

-RESEARCH ARTICLE-

THE EFFECT OF INFLATION AND WAGES ON UNEMPLOYMENT IN EAST JAVA PROVINCE

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—Abstract—

Unemployment is a major challenge in the way of national and regional economic development. Unemployment indicates low labour absorption. This is partly attributable to high rate of inflation (Karanassou et al., 2010; Mankiw, 2003). Unemployment is also influenced by wages (Case et al., 2007). This research was conducted to analyze the effect of inflation and labour wages on unemployment in East Java. Secondary data published by the Central Statistics Agency for the period 2010 – 2014 is used in the current study to explore this relationship. Samples are taken from seven cities in East Java Province. The panel analyzes the data modelling using the Eviews application software, Version 8. The Fixed Effect model analysis shows that simultaneously, the inflation variable and the wage rate affect unemployment rate in East Java, as indicated by a probability coefficient of 0.000 less than 0.05. The partial test results also show a significant effect, with a probability coefficient of 0.0434 (inflation) and 0.0012 (wages), respectively. The increase in inflation contributed to the rise in unemployment by 1,544.96 against an increase inflation by 1%. The contribution of increased wages to unemployment decreases by 0.0095, assuming the other variables are fixed. The coefficient of determination R^2 of 0.78 shows that inflation and wages can explain the variation of 78% of the unemployment rate in East Java Province. Other variables outside the model determine the rest (22%).

Keyword: Inflation, Wage, Unemployment

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1. BACKGROUND

Unemployment, as a macroeconomic magnitude, is not an independent variable. This variable, either directly or indirectly, will be related to other macroeconomic variables. Theoretically, one of the macroeconomic quantities that affect unemployment rate is the inflation rate. These two things (inflation and unemployment rates) will be negatively related. Inflation in Indonesia tends to be stable at 11% to 12% in 2007. However, it tends to decline in the years and mostly ranges from 7% to 9%. Meanwhile, considering other data, unemployment in Indonesia tends to remain at a high percentage. Specifically, regarding the relationship between inflation and the unemployment rate, there are two different opinions about the period of influence between the two variables. Several macroeconomic works of literature, [Case et al. \(2007\)](#) and [\(Mankiw, 2003\)](#) suggest that the relationship between the two variables is short-term. Different things are conveyed by [Karanassou et al. \(2010\)](#). They found that the relationship between the inflation variable and the unemployment rate in the USA was long-term.

It is interesting to observe that the highest unemployment rate occurs in high economic levels, such as Sidoarjo Regency and Malang Regency. Both districts have the highest unemployment rate, where these two regions are the regions with the highest economic level after Surabaya. Regions with high economic growth are generally followed by high inflation because there is a positive correlation between economic growth and inflation. In classical economic theory, unemployment will also be influenced by how much wages the worker will receive. In normal conditions, that is, without any pressure in the economy, a worker will choose a job with a higher wage rate. Concerning wages, the government has determined the minimum wage that workers in the formal sector must receive. The government policy in the form of regional minimum wages is used to protect workers. The government hopes that, through this policy, workers can enjoy a decent salary in order to meet their basic living needs.

In terms of regional minimum wages, the data shows that a relatively high minimum wage composition generally occurs in urban areas. Only Sidoarjo Regency is found to have a relatively high minimum wage compared to other districts.

2. FORMULATION OF THE PROBLEM

The researchers raise the problem:

How much influence does inflation and the wage rate have on the unemployment rate in East Java Province?

3. RESEARCH PURPOSES

The purpose is to analyze inflation and wages on the unemployment rate in East Java Province.

4. RESEARCH OBJECTIVES

The author hopes that this research is able to:

- a. Look at the variation and diversity of the relationship between the variables understudy,
- b. Assess the existing theories of unemployment as to whether they can explain the phenomenon of unemployment in East Java Province,
- c. Provide additional knowledge to formulate policies, especially those related to the human resource management.

5. THEORETICAL REVIEW

5.1 Labor Market and Unemployment

Unemployment can be caused by an imbalance between the demand and supply in the labour market. This imbalance will result in an excess or excess supply, which will result in an unemployed workforce. The supply for labour is defined as the number of hours worked that the household sector (workers) can provide at a certain wage level (Borjas, 2012; Case et al., 2007). In line with this definition, in classical economic thought, labour supply will be influenced by the level of wages offered. In mathematical terms, it can be said that the number of hours worked is a function of the wage level.

Demand for labour is defined as the number of workers capable of being employed or requested by employers or employers at a certain wage level (Case et al., 2007). Like the supply, demand is also influenced by the level of wages. It can also be said that the demand for work is a function of the wage level. Labour demand and wage rates have a negative or opposite direction; the higher the wage rate in the market, the less labour. Employers will shift the use of labour to machines or be inclined to use technology if there is an increase in the wage level.

Equilibrium occurs when the supply equals the demand. This balance produces a balance between wages and the number of workers. This is also known as the competitive wage rate and competitive workers. The wage rate in this equilibrium condition is the market-clearing wage rate. A wage rate outside of the equilibrium wage rate creates either a downward pressure or an increase in the wage rate. Wage levels outside of the equilibrium wage level will create job vacancies that are labour-intensive or, perhaps, there are too many workers competing for limited employment.

The interaction of supply and demand in the labour market does not always occur in equilibrium conditions. There are often conditions where there is excess demand or excess supply of labour. In a perfectly competitive market or competitive market, workers' wages can reinstate the equilibrium position. Wage is a variable that can adjust

itself automatically in competitive market climate thinking. Therefore, a new equilibrium point will always be obtained when there is no imbalance in the labour market. The consequence of this theory is that there is no unemployment in the labour market. People who are not absorbed are considered voluntary because of the mismatch in wages offered in the labour market.

5.2 Inflation Rate and Its Effect on Unemployment

One economic variable that is theoretically able to influence the unemployment rate is the inflation rate. Inflation here is defined as a general increase in the price of goods and services continuously (Dornbusch, 1992). An increase in the price of certain goods and services over a short period cannot be inflation (Mankiw, 2003). The linkage or relationship between inflation and unemployment can be explained using the Phillips curve (Reichel, 2004; Ruchba et al., 2019). The relationship between inflation and unemployment in the Philips Curve framework is as follows:

1. The low unemployment rate will lead to an increase in workers' wages.
2. As a response to a higher wage rate, entrepreneurs will increase their prices to cover the rising production costs.
3. Since prices have generally risen, workers will ask for an increase in wages from employers.
4. This condition continues and causes inflation as well as increases in the wages of workers.

The negative relationship between unemployment and inflation can also be seen in how it is handled. When a country experiences high inflation, one of the strategic measures used to overcome the inflation rate is a tight money policy. This is done by increasing interest rates. The continuation of the increase in interest rates is a decrease in investment, which will impact the increase in the unemployment rate.

Regarding the trade-off or the negative relationship between inflation and the unemployment rate, differences are viewed from the effect period, as discussed in the previous section. Several macroeconomic works of literature (Case et al., 2007; Mankiw, 2003) show a negative relationship between inflation and the unemployment rate in the short run. However, in their research based in America, Karanassou et al. (2010) find a long-term negative relationship between inflation and the unemployment rate. Pallis (2006) conducts a study related to the Philips curve regarding inflation and unemployment rates in member countries of the European Union. Pallis reveals that the duration of the relationship between inflation and the unemployment rate will differ significantly between countries. The country's economy also influences this relationship. However, both studies on the Philips curve show that inflation will negatively affect

unemployment rate. This conclusion is in line with the theory that has been put forward previously.

Along the way, the theory regarding the relationship between inflation and unemployment rate has changed. Especially since the stagflation incident in the 1970s in developed countries was caused by rising oil prices. The latest development of the Phillips curve is proposed by new Keynesian economists (from now on, more commonly known as the new Phillips curve). The newest version of the Phillips curve is based on a discontinuous analysis of nominal price formation. Meanwhile, the fundamental difference between the traditional and the latest version of the Phillips curve lies in that the price change results from optimal decisions from business participants in a monopolistic competition market, with constraints in the form of frequency of price adjustments. This is not found in the traditional version of the Phillips curve (Anwar et al., 2020).

Furthermore, the new Phillips curve developed by new Keynesian economists also has another fundamental difference with the standard version of the Phillips curve. If the curve's direction is sure to be negative and linear in the traditional Phillips curve, this cannot be ascertained in the new Phillips curve. The new Phillips curve cannot be confirmed whether the curve will be linear, convex or if the curve will be concave to the origin. The shape of the new Phillips curve will be very different from country to country (Anwar et al., 2020; Müller et al., 2007).

5.3 Empirical Literature Reviews

Komalasari et al. (2014) investigate the determinants of unemployment from seven provinces of Indonesia. For this purpose collected, data is collected for 2004 to 2012, and the resulting data is analysed using SPSS. Results show that inflation positively relates with unemployment while wage rate insignificantly relates with unemployment (Leasiwal, 2021). In case of Namibia, Eita et al. (2010) explore the reason behind unemployment during 1971-2007. Findings show that inflation negatively relates with unemployment in Namibia, unemployment responds positively if actual output is below potential output, and if wages increase. An increase in investment causes unemployment to decrease significantly. The results provide evidence that the Phillips curve holds for Namibia and unemployment can be reduced by increasing aggregate demand. Another study conducted to investigate the relationship between inflation and unemployment in case of Nigeria during 1977-2009 (Umaru et al., 2012; Wulandari et al., 2019). Johansen's cointegration technique to examine the long-run relationship between the two phenomenon shows that inflation negatively related to unemployment. Afzal et al. (2012) have the same findings in case of Pakistan, reached by applying OLS techniques, and performing data analysis through ARDL; (Maqbool et al., 2013) finds the same results from Pakistan. Ahmed (2020) used the time series data from 1991 to 2015, analysing the data using an Engle-Granger econometric technique which points to the

existence of Philips Curve in Pakistan. That means that increased inflation results in a decreased unemployment rate which ultimately increases employment opportunity in the country. As demand for labor increase due to increase in employment opportunities, the result is an increase in wage rate which is paid by producer to their labor. This causes an increase in cost of production of goods which leads to inflation (Sasongko et al., 2019).

Pratomo et al. (2020) conduct a panel data study using data from 26 districts and cities of West Java Province. Data is collected from Badan Pusat Statistik (BPS) in 2013-2015, results shows that unemployment increases due to minimum wage criteria because business actors will reduce the amount of labor demand as more costs are incurred in order to pay the salaries of the human resources they have. For this reason, business people tend to choose a quality workforce and will make the number of unemployed increase (Groisman, 2016; Kristiyana, 2011). On the other hand, Mitsis (2015) shows that the minimum wage has a negative effect on the number of jobs available. This shows that when the minimum wage increases it will reduce the number of jobs available. For this reason, rising minimum wages are proven to increase the number of unemployed. Kuntiarti (2018) states that minimum wages have a negative influence on unemployment; due to increasing level of wages, individuals will find it easier to choose existing jobs. Conversely, when the minimum wage falls, it will trigger workers to switch to better jobs in a better place. When that happens, not necessarily every individual will get a job so unemployment is created as a result.

Putri et al. (2017) determine the effects of inflation, investment and wages rate on unemployment rates in the case of the eastern Java Province during 2006-2016. Data analysis is done through multiple linear regression for both simultaneously and partially analysis. Results reveal that inflation and wage rate have a significant effect on unemployment for both partially and simultaneously. Another study by Pratama et al. (2020) finds the partially and simultaneously results of Indonesian industry sector during 2007-2015. As a result, minimum salary value and inflation rate simultaneously had a significant effect on unemployment, with partially analysis showing there is a negative and significant relationship between inflation and wage rate on unemployment. Sucitrawati et al. (2012) find a positive relationship between inflation and wages on unemployment in the case of Bali Province.

5.4 Hypothesis

On the basis of previous studies, the current researcher postulates the following hypothesis:

1. Inflation rate has a negative and significant effect on the unemployment rate in East Java Province
2. Wage rate has a negative and significant effect on the unemployment rate in East Java Province

6. METHODOLOGY

6.1 Data sample and Source

The present study uses secondary data from seven cities in the East Java Province which included (Surabaya, Madiun, Probolinggo, Malang, Kediri, Sumenep Regency, and the Administrative City of Jember). The researcher obtained this data from the Central Statistics Agency for the priod between 2010 to 2014 (BPS, 2020).

Researchers conducted research using data pertaining to a number of open unemployment, annual inflation rate and wage rate. The present study follow the panel data models because panel data allows us to view the full image of the variables studied and ensure the comprehension of the relation built between the dependent and independent variables (Sul, 2019). Figure 1 below represents the open unemployment rate as the dependent variable (Y) which is influenced by the independent variables: inflation (I) and wage rate (U).

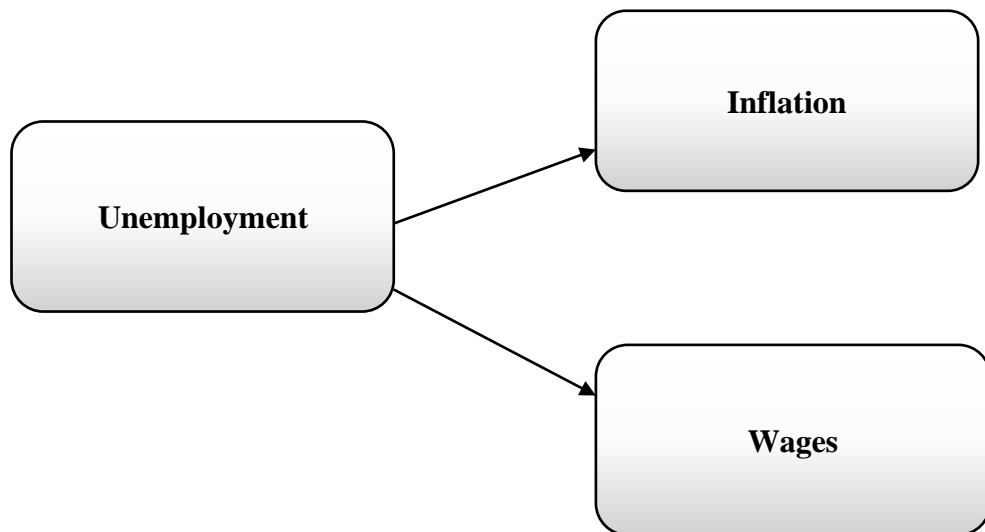


Figure 1. Research Framework

6.2 Econometric Techniques

This study used a descriptive research model while using quantitative approach method with multiple regression. Data is analyzed using regression partially and simultaneously (Yunus et al., 2017). In this study, below is the stochastic equation which will be utilized in the estimation, below α is a constant term while β_1 and β_2 , are the coefficients or parameters, i indicate the cross-sections or Location identity ($i = 1, \dots, 7$) and t indicate for time period ($t = 2010, \dots, 2014$) and ϵ is error term with mean zero. The stochastic equation of the model is as:

$$Y_{it} = \alpha + \beta_1 I_{it} + \beta_2 U_{it} + \varepsilon_{it} \dots \dots \dots (1)$$

6.3 Model Specification

The procedure of final model selection is as follows:

1. Researcher to ascertain which model is more suitable for the present study. For this purpose, we utilized the Chow Test and find the value of F-test to compared the the coefficient of Pooled Least Square PLS (restricted model) and coefficient of Fixed Effect Model FEM (unrestricted model) model for data estimation. PLS test shows the same intercept for all cross section series; on the other hand, FEM shows the different behaviours of cross sections.
2. On the basis of above results, if results give preferences of FEM then the researcher moves towards the selection of final model. For this, we compared the coefficients of FEM and random effect model (REF) and on the basis of Houseman test in order to select the final model. If the Hausman test is found to be significant, then the model chosen is a random effect (REM); on the other hand if the Hausman test is not significant, then the model chosen is the fixed effect (FEM).

6.4 Statistic test

➤ **Simultaneous Hypothesis Test:** This test is conducted to determine whether there is a relationship between the independent and dependent variables or not (Gujarati et al., 2012). The significant level of F-test is 95% and criteria used are as follows:

- H_0 : If $F \text{ count} < F \text{ table}$, it means that there is no relationship between the independent variables together on the dependent variable.
- H_1 : If $F \text{ count} > F \text{ table}$, It means that there is an relationship of the independent variables together on the dependent variable.

The formula used to measure the F count is:

$$F \text{ Count} = \frac{R^2 / K}{(1 - R^2) / (n - k - 1)}$$

where:

R^2 represent coefficient of determination, N shows sample number, and K represents the number of explanatory variables.

- **Partial Hypothesis Test:** The t-test was used to test the regression relationship partially. This test is used to determine whether an independent variable can affect the dependent variable (Gujarati et al., 2012). The level of significance of t-test is 95% and criteria used in the t-test are:
- H_0 : If $t \text{ count} < t \text{ table}$, It means that an independent variable does not influence the dependent variable.
 - H_1 : If $t \text{ count} > t \text{ table}$, It means that an independent variable keep influence the dependent variable.

The formula used to measure the t count is:

$$t \text{ count} = \frac{\hat{\beta}_i - \beta_i}{Se(\hat{\beta}_i)}$$

where:

$\hat{\beta}_i$ measure coefficient of i^{th} independent variable, β_i represent value of hypothesis and $Se(\hat{\beta}_i)$ measure standard error of i^{th} independent variable.

- **Determination Coefficient Test:** coefficient of determination is denoted as R^2 and is used to shown the variation of dependent variable due to independent variables, R^2 is most commonly used quantity to measure the goodness of fit of the regression line (Gujarati et al., 2012). The value of R^2 is exist between 0 and 1. A small value of R^2 indicates the ability of the independent variable to explain the variation of the dependent variable is very limited. If a value is close to one, it means the independent variables provide all the information needed to predict the dependent variable.

6.5 Classical Assumption Test

Before applying any regression model there are some issue exists in data which must be addressed. To check these issues, the researcher applies some diagnostics tests such as: Multicollinearity, Heteroscedasticity, and Autocorrelation. This study follow the panel data model; therefore, according to Nachrowi et al. (2006), there is no need to test the classical assumptions in modelling with panel data as is done in modelling using time series and cross-sectional data. This study uses the FE and RE model as these approaches do not require data to meet classical assumptions, such as freeing the data from heteroscedasticity and autocorrelation problems. This study consists of 35 observations of data, so normality problem does not exists.

7. RESULTS AND DISCUSSIONS

The results and discussion section begins with executing model 3.1 using the Pooled Least Square Model approach. In addition, to start the discussion, the most suitable or appropriate data panel modelling must first be selected. The first test performed is by

choosing the Pooled Least Square Model or Fixed Effect Model using the Chow Test method. The following results are obtained:

Table 1. Chow Test Results

Pooled Least Square Model vs Fixed Effect Model		
Effects Test	Statistic	Prob.
Cross-section F	23.780864	0.0000
Cross-section Chi-square	74.425361	0.0000

As shown in [Table 1](#), the significant value of the Cross Section Chi-Square, it can be decided that the Fixed Effect model is better when compared to modelling using the Pooled Least Square Data Model. Furthermore, the Haussman Test is carried out to determine whether the Fixed Effect Model or the Random Effect Model is more appropriate to use. The Haussman test is carried out in a Random Effect Model modelling condition.

The Haussman test results, as shown in [Table 2](#), confirm that the Fixed Effect Model is the most appropriate model to be used in this research ([Winarno, 2015](#)). This is indicated by the fact that all independent variables and the value of chi-square are insignificant. It can be interpreted that modelling with the Random Effect Model is not significant and cannot be continued. Therefore, this paper will use the Fixed Effect Model as a basis for discussion. The results of the Haussman Test are as follows:

Table 2. Hausman Test Results

Fixed Effect Vs Random Effect	
Chi-Sq. Statistic	0.991137
Prob	0.6092

After obtaining the regression results with the Fixed Effect Model as shown in [Table 3](#) below, the next step is to interpret the results starting with statistical tests in the form of simultaneous hypothesis testing (F-test), partial hypothesis testing (t-test), and coefficient of determination test (R^2). A parameter test is not carried out in this study. Panel data modelling with the Fixed Effect Model approach does not require a parameter test because it combines time series and cross-sectional data ([Nachrowi et al., 2006](#)).

The results of each statistical test are as follows:

Table 3. Fixed Effect Model Estimation Results

Variable	Coefficient	t-Statistic	Prob.
C	31503.50	4.50729	0.0001
Inflation	1544.95	2.086	0.0434**
Wage	-3.483	-3.4833	0.0012*
R Square	0.819		
Adj R Square	0.78		
F Statistic	22.7		
Prob (F Statistic)	0.00		
No. of Observation	35		

Note: *, and ** demonstrates significance level at 1% and 5% respectively.

7.1 Simultaneous Hypothesis Test Results

Simultaneous hypothesis testing is carried out to see whether the independent variables offered in this study jointly influence the dependent variable or not. The independent variables in this study are inflation and wage rates. Simultaneous hypothesis testing can be carried out using the F test, comparing the calculated F value obtained from the computational results with the table F value. Another way is to look at the probability of the F-value statistic and then compare it with a predetermined value of the degree of error. The rules used in the F test are as follows: if the value of the F Count is greater than the value of the F table, then there is an influence between all independent variables on the dependent variable. Vice versa, if the calculated F value is less than the table F value, then there is no relationship between the independent variables and the dependent variable. Meanwhile, suppose the probability value of the F statistic is less than the previously determined error degree value. In that case, there is a relationship between the independent variables with the dependent variable.

The calculated F value is 22.7, while the F table value has a df (degree of freedom) value of 46 and a degree of error of 5% is 3.20. If this value is compared with the calculated F value, then the estimated F value is higher. This higher value of the F count indicates that the inflation variable and the wage rate together will affect the unemployment rate in East Java Province. The same thing will be found when looking at the probability value of F statistics. The probability value of the F statistic is less than 0.05, which means that the inflation and wage levels, together, will affect unemployment in East Java Province.

7.2 Partial Hypothesis Test Results

The partial hypothesis test can determine whether or not there is a partial or individual effect between the independent and dependent variables. The partial hypothesis test can be done using the t-test, namely by comparing the t-statistical value obtained from the computational results with the t-table value for each variable. The rule that applies in

this t-test is if the calculated t value is greater than the t table value, then the variable is declared to affect the dependent variable significantly and vice versa. The t value used is an absolute value, meaning that it ignores the positive or negative signs.

Another path that can be taken is to compare the value of the probability t statistic with the value of the degree of error taken. If the probability value is less than the predetermined error degree value, then the variable is declared statistically significant. Likewise, on the contrary, if the probability value is higher than the predetermined value of the degree of error, then the variable does not have a significant effect on the dependent variable.

Referring back to [Table 3](#), the calculated t value for the inflation variable is 2.086, and the wage variable is -3.4833. The t-table value is 1.67866 using the degree of freedom of 46 and the value of the degree of error of 0.05. The t value (absolute value) is higher than the t table value, so it can be concluded here that both the inflation variable and the wage rate variable significantly influence the unemployment variable. It is also confirmed by the probability value of the t statistic that is lower than the value of the degree of error of 0.05. The inflation variable has a probability value of 0.04364, and the wage rate variable has a probability value of 0.0012.

7.3 Determination Coefficient Test Results

The test for the coefficient of determination that is most commonly used is to see how significant the value of R^2 is. Using [Table 3](#) as a reference, it can be seen that the adjusted R^2 is 0.78 or 78%. Therefore, it can be interpreted that 78% of the variation in the unemployment rate can be explained by the independent variables included in this study. Or in other words, the inflation variable and the wage rate can explain 78% of the variation in the unemployment rate in East Java Province. In comparison, other variables explain the remaining 22% outside of inflation and wage levels.

7.4 Result Interpretation

When written mathematically, the computation results, as listed in [Table 3](#), are as follows:

$$Y = 31503.50 + 1544.96 I_{it} - 0.0095 U_{it} + \varepsilon_{it} \dots \dots \dots (2)$$

Because all the independent variables (the Inflation variable and the Wage variable) influence the number of unemployed significantly, it can be said that if inflation increases by one unit (in this case, 1%), it will increase the unemployment rate by 1544.96 people, while assuming that all other variables are constant. Likewise with the wage rate, if there is an increase in wages by one unit, it will be followed by a decrease in the unemployment rate by 0.0095 people, assuming that all variables are constant.

This study uses panel data modeling with the Fixed Effect Model approach that has a constant slope and is considered the same for all individuals, with different intercepts.

Therefore, the following will describe the intercept of each individual: Surabaya ($31503.5 + 46175.88 = 77679.38$), Madiun ($31503.5 - 18594.75 = 12909.35$), Probolinggo ($31503.5 - 16291.75 = 15211.75$), Malang ($31503.5 + 9887.26 = 41390.76$), Kediri ($31503.5 - 12118.25 = 19385.25$), Sumenep Regency ($31503.5 - 17743.5 = 13760$) and Jember Regency ($31503.5 + 8684.51 = 40188.01$). Overall, the constant or intercept in Table 3 has a significant relationship with unemployment rate in East Java Province.

8. DISCUSSIONS

The inflation variable in this study has a positive and significant relationship with the unemployment variable. If there is an increase in the inflation rate, it will be followed by a rise in the current unemployment rate. Conversely, if there is a decrease in the inflation rate, it will be followed by a reduction in the number of unemployed. The positive and significant relationship of inflation with unemployment rate does not follow the hypothesis built at the beginning of this paper. The initial assumption is that the inflation rate is negatively related to the unemployment rate. However, when referring to the latest theories regarding the relationship between inflation and the unemployment rate (the view of the Neo-Keynesian school), the results of this study are not surprising. According to this view, the relationship between inflation and unemployment, initially negative and linear, turns into non-linear. The non-linear relationship indicates that the relationship between inflation and unemployment can be positive or negative. At one point, a particular turning point will turn out to be the opposite.

Inflation conditions in East Java Province generally follow the national inflation rate. Some cities tend to have higher inflation when compared to inflation in other cities. Madiun and Kediri are examples of two cities that are typically high inflation rates. The geographical conditions of Madiun and Kediri, which are located in the western part of East Java Province, have resulted in higher transportation operating costs compared to other cities. We can also find the same for Sumenep Regency. This district, which is located on the eastern tip of the island of Madura, certainly requires more costs to supply goods, eventually leading to high prices of goods in the region.

The wage rate in this study is found to have a negative and significant effect on the unemployment rate in East Java Province. This condition confirms that a decrease the current unemployment rate is seen when there is an increase in the wage rate. Likewise, vice versa, if there is a decrease in wages, it will increase the unemployment rate. The results obtained in this study are in line with the hypothesis stated in the initial section of this study.

Wages received by workers are remuneration for the free time given to employers. When the wages offered by employers increase, it will increase the supply of new workers. To a certain point, the workers will choose to sacrifice more of their time to obtain higher returns. With more workers working, the unemployment rate will naturally decrease.

Nominal wage increases will occur every year in line with the growth in the Regional Minimum Wage set by the government. However, let us suppose it is calculated more carefully and includes an element of inflation in it. In that case, it is not evident that the increase in nominal wages will be the same as the increase in real wages. Economically, real wages are nominal wages received by workers and are reduced by the inflation rate.

The constant in this study has a significance level which means that although the inflation and wages variables are zero, unemployment still occurs. This condition in employment theory is called natural unemployment, or unemployment that will inevitably happen in an economy. This natural unemployment, in theory, cannot be eliminated and will undoubtedly occur.

9. CONCLUSIONS AND SUGGESTIONS

9.1 Conclusions

Based on the discussion in the previous section, it can be concluded that both inflation and wage variables can affect the unemployment rate in East Java Province. The inflation rate positively affects the unemployment rate, while the wage rate can negatively affect the unemployment rate.

A constant rate that shows a significant value indicates the existence of natural unemployment. This situation must occur in every economy everywhere.

9.2 Suggestions

The government can control the inflation rate by tackling unemployment, which continues to rise every year. The inflation rate must be suppressed or directed at the expected inflation rate to reduce the unemployment rate optimally. The government must cooperate with the monetary authority as the controller of inflation to control inflation.

The government's efforts to apply the Regional Minimum Wage should be a step to protect workers from exploitation by employers. However, if the determination of the Regional Minimum Wage does not take into account multiple factors, it will create a separate conflict between workers, employers, and the government. The government must find a suitable formulation to determine the right Regional Minimum Wage for a region, considering various social and economic aspects.

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