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### The Analysis of the Economic Growth, Minimum Wage, And Unemployment Rate to the Poverty level in East Java

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**Abstract:** This study aims to analyze the economic growth, minimum wage, and unemployment rate to the poverty level in East Java. This study is a quantitative study using the panel data. Moreover, this study uses the time series data from 2012 to 2014 and the cross-section data from 29 districts and 9 cities in East Java. The data used are the secondary data obtained from *Badan Pusat Statistik* (BPS) or the Central Bureau of Statistics. The method employed in this study is the regression analysis by using the fixed effect panel data. The research finding shows that the economic growth and the minimum wage negatively affect the poverty level, nonetheless the unemployment positively affects the poverty level. Simultaneously, the economic growth, minimum wage, and unemployment rate affect the poverty level in East Java.

**Keywords:** Economic growth, minimum wage, unemployment rate, poverty level, population growth, city, district, central bureau of statistics.

### INTRODUCTION

Poverty is a complex and globalized problem in many countries, even it becomes a main topic which is able to raise a lot of new polemics. According to BAPPENAS, poverty is a deprivation situation due to the inevitable circumstance. It is multidimensional; it means that as there are many kinds of human beings' needs, the poverty also has a lot of aspects, namely primary aspect in the form of the lack of asset, social organization, politic, knowledge, and skill as well as secondary aspect in the form of the lack of social networking, financial resources, and information.

The government is able to resolve this condition by improving the economic growth of East Java by administering labor trainings so that the society can open their own job opportunities. The challenge with the high population number is the high rate of unemployment as many citizens are not supported by skills and other supporting factors. According to the data of the Central Bureau of Statistics in 2013, East Java is in the first rank of Province with the highest rate of poverty in Indonesia. This is based on the national economic social survey conducted in September 2013 stating that the number of poverty in East Java is 4.86 millions. Out of the total number, 1.62 millions are the urban poverty and the remaining lives in the rural areas.

Several researches have been conducted to identify the effect of the economic growth, minimum wage, and unemployment rate to the poverty level. From those studies, there is a research gap. The study by Cholili (2014), Istifaiyah (2015), Nasikh (2017a) and Nasikh (2017c) explain that the economic growth negatively and significantly affects the poverty level. Nevertheless, a study by Dahliana (2013) suggests that the economic growth affects the poverty level negatively yet insignificantly.

A research conducted by Souza (2007) explains that the minimum wage positively and significantly affects the poverty level. Yet, Cholili (2014), Istifaiyah (2015), and Dahliana (2013) find out that the unemployment rate gives a positive and significant effect to the poverty level.

From all phenomena and theories explained above, the researcher is interested in analyzing the factors determining the poverty level in East Java. This study is significant as the research gap exists. Therefore, this study aims to analyze the economic growth, minimum wage, and unemployment rate to the poverty level in East Java.

## **LITERATURE REVIEW**

Todaro (2000: 37) states that the poverty variation in the developing countries is caused by several factors, namely

1. the size of the country,
2. historical differences, some of them are colonized by different countries,
3. differences in the natural resources and the human resources' quality,
4. the relatively important public and private sectors, and
5. the difference in the industrial structure.

According to Kuncoro (2010: 107) and Nasikh (2013), the poverty is caused by two reasons, namely

1. from the macro view, the poverty appears when there is a different pattern of resource ownership which causes the imbalance income distribution; the poor society own the limited and poor quality resources, and
2. the poverty arises due to the low quality of human resources.

Tambunan (2008: 57) adds that the economic growth is one of the requirements to develop an area and to improve the society's prosperity. The economic growth often becomes a benchmark of the economic performance of an area despite the fact that the economic growth cannot stand alone to reduce the poverty level. Nevertheless, the economic growth is one of the undeniable factors to reduce the poverty level.

Moreover, Tarigan (2007: 46) explains that the economic growth of an area is the society's increasing income in the particular area, namely the increasing added value.

Todaro and Smith (2006) argues that the economic growth is a set of activities resourced from human beings, capital accumulation, modern technology utilization, and output. The population growth can give a positive and negative effects. Consequently, Todaro and Smith (2006) suggests that the population growth has to be utilized as the positive resource.

The policy of minimum wage has been an important issue in the employment area in some developing and developed countries. Therefore, the policy of minimum wage is to

1. guarantee the labor's wage so it is not lower than particular level,
2. improve the labor's productivity, and
3. develop as well as improve the company in more efficient ways (Tarigan, 2007; Nasikh, 2014; Nasikh, 2016).

According to the Regulation of The Labor and Employment Minister Number Per-01/Men/1999, the minimum wage is the lowest monthly wage consisted of the main wage and fixed allowance. The fixed allowance is the fixed amount of money given regularly to the labor regardless their absence or achievement in their working place.

The policy of minimum wage is a system which has been applied in some countries. It can be seen from two perspectives. First, the minimum wage is a protection tool for the labor to maintain their wage to fulfill their daily needs. Second, it is a protection tool for the company to maintain their labor's productivity (Gianie, 2009). The higher the minimum wage set, the greater the income earned by the labor, thus, the prosperity improves and the society are free from the poverty (Khabhibi. 2013).

According to Istifaiyah, 2015, the decreasing minimum wage can decrease the society's purchasing power. This decreased purchasing power can lower the expenditure level and decrease the price of goods and services. The decreased demand of goods and services due to the low purchasing power will decline the production capacity which means that there will be labor cut off. Consequently, the unemployment level will get higher and the poverty level increases as well (Sulistiawati, 2012).

Another factor influencing the poverty level is the unemployment. The unemployment will decrease the society's income. This will lower the achieved prosperity level (Mankiw, 2007: 152). According to Arsyad (2012), there are some types of unemployment, namely

1. the open unemployment, in which the labor is able and willing to work, yet the suitable job is not available,
2. the under employment, in which the labor works nominally but their productivity is low so that their working time gives no significance to the whole production, and
3. impaired, in which the labor fully works yet their intensity is low as they suffer from an illness or nutrient deficiency.

According to Irawan and Suparmoko (2002), there will always be a competition between the output development level and the population growth which is eventually won by the population growth. As the society also work as the labor, there will be some difficulties in providing job opportunities. When people

get a job, their prosperity will improve. However, if they are unemployed, their living standard will be lower and it increases the poverty level (Irawan and Suparmoko, 2002: 88; Nasikh, 2017b).

The rapid growth of labor and the relatively slow growth of job opportunity cause the unemployment problem in the developing country. The high rate of unemployment, poverty, and unequal income distribution are closely related. The labor with no fix job or the part-timer will always be in between the poverty group. Those who work and earn fixed salary monthly as the governmental or private employees belong to the middle to high class of society (Sulistiawati, 2012).

The relationship between the unemployment and poverty is very close that if the citizen has a settle job, they must live a prosper life and vice versa. The unemployment will automatically decrease the prosperity of the society and affect the poverty level (Sukirno, 2006: 125).

The bad effect of unemployment is it can decrease the society's income which eventually lower the prosperity. The lower the prosperity due to the unemployment, the bigger the chance the society is trapped in the poverty and no income. If the unemployment in a country becomes worse, there will be a social chaos which gives bad effect to the society's prosperity (Enwuchola, 2013).

## RESEARCH METHOD

This study employs the descriptive quantitative approach. The panel data used in this study is the compilation of the time series data from 2012 to 2014 and the cross section data from 29 districts and 9 cities in East Java.

The equation model in this study is as follows in equation (1)

$$Y_{it} = a + bX_{1it} + cX_{2it} + dX_{3it} + e_{it} \quad \dots(1)$$

### Note:

$Y$  = The number of poor society

$a$  = Intercept

$X_1$  = The economic growth

$X_2$  = The minimum wage

$X_3$  = The unemployment rate

$b$  = The regression coefficient of the Economic Growth Variable

$c$  = The regression coefficient of the Economic Growth Variable

$d$  = The regression coefficient of the Unemployment Rate Variable

$e$  = Disturbance/error term

$i$  = The cross section unit of cities and districts in East Java

$t$  = The time series unit in 2012 to 2014.

According to Widarjono (2013: 355), in equation (1) there are three approaches, namely

1. Pooled Least Square (PLS) or known as Common Effect (CE). This method estimates the panel data by using the Ordinary Least Square (OLS) method. This PLS approach simply pools all data

in sequence and inter space. It assumes that the intercept and slope is similar to every individual and period. This method ignores the individual and time dimensions.

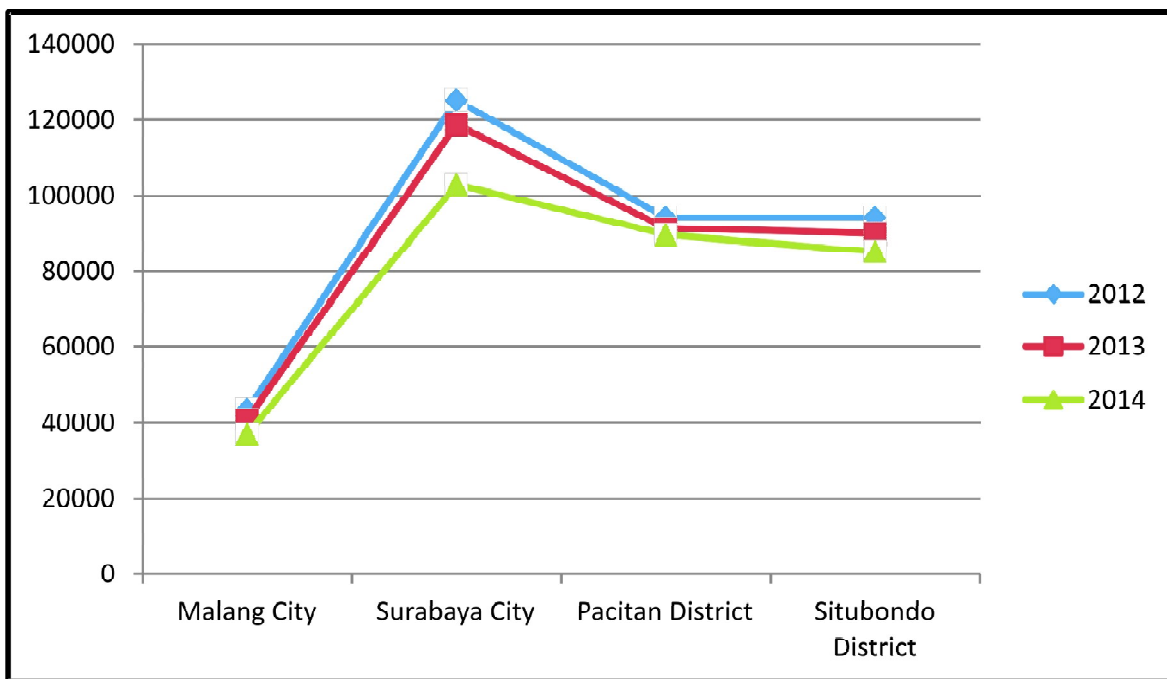
2. Fixed Effect is a model which assumes that there is a different intercept between the individuals yet the slope is fixed.
3. Random Effect (RE) is a model which estimates the panel data in which the disturbance might be related in time and individuals.

According to Gujarati (2003: 143), to determine whether a data panel can be regressed by the Pooled Least Square (PLS), Fixed Effect (FE), or the Random Effect (RE) methods, some tests have to be administered.

1. Chow Test can be administered to choose whether using the Common Effect, the Pooled Least Square, or the Fixed Effect (FE) approach.
2. Hausman Test is used to choose whether using the Fixed Effect (FE) or Random Effect (RE) approach.

### RESEARCH FINDING

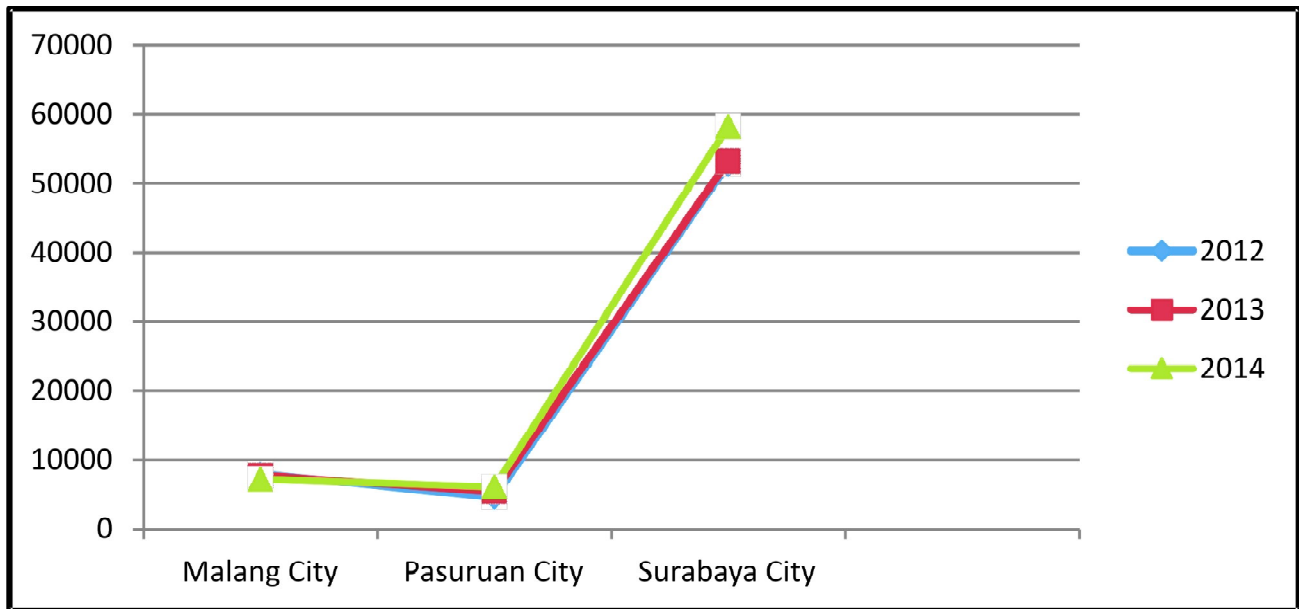
In the figure 3, it could be seen that the poverty level in 2012 to 2014 gradually increased. The increasing number of poverty level in East Java was due to the increasing unemployment. It was also caused by the low wage so that society could not meet all their daily needs. While in Surabaya city, the increasing number of poverty level was due to the urbanization which caused the higher rate of unemployment. Figure 1 presents the development of the number of poverty in district/city in East Java.



**Figure 1: The Development of the Number of Poverty in District/City in East Java**

*Data Source:* The Central Bureau of Statistics of East Java in 2016.

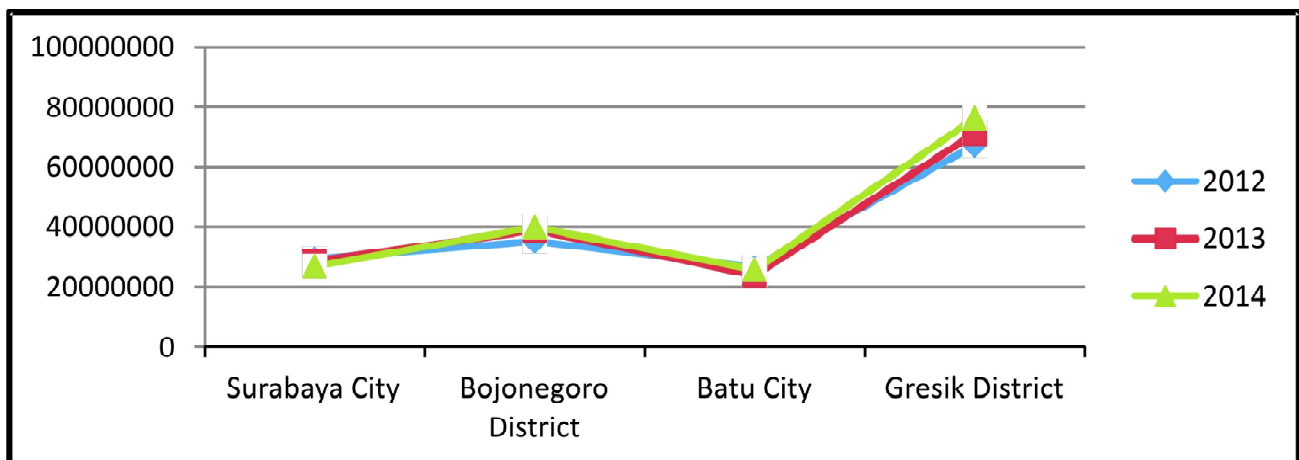
Figure 2 displayed the unemployment rate in East Java in 2012 to 2014 which increased from year to year. The high level of employment in Surabaya, Malang, and Pasuruan cities was due to the fact that the job opportunity was very limited and there was an imbalance between the number of job opportunities and the number of labor which always increased. Figure 2 presents the unemployment rate in East Java in 2012 to 2014.



**Figure 2: The Unemployment Rate in East Java in 2012 to 2014**

*Data Source:* The Central Bureau of Statistics of East Java in 2015.

The government's attempt to resolve the problem of unemployment was by adding more job trainings as there were a lot of uneducated and educated unemployment. Figure 3 presents the economic growth of East Java in 2012 to 2014



**Figure 3: The Economic Growth of East Java in 2012 to 2014**

*Data Source:* The Central Bureau of Statistics of East Java in 2015.

In the figure 3, it could be seen that the economic growth of East Java in 2012 to 2014 gradually increased. The increasing economic growth was caused by the rapid development of industry in East Java, such as in Surabaya city, Gresik, Madiun, Lamongan, Mojokerto, and Pasuruan districts. Those areas were the industrial areas in East Java.

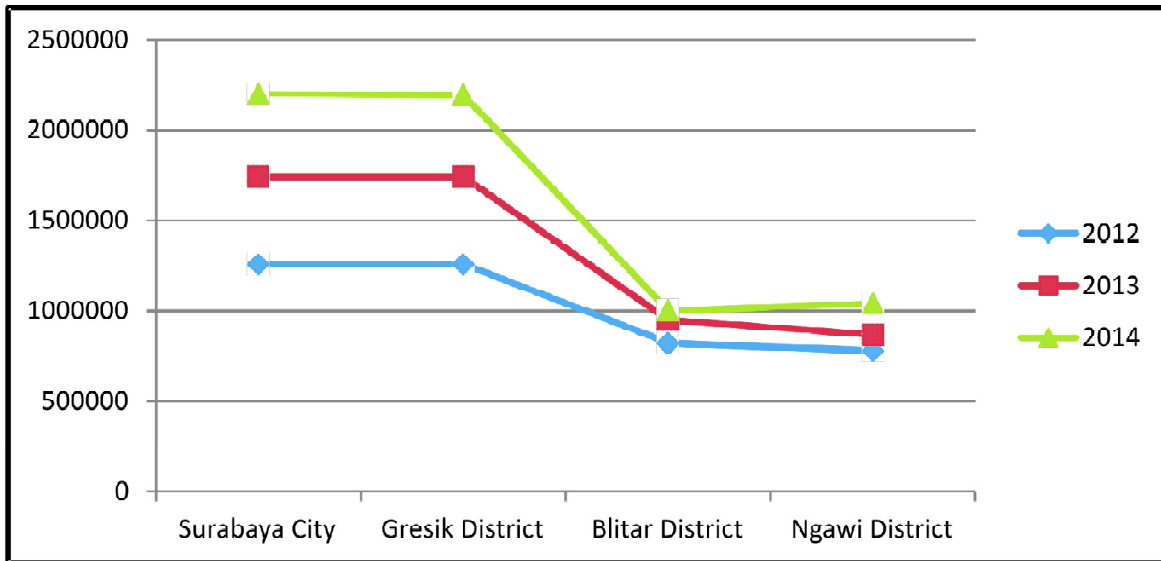


Figure 4: The Minimum Wage of East Java in 2012 to 2014

Data Source: The Central Bureau of Statistics of East Java in 2015.

Figure 4 displayed the minimum wage of districts and cities in East Java in 2012 to 2014 which increased in the three years. The increasing minimum wage of each district or city was adjusted to the decent living standard in each area. For example, the minimum wage of Surabaya city and Gresik district were the highest, while the lowest was in Ngawi and Blitar districts. The different minimum wage was due to the distinct life expenditure. Bigger city such as Surabaya city had higher life expenditure than smaller city or district such as Ngawi and Blitar districts.

The model was chosen by administering two tests, namely Chow and Hausman tests. The result of the test was displayed in table 1 and 2.

Table 1  
Chow Test

<i>F</i> calculated	<i>Sig.</i>	<i>F</i> table	<i>Conclusion</i>
254.243	0.000	1.491	Fixed Effect Model

Data source: Output Eviews 7.

Table 2  
Hausman Test

$\chi^2$ calculated	<i>Sig.</i>	$\chi^2$ table	<i>Conclusion</i>
24.158	0.000	7.815	Fixed Effect Model

Data source: Output Eviews 7.



Based on Table 1 and 2, the result of Chow and Hausman tests showed the significance score 0.000 smaller than  $\alpha$  5%, therefore, the chosen model was the Fixed Effect Model.

### Normality Test

**Table 3**  
**Normality Test**

<i>Residual</i>	<i>Jarque-Bera</i>	<i>Probability</i>
Model 1	3.76	0.152

*Data Source:* Output Eviews 7.

From Table 3, it was identified that the probability score or the significance was 0.152 higher than the alpha (0.05) which meant the normal distributed residual.

### Multicollinearity Test

Table 4 showed that the correlation score between the independent variables was less than 0.8, which meant that there was no multicollinearity between the independent variables.

**Table 4**  
**Multicollinearity Test**

	<i>X1</i>	<i>X2</i>	<i>X3</i>
X1	1.000000	0.193522	0.346817
X2	0.193522	1.000000	0.054943
X3	0.346817	0.054943	1.000000

*Data Source:* Output Eviews 7.

### Heteroskedasticity Test

Table 5 showed that the probability score was 0.2009 higher than the alpha (0.05), which meant there was no heteroskedasticity.

**Table 5**  
**Heteroskedasticity Test**

<i>Residual</i>	<i>Obs*R-squared</i>	<i>Prob. Chi-square</i>
Model 1	4.6305	0.2009

*Data Source:* Output Eviews 7.

### Autocorrelation Test

From Table 6, it could be identified that the Durbin Watson (DW) score was 2.1874 between dU and 4-dU, which meant that there was no autocorrelation between the residuals.



**Table 6**  
**Autocorrelation Test**

<i>DW</i>	<i>dL</i>	<i>dU</i>	<i>4-dU</i>	<i>4-dL</i>
2.1874	1.734	1.797	2.203	2.266

Data Source: Output Eviews 7.

### T Test

In this study, *T* test was administered to identify the partial effect of the independent variable (*X*) to the dependent variable (*Y*).

**Table 7**  
**The Panel Regression Test**

<i>Independent Variable</i>	<i>Regression Coefficient</i>	<i>t calculated</i>	<i>Sig. t</i>	<i>Note</i>
<i>Constanta</i>	141577.0	23.611	0.000	Significant
<i>X1</i>	-0.000	-3.8744	0.0002	Significant
<i>X2</i>	-0.002	-2.3384	0.0207	Significant
<i>X3</i>	0.3473	4.4299	0.0000	Significant
<i>t table</i> ( $t_{186,5\%}$ )	= 1.973			
<i>R-square</i>	= 0.989			
<i>F calculated</i>	= 355.732			
<i>Sig. F</i>	= 0.000			
<i>F table</i> ( $F_{3*186,5\%}$ )	= 2.653			

Data Source: Output Eviews 7.

In table 7, it could be seen that the *F* calculated was 355.732 higher than the sig *F* 0.000, which meant that the independent variable namely the economic growth (*X1*), minimum wage (*X2*), and unemployment rate (*X3*) significantly affected the poverty level (*Y*) simultaneously.

### Determination Coefficient

**Table 8**  
**The Determination Coefficient Test**

<i>t table</i> ( $t_{186,5\%}$ )	= 1.973
<i>R-square</i>	= 0.989
<i>F calculated</i>	= 355.732
<i>Sig. F</i>	= 0.000
<i>F table</i> ( $F_{3*186,5\%}$ )	= 2.653

Data Source: Output Eviews 7.

Table 8 showed that the *R-square* score was 0.989 or 98.9%, which meant that the poverty variable (*Y*) was explained as much as 98.9% by the economic growth (*X1*), minimum wage (*X2*), and unemployment

rate (X3) variables. The remaining 1.1% was explained by other variables or independent variables outside this regression equation.

The analysis result displayed that the economic growth variable negatively yet significantly affected the poverty level in East Java in 2012 to 2014. It meant that if the economic growth improved, the poverty level would decrease. This was in line with the study conducted by Adit (2009) and the neo classical theory which stated that the economic growth was a set of activities resourced from human beings, capital accumulation, and modern technology utilization, as well as output. The population growth could affected positively and negatively. Consequently, Adit (2009) explained that the population growth had to be utilized as the positive resource.

The rapid population growth in East Java was supported by the neighborhood cities. For example, the economic growth of Batu city was rapid due to the abundance number of tourism objects. This gave a positive effect to the neighborhood city, such as Malang city and district.

The rapid development of industry also contributed to the economic growth, such as in Surabaya city, Gresik, Madiun, Lamongan, Mojokerto, and Pasuruan districts which were the industrial areas of East Java. The improved economic condition triggered new investments in the area. The investment was expected to be able to open more job opportunities and reduce the unemployment rate, thus the poverty level decreased significantly.

The minimum wage also significantly and negatively affected the poverty level of East Java in 2012 to 2014. This showed that the minimum wage had an inverted role to the increasing number of poverty, in which the minimum wage was the inseparable part of the poverty. If the minimum wage increased, the number of destitute family would decrease.

This was in line with the study conducted by Adit (2009) and Keynes theory in Istifaiyah (2005). They suggested that the decreasing minimum wage would lower the society's purchasing power. This low purchasing power would decrease the expenditure level and consequently the price of goods and service decreased as well. The decreasing demand of goods and services due to the lower purchasing power of the society would cause the decreasing production capacity. It meant that there would be a cut off of labor, thus, it increased the unemployment rate and the poverty level got higher.

Generally, the minimum wage was aimed to be a protection tool for the labor to maintain their wage to fulfill their daily need. The wage was the main income of the labor, so it must have been able to meet all their needs. Consequently, the minimum wage would help the low-income labor and reduce the poverty.

The research finding of this study suggested that the unemployment significantly affected and was positively related to the number of poverty of East Java in 2010 to 2014. This showed that if the unemployment rate got higher, the poverty level would also increase. This was in line with the study conducted by Dahliana (2013), Adit (2009), Cholili (2014), and Istifaiyah (2015) as well as the classical theory of Adam Smith, David Ricardo, and Thomas Robert Malthus suggesting that there would always be a competition between the output development and population growth which would eventually be won by the population growth. As the society was functioned as the labor, there would be a difficulty in providing the job opportunities.

The high rate of unemployment in big cities such as in Surabaya was caused by the urbanization. This affected the poverty level. The government's attempt to resolve the problem of unemployment was by

adding more job trainings as there were a lot of uneducated and educated unemployment. It was due to the imbalance number between the job opportunities and the stream of labors which got higher from time to time.

## CONCLUSION

Based on the analysis result and the discussion, the conclusion drawn is as follows. The economic growth negatively affects the poverty level in East Java. It means that when the economic growth improves, the poverty level will decrease. Moreover, the minimum wage also negatively affects the poverty level in East Java. It means that when the minimum wage increases, the poverty level will decrease. Nevertheless, the unemployment rate affects the poverty level of East Java positively. It means that when the unemployment rate gets higher, the number of destitute family also increases. Simultaneously, the economic growth, minimum wage, and unemployment rate significantly affect the poverty level of East Java.

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