

EXAMINING THE EFFECTS OF ECONOMIC GROWTH ON UNEMPLOYMENT IN INDONESIA

Teddy Ch Leasiwal*, Hermi Oppier, Ali Tutupoho, Adellci Palloma
Faculty of Economics and Business, Universitas Pattimura Ambon, Maluku, Indonesia
Email: immanuel_tyo@yahoo.com*

ARTICLE INFO

Date received : August 30, 2022
Revision date : September 11, 2022
Date received : September 19, 2022

Keywords:

Unemployment Rate, Economic Growth; Minimum Wage; Human Development Index; Vector Error Correction Model

ABSTRACT

This study aims to determine the effect of the variables of Economic Growth, Minimum Wage, and Human Development Index on the Unemployment Rate in Indonesia in the short and long term. This research uses quantitative research. The data used is secondary data from 2001 to 2020. The dependent variable in this study is Unemployment while the independent variables are Economic Growth, Minimum Wage, and Human Development Index. The analytical method used in this research is the Vector Error Correction Model (VECM). The results showed that the variable economic growth had a positive and significant impact on the unemployment rate in the short and long term. The minimum wage variable and the human development index variable in the short and long term respectively have a negative and insignificant impact. Moreover, This research provides good and appropriate information for academics and the government to be able to reduce the problem of unemployment in Indonesia by using an economic and social approach.

INTRODUCTION

Indonesia is one of the countries that is still undergoing a process of economic development and aims to achieve a society's welfare. In achieving a welfare, one of which is needed for job opportunities that support and equal distribution of income in society, in Indonesia there is a gap between job opportunities, namely an increase in the number of job opportunities that is not balanced with an increase in the workforce which increases faster, this will have an impact on the creation of unemployment (Nurcholis, 2014).

Unemployment is an economic problem that can affect survival directly. Losing a job will lower the standard of living for the community. Unemployment can have a negative impact on the person himself as well as on society or the surrounding environment. Economic uncertainty is a business cycle driver, and its leading features make it a significant advanced indicator for assessing the impact of socioeconomic factors on suicide prevention (Claveria, 2022). This is due to reduced job opportunities which can be caused by a slow economy, reduced individual potential, loss of work skills, decreased income taxes and low levels of community welfare (Podi et al., 2020). Unemployment has become an economic problem in many countries and not only

in Indonesia. Due to unemployment, the level of productivity and income of the community is reduced, resulting in poverty and social problems (Hartanto & Masjkuri, 2017).

Economic growth is an increase in the ability of the economy to produce goods and services over a certain period of time. Economic growth is an increase in the ability of an economy to produce goods and services. In other words, economic growth refers to changes that are quantitative in nature and are usually measured using data on gross domestic product (GDP) or output income per capita. The economy of a country can be said to be growing if the economic activities of its people directly affect the increase in the production of goods and services. By knowing the level of economic growth, it is possible for the government to make plans regarding state revenues and future development.

The problem of unemployment can be influenced by several indicators, including economic growth, minimum wages, and the human development index. If a country's economic growth increases, it is expected to affect a decrease in the unemployment rate. Efforts to increase economic growth are one of the important indicators in overcoming the problem of unemployment (Baba, 2021). Okun 's law states that when there is an increase in economic growth it will have a negative effect on the unemployment rate.

Economic growth is usually measured using data on gross domestic product (GDP) or per capita output income. Gross Domestic Product (GDP) data based on current prices and constant prices is one of the important indicators to determine the economic condition of a country in a certain period. Moreover, countries in the global north and south have been developing service employment, much of it is poor wages, for several decades in order to attain more economic stability and secure a dynamic labor market (Antipova, 2021).

Based on the unemployment rate in 2020 reached 7.70%, this figure increased rapidly from previous years. This is due to the COVID-19 pandemic. One of the main causes of the rising unemployment rate during this pandemic is layoffs.

Indonesia's economic growth in 2020 contracted minus 2.07 percent with the deepest growth contraction in the transportation and warehousing sector of 15.04 percent. Ba and the Central Statistics Agency (BPS) stated that Indonesia's 2020 economic growth was minus 2.07 percent. The realization of this Gross Domestic Product (GDP) decreased compared to 2019 which grew 5.02 percent, as well as the worst since the 1998 crisis which grew minus 13.16 percent. According to BPS calculations, the Indonesian economy experienced a growth contraction in 2020, mainly due to the Covid-19 pandemic that had occurred since early 2020.

The Minimum Wage is also one of the indicators to overcome the unemployment rate (Panjawa & Soebagiyo, 2014). If the minimum wage in an area is low, then the population has a low standard of living and a low level of consumption (Gorry, 2013). On the other hand, districts/cities with high regional minimum wages have a high standard of living and consumption levels.

In addition to economic growth and the minimum wage, the human development index is also an important indicator in overcoming the problem of unemployment. The human development index is an acceptable measure to describe the quality of human life in a certain period. Increased human development through the development of human capital which is reflected in the level of education and health can increase human productivity so that it will increase the demand for labor and decrease the unemployment rate (Kurnia & Septiani, 2021).

Table 1 above shows the human development index in Indonesia for the last 20 (twenty) years. The Central Statistics Agency (BPS) recorded a slowdown in the growth of the Human Development Index (HDI) in 2020 compared to previous years. This condition is caused by the COVID-19 pandemic that hit Indonesia. Indonesia's HDI in 2020 was recorded at 71.94 , or an increase of 0.02 points compared to the previous year's achievement. The slowdown in HDI

growth in 2020 was strongly influenced by the decline in the adjusted average per capita expenditure. Based on the explanation of economic growth, minimum wage and human development index, a problem arises that must be investigated regarding economic growth, minimum wage and human development index in Indonesia.

[Amrullah et al. \(2019\)](#) analyze the determinants of the open unemployment rate in java in 2007-2016. This study uses the variables of minimum wage, grdp and inflation rate on open unemployment. In this study, the panel data regression model was used using the fixed effect model (FEM) Approach. The results of this study simultaneously show that the independent variables of GRDP, Provincial Minimum Wage, and Inflation have a significant effect on the dependent variable of the open unemployment rate. The results of the partial test analysis show that GRDP has a significant effect while the Provincial Minimum Wage and Inflation have an insignificant effect on the open unemployment rate for the period 2007-2016.

[Mahihody et al. \(2018\)](#) analyze the effect of wages and Human Development Index (HDI) on unemployment in Manado. This study uses a variable wage and human development index on unemployment. The analytical method used is multiple regression analysis. Based on the results of the study, the minimum wage level in Manado City has a significant negative effect on unemployment and the human development index has a significant negative effect on unemployment in Manado City.

[Baba \(2021\)](#) analyze economic determinants of unemployment in Malaysia, the research variables Unemployment, GRDP, Investment, Inflation, Population, used VECM approach. The results show that there is short-term causality between variables as well as long-term. GDP has a significant negative impact while investment has a significant positive impact on unemployment.

[Tsaurai \(2020\)](#) analyze Macroeconomic Determinants of Unemployment in Africa, the variables used Information and communication technology, Unemployment Human resources and infrastructure. method used Panel data analysis (fixed effects, random effects, pooled ordinary least squares, dynamic generalized methods of moments). Random effects and OLS show that economic development has a significant positive effect on population unemployment and open trade has a significant positive impact on unemployment. Information and communication technology and human resources have a significant negative effect on unemployment. Fixed effects and pooled OLS method show that economic growth has a significant negative effect on unemployment. Meanwhile, this research took place in Indonesia and at a time when the COVID-19 pandemic condition occurred, using the VECM approach.

METHOD

A. Data types and sources

The type of research used in this study is quantitative data. The secondary data used in this study is time series data or annual data from 2001-2020. Sources of data in this study were taken from data published by the Central Statistics Agency and Bank Indonesia. This data was taken from the Central Statistics Agency due to the completeness of the data published by BPS and Bank Indonesia.

1) Operational Definition

- a. Unemployment: the number of people of working age who are not working or have not worked in the study period. Percentage of Unemployment Rate in Indonesia in 2001-2020.
- b. Minimum Wage: the lowest monthly wage set annually as a safety net in an area. Minimum Wage Data in Indonesia for 2001-2020 in rupiah.

- c. Economic growth: an increase in the value and amount of production of goods or services in Indonesia within a certain period of time. proxied with Indonesia's GRDP in the period 2001 – 2020.
- d. Human Development Index: Human development achievement is based on a number of basic components of quality of life. As a measure of the quality of life in Indonesia. with 3 main indicators, namely health indicators, education levels and economic indicators in 2001 - 2022.

B. Data Collection

Data was collected by observing the data, literature, reports, journals, and other sources that support and have a relationship with this research. The data for this study were obtained from data published by the Central Statistics Agency (BPS) and Bank Indonesia.

C. Data Analysis

The analysis used in this research is Vector Error Correction Model (VECM) analysis. Vector Error Correction Model (VECM) is a method derived from VAR.

1) Data Stationarity Test

The test method used to test the stationarity of the data is the ADF (Augmented Dickey-Fuller) test. using a significance level of 5 percent. If the t-ADF value is less than the critical value, it can be concluded that the data used is stationary (does not contain unit roots). The unit root test is carried out at the level up to the second difference. Stationary data tend to be close to the average value, fluctuating around the mean value. Non-stationary data can result in quasi-regression, which is a regression that describes the relationship between two or more variables that looks statistically significant when in fact it is not.

2) Optimal Lag Determination

Problems that arise if the lag length is too small will make the model unusable because it cannot explain the relationship. Vice versa if the length of the lag used is too large, the degrees of freedom will be greater so that it is no longer effective. Determining the optimal lag is important because in the VAR method, the optimal lag of the endogenous variable is the independent variable used in the model. Long test lag will be very helpful in eliminating the problem of auto correlation in the VAR system which is used as a VAR stability analysis. So that by using the optimal lag, it is expected that auto problems are expected the correlation will no longer appear.

3) Cointegration Test

The purpose of the cointegration test in this study is to determine whether the group of non-stationary variables at these levels meets the requirements of the integration process, that is, if all variables are stationary to the same degree. This test is intended to determine whether there is a long-term effect on the variables studied. If cointegration is proven to exist, then the VECM step can be continued. However, if it cannot be proven, then VECM cannot be continued.

4) Granger Causality Test

Causality test is conducted to determine whether an endogenous variable can be considered as an exogenous variable. This stems from a lack of understanding of the influence between variables. If there are two variables y and z, then whether y causes z or z causes y or applies both or there is no relationship between the two variables.

5) Vector Error Correction Model (VECM)

VECM data is used in a non-structural VAR model if the time series data is not stationary at the levels but is stationary at the differential data and is cointegration so

that it shows a theoretical relationship between variables. In VECM, there is a speed of adjustment from short to long term.

VECM is a limited form of VAR due to the non-stationary form of data but cointegration. VECM is often referred to as a VAR design for non-stationary series that has a cointegration relationship.

According to Syahfitri, the general VECM model is:

$$y_t = \mu_0 + \mu_1 t + \alpha \beta y_{t-1} + \sum_{i=1}^{k-1} \tau_k y_{t-1} + \varepsilon_t$$

y_t : vector containing the variables analyzed in the study, μ_0 : vector intercept, μ_1 : regression coefficient vector, t : time trend, α : coefficient speed of adjustment, β : cointegration vector, y_{t-1} : variable in-level, τ_k : regression coefficient matrix, $k-1$: VECM order of VAR, k : lag, ε_t : error term

6) Impulse Response Function (IRF)

Impulse Response Function (IRF) analysis is a method used to determine the response of an endogenous variable to shocks of certain variables. The Impulse Response Function (IRF) is also used to see the shock of another variable and how long the effect lasts. If a variable cannot be affected by shocks, then the specific shock cannot be known but the shock in general.

7) Variance Decomposition (VD)

Variance Decomposition is a method to describe the dynamic system contained in VAR. It is used to compile an estimate of the error variance of a variable, namely how big the difference between the variance before and after the shock, both from the shock that comes from oneself or from other variables.

Forecast error variance decomposition (FEVD) describes the innovation of a variable against the components of other variables in the VAR. The information conveyed in the FEVD is the proportion of sequential movements caused by the shock itself and other variables.

D. Operational Definition

- **Unemployment** : the number of people of working age who are not working or have not worked in the study period. Percentage of Unemployment Rate in Indonesia in 2001-2020
- **Minimum Wage**: the lowest monthly wage set annually as a safety net in an area. Minimum Wage Data in Indonesia for 2001-2020 in rupiah
- **Economic growth**: an increase in the value and amount of production of goods or services in Indonesia within a certain period of time. proxied with Indonesia's GRDP in the period 2001 – 2020
- **Human Development Index** : Human development achievement is based on a number of basic components of quality of life. As a measure of the quality of life in Indonesia. with 3 main indicators, namely health indicators, education levels and economic indicators. 2001 - 2022. in percent

RESULTS AND DISCUSSION

A. Stationary Test

Table 1
ADF Stationary Test At Level

Variable	ADF statistics		
	t-Statistics	critical value	Prob.
Unemployment Rate	-0.944	-3.029	0.750
Economic growth	-0.835	-3.029	0.785
Minimum wage	-1.232	-3.040	0.636
HDI	-2.401	-3.029	0.154

Source: data processed

Based on Table 1, the stationary test at the level level, it can be seen that the ADF t-statistic value on the variables of unemployment, economic growth, minimum wage and human development index is not stationary. This is because the critical value is greater than the ADF t-statistic value. Therefore, it is necessary to process 1st difference to find out all the variables are stationary or not. The following are the results of the stationarity test at the first difference level :

Table 2
ADF Stationary Test at Level 1st difference

Variable	ADF statistics		
	t-Statistics	critical value	Prob.
Unemployment Rate	-3.100	-3.040	0.044
Economic growth	-1.519	-3.040	0.501
Minimum wage	-6.070	-3.040	0.000
HDI	-4.471	-3.040	0.002

Source: data processed

Based on Table 2, the results of data processing for 1st difference , it can be seen that the variables of the unemployment rate, minimum wage, and the human development index are stationary at level 1st difference where the ADF t-statistic value is greater than the critical value . On the other hand, the economic growth variable is not stationary where the critical value of -3.040 is still higher than the ADF t-statistic which is -1.519. Therefore, it is necessary to carry out a 2nd difference process to see whether all variables are stationary or not. The following is a table of ADF stationary test results at level 2nd differences:

Table 3
ADF Stationary Test at Level 2nd difference

Variable	ADF statistics		
	t-Statistics	critical value	Prob.
Unemployment Rate	-6.222	-3.052	0.000
Economic growth	-3.117	-3.052	0.044
Minimum wage	-9.573	-3.052	0.000
HDI	-7.596	-3.052	0.000

Source: data processed

Based on Table 3, the results of the above data processing, it can be seen that all data are stationary based on the results of the 2nd difference unit root, this is because the ADF t-statistic value is greater than the critical value. The probability of ADF t-statistics of the unemployment rate variable is -6.222 which is greater than the critical value of -3.052.

The economic growth variable has stationary data at the second difference, where the probability of the ADF t-statistic of the economic growth variable is -3.117 which is greater than the critical value of -3.052.

The minimum wage variable has stationary data at the 2nd difference level, because the probability of the ADF t-statistic is -9.573 greater than the critical value, which is -3.052. The Human Development Index (HDI) variable also has stationary data at the 2nd difference level, because the probability of the ADF t-statistic is ^{-7.596} which is greater than the critical value, which is -3.052. It can be concluded that the variable data on the unemployment rate, minimum wage, economic growth and also the human development index are stationary at the second difference level.

B. Optimal Lag Test

Table 4
Optimal Lag Test Results

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-77.36593	NA	0.307244	10.17074	10.36389	10.18063
1	-51.21811	35.95326*	0.094162*	8.902264	9.868000*	8.951718*
2	-35.18955	14.02499	0.155525	8.898694*	10.63702	8.987710

Source: data processed

Table 4 shows the amount of lag in this study is based on the smallest or minimum value. Apart from being seen from the smallest or minimum value, it can also be seen from the number of stars in the lag. In the table it can be seen that the optimal lag length lies in lag 1. Thus, the recommended optimal lag is lag 1.

C. Cointegration Test

Table 5
Johansen Cointegration Test Results

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.907352	71.80182	47.85613	0.0001
At most 1 *	0.654905	33.73864	29.79707	0.0167
At most 2 *	0.524719	16.71567	15.49471	0.0326
At most 3 *	0.259834	4.814083	3.841465	0.0282

Source: data processed

Table 5 shows the trace statistic at none, at most 1, at most 2 and at most 3 is greater than the critical value with a significance level of 5 percent. Based on the results of the cointegration test, a sign (*) was found on none, at most 1, at most 2 and at most 3, then the equation must be solved using the VECM method. Thus, among the variables of unemployment rate, economic growth, minimum wage and HDI, there is stability and movement in the long term. Meanwhile, in the short run, all variables adjust to each other to achieve balance in the long run.

D. Granger Causality Test

**Table 6
Granger Causality Test Result**

Pairwise Granger Causality Tests
Sample: 2001 2020
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause Unemployment	19	5.058	0.038
Unemployment does not Granger Cause GDP		2.800	0.113
LOGMINIMUMWAGE does not Granger Cause UNEMPLOYEMENT	19	4.116	0.059
UNEMPLOYEMENT does not Granger Cause LOGMINIMUMWAGE		1.141	0.301
HDI does not Granger Cause UNEMPLOYEMENT	19	4.701	0.045
UNEMPLOYEMENT does not Granger Cause HDI		0.011	0.915
LOGMINIMUMWAGE does not Granger Cause GDP	19	2.673	0.121
GDP does not Granger Cause LOGMINIMUMWAGE		0.001	0.976
HDI does not Granger Cause GDP	19	0.874	0.363
GDP does not Granger Cause HDI		2.463	0.136

Source: data processed

Based on Table 6, the probability value, if the probability value is below 0.05, then the variables have an influence. On the other hand, if the probability value is above 0.05, then the variables have no influence on each other. One of them is the variable of economic growth which has a statistically significant effect on the unemployment rate, while unemployment does not have a statistically significant effect on economic growth.

E. Vector Error Correction Model (VECM) Test

**Table 7
Long-Term and Short-Term VECM Estimates**

Variable	Coefficient	t-stats	t-table
Long-term			
Economic growth	59.34795	6.14707	1.74588
Minimum wage	-593.6873	-3.98820	
HDI	-40.01235	-7.67578	
Short-term			
CointEq1	0.00506	-1.61863	1.74588
Economic growth	0.497935	2.21716	
Minimum wage	-6.735205	-2.81136	
HDI	-0.342571	-2.52685	

Source: data processed

Based on table 7, In the long term economic growth has a positive and significant effect on the unemployment rate. It is known from the t-statistical value which is greater than the t-table value. Each minimum wage variable shows negative and insignificant results as seen from the t-statistic value which is smaller than the t-table value. In the short-term VECM estimation results, economic growth shows positive and significant results with a t-statistic value of 2.21716 which is greater than the t-table value of 1.74588. Meanwhile, the minimum wage and HDI variables showed negative results and did not have a significant

effect on the unemployment rate variable because the t-statistic value was smaller than the t-table, namely 1.74588.

Based on the table In the long term economic growth has a positive and significant effect on the unemployment rate. Each minimum wage variable shows negative and insignificant . In the short-term VECM estimation results, economic growth shows positive and significant. Meanwhile, the minimum wage and HDI variables showed negative results and did not have a significant effect on the unemployment rate

F. Impulse Response Function (IRF)

Table 8
Impulse Response Function (IRF) Value

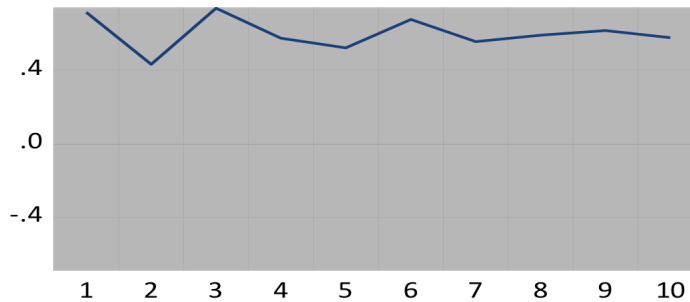
Respon of D(Unemployment):

Period.	D(Unemployment)	D(GDP).	D(LogMW)	D(HDI)
1	0.715280	0.000000	0.000000	0.000000
2	0.432396	-0.059792	-0.185300	-0.012857
3	0.738587	-0.096179	0.244082	0.322577
4	0.574231	-0.586123	-0.688840	-0.079397
5	0.522493	0.302078	0.356040	0.152193
6	0.676708	-0.477212	-0.329993	0.115259
7	0.556427	-0.099693	-0.120076	0.057841
8	0.591214	-0.126462	-0.036740	0.112811
9	0.616760	-0.242932	-0.176194	0.098424
10	0.577756	-0.149458	-0.111105	0.081433

Source: data processed

Table 8 shows the unemployment rate variable responds to the shock given the variables of economic growth, minimum wage, and human development index are changing every period . Both respond positively and negatively to the unemployment rate variable

Response of D(Unemployment) to D(Unemployment)



Source: data processed

Figure 1. Test of Impulse Response to Unemployment

From the Figure 1, it can be seen that the tendency of the unemployment variable above the horizontal line which indicates that this variable has a positive impact. This is because the unemployment rate affects itself so that it can control its own impact.

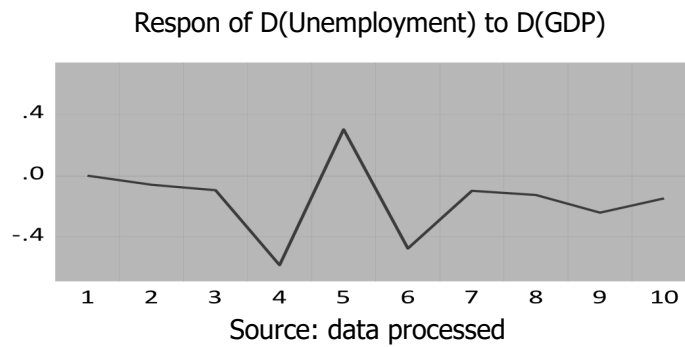


Figure 2. Impulse Response Test of Economic Growth on Unemployment

Figure 2 shows the trend of the variable economic growth below and above the horizontal line, which means that the variable economic growth has a negative impact as well as a positive impact according to each period. The *shock* given by -0.149458 in the 10th period means that if there is an increase in economic growth it will reduce the unemployment rate.

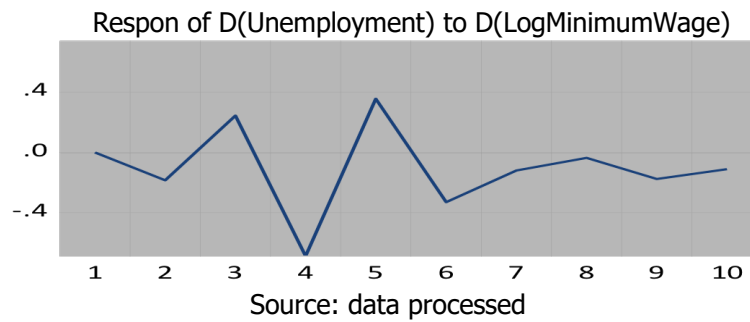


Figure 3. Minimum Wage Impulse Response Test on Unemployment

Figure 3 shows the trend of the variable economic growth below and above the horizontal line, which means that the variable economic growth has a negative impact as well as a positive impact according to each period. The shock given was -0.111105 in the 10th period.

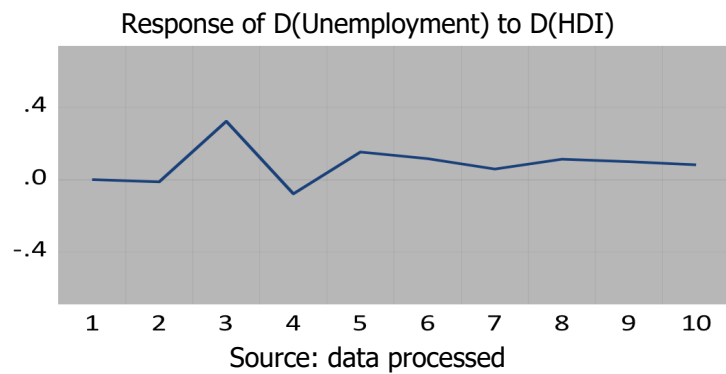


Figure 4. HDI Response Test on the Unemployment Rate

Figure 4 shows the tendency of the variable economic growth below and above the horizontal line, which means that the variable economic growth has a negative impact as well as a positive impact according to each period.

Table 9
Variance Decomposition (VD) Results

Variance Decomposition of D(Unemployment) :

Period.	SE.	D(Unemployment	D(GDP)	D(LogMW)	D(HDI
1	0.715280	100.0000	0.000000	0.000000	0.000000
2	0.858293	94.83127	0.485297	4.660988	0.022441
3	1.206259	85.50170	0.881440	6.454176	7.162682
4	1.615286	60.32020	13.65833	21.78540	4.236066
5	1.767293	59.13063	14.33144	22.25762	4.280313
6	1.982718	58.62823	17.17932	20.45379	3.738650
7	2.066031	61.24860	16.05458	19.17523	3.521585
8	2.155942	63.76647	15.08749	17.63826	3.507777
9	2.264559	65.21384	14.82570	16.59220	3.368255
10	2.345920	66.83422	14.22105	15.68556	3.259166

Source: data processed

Table 9 explains the results of the variance decomposition test where in the first period the unemployment rate is influenced by the unemployment rate itself. However, as the period increases, other variables begin to influence, although the magnitude is not as large as the influence of the unemployment rate itself. The minimum wage has the second largest influence after the unemployment rate variable, where the effect at the beginning of the period is 4.66 and continues to increase for 3 periods, and after that it decreases until the end of the period the effect is 15.6 on the unemployment rate. The smallest effect is given by the human development index variable on the unemployment rate of 3.26 percent at the end of the period, as for the economic growth variable seen from the variance decomposition test, which is in the 3rd place, its effect on the unemployment rate is 14.2 percent at the end of the period.

Based on the results of the above calculations, the following is a further discussion which is explained as follows:

1) The Effect of Economic Growth on Unemployment

Based on the short-term and long-term test results, the economic growth variable shows positive and significant results on the unemployment rate. This condition is not in accordance with the theory of Okun's Law and the hypothesis of this study which states that when there is an increase in economic growth, it will have a negative effect on the unemployment rate. However, this condition is in accordance with the results of research from [Anggoro \(2015\)](#) which states that positive economic growth is due to economic growth not being accompanied by an increase in production capacity, so unemployment continues to increase in line with economic growth.

2) Effect of Minimum Wage on Unemployment

Based on the short-term and long-term test results, the minimum wage variable shows negative results and does not have a significant effect on the unemployment rate. This means that if wages rise, the unemployment rate will decrease. If wages are set at too low it will result in high levels of unemployment.

This condition is in accordance with Keynes's theory which states that if the wage rate increases, it will affect the decrease in the unemployment rate. When wages increase, income also increases. The impact that occurs if income increases is that purchasing power will also increase and public spending will increase, so the production capacity will be increased in accordance with the demand for goods and services, so that the company will increase its workforce to meet community demand and the use of full employment will increase.

The results of this study also show the relationship between the minimum wage and the unemployment rate which is not significant. According to research conducted by [Amrullah et al. \(2019\)](#) regarding the determinants of the Open Unemployment Rate in Java in 2007-2016, it is stated that whatever the minimum wage increases, it will not affect the unemployment rate. An increase in the minimum wage is not always accompanied by a decrease in the unemployment rate. This means that the increase in the minimum wage that occurs does not absorb the existing workforce so that the unemployment rate does not decrease.

3) The Effect of the Human Development Index on Unemployment

Based on the short-term and long-term test results, the human development index variable shows negative results and does not have a significant effect on the unemployment rate ([Sanitra, 2021](#)). That is, if the human development index increases, the unemployment rate will decrease. On the other hand, if the human development index decreases, the unemployment rate will increase. HDI includes three dimensions, namely a long and healthy life, knowledge, and a decent life.

The first dimension, a long and healthy life as measured by a higher life expectancy at birth, indicates that public health is classified as good, and in the long term it will increase work productivity. When work productivity increases, income will increase, so this will have an impact on decreasing the unemployment rate. For the dimension of knowledge, it is measured by the expectation of long schooling and high average length of school, it will increase the quality of self in the community. When the quality of human resources increases, they are quickly absorbed in the world of work because they have expertise. This has an impact on job absorption and reduces the unemployment rate.

The third dimension is a decent life as measured by the average amount of per capita expenditure. If the people of an area have a high average per capita expenditure, this illustrates the high purchasing power of the people. This indicates a high community income and a low unemployment rate. If these three dimensions increase every year, then human development is considered successful. Thus the government has succeeded in increasing human development and making people quickly absorbed into the world of work. This is in accordance with the research conducted by [Mahihody et al. \(2018\)](#) with the title of the research entitled The Effect of Wages and Human Development Index (IPM) on Unemployment in Manado City.

The results of this study also show the relationship between the minimum wage and the unemployment rate which is not significant. This means that the human development index does not have a significant effect on the unemployment rate. According to research by [Latifah \(2017\)](#), it is said that the occurrence of unemployment is not only caused by the quality of human resources, the number of college graduates who are still unemployed because the existing job opportunities are not in accordance with the interests of increasing educated unemployment.

CONCLUSION

Based on testing with the VECM test, it shows that economic growth positively affects the unemployment rate in the short and long term in the period 2001-2020. Economic growth has a positive and significant effect on the unemployment rate in the long term. The minimum wage does not have a significant effect on the unemployment rate in the long run. The human development index does not have a significant effect on the unemployment rate in the long run. In the short-term VECM estimation test results, only economic growth has a positive and significant effect on the unemployment rate. Meanwhile, the minimum wage and the human development index have no significant effect on the unemployment rate.

This research provides good and appropriate information for academics and the government to be able to reduce the problem of unemployment in Indonesia by using an economic and social approach. The weakness of this research is that the data was also taken during covid 19, so it does not provide a real picture of unemployment in Indonesia

REFERENCES

- Amrullah, W. A., Istiyani, N., & Muslihatinningsih, F. (2019). Analisis Determinan Tingkat Pengangguran Terbuka di Pulau Jawa Tahun 2007-2016. *E-Journal Ekonomi Bisnis Dan Akuntansi*, 6(1), 43–49. [Google Scholar](#)
- Anggoro, M. H. (2015). Pengaruh pertumbuhan ekonomi dan pertumbuhan angkatan kerja terhadap tingkat pengangguran di kota Surabaya. *Jurnal Pendidikan Ekonomi (JUPE)*, 3(3). [Google Scholar](#)
- Antipova, A. (2021). Analysis of the COVID-19 impacts on employment and unemployment across the multi-dimensional social disadvantaged areas. *Social Sciences & Humanities Open*, 4(1), 100224. [Scopus](#)
- Baba, J. F. (2021). Economic Determinants of Unemployment in Malaysia: Short-and Long-Run Causality. *Journal of Public Administration and Governance*, 11(1), 251272. [Google Scholar](#)
- Claveria, O. (2022). Global economic uncertainty and suicide: Worldwide evidence. *Social Science & Medicine*, 115041. [Scopus](#)
- Gorry, A. (2013). Minimum wages and youth unemployment. *European Economic Review*, 64, 57–75. [Scopus](#)
- Hartanto, T. B., & Masjkuri, S. U. (2017). The Effect of Population, Education, Minimum Wage and Gross Regional Domestic Product on The Amount of Unemployment in The Regency and City of East Java, 2010-2014. *JJET (Jurnal Ilmu Ekonomi Terapan)*, 20–29. [Google Scholar](#)
- Kurnia, R. E., & Septiani, Y. (2021). Social and economic factors determining the Unemployment rate in the Bregasmalang region 2010-2020. *Eko-Regional: Jurnal Pembangunan Ekonomi Wilayah*, 16(1). [Google Scholar](#)
- Latifah, N. (2017). Pengaruh pertumbuhan ekonomi dan indeks pembangunan manusia terhadap tingkat pengangguran terbuka dan dampaknya pada jumlah penduduk miskin di Kota Manado. *Jurnal Berkala Ilmiah Efisiensi*, 17(02). [Google Scholar](#)
- Mahihody, A. Y., Engka, D. S. M., & Luntungan, A. Y. (2018). Pengaruh Upah Dan Indeks Pembangunan Manusia (IPM) Terhadap Pengangguran Di Kota Manado. *Jurnal Berkala*

Ilmiah Efisiensi, 18(3). [Google Scholar](#)

Nurcholis, M. (2014). Analisis Pengaruh Pertumbuhan Ekonomi, Upah Minimum dan Indeks Pembangunan Manusia Terhadap Tingkat Pengangguran di Provinsi Jawa Timur Tahun 2008-2014. *Jurnal Ekonomi Pembangunan*, 12(1), 48–57. [Google Scholar](#)

Panjawa, J., & Soebagiyo, D. (2014). The effect of an increase in the minimum wage on the unemployment rate. *Journal of Economics & Development Studies*, 15(1), 48–54. [Google Scholar](#)

Podi, S. I., Zulfanetti, Z., & Nurhayani, N. (2020). Analisis pengaruh pertumbuhan ekonomi dan tingkat inflasi terhadap pengangguran perbuka di Provinsi Jambi pendekatan vector error correction model (VECM). *Analisis Pengaruh Pertumbuhan Ekonomi Dan Tingkat Inflasi Terhadap Pengangguran Perbuka Di Provinsi Jambi Pendekatan Vector Error Correction Model (VECM)*, 15(1), 95–114. [Google Scholar](#)

Sanitra, N. (2021). Effect of Economic Growth And Human Development Index (IPM) on Unemployment in Indonesia. *Jurnal Ekonomi*, 10(01), 13–16. [Google Scholar](#)

Tsaurai, K. (2020). Macroeconomic determinants of unemployment in Africa: A panel data analysis approach. *Acta Universitatis Danubius. Œconomica*, 16(2). [Google Scholar](#)

Copyright holder:

Teddy Ch Leasiwal, Hermi Oppier, Ali Tutupoho, Adellci Palloma (2022)

First publication right:

Journal of Social Science

This article is licensed under:

