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Open Unemployment Rate in The Province of East Java

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Abstract **-** Economic development is basically a series of policy efforts that have the aim of increasing the standard of living of the people, directing income distribution, and expanding employment opportunities. In efforts to develop the economy, employment is still a major issue. This is due to inequality in getting job opportunities. The growth in the number of the workforce with progress in various economic sectors is not balanced. The research aimed to study the effect of gross regional domestic product (GRDP), provincial minimum wage (PMW), and inflation on the open unemployment rate in East Java province. The research used secondary data for the period 2006 - 2017 which consists of the value of GRDP, East Java PMW, East Java province inflation, and East Java province open unemployment rate. By applying regression using panel data regression analysis, the research results show that GRDP and Inflation has a negative and significant effect on the open unemployment rate in East Java. The PMW has a positive and significant effect on the open unemployment rate in East Java Province. Nevertheless, the research highlights effect relation and government policy instruments.

Keywords: open unemployment, gross regional domestic product, provincial minimum wage, inflation

I. INTRODUCTION

Economic development in Indonesia is aimed at increasing high economic growth and being able to overcome problems of poverty, unemployment, maintaining price stability, balancing payments and increasing employment opportunities, and directing equitable distribution. To achieve economic development in Indonesia, various efforts have been made by the government to improve the standard of living of the Indonesian people, starting from the implementation of monetary policy, fiscal policy and so forth.

The objectives that Indonesia wants to achieve itself are the same as in the macroeconomic goals, namely: 1) to achieve economic stability in conditions of full employment; 2) to achieve low inflation, low unemployment, and high-quality economic growth. The problems that exist in developing countries are generally the condition of the problem of the movement of population from rural areas to cities in large numbers, with the problem of stagnant agricultural productivity and increasing unemployment in rural and urban areas. An aspect that often becomes a problem in developing countries is the unemployment or job opportunities in which the growth of the workforce increases are not in line with the availability of existing jobs. This kind of problems do not only occur in Indonesia but also occur in other developing countries. The existence of a large number of job opportunities is not a problem if the carrying capacity in the country supports the fulfillment of job opportunities.

Controls for the increasing unemployment problem are found in many developing countries. This decade has shown that the development that has been implemented in developing countries is unable to provide employment opportunities for the existing workforce. The problem occurs because in developing countries the growth rate of the labor force is higher than the growth of employment opportunities (Hajji & Nugroho, 2013).

Indonesia is a developing country that has challenges and obstacles in economic development. Indonesia encounters as similar problems as the ones previously described, namely: 1) poverty, 2) unemployment, 3) low quality of human resources, and 4) low capital. They must be overcome as they will have an impact on the country's economy. Besides, it can cause social insecurity, which leads to poverty. Efforts to overcome the problems can be done by striving to increase economic growth. Increased economic growth can bring an increase in national income. Moreover, there will be an increase in employment opportunities to raise labor absorption

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which will have an effect on reducing unemployment. Indonesia is experiencing a dilemma of economic conditions, which means it is faced with internal and external imbalances. Internal imbalance occurs when the indicator that the national output level and the level of employment opportunity in Indonesia do not reach full employment opportunity (unemployment). Meanwhile, external imbalance happens when the indicator that the national output level only shows the level of gross domestic product (GDP) increasing but not followed by social welfare as indicated by wages (Kurniawan, 2013).

The main factor that causes unemployment is a lack of aggregate expenditure. Entrepreneurs produce goods and services with the intention of making a profit. This profit can only be obtained if entrepreneurs can sell the goods they produce. The greater the demand, the more goods and services they will deliver. The increase in production will increase the use of labor (Sukirno, 2016).

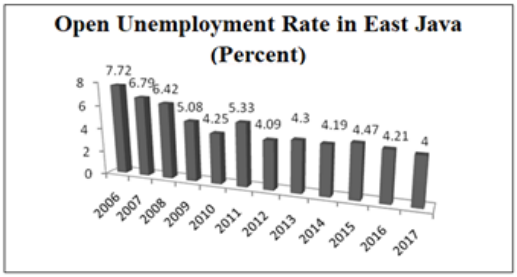

Figure 1 Open Unemployment Rate in East Java, 2006 - 2017
Source: ("Tingkat pengangguran terbuka", 2018)

Based on Figure 1, open unemployment in East Java Province is a problem that must be resolved by the regional government. It occurs that intensive handling is required, which applies not only to East Java, but also to all regions in Indonesia. This unemployment rate can be reduced by using systematic steps, namely by formulating a strategy for holding outreach to hold small and medium enterprises which are useful for the community to obtain a decent life, so they can reduce the unemployment rate to the maximum.

It can be assumed that gross regional domestic product (GRDP) has an influence on the number of workforces working, so that if the GRDP increases, the total value of output in all economic units in an area will also increase. The increased output will cause an increase in the amount of labor demanded. GRDP at constant prices can be used to show the overall rate of economic growth from year to year.

The existence of a growth in the labor force in cities in developing countries can cause unemployment. Here wages can also have an impact on the level of employment opportunities and unemployment, the existence of a provincial minimum wage (PMW) can reduce the level of labor demand which in turn will increase unemployment. The application of the minimum wage can affect the demand and supply of labor. The supply of labor will decrease which can lead to unemployment. The relationship between inflation and open unemployment shows a negative influence between inflation and unemployment. An increase in aggregate demand will encourage an increase in prices which in turn will encourage producers to increase production of goods and services (Latifah, 2017).

The results of research conducted by Kurniawan (2017), Valentine (2018), and Parwata, Suwendra, and Yudiaatmaja (2016) show that the minimum wage has a significant negative effect on the unemployment rate. In contrast, Rustariyuni et al. (2019), Hajji and Nugroho (2013), Prawira (2018), Sa'adah and Ardyan (2016), Piwulang (2018), Pamungkas (2016) and Georgiadis, Kaplanis, and Monastiriotis (2020) find that wage levels have a positive and significant effect on the level of unemployment.

Meanwhile Adawiyah and Seftarita (2016), Johan, Marwoto, and Pratiwi (2016), Ryan, Istiyani, and Hanim (2017), Nurdiana et al. (2020), and Pratinidhi and Verma (2020) have found that inflation has a significant effect on unemployment. This is described by the Philip curve, where in the short run, inflation and unemployment have a negative relationship, while in the long run inflation and unemployment have no relationship (Shifa, 2017).

Nwosa et al. (2020) state that trade is another factor that also affects unemployment. The increase in the trade sector will have an effect on the creation of new jobs. Luong et al. (2020) states that unemployment is also affected by investment, with the large amount of incoming investment having an effect on the creation of new business fields to reduce unemployment. Kurniasari et al. (2020) only focuses on the classification of unemployment.

The main problem observed in the research is the relationship between GRDP, Provincial Minimum Wage, inflation in East Java province and its effect on the open unemployment rate in East Java province. The research purpose is to obtain the results of the analysis of the relationship between the effect of GRDP, Provincial Minimum Wages, and inflation on the open unemployment rate in East Java province.

It occurs important and interesting to conduct research to identify the factors that influence the open unemployment rate in East Java. Expectations from the analysis results can be used for planning purposes for policy makers for economic development in East Java.

II. METHODS

The scope of the research is one of the provinces in Indonesia, East Java. The observation period is 2006 to 2017. The type of data used is secondary data from reports, journals, and websites such as Badan Pusat Statistik (BPS-Statistic Indonesia). The method applied in the research is descriptive and quantitative with econometric methodology.

The dependent variable is the open unemployment rate using the East Java province open unemployment data. Unemployed people are the ones who are not working, working less than two days a week, or trying to get a decent job (Hartanto, 2017). The independent variables in the research use data on GRDP, Provincial Minimum Wages, and inflation. GRDP is an indicator to determine the economic condition of a districts or cities in a certain period and measure economic growth. Economic growth can be defined as the amount of added value generated by all business units in a particular area or a certain area and as the total value of the final goods and services obtained by all economic units (Laksamana, 2016). Provincial Minimum Wages is an important indicator to see the standard living of workers. Wages are remuneration for labor provided by producers or companies as an imbalance of the results of labor services in producing goods and services. Working workers are wages that have been adjusted to take into account the level of needs of the population in general (Todaro, 2005). Inflation is an indicator an increase in prices in general (Kuncoro, 2015).

Answering the first research objectives about the effect of the independent variable on the dependent variable, the research uses multiple linear regression with the help of Eviews 8 software. The research uses an equation model from Kurniawan (2013), which uses a case study of Malang City. Here's the equation model:

$$Y = \beta i\ Xi + Yi\ Zi + \mu \quad (1)$$

Note:

Y	:	open unemployment rate
βi	:	variable coefficient of GRDP, districts or cities minimum wage, and inflation
Xi	:	variable of GRDP, provincial minimum wage, and inflation
Yi	:	non-wage coefficient variable
Zi	:	other macro variables
μ	:	error term

However, the research excludes non-wage variables and other macro variables on the grounds that the discussion will be too broad and do not focus according to the research objectives at the beginning. Thus, the research does not include non-wage variables along with macro variables, and the equation notation is:

$$TPT = a + b1GRDP + b2WAGE + b3INFLATION + e \quad (2)$$

Note:

TPT	:	open unemployment rate
GRDP	:	gross regional domestic product
WAGE	:	provincial minimum wage
INFLATION	:	inflation
a	:	constant
b	:	independent variable regression coefficient

Next, the research looks at the feasibility of a regression model used to fix the dependent variable based on input the independent variable, namely by using the classical assumption test. The classical assumption test has a requirement that the regression model must be free from normality tests, multicollinearity tests, heteroscedasticity test, and autocorrelation test (Yuliardi, 2017). Normality test is used to test whether it is deep regression model of both dependent variable and independent variable have normal distribution or not. Furthermore, the purpose of multicollinearity is to explain the presence or absence of multiple relationships variables and all variables in the regression model. Heteroscedasticity is a condition in which the variants of the confounding error are not the same for all independent variable values. Autocorrelation aims to analyze the correlation between one variable interference with other disturbance variables in the current period different (Gujarati, 1999).

The next research objective is to see the effect of independent variables on the dependent variable simultaneously and partially by using statistical tests. Simultaneous test is to find out whether all the independent variables have the same effect on the dependent variable. Partial test aims to analyze the effect of independent variables on the dependent variable individually. Finally, using the determinant coefficient test to show how big the variable is independent can explain the dependent variable well.

III. RESULTS AND DISCUSSIONS

From the research results, the Y constant is 2,125336 and the X1 coefficient is -0,001545, the X2 coefficient is 4,799606, and the X3 coefficient is 3,345585. For the value of a constant of 2,125336, it explains that if the independent variables (GRDP, PMW, and inflation) are considered constant, the resulting open unemployment rate is 2,125336 people. Furthermore, the regression coefficients X1, X2, and X3 from the results of the multiple regression analysis explain that every Rp 1 million increase in GRDP will reduce the open unemployment rate by 0,001545 people. Every time there is an increase of Rp 1 million in the PMW will increase the open unemployment rate of 4,799606 people. An increase of Rp 1 million in inflation will rasie the open unemployment rate by 3,345585 people. The equation formula obtained from the effect of variable X on variable Y is:

$$Y = 2{,}125336 + (-0{,}001545)\ X1 + 4{,}799606\ X2 + 3{,}345585\ X3 + e \quad (3)$$

Based on Table 1, the classic assumption test for multiple linear regression shows that the probability

value of GRDP is 0,0007. Since the probability value of 0,0007 < 0,05, it can be assessed that the GRDP affects the open unemployment rate in East Java. Meanwhile, the probability value of PMW is 0,0000. Because the probability value is 0,0000 < 0,05, so it can be said that the provincial minimum wage affects East Java's open unemployment. Meanwhile, the inflation probability value is 0,0266. Because the probability value is 0,0266 <0,05, so it is assessed that inflation has a significant effect on the open unemployment rate in East Java province.

Table 2, shows that the correlation value between the independent variables is smaller than 10, which means that this model does not contain multicolinearity problems, or the assumption that multicollinearity does not occur in the model is fulfilled. The centered VIF value of GRDP is 1,340386, the PMW is 2,164503 and inflation is 1,862498. Because the centered VIF value <10, it is stated that multicollinearity does not occur in the research.

Table 3 shows the probability value of F is 0,1177. It can be concluded that heteroscedasticity does not occur in the research. If the value for Prob. F count is greater than the alpha level of 0,05 (5%) then H0 is accepted, which means that there is no heteroscedasticity, whereas if the probability value of F is smaller than the alpha level of 0,05 (5%) then H0 is rejected, which means that heteroscedasticity occurs. Based on Table 4, it is known that the F probability value of 0,2175 can also be referred to as the calculated F probability value. The calculated F probability value is greater than the alpha level of 0,05 (5%), so based on the hypothesis test, H0 is accepted, which means there is no autocorrelation. Conversely, if the calculated probability value is less than 0,05, it can be concluded that autocorrelation occurs.

Table 1 The Output Results of the Multiple Linear Regression Model Test

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	2,125336	0,216569	9,813659	0,0000
PDRB	-0,001545	0,000420	3,683328	0,0007*
UMP	4,79E-0	6,08E-07	7,891130	0,0000*
INFLASI	-3,345585	0,306394	1,127910	0,0266*
R-squared	0,778685	Mean dependent var		1,292045
Adjust R-squared	0,762086	S.D. dependent var		0,306916
S.E. of regression	0,149703	Akaike info criterion		-0,873825
Sum squared resid	0,896434	Schwarz criterion		-0,711626
Log likelihood	23,22416	Hannan-Quinn criter.		-0,813674
F-statistic	46,91263	Durbin-Watson stat		0,184585
Prob(F-statistic)	0,000000			

Note: * significance at α 5%
Source: Regression Results, processed with Eviews 8

Table 2 Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
PDRB	1,76E-07	2,855262	1,340386
UMP	3,69E-13	25,25965	2,164503
INF	0,093877	25,93072	1,862498
C	0,046902	92,08476	NA

Source: Multicollinearity Results, processed with Eviews 8

Table 3 Heteroscedasticity Test

Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	2,082865	Prob. F(3,40)	0,1177
Obs*R-squared	5,944791	Prob. Chi-Squared(3)	0,1143
Scaled explained SS	4,248315	Prob. Chi-Squared(3)	0,2359

Note: * significance at α 5%
Source: Breusch Pagan Godfrey Results, processed with Eviews 8

Table 4 Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1,639516	Prob. F (2,38)	0,2175
Obs*R-squared	3,652434	Prob. Chi-Squared (2)	0,1769

Note: * significance at α 5%
Source: Breusch-Godfrey Results, processed with Eviews 8

Table 5 Partial test / t-test

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	2,125336	0,216569	9,813659	0,0000
PDRB	-0,001545	0,000420	3,683328	0,0007*
UMP	4,799606	6,08E-07	7,891130	0,0000*
INFLASI	-3,345585	0,306394	1,127910	0,0266*

Note: * significance at α 5%
Source: Partial Test, processed with Eviews 8

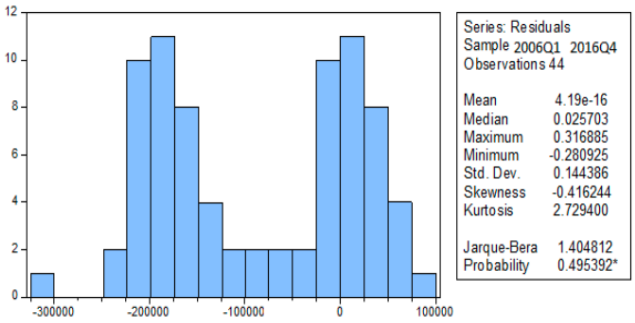

Figure 2 Normality Test
Note: * significance at α 5%
Source: Jarque-Bera Normality Test, processed with Eviews 8

Figure 2 shows that the Jarque-Berra (JB) probability value is 0,495392. In the JB test, normality can be seen if the JB probability value is JB >0,05, the data is normally distributed, on the contrary, if the probability value is JB <0,05, the data is not normally distributed. It can be concluded that data in this research is normally distributed.

The coefficient of the GRDP level -0,001545 is the probability of 0,0007 which is significant and negative at the 5% significance level, because the p-value <0,5. This means that the GRDP variable individually has a significant effect on the dependent variable (open unemployment rate) in East Java Province at a significance level of 5%. The coefficient of the PMW level 4,799606 is with a probability of 0,0000 significant and positive at the 5% significance level, because the p-value <0,5. This means that the variable individual provincial level wages significantly influence the dependent variable (open unemployment rate) in East Java Province at a significance level of 5%. The coefficient of the inflation rate is -3,345585 with a probability of 0,0266 significant and negative at the 5% significance level, because the p-value <0,5. This means that the individual inflation rate variable has a significant effect on the dependent variable (open unemployment rate) in East Java province at a significance level of 5%.

The results of the t-test show that the GRDP variable together with the PMW variable and inflation have a significant effect on the partially open unemployment rate. This is consistent with the hypothesis at the beginning of the research which states that GRDP, PMW, and inflation have significant effect on the open unemployment rate. The estimation results in Table 5 shows that the regression coefficient of the GRDP variable is -0,001545 with a probability value of 0,0007. This shows that there is a negative and significant effect of the GRDP variable on the open unemployment rate in East Java. The GRDP variable regression coefficient of -0,001545 also shows that every 1-billion-rupiahs increase in GRDP will reduce the open unemployment rate by 0,001%. The research results are different from the findings of Hajji and Nugroho (2013) which state that GRDP has no effect on the open unemployment rate in 1990-2011. The results also show conformity with the research hypothesis which states that GRDP has an effect on the open unemployment rate in East Java in 2006-2017.

The increase in the value of GRDP indicates that the amount of value added output or sales in all economic units in a region also increases. When the company makes greater output or sales, it will encourage the company to increase demand for labor so that production can be increased to catch up with the occurring increase in sales. Thus, it will reduce open unemployment. This research is in accordance with the theory of Okun's law where every increase in national or regional output will cause economic growth to decrease labor demand and unemployment.

The results of the t-test indicate that the provincial minimum wage variable together with the GRDP and inflation variables have a positive and significant effect on the partial open unemployment

rate. This is in accordance with the initial hypothesis which states that GRDP, PMW, and inflation have a significant effect on the partially open unemployment rate. From the estimation results in Table 5 shows that the regression coefficient of the provincial minimum wage variable is 7,891130 with a probability value of 0,0000. This shows that there is a positive and significant influence of the provincial minimum wage variable on the open unemployment rate in East Java province. The regression coefficient for the provincial minimum wage variable of 7,891130 also shows that every 1 rupiah increase in the provincial minimum wage will result in an increase in the unemployment rate of 7,89%.

The results of research support Hajji and Nugroho (2013) pointing out that the wage rate has an influence on the open unemployment rate in Central Java province, where every 1% increase in PMW, the unemployment in Central Java will increase by 0,26%. These results also show conformity with the research hypothesis which states that the provincial minimum wage affects the open unemployment rate in East Java. In theory, an increase in wages will result in an increase in the unemployment rate. If the wage level rises while the price of other inputs remains constant, the price of labor is relatively more expensive than other inputs. This encourages entrepreneurs to replace relatively expensive labor with other inputs that are cheaper to maintain profits. The increase in wages will encourage companies to increase the price per unit of product so that consumers tend to reduce consumption of these products. This causes the production results not to sell much, so that the producers are forced to reduce the amount of production. The amount of production that is lacking will result in the labor required to be reduced. The research is in accordance with the theory stated by Samuelson which argues that an increase in the wage rate will influence the supply of labor.

The results of the t-test show that the inflation variable together with the GDP variable and the provincial minimum wage have a negative and significant effect on the partially open unemployment rate. This is in accordance with the hypothesis at the beginning of the research which states that the GRDP, PMW, and inflation have significant unemployment rate. The following shows the effect of inflation on the partially open unemployment rate. Table 5 show the regression coefficient for the inflation variable is -3,345585 with a probability value of 0,0266. This shows that the effect of inflation on the open unemployment rate is negative and significant, which means that inflation in East Java influences the open unemployment rate. The regression coefficient for the provincial minimum wage variable of -3,345585 shows that every 1% increase in inflation will reduce the unemployment rate by 3,345%. The research is in accordance with theory of A.W. Philips stating that the relationship between inflation and unemployment has a negative relationship as the Philips curve explains the relationship between the level of inflation and the unemployment rate, which is assumed to reflect the existence of aggregate demand. The theory of demand states that if the price level (inflation) is high, it will reduce the unemployment rate. This may occur since the high rate of inflation (prices) will affect demand, which makes companies increase their workforce by increasing their production.

The amount of F-Statistic is 46,91263 and the probability value of 0,000000 in this equation model is less than 1, it can be said that all regression coefficients are simultaneously significant at the 5% significance level. Thus, both in the long and short term GRDP, PMW, and inflation simultaneously affected the open unemployment rate in 2006-2017.

The amount of F-Statistic is 46,91263 and the probability value of 0,000000 in this equation model is less than 1, it can be said that all regression coefficients are simultaneously significant at the 5% significance level. Thus, both in the long and short term GRDP, PMW, and inflation simultaneously affected the open unemployment rate in 2006-2017. The F-test shows the coefficient of determination (R^2) of 0,778685. This value shows that the ability of the GRDP variable, PMW, and inflation is able to explain the variation of the open unemployment rate variable by 77,86%, while the remaining 22,14% is explained outside the variables used in the research.

From the estimation results in Table 6 shows that the calculated F-value is 46,91263 with a probability value of 0,000000. If the probability value is compared with the significance level used in this study (alpha = 0,05), it is evident that the probability value is smaller than the significance level used (0,000000 <0,05). This shows that there is a significant effect of GRDP, PMW, and inflation together on the open unemployment rate in East Java province in 2006-2017. This is in accordance with the author's hypothesis that the variables of GRDP, PMW, and inflation have a simultaneous effect on the open unemployment rate.

From results in Table 6, the research carries out discussion activities that aim to deepen and broaden our horizon to answer in more detail and detail the variables that affect open unemployment in East Java province. First, the results show that the GRDP has a negative effect on open unemployment in East Java province, which means that an increase in GRDP in East Java province influences reducing the number of open unemployment. The economic growth that occurs in East Java is potentially due to the influx of capital inflows to invest and the development of economic sector in East Java Province which is conducive for the long term. It is famous for its many tourism sectors, snack industry education to provide job opportunities both in establishing new business and expanding business are on average dominated by micro, small and medium units, thereby reducing the number of open unemployed.

Second, the results indicate that the East Java provincial minimum wage has a positive effect on open unemployment in East Java, this means that the increase in the PMW in East Java has an effect in

Table 6 Simultaneous Test/ F-test

R-squared	0,778685	Mean dependent var	1,292045
Adjust R-squared	0,762086	S.D. dependent var	0,306916
S.E. of regression	0,149703	Akaike info criterion	-0,873825
Sum squared resid	0,896434	Schwarz criterion	-0,711626
Log likelihood	23,22416	Hannan-Quinn criter.	-0,813674
F-statistic	46,91263	Durbin-Watson stat	0,184585
Prob(F-statistic)	0,000000*		

Note: * significance at α 5%
Source: F-test, processed with Eviews

making the number of open unemployment increase, which becomes a worrying situation for the long term. Third, the research results indicate that inflation has a negative effect on open unemployment in East Java province, this means that an increase in inflation in East Java causes the number of open unemployment to decrease. Based on the results obtained, this becomes a good and supportive condition in creating a healthy and dynamic economy going forward. The statement is based on inflation, which is a reflection of an increase in aggregate demand, which in turn, demand will increase and prices will also rise. With high prices (inflation), to meet this demand producers increase their production capacity by increasing labor and by establishing or adding business units, in this case, building new industries so that unemployment will decrease. This is supported by improving macroeconomic fundamental conditions, attractiveness maintained, and profitable investment as well as relatively more conducive global economic developments in which the overall manifestation of this can be seen with the relatively stable inflation rate and the large number of new industries that have emerged in East Java.

IV. CONCLUSIONS

GRDP has a negative and significant effect on the open unemployment rate in East Java in 2006-2017. This is indicated by the regression coefficient value of the GRDP of -0,001545 with a probability value of 0,0007. The GRDP regression coefficient variable of -0.001545 also shows that every 1-billion-rupiahs increase in GRDP will tend to be followed by a decrease in the open unemployment rate of 0,001%. The provincial minimum wage has a positive and significant effect on the open unemployment rate in East Java in 2006-2017. This is indicated by the regression coefficient value of the provincial minimum wage variable which is 7,891130 with a probability value of 0,0000. The regression coefficient for the provincial minimum wage variable of 7,891130 also shows that every 1-billion-rupiahs increase in the provincial minimum wage will tend to be followed by an increase in the unemployment rate of 7,89%.

Inflation has a negative and significant value on the open unemployment rate in East Java Province in 2006-2017. This is indicated by the regression coefficient value of the Inflation variable which is -3,345585 with a probability value of 0,0266. The regression coefficient for the inflation variable of -3,345585 also shows that every 1% increase in inflation will tend to be followed by a decrease in the unemployment rate of 3,345585%. GRDP, provincial minimum wages, and inflation have a partially significant effect on the open unemployment rate in East Java in 2006-2017. GRDP, provincial minimum wage, and inflation have a positive and significant effect simultaneously on the open unemployment rate in East Java in 2006-2017. This is indicated by the calculated F-value of 46,91263 with a probability value of 0,000000.

The researcher proposes several suggestions for related parties (in this case the government) as follows. First, local governments should encourage and spur an increase in gross regional domestic product in every economic sector so that the unemployment rate can be reduced by increasing labor absorption. Second, local governments should formulate wage policies in such a way as to increase labor productivity and production growth as well as increase workers' income and welfare. Thus, the wage policy will be oriented towards the interests of all parties. Third, the regional government should be more active in business units towards community empowerment so that it is hoped that the community will be able to be independent in the economy and prevent inflation from occurring in the economy.

The research has several limitations. First, the limited data released by BPS, due to the incomplete data held by BPS, the data were only the ones during the years 2006-2017 which affected the results of the significance of the independent and dependent variables. Second, the number of independent variables is small, so that there are only three independent variables originating from economic factors (GRDP, PMW, and inflation). With these limitations, future researchers are expected to add to education or health variables that are thought to influence open unemployment rate.

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