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Minimum Wages, Economic Growth and Human Development Index on Unemployment in East Java

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Abstract

The larger the workforce, the very low wages received by the workers, the low level of the economy and the low human development index, the more difficult it is for people to find work. This is a problem that needs to be resolved immediately.The purpose of the study is that the Minimum Wage, Economic Growth and Human Development Index have a joint impact on the number of unemployed in East Java Province and to find out the Minimum Wage, Economic Growth and Human Development Index have an individual impact on the number of unemployed in East Java. The sample used was secondary data from the East Java BPS relating to the variables analyzed from 2017-2021. Minimum Wage, Economic Growth and Human Development Index both together have a significant impact on the Number of Unemployment in East Java Province. Minimum wages and economic growth have a significant impact on unemployment in East Java Province.

Keywords
minimum wage; economic growth; human development index; unemployment rate

I. Introduction

One of the development goals is to reduce unemployment so that it can increase employment and increase income for the community. (Zulhanafi et al, 2013).

The Indonesian state should benefit from successful economic development. Because it has a lot of human resources. However, in reality the success of economic development cannot always be guaranteed by human resources, it can even become a burden for the sustainability of development itself. This happens, if the number of human resources owned is not balanced with good enough quality. The result will be problems such as unemployment problems (Sulistiawati, 2021).

The limited capacity of the government is related to the large number of people so that the workforce in the business/work world cannot be accommodated. This situation will cause unemployment and worse every year the number of unemployed is increasing.

The Human Development Index is a composite indicator or a combination of several indicators thoughall aspects of human development cannot be measured. National development in Indonesia has actually embraced this concept, namely the concept of complete human development which requires improving the quality of life of the population physically, mentally and physically (Bhakti Setiawan Bhakti and Setiawan & Abdul Hakim, 2003).

The minimum wage according to the Minister of Manpower Article I paragraph 1 No.Per01/MEN/1999 is:

Minimum wage factors consist of:

a. Minimum wage in East Java Province
b. Minimum wages for the sector in East Java

Ma'ruf & Wihastuti (2008) argues that "Economic growth is a significant increase in national income (increase in income per capita) within a certain period of time".

The indicators of economic growth are (Sukirno, 2012):

1. Gross Domestic Product (GDP) or Proto Regional Domestic Product (GRDP).
2. Gross Domestic Product (GDP) is used to measure economic growth at the national level, while Gross Regional Domestic Product (GDP) is used to measure economic growth in a region/province. According to PBS.
3. Income per capita reflects GDP per capita. Per capita income is income divided by the total population.

According to Sukirno (2012), some of the adverse effects of unemployment can be divided into two aspects, namely:

1. Impact on the economy.
2. Bad consequences for society or individuals.

Unemployment will affect individual life and social stability in society.

The purpose of this research is to know the impact of knowing the minimum wage, economic growth and human development index on the number of unemployed in East Java. And to find out the impact of individual minimum wages, economic growth and the human development index on the number of unemployed in East Java.

II. Review of Literature

2.1 The Relationship between The Minimum Wage And Unemployment

If wages mincreases, the company's production costs will also increase. so the price of goods per unit produced also increases. Generally, when commodity prices rise, consumers will respond quickly, namely reducing consumption, even reluctant to buy problematic commodities. Reduce production targets, thereby reducing the labor required. This situation will increase the number of unemployed. The reduction in the number of workers needed due to the impact of reduced production scale is called the scale effect (Sukirno, 2010).

2.2 The Relationship Between Economic Growth And Unemployment

Research carried outukan by Azizah, F. I (2016) said if GDP grows 2.5% of the trend of a given year, the unemployment rate will fall by 1%, which means higher economic growth will reduce the number of unemployed. This is because the economic growth is more labor-intensive, meaning that the production process uses human labor.

2.3 Relationship between Human Development Index and Unemployment

Unemployment is closely related to the quality of human development. The high number of unemployed will result in a lack of prosperity in people's lives, and also cause their income to decrease.

Thus, income is the main factor that drives the improvement of human development (Setiawan M. Bhakti & Abdul Hakim, 2013).

And human development is expressed as a process of expanding human choices to improve education, health services, income and employment. The development index is a translation of the Human Development Index (HDI), which is an index number that measures the level of welfare of a country. The higher the HDI value, the more developed the country will be.

III. Research Method

Population and Sample

The population is related data from the variables in the study, namely the minimum wage, economic growth, human development index and the number of unemployed obtained at BPS East Java.

The sample was taken by purposive sampling which was taken from 2017 to 2021 with numbers or calculations per year.

Data Analysis Techniques

The analysis technique uses econometric models, namely:

Yit =0 + 1X1it + 2X2it + 3X3it + u it

Information:

Yit = Number of unemployed

X1it = Minimum wage amount

X2it = Economic growth (UMR)

X3it = Human growth index (IPM)

1- 3 = Regression coefficient for each variable

o = Constant

u = error tedrm (interference variable)

IV. Results and Discussion

4.1 Simultaneous Test (F test)

The stages of the F test are as follows:

a. Probability F > 0.05 then Ho is accepted and Hi is rejected.
   It means that the independent variables together have no impact on the dependent variable.
b. The probability value < 0.05 means Ho is accepted and Hi is accepted.
   Means that the independent variables together have an impact on the dependent variable.

4.2 t test (Partial)

a. The probability of t arithmetic (α=10%) then Hypothesis O is accepted and alternative H is rejected. This means that the independent variable and the dependent variable t have a significant impact on the unemployment rate.
b. If the probability t arithmetic (α = 10%) then Hypothesis O is rejected and the alternative hypothesis is accepted is rejected, which means that the independent variable has no impact on the unemployment rate.

4.3 Determination of the Best Model Technique

a. Chow test

DestinationThe purpose of the Chow test is to find out if the model that should be used is fixed effect or common effect.

H_0: Common effects

H_a:*Fixed effect*

If the result of the chi-square probability is less than 0.05 then H0 is rejected.

Table 1. Chow test

	Statistics	Prob.
Cross-section Chi-square	69.048213	0.0000

Source: Data processed by Eviews 11

The table above shows that the Chow test obtained a probability value of 0.0000 which is smaller than 0.05 so it is decided that H0 is rejected, so it is concluded that the fixed effect is better than the common effect model. Because of the conclusions obtained, further tests were carried out to find out which one is more appropriate between the fixed effect approach or the random effect approach.

b. Hausman Test

The purpose of this test is to find out which model should be used whether the random effect model is better than the fixed effect.

H0 : Random effect

H_a: Fixed effect

Table 2. Hausman test

Chi-Sq. Statistics	Chi-Sq. df	Prob.
2.333241	4	0.6747

Source: Data processed Eviews 11

The results of the Hausman test are known that the chi-square probability value of 0.6747 is greater than 0.05, so it is decided that H0 is accepted. So it can be decided that the chosen model is Random effect.

c. Lagrange Multiplier (LM) Test

DestinationThe purpose of the LM test is to find out if the model that should be used is the Common Effect or Random Effect

Table 3. LM . Test

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	21.62767	0.770886	22.39855
	(0.0000)	(0.3799)	(0.0000)

Source: Data processed Eviews 11

The results of the Lagrange Multiplier (LM) test show that the Breuch-Pagan probability value of 0.0000 is smaller than alpha (0.05), so it is decided that H1 is accepted, meaning that the chosen model is Random Effect.

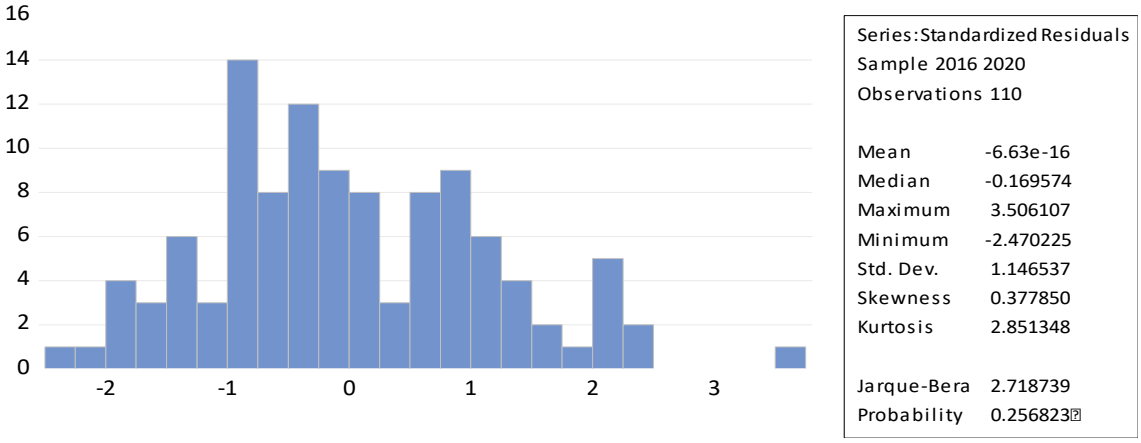
From these three tests, it is concluded that the best model technique is using the Random Effect model technique.

4.4 Classic Assumption Test

a. Normality Test

The normality test has a purpose to test in the regression model, whether the dependent variable and the independent variable are normally distributed or not with the

Jargue-Bera decision making (JB test) if the prob value. > 0.05, then the data is normally distributed.



Source: Data processed Eviews 11

Figure 1. *Normality Test Results*

From the results of the analysis of the normality test above the probability value of 0.256823. So it is assumed that the value is greater than 0.05 so it can be concluded that the data is normally distributed.

b. Multicollinearity Test

Multicollinearity test has a purpose to test whether the regression model has a correlation between independent variables or not.

Table 4. Multicollinearity Test Results

	UMR	GDP	HDI
UMR	1.0000000	0.068424	0.241456
GDP	0.068424	1.0000000	0.819795
HDI	0.241456	0.819795	1.0000000

Source: Data processed Eviews 11

From the data above, it can be seen that the correlation of each independent variable, namely the correlation of the Minimum Wage (UMR) with Economic Growth (GRDP) is 0.068424, and the Minimum Wage (UMR) variable with the Human Development Index (IPM) is 0.241456. while the variable of Economic Growth (GRDP) with the Human Development Index (IPM) is 0.819795. The explanation shows that there is no multicollinearity problem because the value is smaller than 0.85.

c. Heteroscedasticity Test

This test has the aim of testing the regression modelwhether there is a similarity or vice versa. This test is carried out using the Glejser Test.

Table 5. Glacier Heteroscedasticity Results

F-statistic	1.449559	Prob. F(4,105)	0.2229
Obs*R-squared	5.756465	Prob. Chi-Square(4)	0.2181
Scaled explained SS	5.115293	Prob. Chi-Square(4)	0.2757

Source: Data processed Eviews 11

In the table above, it can be seen that the value of the Chi-Square Probability of Obs*R-squared is 0.2181. So if it is concluded in this model there is no heteroscedasticity because the value is greater than 0.05.

d. Autocorrelation Test

The autocorrelation test aims to test the linear regression model whether there is a correlation between the confounding error in the time period t and the error in the time period t-1 (before) or not. If there is a correlation, then there is an autocorrelation problem. The method of detecting autocorrelation problems in this study is using the Durbin Watson test. Autocorrelation testing can be done with the following criteria (Ghozali, 2013):

- If the DW number is below -2, then the autocorrelation is positive.
- If the DW number is above +2 then the autocorrelation is negative
- If the DW number is between -2 to +2, it means that there is no autocorrelation.

Table 6. Durbin-Watson Test

Root MSE	1.139571
Mean dependent var	3.424818
S.D. dependent var	2.177414
Sum squared resid	142.8484
Durbin-Watson stat	0.986264

Source: Data processed Eviews 11

After selecting the model, the RandomEffect model, it is known that the number of n=110 and k=4. The results of the Durbin Watson test carried out are DW of 0.986264. Based on the criteria above, the results of the autocorrelation test show that the DW value lies between -2 and +2 (-2 < 0.986264 < 2, so no autocorrelation is found.

4.5 Coefficient of Determination Test (Adjusted R2)

The coefficient of determination test explains the contribution of the dependent variable to the independent variable.

Table 7. Results of the Coefficient of Determination (R2)

R-squared	Adjusted R-squared
0.723582	0.713051

Source: Data processed Eviews 11

The table above shows that the R-squared is 0.723582. If it is explained that R-squared has a relationship between the independent variables (independent) minimum wage (X1), economic growth (GDP) (X2) and human development index (X3) on the dependent variable (dependent) the level of unemployment (Y) in the district/city East Java province by 72.3% and the remaining 27.7% can be explained by other variables that are not in this study.

4.6 F Test (Simultaneous)

The F test explains the simultaneous effect of the dependent variable on the independent variable.

Table 8 .F Test Results (Simultaneous)

F. Statistics	Prob (F-Statistic)	F-Table
68,71472	0.000000	2.46

Source: Data processed Ewiews 11

The number of F-statistical tests is 68.71472. Using = 0.05, then F table is obtained with the numerator being 4 (4-1 = 3) and the denominator 105 (110-5) with = 0.05. Then the results of the probability F-statistic 0.000000 < = 0.05 or (5%) and F-statistic 68.71472 > F table 2.46 The explanation of the hypothesis can be concluded that the independent variables, namely the minimum wage, population growth and the human development index have an effect simultaneously on the dependent variable, namely the unemployment rate.

4.7 t test (Partial)

Table 9. T-Test Results (Partial)

Variable	Probability	Critical Probability (α)	t-Statistics	t-table	Information
X1	0.0536	0.10	1.951857	1.28967	Significant
X2	0.0000	0.10	9.521397	1.28967	Significant
X3	0.9892	0.10	0.013545	1.28967	Not significant

Source: Data processed 2021

From this test, the results of the influence of the independent variable, minimum wage (X1), economic growth (X2) and human development index (X3) on the dependent variable on the unemployment rate (Y) are obtained.
(Y) as follows:

1) The t-statistic of the minimum wage (X1) is greater than the t-table, which is 1.951857 > 1.28967 or the probability of the minimum wage is smaller than =10, which is 0.0041 < 0.10. The minimum wage has a positive and significant effect on the unemployment rate.
2) The t-statistic of economic growth (X2) is greater than t-table, which is 9.521397 > 1.28967 or the probability of economic growth is less than =10%, i.e. 0.0000 < 0.10. Economic growth (X2) has a positive and significant effect on the dependent variable of the unemployment rate.
3) The t-Statistic of the human development index (X3) is smaller than the t-table ie 0.013545 < 1.28967 or the probability of the human development index is greater than =10% ie 0.9892 > 0.10. The human development index (X3) has no positive and significant effect on the unemployment rate.

4.8 Discussion of Research Results

– The results of the study of the factors that affect the unemployment rate, among others, in the form of minimum wages, economic growth and human development index. Indicating that there is an influence on the unemployment rate in East Java Province, this can be seen from the F-statistic test, the probability value is 0.000000 < = 0.05 and the F-statistic is 68.71472 > F table 2.46 which shows all significant variables. to the unemployment rate. This result is in accordance with the hypothesis which states thatMinimum Wage, Economic growth and Human Development Index variables have

a simultaneous effect on the Unemployment variable in the Regency/City of East Java Province.

- The results of the t-test (partial) for the Minimum Wage variable (X1) show that it has a positive and significant effect on the unemployment rate (Y) in the Regency/City of East Java Province in 2017-2021. The results of this study are in line with research conducted byNurcholis (2014) with the title The Effect of Economic Growth, Minimum Wages and Human Development Index on Unemployment Rates in East Java Province 2017-2021.
- The results of the t-test (partial) for the variable Economic Growth (X2) show that it has a positive and significant effect on the Unemployment Rate (Y) in the Regency/City of East Java Province in 2017-2021. These results are in accordance with research conducted by Duma (2017) entitled Analysis of the Effect of Economic Growth Rates on Unemployment in North Sumatra.
- The results of the t-test (partial) for the Human Development Index (X3) variable show that it does not have a positive and significant effect on the unemployment rate in the Regency/City of East Java Province in 2017-2021.The results of this study are also in accordance with the research conducted by Nanang Hidayat (2020) entitled The Effect of the Human Development Index on the Unemployment Rate in Makassar City with the results of his research that the Human Development Index has no significant effect on the unemployment rate in Makassar City.

V. Conclusion

1. The independent variables are minimum wage, population growth and development index Humans have a simultaneous effect on the dependent variable, namely the unemployment rate.
2. The minimum wage has a positive and significant effect on the unemployment rate.
3. The level of economic growth has a positive and significant effect on unemployment
4. Human development does not have a positive and significant influence on unemployment rate.

Suggestion

1. The government should always increase the level of the minimum wage in order to reduce the level of Unemployment.
2. The level of economic growth needs to be increased so that the level of disruption is reduced, namely fostering small and medium economic actors, for example for street vendors.
3. The government encourages and provides facilities for human development, for example by increasing scholarships for students and students.

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