

The Effect of Inflation, Investment and Wages Rate on Unemployment in The East Java Province

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Abstract: The growth of the labor force that is faster than the growth employment will increase the number of unemployment. This study discusses the effects of inflation, investment and wages rate on unemployment rates in eastern Java Province in 2006-2016 both simultaneously and partially. The data used is secondary data with the time series data from 2006-2016. The analysis technique used is multiple linear regression analysis. The analysis showed that simultaneous inflation, investment and wages rate significant effect on the wage rate of unemployment in eastern Java 2006-2016. While partially, investment has no effect on the unemployment rate in eastern Java 2006-2016. While the inflation and wages is partially significant effect on unemployment in eastern Java 2006-2016.

1 INTRODUCTION

1.1 Background

A process of development for the region, of course, there can be an increase as the income of the community which is offsite by increased employment opportunities and price stability. Development is a multidimensional process that encompasses fundamental changes to social structures, attitudes of society and national institutions as well as the acceleration of economic growth, the reduction of inequality and absolute poverty reduction or the total change of a society the adjustment of the whole social system to a better state (Todaro, 2004: 17). In order to achieve these objectives, it is imperative that the government's participation in maintaining state stability or basic goals of the established development can be achieved. The role of government can be done through fiscal policy, monetary policy and other policies that will affect the national economic condition. As the population increases every year, it will require additional revenue each year (Tambunan, 2009). Apart from the demand side (consumption), in terms of supply, population growth also requires employment growth (source of income). Economic growth without being followed by additional employment opportunities will lead to inequality in

the division of the additional income (*ceteris paribus*), which will further create a condition of economic growth with increasing poverty (Tambunan, 2009).

In the International Labor Organization (ILO) states, the global unemployment rate will increase. This is based on ILO research that brings together government, companies and employment representatives from 187 countries. Quoting the BBC, the ILO said that the unemployment rate is predicted to increase by 3.4 million this year and 2.7 million in 2018. The reason is the growth of manpower is much higher than the employment created.

Director-General of the ILO, Guy Ryder said economic growth continued to disappoint. This provides a worrying picture for the global economy and the ability to create sufficient employment.

Table 1: The unemployment rate, inflation, investment and minimum wage rate of eastern Java Province in 2006-2016.

| Year | Unemployment rates (%) | Inflation (%) | Investment (%) | Wages rate (Rp) |
|------|------------------------|---------------|----------------|-----------------|
| 2006 | 8.19 | 6,76 | 2.10 | 390000 |
| 2007 | 6.79 | 6.48 | 3.48 | 448500 |
| 2008 | 6.42 | 9.66 | 2.03 | 500000 |
| 2009 | 5.08 | 3.62 | 3.77 | 570000 |
| 2010 | 4.25 | 6.96 | 6.06 | 630000 |

| | | | | |
|------|------|------|-------|---------|
| 2011 | 4.16 | 4.09 | 7.60 | 705000 |
| 2012 | 4.12 | 4.50 | 9.21 | 745000 |
| 2013 | 4.33 | 7.59 | 12.82 | 866250 |
| 2014 | 4.19 | 7.77 | 15.61 | 1000000 |
| 2015 | 4.47 | 3.08 | 17.10 | 1150000 |
| 2016 | 4.21 | 2.76 | 18.20 | 1238000 |

Source: BPS of East Java Province, data is processed.

According to the East Java statistics agency, unemployment rates are still high, open unemployment rates range from 800,000 or 4% of the workforce. This figure moves quite slowly in the last 6 years, ie from 2010-2016. In previous years the open un-employment rate in East Java was also quite high, in 2006 the unemployment rate reached 8.19%. The high unemployment rate shows a failure in development. Those who are economically unemployed have no source of income for life. It affects social problems, including criminal problems with economic motives (Djohanputro, 2006: 19).

In more detail during the period of 2006 only accounted for 18.22% and decreased again in 2007 by 17.41%. There are several things that cause the decline of this investment is Lapindo mud disaster that disrupts the process of distribution of goods and services. Beside that, the sluggish global economic condition contributing to private consumption and government consumption more than 60% of total GDP for the period of 2004-2008. However, it approaches the period of 2015 to date, investment in East Java is increasingly in demand by foreign investors, as described by one of the okezone.com media, which explained that the US would be interested in investing in East Java, because East Java is the entrance and the lane liaison in Eastern Indonesia. Because the cost of distribution of goods so far is very high because of logistics connectivity is less good. So investment to East Java is very appropriate.

Inflation is an economic phenomenon that is difficult to avoid an economy, which can cause some good or bad consequences that reflect the economic conditions in country. Inflation is one of the important indicators in analyzing a country's economy besides economic growth and unemployment. Inflation occurring in provinces with agriculture and industry as the leading sector to the economy fluctuated in 2006 by 6.76%, in 2009 by 3.62%, in 2014 recorded inflation of 7.77% and in the year 2016 of 2,76%. A.W Phillips mentioned that the inflation rate had an inverse (negative) relationship to the unemployment rate. That is, the greater the unemployment rate, the lower the inflation rate.

The next variable is the minimum wage rate. Each region has set its minimum wage, for East Java itself from 2006 to 2016, the minimum wage increases annually. From 2006 of Rp. 390.000,00 and in 2016 reached Rp.1.238.000,00. According to A.W Phillips wages have a negative relationship with unemployment, that is when high unemployment wages are at a low level. The ability of an economy to produce goods and services can be said to grow, if the amount of goods and services produced are up. Based on the above background, the authors examine the "The Effect of Inflation, Investment and Wage Rate on Unemployment Rate in Eastern Java".

1.2 The Purpose of the Study

- Knowing the effect of inflation, investment, and wage rate simultaneously on unemployment rate in Eastern Java Year 2006-2016.
- Knowing the effect of inflation, investment, and wage rate partially on unemployment rate in Eastern Java Year 2006-2016.

2 LITERATURE REVIEW

2.1 Inflation

According to Suseno (2009) inflation can briefly be interpreted as a tendency to increase prices - goods prices and services in general and continuously. In Suseno's sense, there are two important notions that are key to understanding inflation. The first is the general rise, and the second is continuous. In inflation must be contained elements of price increases, then the price increase is the price in general. The declining inflation in recent years is the result of a mixed economic policy, favoring disinflation, followed by tight monetary and fiscal policy and an almost neutral budget policy. The monetary policy is mainly characterized by high interest rates and mandatory reserves and currency appreciation (Pop, 2010). With regard to an adequate inflation rate, prior to the crisis, there was a belief that inflation rates were low and stable. Important for long-term economic growth. At the same time, economists of all formations agree that if there is a reserve production capacity, then inflation will fall. Conversely, if production is overloaded, there will be an increase in inflation.

2.1.1 Theory of Inflation

Quantity theory according to Sukirno (2010) this theory differentiates the source of inflation into three, namely the theory of demand pull inflation, cost push inflation, and the latter is inflation imported. The demand pull inflation or demand pull inflation is caused by an aggregate demand whose production conditions are in full. Employment. In quantity theory, it is explained that the main source of inflation is due to the excess demand so that money circulating through the community multiplies. According to Keynesian Theory, inflation occurs because a society wants to live beyond its economic capabilities. The inflationary process, according to this view, is nothing but a process of seizing a share of livelihood among social groups who want a larger share than that provided by the community. This process of struggle is then translated into state in which people's demand for goods always exceeds the amount of goods attainable. Because the demand exceeds the goods attainable, the prices will rise. The increase in prices means that part to the plan to purchase goods from the group is not met.

In subsequent periods, the group will seek greater funding (from printing new money or credit from larger banks or from larger pay increases). The inflation process will continue as long as the number of effective demands from all segments of society exceeds the amount of output produced by society.

2.2 Investment

Investment is the expenditure or expenditure of investment or companies to purchase capital goods and equipment to in-crease production capacity of goods and services available in the economy. Factors Affecting Investments (Deliarnov, 1995: 84) are among others as follows:

- Innovation and Technology
- Economic Level
- Corporate Profit Rate
- Political Situation

This increase in the amount of capital goods allows the economy to produce more goods and services in the future. Sometimes investment is done to replace the old capital goods that must be depreciated (Sukirno, 2010: 121).

Investment is a step at the expense of current consumption to increase consumption in the future. Therefore, the amount of investments can be defined as an expenditure or expenditure by a company to purchase capital goods and production equipment so that the ability of production of goods and services companies can increase. Infestation very important

role in economic development an area where foreign investment can accelerate the rate of economic growth. Mean-while, the unemployment rate of a region can be seen through an increase in economic growth of a region. The higher the economic growth of a region, the higher the level of community welfare and the unemployment rate decrease.

2.3 The Wages Rate

Wages are also one of the factors that affect the unemployment rate of a region, because the low level of wages can also be a matter of employment in Bali Province. As regulated in PP no. 8/1981 minimum wages can be set a regional, sectorial or sub-sectorial minimum, although currently only a minimum wage. Determination of wage rate is the authority from the government that affects the level of unemployment in a region. However, the economic analysis, the size of their reply as labor should be taken into account. The level of wages is also called the average rate of work repayment that is generally accepted in society for all kinds of work. This wage rate can be calculated per hour, day, week, month or year (Gilarso, 2003). The higher the level of wages set by the government, it will cause the fewer number of workers who work (Alghofari, 2009). Determination of wage rates is influenced by the economic conditions for an area that spur on the economic growth of the area. That is, the better the economic conditions for a region, the more increasing the economic growth of the area so that the determination of wage rates is also increasing. In Indonesia, many people try their own and do not take into account "wages" for them-selves. In Indonesia the provisions on manpower especially in the wage determination system are regulated in Law No.13 Year 2003 on Employment.

The minimum wage is the minimum monthly minimum allowance in return for an employer granted under an employee for a work or service that has been or has been done and declared or assessed in money as determined by a consent or by law and is payable upon the basis of an agreement employment between employers and employees, including benefits, both employees themselves and their families. Indonesian government every year there is a regional minimum wage increase that perceived this policy is profitable for the workers because workers are able to in-crease their standard of living. The labor must be work harder because they have earned a decent salary in accordance with the standard needs of workers.

2.4 The Unemployment Rate

According to Sukirno (2010) unemployment is someone who has been classified in the labor force, who is actively looking at a job at a certain wage level, but unable to get the job he wants. According to Sukirno (2010) distinguishes the types of unemployment, into two ways to classify the first is based upon the source or cause, and the second is based on its characteristics. When viewed from the source afterwards there are some kinds of unemployed that is normal unemployment, Normal unemployment is unemployment caused by the desire of workers - workers to seek work better or more appropriate for them. After that the next is cyclical unemployment, cyclical unemployment is unemployment caused by changes in waves (up and down) of an economic life / economic cycle. This unemployment is taken seriously when economic activity is under full employment, and this can be seen from the circumstances that indicate that the national income is actually below the potential income. Furthermore, structural unemployment is unemployment caused by changes in economic structure and economic patterns in the long run. Structural unemployment can be caused by a number of possibilities such as a cause of demand, because of changes in technology use, because of government policy. The last is technological unemployment is unemployment caused by the replacement of human labor by machines and chemicals. In addition to differentiating unemployment by source, there are also unemployment types based on their characteristics.

2.5 Previous Research

Research conducted by Sucitrawati and Arka (2014) got positive results for the influence of inflation on unemployment rate in Bali Province as well as the level of wages that have a positive influence. Similarly, research conducted Setiawan (2013) states that there is a significant influence between inflation and the unemployment rate with a positive direction. And research conducted by Putri and Subroto (2014) which shows the result that the influence of inflation and minimum wage variables has a significant effect. Irdam Ahmad at Ekubank Journal entitled "The Relationship Between Inflation with Unemployment Rate Testing Phillips Curve with Indonesian Data, 1976-2006". The conclusion is that the relationship between inflation and unemployment rates for this study is long-term with a 35 percent error correction model, which means that any past shock (year $t-1$) in the short term will reduce the unemployment rate in

the year t by 35 percent, and so on so that ultimately unemployment and inflation in the long run will reach equilibrium. Research conducted by Timothy Cogley and Argia M. Sbordone on Journal of Economics Literature entitled "Trend Inflation and Inflation Persistence in the New Keynesian Phillips Curve". Cogley uses Vector Autoregressive (VAR) analysis in analyzing data because the data obtained is volatility yields the conclusion that the inflation rate that happened in the previous year from 1960 - 2003 shows a fairly stable inflation rate and also for the short term in the next few years, there is no a serious problem.

3 METHODS

Types of Research this research is included in descriptive research using quantitative approach. Quantitative approach is a research methodology used to quantify data and usually apply statistical analysis. This research is an explanation of the state of variables and completes the description of the results of the analysis of quantitative data. The research was conducted by using time series method. "Time Series Designed" is a study that aims to determine the stability and clarity of an uncertain and inconsistent circumstances (Sugiyono, 2008: 78). Researchers conducted research using inflation data, investment, wage rate and un-employment rate during the period 2006-2016.

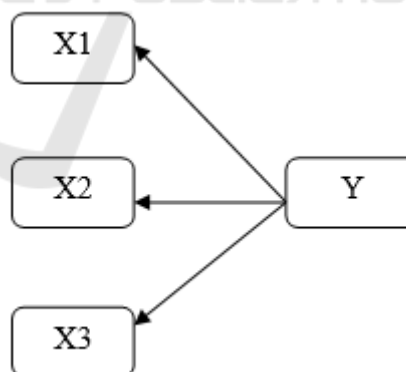


Figure 1: Research design.

In the figure above, the open unemployment rate as the dependent variable (Y) is influenced by the independent variable inflation (X1), investment (X2) and wage rate (X3). Sources of data from this study are secondary sources, where sources are obtained from outsiders of research objects, which are not self-employed by researchers, for example, from statistics agencies, documents of companies or organizations, newspapers and magazines or other

publications (Marzuki 2005: 15). This research data is taken from BPS (Central Bureau of Statistics), journal, and book. Data collection technique in this study is to perform documentation from the data source. The documentation in question is data obtained from BPS (Badan Pusat Statistik), journals, and books. The analytical technique in this research uses descriptive statistics and statistical analysis, which includes classical assumption test, statistical test, and regression analysis. The classical assumption test in this research includes normality test, multicollinearity test, heteroscedasticity test, autocorrelation test, and linearity test.

4 RESULTS AND DISCUSSION

4.1 Classic Assumption Test

The classical assumption test includes hypothesis test, and regression analysis. The classical assumption test in this study includes multicollinearity test, heteroscedasticity test, autocorrelation test, normality test, and linearity test.

Normality test results are known that the value Prob.Obs.R2 of $0.837 > \alpha (0.05)$ then the distribution of normal data, thus it can be concluded that the variable in this study is normal.

The results of multicollinearity test of tolerance and VIF values there is no Tolerance value below 0.10, that are 0.682; 0.527, 0.525 thus can be concluded there is no correlation between independent variables because the correlation value of $0.682 < 0.10$; $0.527 < 0.10$; $0.525 < 0.10$

The result of heteroscedasticity test with Park's test, the inflation, investment and wage variable are not significant at 0.01 (0.868, 0.865, 0.580) which means there is no heteroscedasticity.

For the linearity test, using LM test showed R square value of 0.843 with sample number 11 then the value of $c2 = 0.843 \times 11 = 9.2273$. This value is compared to the value of c2 table = 19.68 with a significance level of 0.05. Therefore, the value of c2 count is smaller than c2 table, it can be concluded that the model is linear.

4.2 Statistic Test

F test is done to know the effect of inflation, investment, minimum wage simultaneously (simultaneously) to open unemployment rate in East Java, obtained F function table value from statistic table that is 4,07 and F count 2,435 bigger than F value table 4,07 it can be concluded that all

independent variables Inflation (X1), Investment (X2), Wages (X3) simultaneously affect the variable unemployment rate (Y).

The t test is used to determine the effect of each variable on the open unemployment rate in East Java. Obtained t value for the variable of inflation of 0.034 with a significance of 0.05 (5%). Because the inflation variable (X1) has a significance value of $0.034 < 0.05$, then the inflation variable (X1) has an effect on the open unemployment rate. For investment variable (X2) t value equal to 0,064. With a significance value of $0.064 > 0.05$, then the investment variable (X2) has no effect on the open unemployment rate. While the variable wage rate (X3) obtained t count value of 0.04. With a significance value of $0.04 < 0.05$ then the variable wage rate (X3) has a significant effect on the open unemployment rate in East Java.

The coefficient of determination is done to determine the ability of independent variables capable of giving to the dependent variable. Also called R-squared and denoted by R2. The coefficient of determination is between zero and one. A small R2 value of R2 means the ability of the independent variable to explain the variation of the dependent variable is very limited. A value close to one means the independent variables provide all the information needed to predict the dependent variable. The result of R2 test in this research is obtained the value of 0.843 can be seen in table 2. Which means free influence (inflation, investment, and minimum wage) to the dependent variable (open unemployment rate) is 84%. While the remaining 26% is influenced by other variables where in the double regression equation the open unemployment rate (Y) is not only influenced by inflation (X1), investment (X2), and minimum wage (X3), but there are other variables (e) Affect the open unemployment rate.

4.3 Regression Analysis

The value of the regression coefficients on inflation variable 0.634 means that if the inflation variable increases 1%, while the variable minimum wage and fixed investment, then open unemployment rate (Y) will rise by 0.643, sign (+) indicates a unidirectional relationship between inflation to the unemployment rate. Value of the regression coefficients on investment variable 0,604 means if investment variable increase 1%, while variable inflation and minimum wage remain hence open unemployment rate (Y) will experience an increase equal to 0,604. The (+) indicates a unidirectional relationship between the investment and the open unemployment rate. The value to the regression coefficient on the

minimum wage variable of 4.7116 means that if the minimum wage variable increases 1%, while the inflation variable and fixed investment, then the open unemployment rate (Y) will decrease by 4.7116. The (-) indicates a unidirectional relationship between economic growth and the open unemployment rate.

4.4 Discussion

4.4.1 Inflationary Influence on Open Unemployment Rate in East Java

From the results for the study showed that inflation has a significant effect on open unemployment rate in East Java. The alter-native hypothesis proposed in this study suggests that the effect of inflation on the open unemployment rate in East Java, and the null hypothesis states that there is no influence between inflation and open un-employment rates. Inflation has a significance value of $0.034 < 0.05$, thus rejecting H_0 and accepting H_1 , and it can be concluded that the inflation variable (X1) has an effect on the open unemployment rate in East Java. The inflation coefficient of 0.604 indicates if inflation increases by 1%, then it will raise the number of open unemployed in East Java by 60.4%. Based on data descriptions in East Java from 2003 to 2007 inflation and open unemployment rates experienced the same direction of movement. This suggests that high inflation will affect high open unemployment rate.

4.4.2 The Effect of Investment on Open Unemployment Rate in East Java

In the results from the study showed that investment has no significant effect to the level of open unemployment in East Java. The alternative hypothesis proposed for this research is the effect of investment on open unemployment rate in East Java. While the null hypothesis states there is no effect of investment on open unemployment rate in East Java. T test conducted by t test gets a result that economic growth variable has probability value equal to 0,634 with level significance 5% (0,05). Because the economic growth variable has a significance value of $0.634 > 0.05$ as to accept H_0 reject H_2 , and it can be concluded that investment variable has an insignificant effect on open unemployment rate in East Java. The positive and significant relation of investment on the unemployment rate is supported by capital-intensive investment theory. This research is supported by research conducted by Suwandika (2015) which states that the amount of investments have a positive effect on unemployment rate in Bali Province. It is caused by incoming investment in the

form of portfolio investment or indirect investment where the investment is not in-vestment directly involved so not able to absorb labor and cannot suppress the existing unemployment rate.

4.4.3 The Effect of Minimum Wage on Unemployment Rate in East Java

From the results for the study showed that the minimum wage affects the open unemployment rate. The alternative hypothesis for this study states that the effect of minimum wage on the open unemployment rate, whereas the null hypothesis states that there is no effect of minimum wage on open unemployment rate. Minimum sphere has a significance value of $0.040 < 0.05$, then H_0 is rejected and H_3 accepted. And it can be concluded that the minimum wage variable significantly influenced the open unemployment rate. The results of the data analysis in this study explain that if the minimum wage variable increased 1%, then the open unemployment rate will de-crease by 63.4%. This is consistent with the Phillips curve theory which states that when high wage unemployment is at a low level. (Pure, 2006: 211).

4.4.4 Inflationary Influence, Investment and Minimum Wage on Open Unemployment

Rate in East Java from the result of data processing done by f test scene that obtained function value F table from statistic table that is 4,07 and F count 2,435 bigger than value F table 4,07 hence can be concluded that all independent variable Inflation (X1), Investment (X2), Wages (X3) simultaneously affect the variable unemployment rate (Y). Inflation, investment and minimum wages are important factors that can reduce the open unemployment rate in East Java. The rigid wage model (Mankiw, 2006: 368) shows the instillation of the rigid nominal wage on aggregate supply. The things that happen to the amount of output produced when the price level rises that is, when the nominal wage does not change, the rise to the price level lowers the real wage, which makes the labor cheaper, the lower real wage pushes the firm to use more labor, and additional labor is used to produce more output. So when there is an increase in price then the wage in real terms becomes lower, thus the entrepreneur feels able to increase its out-put which then increase the economic growth, the addition of output is done with the addition to the number of workers. From the addition to this number of workers, there is a reduction to the number of unemployed. Based on data descriptions in East Java, with nominal wages increasing by Rp60,000.00, the

inflation rate increased from 3.62% to 6.96%, recorded open unemployment rate decreased from 5.08% to 4.25% in 2009-2010. It shows that the effect of inflation and minimum wage on open unemployment rate.

From the research and discussion above, the influence of inflation can be seen from the theory of Sadono Sukirno that is with the higher rate of inflation that occurs it will result in the economic growth is de-creased so that there will be an increase on unemployment. And previous research, that the high inflation will affect the high level open unemployment. In a positive and significant relationship the amount of investment to the unemployment rate is supported by capital-intensive investment theory. It means agreeing with Sucitrawati (20012) when the amount of investment districts / cities in Bali Province increased, then the level of unemployment districts / cities in Bali Province also increased with invested capital-intensive.

Thus with wages, Phillips's curve theory states that when high wages unemployment is at a low level. (Pure, 2006: 211). The results of this study are in accordance with research conducted by Sirait and Marhaeni (2013) conducted in the regency / municipality of Bali province, indicating that the minimum wage negatively affect the unemployment rate, mentioned by in-creasing wages hence the urge to seek work by more and more people so that Reduce the number of unemployed. So it can be concluded the authors argue that there is influence between inflation, investment and wage rates against unemployment rate in East Java, with the results of research Sucitra and Arka (2014) entitled "Inflation Rate Influence, Investment, and Minimum Wage against Open Unemployment Rate in Province Ba-li".

5 CONCLUSIONS

Based on the analysis and discussion of data can be taken. The following conclusions: inflation has a significant positive effect on open unemployment rate in East Java in 2006-2016 with a positive or unidirectional signs. Investment has no significant positive effect on open unemployment rate in East Java in 2006-2016 with a negative or unidirectional signs. Minimum wage has negative and significant effect on open unemployment rate in East Java year 2003-2014 with a negative or unidirectional signs. Inflation and minimum wage affect open unemployment rate in East Java in 2006-2016.

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