail store appearance, b. effective layout. Factors that influence Lamb in Bob Sabran (2012) namely: a. employee, b. type of fixture, c. music, d. aroma, e. visual factor. Berman and Evan (2014) suggested that there are four influential store atmosphere elements, they are: a. store exterior, b. general interior, c. store layout, d. interior display.

Kotler and Armstrong (2014) stated that promotion refers to activities that communicate to merits of the product and persuade customer to buy it. While Lupiyoadi (2013) stated that promotion is an activity carried out by the company to communicate the benefits of the product and as a tool to influence consumers in the activity of buying or using services according to their needs. Different understanding of promotion came from Stanton in Alma (2011) who defined that promotion is an exercise in information, persuasion and conversely, a person who is persuades is also being informed.

Kotler and Keller (2016) suggested the promotion mix as followed: 1. advertising, 2. sales promotion, 3. event and experiencess, 4. public relations, 5. online and social media marketing, 6. mobile marketing, 7. direct marketing , 8. personal selling.

Consumer satisfaction according to Kotler & Keller (2016) is the feeling of someone's likes or dislikes for a product after he compared the performance of the product with his expectations. Then Lovelock and Wirtz (2011) argued that consumer satisfaction is an attitude that is decided based on the experience gained. Where as Tjiptono (2014) defined it as the customer's response to the evaluation of discrepancies or disconfirmations that were felt between previous expectations.

Loyalty is a behavior where the experience of purchasing a product that is used as a reference or a benchmark; if a consumer is satisfied with a product then there is a high probability that the consumer will make a repeat purchase or even use the product with that brand continuously. On the contrary, if a consumer feels that the product is not in line with his expectations, the consumer may not be satisfied (Tjiptono, 2014).

In accordance with researches by Indra (2014), Widoretno (2014) and Prasetyo (2016) which state that store atmosphere has an effect on consumer satisfaction. Maria (2013) and Amanah (2010) provided results that there is a positive influence between promotion

and customer satisfaction. Therefore, the higher the promotion, it is expected to have a positive impact on the level of customer satisfaction.

The results of Indra's (2014) and Widoretno's (2014) study stated that store atmosphere has an effect on consumer satisfaction as well as promotion which has a positive effect on consumer satisfaction and Maulana Lutfi (2016) found that store atmosphere and promotion simultaneously affect customer satisfaction.

Satisfaction will arise if the customer positively evaluates the transaction experience. With that positive impression, the customer is willing to remain loyal to the company. Researches by Aryani(2010), Widjoyo (2014) and Khadka and Maharjan (2017) stated that customer satisfaction has a positive and significant effect on customer loyalty.

Researches done by Widoretno(2014), Prasetyo (2016) and Ayu (2017) stated that store atmosphere has a significant effect on consumer loyalty. Arfiani (2017) and Wibawa (2014) stated that promotion has a significant positive effect on consumer loyalty, and Indar (2016) stated that promotion is one of the determinants of the success of marketing programs, and promotion has a significant positive effect on consumer loyalty.

The hypothesis proposed is: (1) store atmosphere and promotion affect consumer satisfaction both simultaneously and partially, (2) store atmosphere influences consumer loyalty both simultaneously and partially, (3) customer satisfaction affects consumer loyalty, (4) store atmosphere and promotion influences consumer loyalty indirectly through customer satisfaction.

METHOD

The research method used was descriptive and verification. The population was consumers of Le Delice Cafe and Bakery of 750 people which is the average consumer per day, specifically 25 people multiplied by 30 days, with a sample of 89 people. The rating scale used was Likert. The data collection technique was a survey. Descriptive data analysis technique was by calculating the average consumer answer. While path analysis was used to answer the verification formulation.

RESULTS

The store atmosphere was perceived by consumers of Le Delice Cafe and Bakery category as fairly good. This indicator hadthe lowest score in the marquee indicator and the largest average score in the temperature indicator. Promotion was perceived to be fairly good, with the smallest average score in the indicator of sales promotion frequency and the largest average score in media indicator. Consumer satisfaction was perceived as fairly good category. The smallest average score was in the company's performance indicators in

designing comfort and the biggest was in the company's performance indicators in the suitability of the products offered. Consumer loyalty was also fairly good, the smallest average score was in the indicator of the level of linkages and repeat purchases and the largest in the preference level indicator.

The store atmosphere and promotion had positive and significant effects on consumer satisfaction (Table 4) of 78.7%. The store atmosphere had an effect of 45.5% and promotion had an effect of 33.2% on customer satisfaction. The influence of store atmosphere and promotion on customer satisfaction and its impact on consumer loyalty (Table 5) was 83.9%, positive and significant. The store atmosphere had an effect of 10.3%, promotion 40.7%, and consumer satisfaction 32.9% on consumer loyalty.

DISCUSSION

The store atmosphere at Le Delice Cafe and Bakery was in the sufficient category. There were still low ratings on store front indicators, lighting and fixtures and possters, signs and cards display. While the highest indicator was on the temperature indicator which is considered good. Promotion was fairly good, there was still the lowest rating from consumers on the indicator of the accuracy of the promotion target and the highest indicator on media indicators. Consumer satisfaction was also fairly good, the lowest indicator was the company's performance in designing comfort in an attractive place and the highest indicator was the company's performance in the suitability of the products offered. Consumer loyalty was fairly loyal as well, the lowest indicator was the level of linkages and repeat purchases and the highest indicator was the level of purchase preference.

The store atmosphere had a positive effect on consumer satisfaction by 45.5%. This result is consistent with the research done by Indra (2014), Widoretno (2014), Dabija (2014), Waja (2013), and Prasetyo (2016). Promotion had a positive effect on consumer satisfaction by 33.2% supporting the study by Maria (2013) and Amanah (2014) and Khan, et. al. (2012). The store atmosphere and promotions simultaneously had direct effect on consumer satisfaction at 78.7% supporting Indra's (2014), Widoretno's (2014), and Maulana's (2016) research.

The store atmosphere had a positive effect on consumer loyalty by 10.3%. The effect of promotion on consumer loyalty was 40.7% in accordance with the research done by Ayu (2017), Widoretno (2014), and Prasetyo (2014). The effect of consumer satisfaction with consumer loyalty was 32.9% supporting Indra's (2016), Arfiani's (2017), and Wibawa's (2014) research. The influence of store atmosphere, promotion, and consumer satisfaction on consumer loyalty was 83.9% in accordance with the research done by Khadka and

Maharjan (2017), Sicily (2016).

The influence of store atmosphere on consumer loyalty indirectly was 0.45%, while the results of direct analysis amounted to 12.1%. The store atmosphere is considered to be one of the reasons consumers are loyal supporting Turley's and Milliman's (2000) research. The effect of promotion on consumer loyalty indirectly was 19.3%, while the results of direct analysis was 50.9% (Figure 1).

CONCLUSION

The store atmosphere and promotion had an effect on customer satisfaction simultaneously and positively. While partially the biggest significant value was the store atmosphere and then promotion. Store atmosphere, promotion, and customer satisfaction directly influenced consumer loyalty simultaneously. While partially promotion had the biggest influence, then consumer satisfaction, and finally the store atmosphere.

Store atmosphere and promotion indirectly influence consumer loyalty through customer satisfaction. The direct effect of promotion on consumer loyalty was greater than the indirect influence. This is shown that consumer satisfaction has a small role through promotion on consumer loyalty, while consumer satisfaction has a large enough role for store atmosphere on consumer loyalty.

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Table 1. Cafe in Bandung

Period	Quantity	Enhancement
2013	196	11,5 %
2014	235	13,8 %
2015	432	25,3 %
2016	653	38,3 %

Source: The Central Bureau of Statistics, Kota Bandung

Table 2. Type of Café in Bandung

No	Type of Café	Period		
		2014	2015	2016
1.	Cafe & Bakery	76	81	157
2.	Buffet	67	79	84
3.	Bistro & Brasserie	46	57	78
4.	Caffeteria	72	77	84
5.	Coffee shop	116	134	157

Source: The Central Bureau of Statistics, Kota Bandung

Table 3. Number of Consumers 2014-2016

No	Type of Cafe	2014	2015	2016	Number of Consumers
1	Cafe & Bakery	3,996,872	5,739,698	6,927,774	16,634,344
2	Buffet	5,195,561	4,181,748	6,167,923	15,545,232
3	Bistro & Brasserie	3,988,891	4,697,874	5,675,586	14,362,351
4	Cafeteria	5,124,237	5,205,232	5,213,243	15,542,712
5	Coffee Shop	3,589,310	4,889,982	5,087,790	13,567,521

Source : The Central Bureau of Statistics, Kota Bandung

Table 4. Effect of Store Atmosphere and Promotion
to Consumer Satisfaction

Variable	Beta	Zero Order	Total
Store Atmosphere (X1)	0,519	0,878	0,455
Promotion (X2)	0,382	0,870	0,332
Total			0,787

Source : Data Processed

Table 5. Effect of Store Atmosphere, Promotions, Consumer
Satisfaction to Consumer Loyalty

Variable	Beta	Zero Order	Total
Store Atmosphere (X1)	0,121	0,854	0,103
Promotion (X2)	0,509	0,801	0,407
Consumer Satisfaction (Y)	0,380	0,867	0,329
Total			0,839

Source : Data Processed
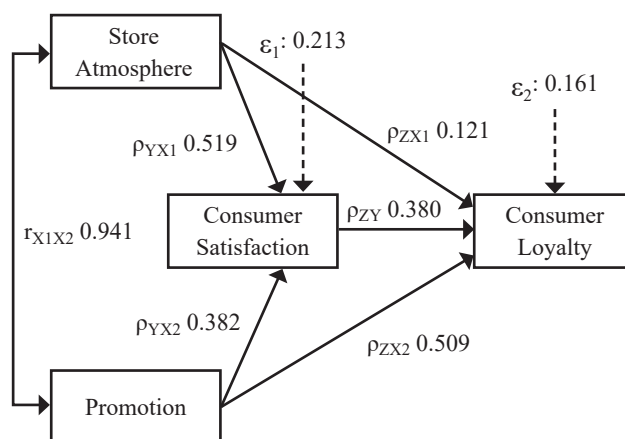
Indirect Effect:
$IE_{ZYX1} : X_1 \rightarrow Y \rightarrow Z = (0,121)(0,380) = 0.045$
$IE_{ZYX2} : X_2 \rightarrow Y \rightarrow Z = (0,509)(0,380) = 0,193$

Total Effect
$TE_{ZX1} \quad : DE_{YX1} + IE_{ZYX1} = (0,519) + (0,045)$
$TE_{ZX2} \quad : DE_{YX2} + IE_{ZYX2} = (0,382) + (0,193)$

Figure 1. Path Diagram Structure

THE COPING STRATEGY OF THE SEAWEED FARMING WORKERS IN RANDUSANGA VILLAGE, BREBES

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Abstract

The seaweed farming workers at Randusanga Wetan and Kulon village were facing a problem which also affecting their welfare, mainly their income. They could not decide their exact income because of their employment status, production and price instability. Coping strategy, which had been implemented, was one way to solve their problem as it made a connection and an active strategy. The form of 'connection' negotiated the portion of profit-sharing and enabled a household to borrow some money. Then, the active strategy was implemented by wild crab fishing, involving family member, intercropping with fish, working for 2-3 farmers, and utilizing 'sumpil'. This way, they could achieve a good welfare while at the same time, kept producing for their income.

Keywords: brebes; coping strategy; income coping strategy; seaweed

INTRODUCTION

As the largest archipelagic country with an area of about three-quarters of the total area, Indonesian waters have 27.2 percent of all flora and fauna species found in the world. It is not surprising that Indonesia is the country that has the second highest capture fisheries production in the world in marine waters, and has the seventh highest capture fisheries production in the world in public waters (FAO, 2016).

Besides the potential of capture fisheries, Indonesia's coastal areas also have the potential of marine aquaculture. Types of marine aquaculture commodities include seaweed, shrimp, and various types of fish such as grouper, snapper, milkfish and so on. During the period of 2011-2015, seaweed has become a leading commodity in the marine aquaculture and its production has increased to 17.37 percent every year (Table 1). Furthermore, Indonesia is the second largest country of aquaculture producer in the world, with a total production of 14.7 million tons worth of USD 10.56 billion. Indonesian aquaculture has grown at an average of 21% per year since 2000, and is one of the 20 largest aquaculture producers in the world in 2014 (KKP, 2016).

The cultivation of tropical seaweed species from Kappaphycus alvarezii and Eucheuma spp. in Indonesia is such a major contributor to the growth of water plant production in the world. Indonesian seaweed cultivation production increases every year, where the increase is more than 10 times or less than one million tons in 2005 to 10 million tons in 2014. This increase will continue in line with the government policies to continue to increase seaweed cultivation production. Indonesia's contribution to the world from seaweed aquaculture production increased dramatically from 6.7 percent in 2005 to 36.9 percent in 2014 (FAO, 2016). From seaweed, Indonesia is able to produce 500 types of final products in all world industries, such as cosmetics, pharmaceuticals, food, to paper and biofuels.

The development of seaweed cultivation helped boosting the Indonesian economy. The Indonesian exports of seaweed and other algae throughout 2017 reached 174 thousand tons, an increase of 6.1% from 164 thousand tons previously. China is still the main destination for Indonesian seaweed exports. The data from the Central Bureau of Statistics (*BPS, Badan Pusat Statistik*) noted that the exports of seaweed and other algae to the Bamboo Curtain country in 2017 reached 149 thousand tons or 85.5 percent of total exports. This number increased 6.23% from the previous year.

Researches with a focus on seaweed as the object have been widely carried out by using a variety of analytical tools, spreading in various regions. The researches on

seaweed cultivation using business analysis tools had been carried out by Asriany (2014), Putri et al. (2014), and Tutupary and Maatoke (2014). The results of these studies indicated that the seaweed commodities were feasible to be cultivated and developed and financially profitable. Researches on seaweed cultivation in terms of competitiveness had also been carried out by Fadli et al. (2018), Luhur et al. (2017), Mira et al. (2015). The result showed that the seaweed cultivation had a competitive and comparative advantage compared to another aquaculture. Researches on the development of seaweed cultivation were done by Putri et al. (2014), Tangko (2008), Suryawati and Erlina (2017), Deswati and Luhur (2014), Ningsih et al. (2016). None of these studies have seen farmers (farm workers) as a research object.

Workers, as the main research object that cultivates seaweed in the farms, are faced with uncertainties from the risk of employment status, production and price instability during the production process. The workers, in this case, have a risk of employment status because the worker's income does not come from working wages but it is based on the cooperation between the workers and farm owners. Thus, the workers have a risk because the income size depends on the harvest of the cultivated seaweed. With the cooperation model, the profit sharing system with the farm owners greatly influences the workers' income. The workers also experience a risk of production and price instability, which is such a link in the production process. It becomes a problem for the workers because of the production and price instability result in the uncertainties about their income. Out of the three factors, in the end, it creates such a pressure for the farm workers themselves, especially to fulfill the daily needs of the household and to survive. Therefore, one way that farm workers can use is by implementing a coping strategy.

Researches on coping strategy had been carried out by Utami et al. (2014), Suparman et al. (2008), Anggrayni et al. (2017), Mardy et al. (2018). They discussed various problems such as climate change and the diversification done by the community to meet their food needs. These researches are still open to conduct a research in terms of income or income coping strategies and not only limited to meeting food needs.

The income coping strategy has been investigated by several studies, namely Wasito et al. (2012), Astuti et al. (2015), and Oscar et al. (2018). These studies looked at the income coping strategies by farm workers, poor households, farmer households, tenant farmer households and urban farming households as the analysis units. There has been no research on income coping strategies related to farm workers, especially seaweed farm workers. In terms of the coping strategies, both income and food coping strategies can be done by using these three strategies, namely active, passive and networking strategy (Wasito et al., 2012; Astuti et

al., 2015; Utami et al., 2014; Suparman et al., 2008; Anggrayni et al., 2017; Oscar et al., 2018).

Brebes Regency is one of the biggest centers of Gracilaria sp. in the waters of Java Island after the West Java. It can be seen from the farming area and the number of farmers. The cultivation location is in five sub-districts, namely Brebes, Bulakamba, Tanjung, Wanasari and Losari Districts. The largest producer and developer location is located in the Brebes District, mainly in the Randusanga Wetan and Kulon Village, located along the road to Randusanga Indah Beach. The land area of the farm reaches 1.190 ha and the type of the brackish water (fresh) is also suitable for planting seaweed.

The potential for seaweed farming cultivation produced in Brebes Regency shows a dynamic increase in the data, as shown in the news stating that from the total farming area of 12.748 ha, one third of the area (4.350 ha) is the area for seaweed cultivation (Afif, 2013). In addition to the farming area, the number of farmers which reached more than 400 people from 5 sub-districts in Brebes Regency made the production of seaweed and the variety of products produced from seaweed-based material increased in numbers. Since 2013, Gracilaria sp. even becomes the Brebes' leading commodity after red onion and salted eggs which have already become the leading commodities.

Based on the background and the problems raised, this study aims to look at the coping strategies carried out by the seaweed farming workers in a case study in Randusanga Wetan and Kulon Villages in facing the pressures from the risk of employment status, production uncertainty and price instability.

METHOD

This research was conducted using qualitative methods with a descriptive approach. The condition of the farm, daily activities of the farming workers and the seaweed production process were described and explored deeper. This research was conducted in the farming area in Randusanga Wetan and Kulon Village, Brebes District, Brebes Regency, Central Java Province.

The data collection was carried out by using three techniques, namely observation, interview and documentation study using a mobile phone and research note sheets. The observations were carried out by observing the behavior, individual or household activities at the research site directly and the researchers could be involved in various roles, both as non-participants and intact participants (Creswell, 2010). The interviews were conducted to key informants by directly asking open questions, so that the answers were obtained with in-depth information (in-depth interviews). The key informants in this study were farm workers who had employers and worked on ponds owned by farmer and did not have their own farms. Other sources of

information were obtained from the farm owners and management of the "Gracilaria" farmer group. The data from the in-depth interviews were changed to transcripts to make it easier to categorize according to the theme similarity. After doing the categorization, a coding was done to organize the data which were related to one another. Based on the organized themes, it was then analyzed starting from the main theme of the research which was the coping strategy.

RESULTS

The seaweed farming cultivation in Brebes was originated from losses caused by the cultivation of milkfish and shrimp. Initially, Randusanga Village was once known as the largest shrimp producer in the 1980-1990 era. However, in 2000, the cultivation of milkfish and natural shrimp by farmers experienced a deterioration caused by several problems (Heryanto, 2015). For example, the time of harvesting milkfish which was relatively long , shrimps that were susceptible to viruses and especially when tidal water damaged the farms and flooded the village, thousands of milkfish and shrimp were frequently lost by coastal flood (Kustiasih, 2012; Afif, 2013). At some time, the farms were left empty without any activity . As a result, many farm workers experienced losses and were not able to generate income from the results of their work on the farmers' land.

In fact, after the occurrence of huge losses experienced, seaweed was increasingly becoming a top priority by farm workers to be cultivated. The reason was that seaweed cultivation was considered to be more profitable for farm workers for several reasons. First, seaweed would not be carried away by water when the tide was high because it was located floating near the bottom of the farm surface (Kustiasih, 2012). Moreover, the intercropping system produced mutualism symbiosis among each other, had a positive effect on the quality of the coastal environment because seaweed had a role as a biofilter and could significantly reduce the risk of white spot attack on shrimp farming (Yusuf, 2014; Mulatsih, 2015; Bappebti, 2016). In addition, seaweed could also be a regional leading commodity and improve the economy of the community (Asriany, 2014; Putri et al., 2014; Tutupary and Maatoke, 2014; Sugiyatno et al., 2013; Fadli et al., 2018), so that seaweed cultivation which initially only became a side job turned out to be the main job of the farm workers in Randusanga Village.

The cultivation of seaweed in farms by local residents simultaneously began in 2003-2004. It was the idea of some experts who had concerns about farming cultivation, namely Tabrani as chairman, Kusnandar and Budi Kurniawan as members (Parjiyono, 2013). The three were lecturers at the Faculty of Fisheries and Marine Sciences from Pancasakti University (UPS) Tegal. The idea was to test the transition of fish and shrimp farms to seaweed farms cultivation by distributing free Gracilaria sp. seaweed seeds to all farmers in Randusanga Wetan and Kulon Villages. In the end, the trials were carried out successfully and proceeded using the intercropping system. By using this system, the land productivity could be optimized properly. The Minister of Maritime Affairs and Fisheries, Mrs. Susi Pudjiastuti, in the 2015 Press Release, said that seaweed cultivation was beneficial because it was in accordance with the three pillars of development, namely Prosperity, Sustainability and Sovereignty, which are derivatives of the President of Indonesia's Vision and Mission (Nawa Cita).

In the process of producing Gracilaria sp. seaweed in Randusanga Village, the one who worked on it was not a farmer but a farm worker. 'Farmer' here had a different meaning from the general meaning of farmers. In general, 'farmers' referred to people who work in rice fields, fields and gardens, and were usually known as the owners and the workers of their own fields. Meanwhile, a 'farmer' in Randusanga Village referred to a person who owns the farm, and most of them do not work on their own farm. 'Farm workers' were those who work on the farm owned by farmers and usually they did not have their own farms. Here, the responsibility of the farm workers was greater than that the farmers', because they had to do all the production processes from the start until the products were ready for sale. The working time of the farm workers also run from morning to evening. Meanwhile, the farmer's responsibility was only as a foreman for his farm workers and implementing a profit-sharing as the work system between the farmers and the farm workers when the harvest time was over. The production process of the farm workers was also supported by the presence of the "Gracilaria" Farmers Group.

The development of seaweed production produced by the farm workers in Randusanga Village was quite volatile. The average production produced each year reached 500-700 tons. During the dry season, when the weather was good enough, the seaweed harvest could increase. The cold farm water conditions supported the growth of the seaweed and the drying process might only take 6-8 hours. In addition, the harvest could be carried out within half a month or 45 days . However, the amount of harvest could decrease during the rainy season. The main cause was that the seaweed did not get enough sunlight. As a result, the drying process could reach 7 days. Therefore, the seaweed might rot and damaged.

The applicable selling price of dry seaweed per kg in Randusanga Village followed the applicable price in the central market and it was fluctuative. The price fluctuations were influenced by the availability of seaweed stocks on the international market. When there were many seaweed stocks and many supplier countries in the international market, the selling price

of seaweed per kg tended to decrease (Bappebti, 2016). The world seaweed prices affected the prices at the local level (Sukoco, 2016). Thus, farm workers could not determine their own prices and moreover, they could not determine the desired amount of income. It was also because the production of the farm workers in the "Gracilaria" farmer group was also distributed to big cities, such as Jakarta, at PT. Agarindo, Malang, Pacitan to Pasuruan.

As a main job, the farm workers spent most of their time in the farms owned by the farmers and carried out the production process from 6 a.m. to 5 p.m. The production process started from the initial stage, namely preparation stage. The only thing needed to be prepared is the Gracilaria sp. seaweed seeds and the farm condition which should be ready for planting the seaweed. The water condition which was clear and cold made a good initial growth of the seaweed .

Within two months, the seaweed could be harvested. A harvest period could be done for 7-15 days (depending on the number of the farm workers in a farm area). The farm workers harvested in the morning around 8 a.m. by breaking down (*gebur*) and carrying simple equipment in the form of kandi , a 1.5 liter empty mineral water bottle that had been tied to the rope as a buoy. The harvested seaweed was then left to stand for 24 hours to remove the water contained in the grass.

The drying process - It took about 10 hours after being left for 24 hours. The farm workers dried the seaweed at 8 a.m. and during the day, the farm workers turned the seaweed to dry evenly. The seaweed was arranged neatly on the waring sheets that had been prepared in advance on an open land and roadside.

After the drying process, the seaweed was then taken to be packaged using a 50 kg plastic roll (bagor) sack. The next process was to weigh them on the hanging scales and the weight of each seaweed sack could exceed the normal weight of 50 kg or less, depending on the way the farm workers putting in the seaweed. Finally, the farm workers must press each sack with a press. With two press tools available, the farm workers could press 1.5 tons of seaweed a day. When everything was neat, the seaweed was double-wrapped in the same sack and it was neatly sewn using raffia straps to make it easier for the farm workers to move them to a storage area next to the warehouse. The last three activities were carried out entirely in the "Gracilaria" Warehouse to be monitored by the person in charge.

The work system between the farmers and the farm workers was a profit-sharing system. The profit-sharing system was obtained from each end of weighed seaweed harvest in the "Gracilaria" warehouse by the farm workers, then the money was given to the farmers for further distribution by a ratio of 60:40, where the percentage for the farm workers was smaller than the farmers'. The profit-sharing system here also emphasized that the responsibility was not fully owned by the farm

workers, but the farmers were still responsible for all process. However, the farm workers, in this case, knew all the information about how to cultivate milkfish, natural shrimp and especially seaweed in the farmers' farms from the production process, starting by spreading the seeds to the harvesting stage.

The amount of dried seaweed per kg obtained by the farm workers in one harvest was then calculated to determine the amount of the income they earned. By using the normal price in the market which was Rp 4,500, assuming that the production for 1 ha of a farm area in the two-month harvest period was an average of 3 tons of dried seaweed. The calculation was the total revenue = quantity x price. Therefore, the revenue for two months was 3,000 kg x Rp 4,500 = Rp 13,500,000 and the profit-sharing for farmers was Rp 2,500, and their net income was 3,000 kg x Rp 2,500 = Rp 7,500,000. While the profit-sharing for the farm workers was Rp 2,000, and their net income was 3,000 kg x Rp 2,000 = Rp 6,000,000 .

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The status of the seaweed farm workers in Randusanga Wetan and Kulon villages are as the ones who plant, harvest, dry, and pack the seaweed. The definition of farm workers here was different from the general meaning of hired laborers. The farm workers earned their income from how much dry seaweed they could produce every day in the farms owned by the farmers where they worked. While the hired laborers were those who worked and earned a fixed income in accordance with a daily or monthly count.

Their status as the farm workers required them to work harder than other hired laborers. Apart from the fact that their income could not be fixed, they were also very dependent on the results of the seaweed in the farms that could be harvested. With the status of a farm worker, the income depended on the work results. Sometimes, the farm workers got a lot of seaweed harvest, but the results could also be small. Thus, this would be different from the workers whose income was fixed and depended on the agreement with the place where they worked.

The farm workers generally received 40 percent of the total gross income that the farmer received as a result

profit-sharing system. From this profit-sharing system, the farm workers could not determine the amount of income received. Meanwhile, they also had to divide their income into two parts, namely for the operational costs and the rest to fulfill their daily needs.

The proportion of the profit-sharing between the farm workers and the farmers also fluctuated. Sometimes, it increased and also decreased. The determining factor was the price of the seaweed and the agreements with the farmers. Therefore, the farm workers' life was very dependent on the work of the farmers as they were the ones providing their main jobs.

The number of the farm workers was ways bigger than the number of the farmers. This resulted in a competition between the seaweed farm workers to get employers. In general, the farm workers already had a frequent or permanent employer. This relationship had been formed not only because of economic factors, but also because of family factors. However, when there were crop failures for certain farmers, it resulted in the farm workers, who usually worked for these farmers, to look for other farmers. Therefore, this triggered a competition.

The farm workers could not get loans easily when their income was insufficient. The "Gracilaria" Farmers Group in Randusanga Wetan and Kulon Villages were often referred as a source of loans. However, loans could only be given to farmers with a certain amount of money on credit where the return came from the deductions for the next crop .

On the other hand, the farm workers could not get loans because they were considered at a high risk of bad credit. They could only get direct capital in the form of wet seaweed (seeds) for free from the Farmers Groups. It was hoped that the farm workers could work on the seeds they received to be planted in empty farms or a farmer.

The amount of seaweed in a single harvest depended on the natural conditions and the development of the seaweed itself. This was the main factor influencing the uncertainty of the seaweed production. Weather, high tides and the quality of seaweed determined the high and low seaweed production by the farm workers.

If the seaweed are going to be harvested, they must be observed first. It can be seen from the seaweed development, whether it is good or not. If the seaweed is good, it is ready to be harvested. If not, the harvest will be delayed.

A supportive weather, referred to when the seaweed got enough sunlight every day. That way, the seaweed quality was getting better because the jelly contained in the seaweed would increase. A good quality seaweed could also be obtained from natural conditions (both water and air around the farm) and through intercropping with milkfish and shrimp. When the water was clear water and the air was cool, the jelly would increase. If the amount of milkfish and shrimp was sufficient in one farm area, then the seaweed growth will also be good too.

On the other hand, the seaweed production below 50 kg was caused by the presence of competitive factors among other farm workers, such as rainy season, high tide and poor quality seaweed.

The large number of farm workers in a 1 ha farm area resulted in a competition among the farm workers. Usually, one farm area was 1 ha, and there were 2-3 farm workers. However, the fact showed that in a unit of a farm area was once harvested by 4-5 farm workers. It indicated that the probability of getting as much seaweed as possible for themselves became even lower.

If the seaweed quality is bad, one farm can be harvested by many workers, reaching 4-5 people. This happened because the lives of the farm workers did depend on the seaweed. Therefore, even though the seaweed production was low and the income was decreased as they had to share with other farm workers, they kept doing it.

Rainy season could damage the seaweed quality. The rainy season reduced the sunlight frequency during the drying process. If the seaweed did not get enough sunlight, this would result in longer drying time. If the seaweed did not dry out immediately, then the seaweed would rot quickly. In the end, the results would be a little or even, it would result in a crop failure. As a result, the final scales of seaweed could be reduced to none at all.

Peteruhan, It was a term for a flash flood in Randusanga Wetan and Kulon Villages. *Peteruhan* was a condition where the high tide sea water in Randusanga Beach made the flash flood entered the farm area, residential housings and roads along the village. The *peteruhan* could damage the seaweed quality and often occured from the beginning of April to mid-July. The damage in the seaweed quality was caused by the entry of fresh water mixed with tidal sea water. This also risked a crop failure .

The harvest was once failed because of the last *peteruhan* in early February 2017. It was big because of a mix of fresh water. The farm in the south of the village was all destroyed and failed. There was a fact that the occurrence of the *peteruhan* often came at any time, making the seaweed production decreased and even a crop failure.

Based on the natural factors described earlier, the seaweed quality also determined whether the seaweed could be harvested by workers or not. If the seaweed quality was poor, the seaweed got rotten faster and turned white, so it could not be sold. Working by yourself does not generate a big result. Within a day, it can reach 50, then 63, and the next day can reach 60. If it is unlucky, the seaweed was not good, and within a day, we can only get 40 kg.

The seaweed quality affected the amount of seaweed shrinkage from wet to dry. A good quality seaweed

shrinked up to 90 percent. For every a 50-kg-sugar sack containing wet seaweed, on average, it could produce 5 kg of dried seaweed with containing a lot of jelly. The workers could produce an average of 10 wet seaweed sacks of various weight (more than 50 kg) because they were mixed with water and sumpil . The highest production of dried seaweed could reach 80 kg or more, which was equal to 16-17 wet seaweed sacks. However, when the quality of seaweed was poor, the shrinkage could reach 92-94 percent. That indicated that the weight of dried seaweed would drop to 4 kg or even 3 kg per sack. The dried seaweed produced from 10 wet seaweed sacks was only 40 kg.

Of all the determinants of high and low seaweed production, the natural conditions and the development of seaweed were not easily predicted. Therefore, this became a production uncertainty for seaweed farm workers in Randusanga Wetan and Kulon Villages.

Price became the benchmark for the farmers and the farm workers to earn their income beside the production. However, the pricing was done by the markets where the sellers and buyers could not determine. Moreover, the farmers and the farm workers in Randusanga Wetan and Kulon Villages, where they were not the price makers, sellers and marketers. The development of the seaweed selling price can be seen in Figure 1, where the price per kg experiences a fairly fluctuative movement.

In 2008, the price of dried seaweed was Rp 3,000/kg. This price was the starting price where the seaweed cultivation in the farms of Randusanga Village was began to be sought after by the farmers and the farm workers and the "Gracilaria" Farmer Group started to actively run. In 2009, the seaweed grass increased by 16.67 percent. This showed that the market began to develop. In 2010 to 2012, the price increased again up to 185 percent. The high price increase was due to the increase in Indonesian seaweed exports, aiming Germany, Hong Kong, Chile and Philippines (Sahat, 2013). The market expansion showed that there was a lot of demand for seaweed in Indonesia, especially Gracilaria sp. However, in 2013, the seaweed price decreased to 36.3 percent, and the price in 2014 was the lowest price for dried seaweed/kg. This decline occurred because the stock availability in the international market was still sufficient. Therefore, when Indonesia increased the supply while its demand was quite constant, it would affect the seaweed price at the local level. Then, in 2015-2016, the resale price increased 50 percent to Rp 4.500. The latest data in March 2017 showed that the prices increased slightly by 28 percent from Rp 4,500 to Rp 5,800.

The fluctuations in the dried seaweed price affected the amount of profit-sharing between the farmers and the farm workers. It can be seen from Figure 2 that the proportion of profit-sharing for the farmers is more volatile than the farm workers'. When the price increases beyond the normal price, the farm workers can only get an average of Rp 2,500 per kg. However, when the price drops, the amount of profit-sharing received by the farm workers also decreases.

From Figure 2, the researchers conducted a simple calculation to show the percentage comparison of the profit-sharing between the farm workers and the farmers from the price of the dry seaweed/kg which experienced fluctuations. In 2005, the normal price was Rp 4.500. In 2007, the price was above normal reaching Rp 5,800, and in 2014, the price was below normal reaching Rp 3,000. The whole calculation was using the assumption that the seaweed production by normal farm workers was 50 kg/day. The calculation results can be seen in Figure 3.

Nominally, in the normal price in 2015, the farm workers got a profit-sharing proportion of Rp 2,000/kg of dried seaweed and they earned Rp 100,000. The amount of money was sufficient to meet their operational costs and daily needs. In this case, the operational costs for the farm workers were Rp 8,750/day and the cost to meet their daily needs was Rp 80,000. Especially in 2017, when the price was above normal, the profit-sharing proportion for the farm workers reached Rp 2,500/kg of dried seaweed. The farm workers earned Rp 125,000, and it was considered more than enough. However, in 2014 when the price was below normal, the profit-sharing proportion for the farm workers reached Rp 1,500 and they only got Rp 75,000. Here, the farm workers were considered unable to meet their operational costs, and it was not enough to meet their daily needs. This price was also the same as in 2008, where at that time, it was the initial price of cultivation in Randusanga Village. Yet, the difference was in the proportion of the results.

Based on Figure 4, by using the basis of normal prices in 2015-2016, it is seen that the movement of the proportion between the farmers and the farm workers is in the opposite direction. When the price of dry seaweed/kg changes from below normal in 2014 to normal prices in 2015-2016 or changes from normal prices to normal prices in 2017, the farmers' proportion seems to always increase. On the contrary, when the price changes above normal in 2017 to normal prices in 2015-2016 or a change from normal prices to below normal prices in 2014, the farm workers' proportion is increasing. Then, the proportion movement in 2010-2012 is different from the movement in 2014-2017 because the price of dried seaweed/kg is above the normal price and does not change in level.

The proportion movement in the opposite direction became such a problem for the farm workers because the proportion of profit-sharing increased precisely when the price of dried seaweed/kg decreased. While what was expected by the farm workers was that they could receive a high profit sharing proportion when the price of seaweed/kg increased. In fact, the farm workers' life also depended on the price of the seaweed/kg because

it affected their income to meet their daily needs and operational costs for their main job.

DISCUSSION

According to Carver (1989), forms of coping strategies are differentiated into adaptive strategies and maladaptive coping strategies. The difference between the two lies in the problem solving. Adaptive coping, stressors can be dealt with or dealt with effectively, positively and make better contributions. The process of overcoming the problem is carried out by direct action as a gradual response effort. Specifically differentiated into adaptive strategies with active, passive coping and network use in the process of overcoming problem complexity.

Active strategy is a form of strategy that optimizes all the potential of the family to increase income because of the growing demands of life (Oscar, Mara, & Nainggolan, 2018). Various forms of strategies that are built include: doing their own activities or doing a division of family work, looking for side jobs, and utilizing the potential of the forest to increase income. The passive strategy undertaken is a model of emphasis on subsistence patterns by prioritizing consumption needs rather than socio-economic needs. Emphasis or tightening of expenditure is a passive strategy, namely reducing family expenses (eg expenses for clothing, food, social costs, transportation, health, education, and other daily needs). In addition to carrying out active strategies and passive strategies, people also use kinship as a network to borrow money when economic needs are urgent while finance is no longer sufficient to meet the needs of their families. Borrowing money is one that is carried out by the community when there is an economic pressure such as the reduced income of farmers so that it is no longer sufficient to meet their daily needs. Borrowing money from neighbors is not based on the interest money system, but only with trust capital.

In dealing with the risks involved, farm workers use several strategies to keep meeting their needs and survive, including:

It was done by relying on trust, good relations and openness with the farmers as employers. This form could also be called as a social capital coping strategy. When the selling price of seaweed / kg fell, the profit-sharing proportion between the farm workers and the farmers was 50:50. This determination was the result of negotiations between the farm workers, the farmers and Mr. Tabrani as the head of the "Gracilaria" Farmers Group who were also responsible for these problems. From this negotiation, it also indicated that in this cultivation business, it was not a business-oriented, but rather a family-oriented business.

In the end, there was a mutual cooperation between the farm workers and the farmers. The farm workers were benefitted because they had a cultural capital in the form of skills that could not be replaced by just anyone. Further, the farmers as the owners of the economic capital in the form of farms and seaweed could also maximize the existing resources by employing the farm workers.

In line with the capital theory, according to Pierre Bordieu (Adib, 2012), the ownership of habitus and good capital could influence the social realm of the society. The farm workers and the farmers in Randusanga Village also had their own habitus and capital. This made the activities in the social sphere (farm area) run well because of the existence of the good social capital.

With this kind of negotiation, the position in the work between the farm workers and the farmers became balanced. It indicated that it was different with other jobs where they differentiated the capital owner as the boss and the workers were only the subordinates. Also, with this kind of negotiation, the transactions between the farm workers and the farmers resulting in the profit-sharing proportion became 50:50. It could be said that it was considered as a humane transaction in the farmers' economic morale based on the theory of James C. Scoot (Geertz, 1983). The patron-client bond that occured, where the farmers as the patrons and the farm workers as the clients, actually created the distribution of wealth. Both had a reciprocal relationship, where in fact, the farmers provided freedom to manage their seaweed farms for the farm workers with a humane profit-sharing. Therefore, the workers also gave their best as their responsibility.

This method was included in the form of coping strategies which were commonly carried out by individuals or households. However, what actually happened to the farm workers' households in Randusanga Village was different. When there was a farm worker's household who had a debt to other farm worker' households, the return was from the sincerity of each farm worker's household. Taking turns in borrowing some money also made them being not reluctant to help each other. The family relations with a high level of trust among the farm workers' household made the problem of financial difficulties to meet daily needs could be resolved properly.

Borrowing money from the neighbors was one way of coping with networking strategies carried out when they were under the pressure of the economic conditions. This finding was also similar to the researches by Wasito et al. (2012), Astuti et al. (2015), Utami et al. (2014) and Oscar et al. (2018). The difference was that Oscar et al (2018) found that debts were also made to institutions, cooperatives and moneylenders. The impact was that the trust in the fellow relatives was more oriented to the kinship and feelings of the brotherhood, while trust was formed with institutions based on profit principles.

The farm workers could get additional income when the harvested seaweed production was less and at one

time unemployed. With a capital of Rp 10.000 for 1 kg of petek fishes as the food for natural crabs, the farm workers could fish freely on the farms owned by the farmers. With the selling price of natural crabs of Rp 80.000 – Rp 100.000 / kg, the farm workers who got more than 1 kg and were able to sell them, the money could cover a shortage of income for 1 day.

In an effort to increase their income, natural crab fishing activities carried out by the farm workers in the farmers' farms were in line with the coping strategies which were also found in other studies. Among them were Astuti et al (2015) who found the double income pattern as a side job to get additional income, Wasito et al (2012) who found additional work and livestock activities or additional income according to their expertise.

The purpose of the farm workers to involve their wives to help during the production process was to eliminate the possibility of asking for assistance to other farm workers. Therefore, they did not need to share their income with other farm workers from the profit-sharing with the farmers. In addition to shorten the time of work, the production results obtained would also be more.

When the farm workers were unemployed, it was common for the farmers to still ask for help from the farm workers to sell the milkfish and shrimp. Therefore, this could also become the additional income for the farm workers.

Based on the coping strategy in relation to this network, its social functioning could be seen from the family cooperation between the farm workers, the farmers and the "Gracilaria" Farmers Group in Randusanga Wetan and Kulon Villages. It was in line with Raharjo's (2015) thoughts on social functioning. He said that by coping strategy, it indicated that the individuals or households implement several ways to meet their needs and carry out their life's tasks.

In fact, most of the seaweed cultivation in Randusanga Village was now not intercropping with milkfish. Therefore, if the seaweed growth was not good or had a problem, then the intercropping was done. Its function was to avoid the existence of soil moss and klekap . This traditional way could easily clear the farm water, so that the seaweed growth was getting better.

When the amount of seaweed production produced by the farm workers was relatively low, this was the form of coping strategy which was carried out. Thus, it could cover the amount of seaweed production desired by the farm workers in one harvest time.

It was used by the farm workers to fix the farm barriers (dikes). The aim was to minimize the mixing of river water with sea water and maintain the salinity of the farm water. As a result, the seaweed quality was getting better, and the seaweed produced were more numerous and affecting the scales to be heavier.

Based on the coping strategy with an anticipation of the production processes by the farm workers, the view of Suharto (2002) has the same understanding as what happened to the farm workers in Randusanga Village. The point referred to the ability of the individuals or the households to utilize the existing resources. The simple farm workers' life led them to think creatively, using their abilities to overcome problems in their main job. In fact, they did not become a passive object who kept silent and surrendered to the situation.

The farmers' economic morale theory according to Scott (1983), it was stated that the nature of the farmers tended to avoid risk and it was in line with the form of coping strategy carried out by the farm workers in Randusanga village, where by anticipating the production process, it could reduce the risk of uncertainty in the production.

In the previous studies, the coping strategy was carried out with three strategies, namely active, passive and networking strategies (Wasito et al., 2012; Astuti et al., 2015; Utami et al., 2014; Suparman et al., 2008; Anggrayni et al., 2017; Oscar et al., 2018). The coping strategies done by the seaweed farm workers were limited only to two strategies, namely active and networking strategy. With these two strategies, the farm workers could maintain the living standards so that they did not carry out the passive strategy.

CONCLUSION

The coping strategies carried out by the farm workers in facing the risk problems at their main job were to use the networking and active strategies. From the overall coping strategies carried out by the farm workers, it appeared that the coping strategies could overcome not only one problem. It indicated that the coping strategy could be done by crossing. The form of the coping strategies carried out by the farm workers were included in the type of an adaptive coping with an active coping. This meant that there were direct and real actions from the farm workers in dealing with the complexity of the problem. The factors affecting the farm workers in the coping strategies could also be considered to have a positive effect. This showed that it made it easier for them to carry out the coping strategies.

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Table 1. The Production of Marine Aquaculture in 2011-2015

Type of Commodity	Year				
	2011	2012	2013	2014	2015
Grouper	8,091	8,786	11,024	11,369	137
Snapper	2,129	2,828	2,838	2,375	2,292
Shrimp	225	488	914	202	161
Shells	48,449	17,251	29,091	44,394	37,503
Sea Cucumber	219	475	206	138	22,029
Seaweed	4,539,413	5,738,688	8,335,663	8,971,463	10,112,107
Milkfish	283	127	81	104	54
Star Pomfret	-	-	643	1,367	2,663
Others	7,019	1,094	5,811	2,833	2,978

Source: Statistics of Sea and Coastal Resource in 2017, BPS
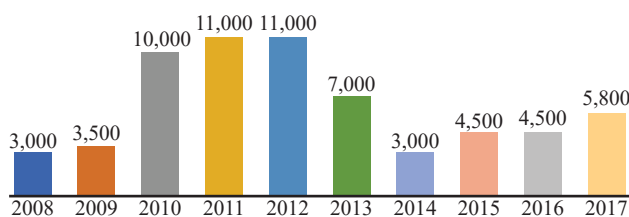
Source: Primary Data Processing, 2017

Figure 1. The Development of The Average Price of Dry Seaweed / Kg
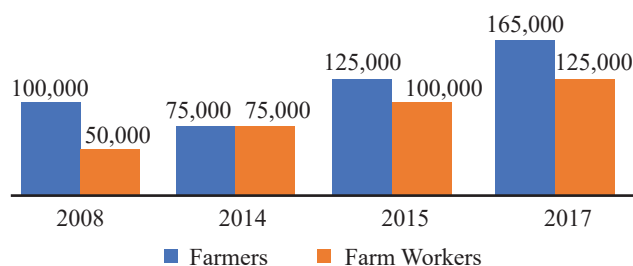
Source: Primary Data Processing, 2017

Figure 3. The Percentage Comparison of The Profit-Sharing for The Farm Workers and The Farmers

Source: Primary Data Processing, 2017

Figure 2. The Comparison of Profit-Sharing from The Development of The Average Price of Dry Seaweed (Rp)

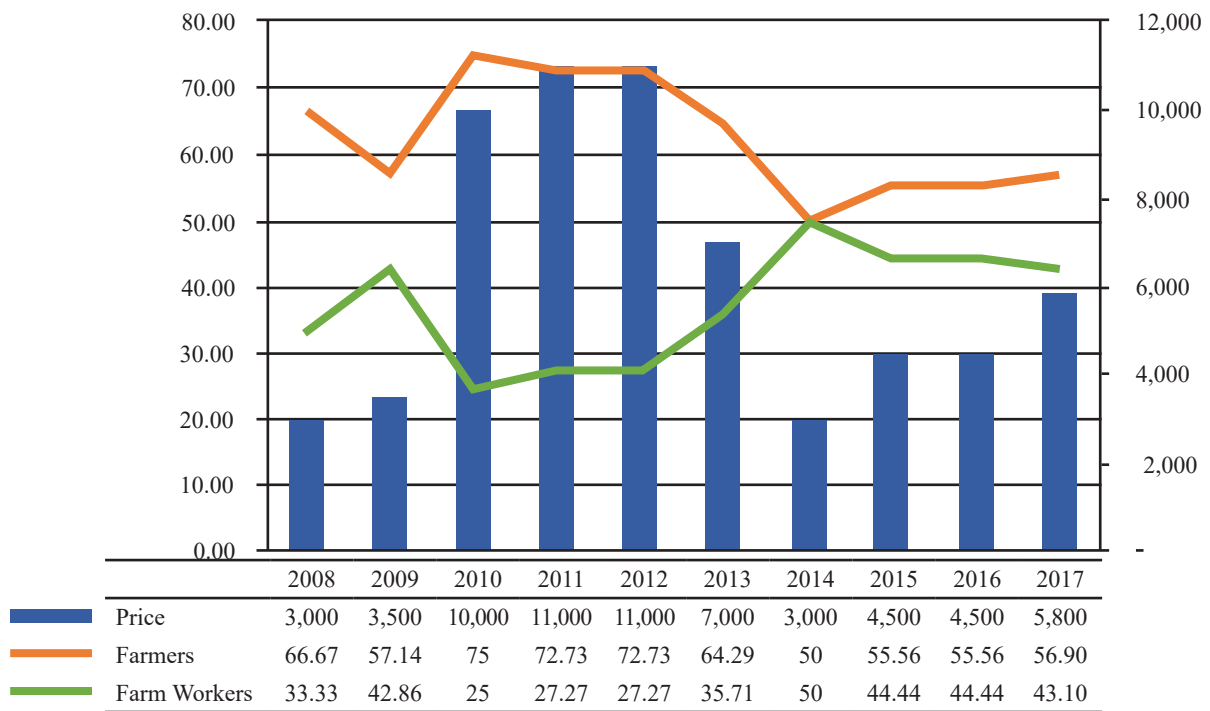|	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Price	3,000	3,500	10,000	11,000	11,000	7,000	3,000	4,500	4,500	5,800
Farmers	66.67	57.14	75	72.73	72.73	64.29	50	55.56	55.56	56.90
Farm Workers	33.33	42.86	25	27.27	27.27	35.71	50	44.44	44.44	43.10

Figure 4. The Development of The Proportion of Profit-Sharing between The Farmers and Farm Workers (%)

ENTREPRENEURSHIP ON STRATEGIES TO BUILD COMPETITIVE ADVANTAGES OF RIAU SPECIALTY FOOD PRODUCTS

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Abstract

The competitive advantage of small and medium industries (SMIs) is a concern in the preparation to face the conditions of developing and growing into large industries. This research, conducted in Riau Province with regard to competitive advantage of SMIs, can provide an overview of the real conditions in the Indonesian border region. Survey was conducted to 247 respondents of small and medium food industry managers using questionnaires. The collected data were analyzed using SEM WarpPLS analysis. The results showed that the competitive advantage of small and medium food industries in Riau Province proved to be influenced by the application of superior strategies, thus, the use of superior strategies was needed to achieve competitive advantage. An effective strategy for business managers is to build entrepreneurship of the business managers through building the ability to see market opportunities and also courage in facing competitors with various risks.

Keywords: competitive advantage; applying effective strategy; entrepreneurship

INTRODUCTION

A business manager is the spearhead in the survival, development, and advancement of a business. Maintaining a business is not an easy task, because businesses that survive are businesses that are ready to face various forms of challenges in producing products, marketing the products, and also sustaining the marketing in every time period. The survival of a business is also an achievement in managing a business, not only for growing small businesses, but also for medium and large businesses. As an example in Indonesia, based on information from Tribunpekanbaru.com, Jakarta: "Its incapability to compete in the digital era is said to be the cause of bankruptcy of PT Nyonya Meneer which was established in 1919."

The company stood for more than a century and in its time was the market leader. This case is related to competition and the changing science and knowledge, namely the internet technology. This technology is a source of havoc for large companies in the face of current global competition. A company can have achievements in business using various measures and strategies to be able to face global competition.

Business managers are also faced with problems in development. In the development phase, businesses face various problems as through the company's ability to survive, they will try to expand their marketing area, and also do everything in their power to show their identity to continue to grow and introduce various products. For companies that face various existing problems, they need to be careful in selecting the strategy that the company will use to face real conditions. For example, whether they act as followers and/or they actually have unique products and have courage in establishing themselves as market leaders.

In the growing conditions of the company, it is also an aging phase and also makes the company always needs to be prepared in advance to deal with various forms of success and continue to prepare and foster the company's heirs and prepare them. The heir of the business manager is a form of challenge for how the company can continue its business and be inherited by its heirs in the future. The problem faced

by large companies is always on the unreadiness of the successors to continue the struggle of the companies that continuously face challenges and to be ready to lead the market.

The analogies are the real conditions experienced by company managers, especially SMI companies that are currently in the period of survival. In the cycle, a small-size company that is able to survive will have the possibility to progress and develop into a medium-sized company, and a medium-sized company that is able to develop may grow into a large company and lead the market. This logic is formed in having a survival attitude from existing small entrepreneurs. It is impossible for business managers to be able to make achievements into large companies while the ability to survive in the small business phase is still difficult to gain.

The natural case is the small and industries (SMIs) in Riau Province. Since SMIs are the basis of the economy, the government's protection for them is strong enough and so as the partnership between medium and large companies and the SMIs. This condition turns the SMIs into a spoiled child who seems to only be able to suckle on their mothers. This is also stated in the Law No. 22 of 2008 concerning Micro, Small, and Medium Enterprises (MSMEs) and also strengthened by the Law No. 3 of 2014 concerning Industry and Government Regulation No. 6 of 2015 concerning the Creative Economy Agency.

All of mentioned laws are forms of support provided by the government and large companies in developing SMIs. These regulations coupled with regulations on the provision of capital support from banking service companies that provide significant contribution in building an economy based on the people.

In terms of SMIs engaging in the food sector in Riau Province, data showed that the development of business units decreased by 8% in 2012 and continued to decline in 2014 by 9.3%. This decrease in business units was followed by a decrease in employment in 2012 as much as 5% and in 2014 it dropped dramatically to 70%. However, in terms of investment and production, they continued to increase. The investment increased by 45% and production by 67% (Directorate of Industry and Trade of Riau Province, 2010, 2012, 2014).

Based on the data, the business movements of SMIs in Riau Province has led more to the use of capital rather than the use of human resources (HR). This condition is different from the 1997 and 2008 crisis where SMIs were more labor intensive rather than capital intensive. This is a fact that the policies on SMIs have changed because of the various existing challenges. However, the case of developing the SMIs is a different phenomenon. Viewed from the condition that they have a decrease in the use of human resources and more use of technology and capital, human resources need to develop their competitiveness.

Competitiveness of human resources is related to the entrepreneurial spirit. Today, the entrepreneurial spirit is a concern and a driver for a company to survive (Suhendar, 2013). On the part of the business managers, the audacity to take risks coupled with the ability to identify opportunities becomes a form of ability or competitiveness that should be possessed in order to build and achieve the effectiveness of business. In the case of the developing food industry, the Riau Province government has a strategic vision of making Riau Province a tourism development because Riau's location is in the outermost area and borders on neighboring countries and it is the entrance for neighboring countries.

The opportunities that are seen are visits by foreign tourists to Riau and since it has a variety of culinary products. These culinary products are also an attraction in the region in developing its superior products. However, the problem faced by the SMI managers in seeing these opportunities is the emergence of a variety of products from neighboring countries as a form of variation and becomes a choice for visitors of Riau. Products such as food from Malaysia, Singapore, Thailand, and China have dominated and have taken away attention from local products.

The uniqueness of local products is also experiencing various obstacles in terms of production. This can be seen from the problem of availability of raw materials and that some of them are not unique raw materials from Riau. This obstacle becomes a problem that needs attention. How to shape the uniqueness of food products as original to Riau region, and can effective strategies build unique products and whether entrepreneurship (being able to see opportunities and taking risks) can make effective strategies in dealing with product competition that varies greatly in Riau.

The model built is based on several previous research. Siregar (2015) explained that the strategy used to improve competitive advantage was through optimization of human resources. Then it is also reinforced by Suendro (2010) stating that the ability to innovate for human resources is the first step to make SMIs superior in a sustainable manner. Supranoto (2009) also stated that the ability of business managers to build a network is still not optimal and business competitiveness is still questionable.

Regarding the issue of entrepreneurship development as a resource in order to implement effective business strategies, Brouthers, K. D., Nakos, G., & Dimitratos, P. (2015) explained that through the development of entrepreneurship globally which is in seeing opportunities and the courage to try new things will have an impact on performance through the implementation of effective business strategies. Similarly, Eggers, F., Kraus, S., Hughes, M., Laraway, S., & Snycerski, S. (2013) suggested that a broader entrepreneurial orientation will open views and opportunities and in turn will have an impact to the performance of small businesses.

The audacity to try new things was discussed by Kreiser, P.M., Marino, L. D., Dickson, P., & Weaver, K. M. (2010) stating that entrepreneurs who dare to face risks in business will think of trying the most effective way of doing business. Tang, Z., & Tang, J. (2012) stated that a broad view of entrepreneurship would encourage forming the most appropriate strategy in doing business. Explained by Kraus, S., Rigtering, J. C., Hughes, M., & Hosman, V. (2012), the strengthened global views has an impact on the use of good business strategies.

Moreover, regarding the impact of the implementation of effective strategies related to the ability to build superior advantages, Machmud (2013) stated that strategies that give birth to policies in business will result in success of the SMIs and it can be carried out continuously. Djodjobo (2014) stated that business performance built from the development of entrepreneurial resources has a significant effect on competitive advantage in order to improve the uniqueness of the products by considering consumer needs. Pailis (2016) believed that the courage to take risks is a form of real effort by a business manager in order to address the success of the business to produce innovative products.

According to Islam, M. A., Khan, M. A., Obaidullah, A. Z. M., & Alam, M.S. (2011), the characteristics of entrepreneurs in small businesses who dare to take risks and are also able to read opportunities and creative characters in developing strategies that are possible to implement will have an impact on product uniqueness. Hazlina et al. (2010) state that the competencies possessed by an entrepreneur in entrepreneurship have a strong relationship to the success of building a superior business. Similarly, Tang, Z., & Hull, C. (2012) stated that the orientation of seeing business opportunities for entrepreneurs and the strategies used had an impact on their ability to survive in small businesses.

Cassia, L., & Minola, T. (2012) stated that the growth and development of MSMEs is closely related to entrepreneurial views and the strategies used. Anderson, B. S., & Eshima, Y. (2013) also conveyed that the excellence in business is closely related to the abilities possessed by an entrepreneur. Shirokova, G., Vega, G., & Sokolova, L. (2013) affirmed that business strategy has an impact on business performance itself.

Based on the previously produced model, it can be said that there has not been any unique study on industrial products in the tourism sector. The effectiveness of the implemented strategies as well as the use of entrepreneurship variables (the ability to see opportunities and the courage to take risks to produce unique products) are also the novelty of this study.

Entrepreneurship characterizes business management development in business. According to Suryana (2008), the development of entrepreneurial spirit in the form of the character of courage to take risks and also the ability to see opportunities will be able to produce creative and innovative products in achieving success. This is reinforced by Kristanto (2009) stating that entrepreneurship is the lifeblood of the process of producing creative products in the economy. According to Zimmerer (2008), an entrepreneur becomes the basis for creating product creativity in order to achieve excellence and will be able to develop business. Suhendar (2013) states that doing what is normal is not an entrepreneur, but those who truly do what they believe are those who have entrepreneurial spirit.

According to Suryana (2008), entrepreneurial spirit is a character possessed by a business manager in the form of courage to face various possibilities of ideas in the form of strategy implementation in business. Alma (2010) states that the ability to produce creative products is the basis for an entrepreneur, and then the product is a manifestation of its effectiveness in doing business and it is also a real effort to develop human resources in looking at opportunities and also in developing courage to take risks. These are all definitions of entrepreneurship.

A similar statement was delivered by Dewanti (2008) that there are many common factors in producing innovative products, namely individual factors, environmental conditions, role models, and coordinated activities. These conditions are the basis for building entrepreneurial characteristics such as their ability to see opportunities and also their courage in making them happen. Entrepreneurship is a situational condition and it continues to shift and it is a characteristic of life process. She elaborates that there are several characteristics of entrepreneurial power skills, including: 1) the ability to manage risk; 2) the ability to select businesses according to their preferences; 3) the ability to manage time; 4) the ability to manage inner strength; 5) the ability to utilize feedback; 6) the ability to increase knowledge; 7) the ability to communicate and convince others; 8) mastery of creativity/innovation techniques; and 9) achievement oriented. Frinces (2011) adds the ability to calculate quickly and precisely the beneficial possibilities of the exploitation of the potentials, resources, and opportunities.

Based on the aforementioned opinions about entrepreneurship, the focus of this research is the ability to manage risk and the ability to calculate quickly and precisely the likelihood benefits of exploiting the potentials, resources, and opportunities in the form of being able to see opportunities.

The ability to see opportunities in this case is the small business managers' ability to see existing opportunities, capture new opportunities, and direct efforts towards the opportunities. The elements include: seeing opportunities, and capturing and realizing the opportunities.

The audacity to take risks is the business managers'

courage in starting a business quickly and also readiness to face the possibility of failure, yet still learning from the experienced failures. Therefore, the element of courage to take this risk includes: realizing business ideas without too much thinking; readiness to face failure; and effort to mend failures.

Then on the subject of business effectiveness strategies, Wheelen, et. al. (2010) states that a success in business cannot be separated from the important role of policy. A wise decision making by considering many factors both internal and external will help a business achieve the effectiveness of its business performance, thus excellence in the form of product innovation will be realized. Similarly, Wahab (2012) explains that a results-oriented business policy should consider many things so that policy outcomes are more effective.

Based on the concept of the strategy that is associated with effectiveness in business management, then clearly a strategy is a method used in order to achieve desired goals. In this research, strategy is defined as the effectiveness in managing business.

Effectiveness is the maximized level of use of organizational resources (labor, money, and technology) in order to increase the yield of each unit of resources. The elements include: the use of labor, budget, and technology.

Competitive advantage is the unique position of an organization in developing competitiveness through patterns of resource deployment. The indicators of business excellence include product excellence, price excellence, service excellence, and innovation excellence. Zimmerer (2008) suggests that excellence can be realized through the realization of creativity in making product innovation. Therefore, it can be said that this business excellence is seen from the perspective of uniqueness of the products.

Uniqueness of the resources means that the products do not yet exist in other regions, and if they do, it would still be different and contain their own uniqueness. The elements include: taste, packaging, raw materials, and manufacturing process.

METHODS

In this article, survey was carried out and the samples were taken from the population of 650 SMI managers of food products in Riau Province spread over ten regencies/cities namely Bengkalis, Siak, Rokan Hilir, Indragiri Hilir, Pelalawan, Islands Meranti, Taluk Kuantan and Kampar Regencies, and Pekanbaru and Dumai Cities. Whereas, Indragiri Hulu and Rokan Hulu Regencies were not included in the list of areas that have unique souvenir products and the regencies were represented by other regencies, namely Indragiri Hulu was represented by Indragiri Hilir and Rokan Hulu was represented by Rokan Hilir. The samples were 247 people and

the number was obtained using the Taro Yamane formula with 5% significance level. The sampling technique used was cluster proportional random sampling technique. This cluster technique is based on the type of souvenir products produced in each Regency/City and taken proportionally according to the number of distributions found in each region and random sampling was taken from the distribution of populations in the area. The variables in this research include competitive advantage (*unik_pro*), the implementation of effective strategies (*efek_us*), entrepreneurship (*peluang*) and risk taking (*brani_ri*). The data collection instrument was a questionnaire compiled based on the operationalization of research variables using variables of opportunity and the risk taking as independent variables. The business effectiveness variable is the intervening variable and the variability of product uniqueness as a form of competitive advantage is the dependent variable. The data processing technique was a quantitative technique namely Structural Equation Modeling (SEM) analysis using WarpPLS program.

RESULTS

Based on the results of the questionnaire distributed to 247 respondents of the food SMI managers in Riau Province, the respondents have several characteristics. In terms of the length of time running the business, 57% of respondents had run the business for less than 10 years. Based on level of education, 63% had secondary school education. Based on partnership, 86% of the business managers had partnered for less than 10 years. The data shows that the respondents in this research were business managers who were still relatively young, had secondary education, had a partnership with both medium and large companies through the Corporate Social Responsibility (CSR) program, and had partnered with local governments through coaching programs from the government.

The competitive advantage (*unik_pro*) variable is described as products that do not yet exist in other areas and if they do exist, they are different and have their own uniqueness. In the four indicators, the average score was 3.5, which was in the good category, with the highest indicator being uniqueness of taste, while the lowest indicator being product packaging. The effective strategy implementation variable (*efek_us*) is the maximum usage level of business resources (labor, money, and technology) in order to increase the yield of each unit of resources. In the three indicators used, it was found that the average score was 3.3, which was in the moderate category, with the highest indicator being the use of labor while the lowest indicator being the use of technology. Moreover, the entrepreneurship (*peluang*) variable in this case is the small business managers who see opportunities,

seizes new opportunities and directs the business towards the opportunities. In the three indicators, the average score was 3.45, which was in the good category, with and the highest indicator being in the ability to see opportunities while the lowest indicator being the ability to realize opportunities. Finally, in the entrepreneurship trait of having the courage to take risks (*brani_ri*), which is the courage that the business managers have in starting a business quickly and their readiness to face the possibility of failure, but still learns from the experiences of failures. The indicators used were three indicators with an average score of 3.2, which was in the moderate category with the highest indicator being ready to face failure while the lowest being not ready to face failure.

The research data was tested for validity, reliability, and normality tests. The results of the validity test showed that the questionnaire about the competitive advantage variable (*unik_pro*) with four indicators, the implementation of effective strategy variable (*efek_us*) with three indicators, the entrepreneurship variable (*peluang*) with three indicators, and risk taking courage (*brani_ri*) with three variables consisting of 13 indicators were declared valid because the rcount value was greater than the rcritical value of 0.300. While in the reliability test, the reliability coefficient of the research instrument was greater than 0.600 and exceeds the standard, which means that the instrument (questionnaire) used was valid and reliable. From the normality test, it was found that the Asymp value obtained from the calculation results for the *peluang* = 0.227; *brani_ri* = 0.064; *efek_us* = 0.062, and *unik_pro* = 0.066, which are greater than the value of the significance level of 0.05, hence, the sample data comes from a population that are normally distributed.

Feasibility assessment of questionnaires and research data and description of each research variable were carried out. The data were then analyzed and tested for hypotheses based on SEM using WarpPLS. The results of the full models are presented in Figure 1.
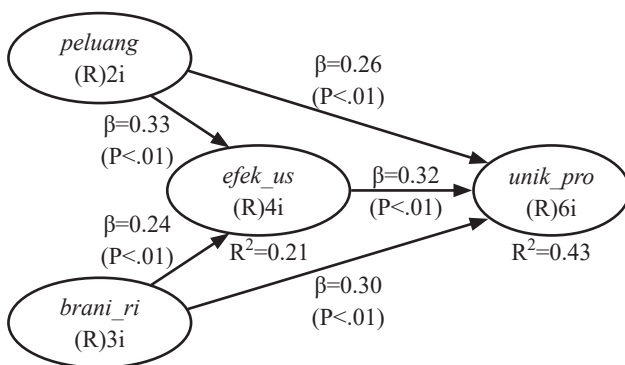

Figure 1. Full Model of the Influence of Entrepreneurship on Strategies for Building Competitive Advantage

Regarding the value of each relationship of all research variables, they had a close relationship between one and another, and each coefficient showed the influence of independent variables on the dependent variable. From the data, it can be seen that the competitive advantage seen from the uniqueness of food products in Riau was indicated to be influenced by the manager's ability to see opportunities (P<0.01). It was also influenced by the courage to take the risk of business managers in dealing with competitors from within and outside the country (P<0.01). In addition, both of these variables (ability to see opportunities and the courage to take risks) also had significant effects on effective strategies implemented by SMI business managers ((P<0.01) and (P<0.01)). Effective strategies had a significant influence on competitive advantage (P <0.01).

The influence of the ability to see opportunities for business managers was greater than the courage in taking risks (0.33: 0.24). Thus, both variables (the ability to see opportunities and the courage to take risks), contribute to effective strategy as much as 21% and to competitive advantage as much as 43%. This shows that competitive advantage was influenced by the application of effective strategies, and effective strategies was influenced by the ability to see opportunities and the courage to take risks in facing competition with similar products.

Drawn from the structural model of the influence of entrepreneurship on effective strategies of business managers of food business in Riau Province, the proposed hypothesis is as follows: Entrepreneurship in the form of the ability to see opportunities and the courage to take risks influences the implementation of effective strategies both partially and simultaneously. The results of the equation using WarPLS program are as follows:

$$\eta_1 = 0{,}33 * \xi_1 + 0{,}24 * \xi_2, + \zeta_1, R^2 = 0{,}21$$

From the equation, it is known that the variable of implementation of effective strategies in managing small industries of Riau food souvenirs was positively influenced by the ability of business managers to see opportunities with path coefficient values of 0.33, and courage to take risks at 0.24.

Of the two variables that have a positive effect on the implementation of effective strategies for food souvenirs typical of Riau, it can be seen that the most dominant influence was the ability to see opportunities rather than the courage to take risks. Simultaneously, the influence of these two variables was 21%. Meanwhile, the remaining 79% was influenced by other factors not examined in this research.

The results of the path coefficient model of entrepreneurship variable namely *peluang, brani_ri*,

and *efek_us* on *unik_pro*, are stated in the hypothesis: The ability to capture opportunities and courage to take risks as well as implementation of effective strategy influences competitive advantages both partially and simultaneously. The equation model is as follows:

$$\eta_2 = 0{,}26 * \xi_1 + 0{,}36 * \xi_2, + 0{,}32 * \eta_1 + \zeta_2, \ R^2 = 0{,}43$$

The equation shows that the ability to capture opportunities had an effect of 0.26 which means that the variable had a positive effect on competitive advantage, the courage to take risks variable at 0.36 which had a positive effect, and the effective strategy for influencing business variables at 0.32 which also had a positive effect. Of the three variables that affected competitive advantage, it is known that courage to take risks had the largest influence on competitive advantage. This means that the bolder the business manager tries new things in producing processed products that are original of the region, the more superior the products.

Of the three variables, it can be seen that the amount of contribution to competitive advantage was 43%. This shows that there were 57% of other variables that affected the competitive advantage of food products typical of Riau which were not examined in this study.

DISCUSSION

The specialty food SMIs in Riau Province are spread in the cities and regencies including Bengkalis Regency with lempok durian, Kepulauan Meranti regency with sago noodles, Indragiri Hilir Regency with amplang and banana chips, Indragiri Hulu Regency with dodol kedondong, Kuantan Singingi Regency with kelamai pulut, Kampar Regency with patin fish, Rokan Hulu Regency with palm sugar. Rokan Hilir Regency with peanut butter, Dumai City with sweet potato chips, Siak Regency bolu kemujo, Pelalawan Regency with betutu fish, and Pekanbaru City with bolu kemujo.

Seeing the condition of this strategic regency, Riau Province is visited by visitors from various regions and even overseas, both for the purpose of temporary stay, or business and tourism visits. The visits to Riau Province provided an opportunity for Riau to develop regional products as evidence and proof of visiting Riau. Seeing this opportunity, industries that provided such products have developed, ranging from souvenirs, clothing, to food. SMI is a tangible manifestation of community creativity in improving the nation's competitiveness. The products produced by SMIs contain sincerity and attention to the needs that develop in a region. Through competitive products, a product can survive and continue from time to time.

The food industry is currently an industry with high demands because food is a basic necessity and it has specific characteristics and unique Malay taste. Malay cuisine is a differentiator and has an appeal and superiority compared to other cuisines in terms of the raw materials and how to cook them.

The results indicate that competitive advantage in terms of product uniqueness was influenced both directly and indirectly by the implementation of effective strategies, the implementation of effective strategies is influenced by the ability to see opportunities and courage in facing risks in the sense of facing existing competition.

The variable of seeing at opportunities, with two statement items, was stated as quite good, which indicate that the managers of local food SMIs in Riau Province have been sufficiently good at seeing opportunities. The lowest value in this dimension was in the statement "can capture opportunities quickly in developing this business," which shows that the managers of local food SMIs in Riau Province have not been able to capture opportunities quickly. The variables of courage to take risks, with three statement items, was stated as quite good, which indicates that the managers of local food SMIs in Riau Province provides an opportunity to develop risk taking in realizing innovation. The lowest value in this dimension was in the statement "always trying to realize business ideas without thinking too much in developing this food business," which shows that the managers of local food SMIs in Riau Province have not been able to develop the ability to realize business ideas without thinking about the risks.

The effectiveness variable, with four statement items, was stated as quite good, which indicates that the managers of local food SMIs in Riau Province have been quite good at showing effectiveness on Riau local food. The lowest value in this dimension was in the statement "always effective in the use of technology in producing products," which shows that the managers of local food SMIs in Riau Province have not had adequate effective use of technology applied to local food businesses in Riau Province.

Variable of resource uniqueness, with six statement items, was stated as quite good, which indicates that the managers of local food SMIs in Riau Province have been quite good in terms of the uniqueness of the resources. The lowest value in this dimension is in the statement "the products are unique in packaging and stays up-to-date," which shows that the managers of local food SMIs in Riau Province have not been adequate in producing uniqueness in packaging which is an advantage for local food businesses in Riau Province.

The results of this research support the opinions of Siregar, E. I. (2015), Suendro, G. (2010), Supranoto, M. (2009), Machmud, S., & Sidharta, I. (2013), and Djodjobo, C. V., & Tawas, H. N. (2014). It is said that building the SMI managers' ability to see opportunities and also building the courage to take risks in developing local SMI products and implementing effective strategies can build a competitive advantage of local food products in the region.

CONCLUSIONS

Based on the results of research conducted in the field with 247 respondents, it is concluded that the competitive advantage of food SMIs in Riau Province was influenced by the application of superior strategies, and the application of superior strategies is needed to achieve competitive advantage. Moreover, the implementation of an effective strategy for business managers can be done by building entrepreneurship of the business managers through building the ability to see market opportunities and also building courage in facing competitors with various risks.

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