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THE EFFECT OF ECONOMIC GROWTH, PROVINCIAL MINIMUM WAGE RATE, AND INFLATION ON OPEN UNEMPLOYMENT IN WEST INDONESIA

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Abstract: This study aims to determine the effect of economic growth, minimum wage rate, and inflation on open unemployment in western Indonesia. The analysis method used is quantitative, with multiple linear regression analysis techniques. The data used in this study were secondary obtained from the Central Statistics Agency. The results of this study show that (1) economic growth has a significant negative effect on open unemployment; (2) The minimum wage rate has a significant negative effect on open unemployment; (3) Inflation has a significant negative effect on open unemployment. The results of this study imply that economic growth affects open unemployment, this is because the economic growth of a country or region shows an increase. In addition, the minimum wage affects because the higher the wage set will have an influence on the high unemployment rate, and inflation affects because with high inflation, producers increase their production capacity by increasing labor.

Keywords: Unemployment; Economic Growth; Provincial Minimum Wage Rate; Inflation

1. Background

Indonesia is a developing country that often experiences obstacles and challenges in economic development. Economic development itself is a process of development that occurs continuously which is to add and improve everything for the better and can be said to be a process that can have an impact on changes in the per capita income of a country's people to increase over a long period of time.

According to HM (2018), unemployment is someone who belongs to the labor force and wants to get a job but has not been able to get it. The problem of unemployment that causes the level of national income and the level of prosperity of the community not to reach its maximum potential is the most important macroeconomic problem. The indicator used to see unemployment is the open unemployment rate (TPT), which is the percentage of the number of unemployed to the labor force. In its development, Indonesia's open unemployment rate fluctuated from 2015-2021, one of which was in western Indonesia. In the last seven years, the open unemployment rate has increased in various provinces, especially in the western provinces which occupy the top 10 held by the western provinces.

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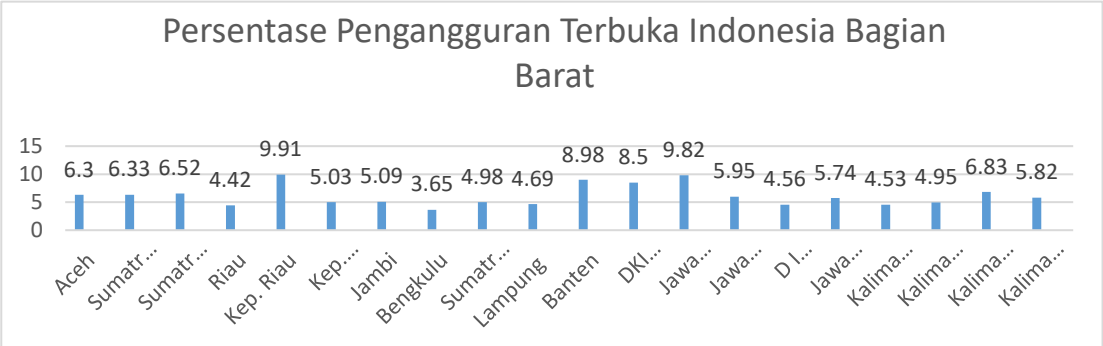
sumber : Badan Pusat Statistik Indonesia (diolah Oleh Penulis)

GAMBAR 1. 1 PERSENTASE PENGANGGURAN TERBUKA DI INDONESIA BAGIAN BARAT DAN TIMUR TAHUN 2017-2021

Referring to data from the Central Bureau of Statistics, the decrease and increase in the national open unemployment rate was also followed by a decrease / increase in the open unemployment rate in all provinces of Indonesia. It can be seen in both regions that provinces in western Indonesia tend to have a higher percentage of open unemployment rate compared to eastern Indonesia, The comparison between the two regions is quite far apart, this proves that high unemployment is a problem that needs to be overcome. According to BPS, the percentage of unemployment in the labor force in 2021 reached 6.49%. The following graph presents the percentage division of the open unemployment rate in provinces in western Indonesia in 2021.



sumber : Badan Pusat Statistik Indonesia (diolah Oleh Penulis)

GAMBAR 1. 2 PERSENTASE PENGANGGURAN TERBUKA DI INDONESIA BAGIAN BARAT TAHUN 2021

Based on data released by the Central Statistics Agency (BPS), it can be seen that Riau Islands province occupies the top position with the highest percentage of open

unemployment rate in western Indonesia. When viewed as a whole, the percentage of unemployment rate in Western Indonesia is still quite high in 2021, with the Riau Islands province at the top with a figure reaching 9.91%, followed by West Java with a figure of 9.82%, then there is Banten at 8.98%, DKI Jakarta at 8.50%, East Kalimantan at 6.83%, and West Sumatra at 6.52%.

According to Prawira (2018), economic growth is one of the indicators of successful development in an economy. The progress of an economy is determined by the magnitude of growth indicated by changes in national output. Changes in output in the economy is a short-term economic analysis. Economic growth is an effort to increase production capacity to achieve additional output, which is measured using Gross Domestic Product (GDP) and Gross Regional Domestic Product (GDP) in a region.

The minimum wage directly and indirectly is also one of the factors that influence the unemployment rate. The determination at the UMP level imposed by the government has an impact on the size of the existing unemployment rate. When a province's minimum wage is high, the workforce will be more enterprising and eager to find work in order to work. Conversely, when the minimum wage is low, the employees will lose the enthusiasm to find work because the wage set does not meet the needs of daily life.

Inflation is one of the factors that can affect the unemployment rate in a province, almost every country faces problems with the inflation rate. Inflation can be a benchmark to find out the good or bad inflation rate in a country in facing economic problems. A country with an inflation rate between 2% and 4% per year can be bound to have a good economy. The Phillips curve illustrates the correlation between unemployment and inflation based on the assumption that inflation illustrates that aggregate demand is increasing.

2. THEORETICAL FRAMEWORK

1. Economic Growth and Open Unemployment Rate

According to Scientific (2009) Economic growth has a negative correlation with unemployment. If the economic growth rate is high, the unemployment rate will certainly decrease. The flow, when the rate of economic growth increases, the wheels of the economy that drive it also expand, the output produced increases. Here the role of labor is increasingly needed, automatically the number is also increasing, which means the number of unemployed

will decrease. Studies conducted by economist Arthur Okun (Okun's Law) indicate a negative relationship between economic growth and unemployment, the higher the economic growth rate, the lower the unemployment rate, and vice versa.

2. Provincial Minimum Wage and Open Unemployment Rate

According to Kaufman and Hotchkiss quoted from (Filiasari, 2013) there is a relationship between wages and unemployment where the higher the amount of wages set by the government, it will result in a decrease in the number of people working. If the wages set in a region are too low, it will result in a high number of unemployment that occurs in that area. In A.W. Phillips' theory called "Phillips Curve Theory" which explains that in the short run there is a negative relationship with an increase in the wage rate in unemployment.

3. Inflation and Unemployment Rate

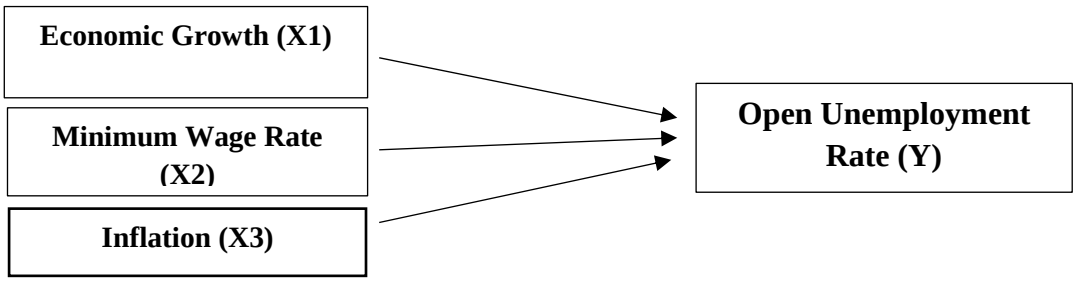
There is a trade-off between the inflation rate and the unemployment rate, that is, when the unemployment rate is high, the inflation rate is low and when the unemployment rate is low, the inflation rate is high. This situation was first proposed by A.W. Phillips who initially described the relationship between the rate of change in wages and the rate of change in employment opportunities. The Philips curve above explains the relationship between the inflation rate and the unemployment rate based on the assumption that inflation is a reflection of an increase in aggregate demand.

3. METHOD

The data used was obtained from the Central Statistics Agency (BPS). This research is an update from the previous research, because the data used in this study is more recent, namely 2015-2021 and the area used as a case study is western Indonesia, where there are 20 provinces that are the subject of research. The scope of this study discusses the effect of economic growth, minimum wage rate, and inflation on the open unemployment rate in Western Indonesia in the 2015-2021 range.

The type of this study is quantitative in the form of numbers. This study used secondary data types. Secondary data itself is data that has been collected previously and then given or published by the party who collected the primary data or other parties. In this study, data provided by the central statistics agency (BPS) was used. This study uses *cross section* data

from 20 provinces in western Indonesia and *time series* data for seven years, namely from 2015-2021.



Tests were conducted to compare which models to use, including Chow, Hausman, and Lagrange Multiplier tests. After the model is selected, it is necessary to perform a Classical Assumption Test. This classical assumption test is required as a condition for the Ordinary Least Square (OLS) to become a BLUE (Best Linear Unbiased Estimator), resulting in regression models with excellent linear estimators. The equation under test should be free of classical assumptions when analyzing multiple linear regression models. Then the selected model will be analyzed based on the results of the Simultaneous Significance Test (F Test), Partial Significance Test (t-Test), and Determination Coefficient Test (R2).

4. RESULT

4.1 Best model selection

a. Uji Chow

The Chow test is performed to test the panel data regression model between *the Common Effect Model and* the Fixed Effect Model. This test uses test criteria if the probability value is > 0.05 and then the selected cem but if the probability value is < 0.05 then the selected fem and continued with the Hausman Test. The following is a table of presentation of Chow Test results shown by the following table:

Effects Test	Statistic	d.f.	Prob.
Cross-section F	19.680074	(19,117)	0.0000
Cross-section Chi-square	200.775418	19	0.0000

Based on the Chow Test above, the results of the probability value of cross section f 0.0000 < 0.05 are obtained. Thus, it can be concluded that the *Fixed Effect Model* became the model selected in the test, so Ho was rejected and H1 accepted.

b. Uji Hausman

The hausman test was performed to test the panel data regression model between the fixed effect model and the random effect model. This test uses criteria if the probability value of random cross section > 0.05 then the brake is selected, while if the Probability value of Cross Section Random < 0.05 then FEM is selected. The following is a table of presentation of Chow Test results shown by the following table:

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	10.528360	3	0.0146

Based on the results of the Hausman Test above, the results of the Cross Section Random Probability f 0.0146 < 0.05 were obtained, so the ho hypothesis was rejected which means that the *Fixed Effect Model* is the best model that can be used in this study, so there is no need to proceed back to the Langrange Multiplier Test.

c. Model Yang Terpilih

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.122815	2.862408	2.837755	0.0054
LOGX1_GROWTH	-0.590658	0.268799	-2.197400	0.0300
X2_WAGES	-0.019873	0.009278	-2.142019	0.0343
X3_INF	-0.055780	0.013566	-4.111830	0.0001
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.804351	Mean dependent var		1.682458
Adjusted R-squared	0.767562	S.D. dependent var		0.318663
S.E. of regression	0.153633	Akaike info criterion		-0.759399
Sum squared resid	2.761559	Schwarz criterion		-0.276129
Log likelihood	76.15790	Hannan-Quinn criter.		-0.563012
F-statistic	21.86410	Durbin-Watson stat		1.719272
Prob(F-statistic)	0.000000			

Based on the results of data processing, the following results can be obtained:

$Unemployment_{i,t}$ = 8.122815 – 0.590658 LOGX1_GROWTH – 0.019873 X2_WAGES – 0.055780 X3_INF + e,t

Based on the regression equation, it can be concluded that:

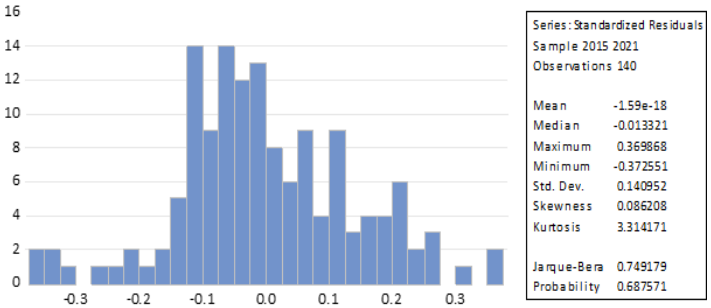
a. If Economic Growth, Provincial Minimum Wage Rate, and Inflation are fixed, then a constant value of 0 will cause Open Unemployment to be 8.122815
b. If the value of Economic Growth rises by 1% then open unemployment will decrease by 0.59%

c. If the Minimum Wage Rate increases by 1%, Open Unemployment will decrease by 0.01%

d. If the Inflation rate increases by 1% then Open Unemployment will decrease by 0.05%

4.2 Assumption Test Classic

a. Normality Test



Based on the Normality Test, the jarque-fallow probability value > 0.05, it means that the data is normally distributed.

b. Multicollinearity Test

	LOG(Growth)	X2(Wages)	X1(INF)
LOGX1_Growth	1.000000	0.073818	0.003302
X2_Wages	0.073818	1.000000	0.179126
X3_INF	0.003302	0.179126	1.000000

Based on the results of the multicollinearity test, it is known that the correlation between variables is smaller than 0.8 so that in this study there is no multicollinearity problem or the assumption that there are no symptoms of multicollinearity.

c. Heteroscedasticity test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.264912	9.504303	0.974812	0.3317
LOGX1_GROWTH	-0.787297	0.892515	-0.882111	0.3795
X2_WAGES	-0.026830	0.030805	-0.870965	0.3856
X3_INF	-0.097841	0.045043	-2.172148	0.0319

Based on table 4.6 above shows the probability value of each variable > 0.05, so it is concluded that the model used does not have symptoms of heteroscedasticity.

4.3 Hypothesis Testing

4.3.1 Coefficient Test Individual Regression (t-test)

Based on the results of regression estimates in the FEM Table, hypothesis testing of each independent variable can be concluded as follows:

1. Economic growth has a probability of 0.0300 with a coefficient of -0.590658. The value shows that the economic growth variable has a negative influence on open and significant unemployment with a significance of 5%.
2. The variable Provincial Minimum Wage Rate has a probability value of 0.0343 with a coefficient of -0.019873. This value shows that the UMP variable has a negative effect on open and significant unemployment with a significance of 5%.
3. Based on the table above, the estimated variable Inflation has a probability value of 0.0001 with a coefficient of -0.55780. this value shows that the Inflation variable has a negative effect on open unemployment and is significant with a significance of 5%.

4.3.2 Coefficient Test Regression Kindly overall (Test F)

Based on the test results, it can be seen that the probability value f is calculated at 0.000000. Calculated with a confidence level of 95% and ALPA = 0.05, then the probability value is < 0.05 so that the three independent variables simultaneously affect the dependent variable. So in this study the independent variable simultaneously affects open unemployment.

4.3.3 Test Coefficient of Determination (R2)

Based on the R-squared value is 0.804351 which means the independent variable can explain the dependent variable by 80.43% while 19.57% is influenced by other factors. While the Adjusted R-squared value is 0.767562 which means the dependent variable i.e. open unemployment can be explained by the independent variables of economic growth, provincial minimum wage, and inflation of 76.75% while the other 23.25% is influenced by factors outside the model.

5. DISCUSSION

5.1 The Effect of Economic Growth on Open Unemployment in Western Indonesia 2017-2021

Economic growth has a probability of 0.0300 with a coefficient of -0.590658. The value shows that the economic growth variable has a negative influence on open and significant unemployment with a significance of 5%. Based on the hypothesis proposed, statistically the

variable of economic growth negatively affects open unemployment. So the hypothesis that economic growth has an influence on unemployment is openly accepted.

This is supported by the theory used in this study, according to Amin (2016) The relationship between economic growth and unemployment can be explained in the theory / law of okun which states that there is an influence between unemployment and output in the business cycle The law of okun shows that the addition of 1 (one) point of unemployment will reduce GDP (Gross Domestic Product) by 2 percent. This means that there is a negative influence between economic growth and unemployment and vice versa unemployment on economic growth.

5.2 The effect of the minimum wage on the open unemployment rate in western Indonesia 2015-2021

Based on the variable, the Provincial Minimum Wage Rate has a probability value of 0.0343 with a coefficient of -0.019873. this value shows that the UMP variable has a negative effect on open and significant unemployment with a significance of 5%. Referring to the research of MSMEs et al. (2018) according to Mankiw (2012) One of the causes of the emergence of unemployment due to wage rigidity is the inability of wages to adjust to the equilibrium point, which is when the quantity of supply and demand for labor is the same. An increase in the wage rate causes an increase in the supply of labor as well as a decrease in demand for labor, resulting in a surplus of labor or unemployment. Wage rigidity occurs due to minimum wage regulations, labor unions, and wage efficiency.

5.3 The effect of inflation on the open unemployment rate in western Indonesia 2015-2021

Based on the table above, the estimated variable Inflation has a probability value of 0.0001 with a coefficient of -0.55780. this value shows that the Inflation variable has a negative effect on open unemployment and is significant with a significance of 5%. Based on the hypothesis proposed, statistically the inflation variable has a negative effect on open unemployment. So statistically the inflation variable has an effect on open unemployment.

There is a trade-off between the inflation rate and the unemployment rate, that is, when the unemployment rate is high, the inflation rate is low and when the unemployment rate is low, the inflation rate is high. This situation was first proposed by A.W. Phillips who initially described the relationship between the rate of change in wages and the rate of change in

employment opportunities. The Philips curve above explains the relationship between the inflation rate and the unemployment rate based on the assumption that inflation is a reflection of an increase in aggregate demand.

6. CONCLUSION

In the study the results obtained were concluded as follows:

1. The results showed simultaneously that the variable open unemployment rate can be explained by independent variables consisting of economic growth, minimum wage, and inflation of 80%. Partially, there are three variables that have a significant effect on the open unemployment rate
2. Economic growth has a negative and significant effect on the open unemployment rate in western Indonesia, meaning that the more economic growth increases, the lower the open unemployment rate in western Indonesia.
3. The minimum wage has a negative and significant effect on the open unemployment rate in western Indonesia. This means that increasing the minimum wage will reduce open unemployment in western Indonesia.
4. Inflation has a negative and significant effect on the open unemployment rate in western Indonesia.

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