Bulletin of Islamic Economics, Vol. 2 No. 1 (2023) 23-31
Published by Department of Islamic Economics, Universitas Islam Negeri Sunan Kalijaga
e-ISSN 2829-9566

Determinants of Unemployment Rate in Indonesia (2011-2021 Period)

Naelul Minah[a *], Riswanti Budi Sekaringsih[a]

[a]*UIN Sunan Kalijaga Yogyakarta, Indonesia*

To Cite This Article: Minah, N., Sekaringsih, R.B. (2023). Determinants of Unemployment Rate in Indonesia (2011-2021 Period). *Bulletin of Islamic Economics, 2*(1), 23-31.

Abstract: This study aims to analyze the effect of economic growth, inflation, Human Development Index (HDI), Regional Minimum Wage (UMR) and investment on unemployment rates in Indonesia. The type of this study is quantitative research. Econometric analysis in this study is panel data analysis with a fixed effect model and a random effect model on the secondary data from the Indonesian Central Statistics Agency in 2011-2021 for 33 provinces. The results show that independent variables simultaneously have a significant effect on the unemployment rate in Indonesia during the period 2011-2022. Partially, the variables of Inflation, Human Development Index (HDI), Regional Minimum Wage (UMR) and investment have a significant and significant effect on the unemployment rate. At the same time, the Gross Regional Domestic Product (GRDP) variable does not affect Indonesia's unemployment rate during 2011-2022.

Keywords: *Gross Regional Domestic Product (GRDP), Inflation, Human Development Index (HDI), Regional Minimum Wage (UMR), Investment, Unemployment.*

Introduction

Unemployment is a fundamental problem in the macroeconomy because it directly affects the community's standard of living. Unemployment can be defined as people who are not working but are looking for work, setting up a business, finding work challenging (despair), or have been accepted for work but have yet to start working. Many factors cause unemployment, ranging from the level of education, human resources, the availability of jobs. In general, unemployment occurs because the level of the labour force is greater than the number of jobs available. The unemployment rate increases with the gap between the smaller number of jobs. Suhendra & Wicaksono (2020) explained that a person's level of education, wages, inflation and economic growth correlate with the unemployment rate and are thought to affect one another.

Economic growth means the state of a country that experiences an increase in income due to increased production of goods and services. Production factors in the form of human resources are needed to produce goods and services. If the country's economic growth has increased in producing goods and services, it will use more human resources and absorb more labour. Hasyim (2016) explains that production factors that increase quantity and quality play an important role in economic growth. High economic growth has a vital role in labour absorption. By absorbing much labour, it means that economic growth can be a solution to the problem of unemployment. Unemployment and inflation are essential in the country's economic process. An increase in prices is generally interpreted as inflation. According to Sukirno (2008:53) in Sarimuda and Soekarnoto (2014), inflation has a close relationship with unemployment, where a high inflation rate will affect the increase in unemployment. Because high inflation will increase

The cost of raw materials used in production harms the company's ability to produce goods. This problem becomes crucial and encourages companies to reduce the production of goods in general so that it requires less than labour. So that companies are forced to take action to reduce the number of

*Corresponding Author

18108010061@student.uin-suka.ac.id (N. Minah), riswanti.sekaringsih @uin-suka.ac.id (R. B. Sekaringsih).

https://doi.org/10.14421/bie.2023.021-04

workers (layoffs) to maintain the survival of the company and cause the unemployment rate to increase. The government plays an essential role in controlling the economy from the inflation problem so that the inflation rate remains excellent and stable.

Another economic variable that is likely to influence unemployment is the HDI. The Human Development Index (HDI) is a comparative measurement of life expectancy, literacy, education, and living standards. The progress and quality level of human development generally can be seen from the developing of a region's HDI. This Human Development Index shows progress in education, health and income. According to the Central Bureau of Statistics, HDI could represent the progress in income, health, and education. HDI can be used as a significant marker to measure results in efforts to build individual living standards. Mahihody et al. (2018) researched the effect of wages and HDI on the unemployment rate in Manado City. In this study, HDI harms unemployment problems. In other words, the higher the number of Human Development Index (HDI) in a country, will reduce the current unemployment rate.

In addition to the three economic variables that have been explained, the wage rate is also fundamental to employment. Soekarnoto and Sarimuda (2014) explain that a decrease will follow an economy experiencing an increase in the wage rate in labour demand. A situation where the demand for labour is low will have a significant impact on increasing unemployment. Vice versa, the determination of a decrease in the wage rate will increase the absorption of labour and reduce the unemployment rate. Mankiw et al. (2014) explained that in understanding unemployment that occurs because the number of jobs is insufficient (structural unemployment) occurs due to the application of minimum wage regulations. In addition, it is also explained that in the labour market, wages are forced to remain at the equilibrium level between supply and demand for labour due to minimum wage regulations. Then the labour supply will increase, and the demand for labour will decrease, resulting in a labour surplus or unemployment. From this explanation, the minimum wage set by the government correlates to unemployment.

Besides being influenced by inflation, the level of investment also affects the unemployment rate (Kurniawan (2014) in Prayuda and Dewi (2015)). Investment is innovative work for some people who have more capital or wealth. The investment itself is an investment activity to obtain profit in the future. Investment has an indirect relationship with unemployment. Research by Romdhoni (2017) proves that investment and labour absorption influence the significance level of the variable correlation coefficient of 0.806. It has concluded that investment and employment have a positive relationship. An increase in the level of investment in a region will impact employment and reduce unemployment. Investment is a solution for the government to overcome the problem of unemployment by increasing the number of foreign and domestic private parties contributing their capital to create jobs for people who do not have jobs in the country. Yanti (2017). The high value of the investment significantly impacts employment in Indonesia.

The labour force in Indonesia has continuously increased over the last ten years. It is an opportunity and challenge for the government to empower Indonesia's human resources. It is a hope for people to be included in the labour force if the government can provide more jobs so that people can get a job. With the availability of more jobs, the government can reduce the unemployment rate.

Unemployment in Indonesia showed a downward trend from 2011-2020, but this unemployment rate is still classified as a high number, especially with a workforce that always increases yearly. To create community welfare by reducing the current unemployment rate, the government must make policies that can expand employment opportunities for the community because the unemployment problem is complex and affects the national economic development program in the long term.

Economic development itself is a process of increasing per capita income accompanied by changes in the structure of a more advanced society. The country's economic development program cannot be separated from the problem of unemployment because unemployment is related to the welfare of the community, and this welfare problem is the main goal in a country to create a decent standard of living for the community, and the community obtains high welfare.

Literature Review

Unemployment

Unemployment is a social problem faced by developed and developing countries. Unemployment is a fundamental socioeconomic problem because it relates to the welfare of human life, can even interfere with the psychological problems of people who experience it and hurts the country's economic development.

Sukirno (2012) defines unemployment as a situation where a person who is included in the labour force wants to get a job but has yet to obtain it. According to BPS, unemployment is a population that does not have a job and is still looking for work, is setting up a business, finds it difficult to get a job (desperate), or has been hired but has yet to start working.

Economic Growth

Economic growth is different from economic development. According to Sukarno (2000) in Franita (2016), economic growth is described as the increase in goods and services produced in society in economic activities so that people experience an increase in income. Meanwhile, economic growth generally means an increase in income due to increased production of goods or services within a certain period.

Johan et al. (2016) define economic growth as a process of increasing per capita output not only in the temporary period (but in the long term), where the emphasis is on three fundamental aspects, namely the process, the increase in output and the long term. Economic growth is a "process", not just a reflection of the economy at a time where the emphasis is on seeing the economy develop and process. The development of economic activity changes over time. Economic growth is also related to "output per capita". In this definition, economic growth is related to GNP (Gross National Product) and GDP (Gross Domestic Product). Third, economic growth is also seen in a "long-term" perspective, meaning that output shows an increase or growth in a long enough period per capita.

Inflation

In language, inflation is the process of rising prices that generally occurs over time. According to Hasyim (2016), inflation is an economic concept that describes the increasing price level over time. Then it is also said that the condition of the situation is said to be inflation if the increase in prices is general and continuous. If the increase in the price of goods only occurs in one or two types of goods, it cannot be categorized as inflation.

While Johan et al. (2016) define inflation as a general increase in prices in an economy, this means that inflation is a state of the country's economy that is prone to price instability due to the unbalanced flow of money and goods. Inflation is a condition where the economy is experiencing a general and continuous price increase at a particular time.

Human Development Index

The Human Development Index, or HDI, is an essential component in assessing the quality of a country. UNDP defines the Human Development Index (HDI) as one of the measurement standards that can be used to assess the nature of human progress, its effects seen through the health or physical condition of the community or the state of non-physical quality seen from its intelligence. According to the Central Bureau of Statistics (2022), the components measured in the Human Development Index (HDI) are Longevity and healthy living, Knowledge and Healthy Living Standards.

The Indonesian Central Bureau of Statistics (BPS) has a unit of measure in measuring the three components above; namely, in estimating the public health aspect, life expectancy is used, and in the education aspect, the unit of measurement is the average length of schooling completed. The decent standard of living aspect uses the purchasing power capacity of the community towards the consumption of basic needs. From three fundamental indicators, health and education are essential for the community as a workforce. The better the health and education level obtained, the better the quality of work provided.

Regional Minimum Wage

According to Sukirno (2012), wages are compensation received by workers due to carrying out economic activities or creating goods and services needed by society. Wages are the number of money workers are entitled to after performing work or services from the employer depending on the agreement (The Manpower Law in Article 1 (paragraph 1) No. 13 of 2003, Wages). It can be concluded that wages are the right of workers to receive compensation for work that has been done based on an agreement. Mankiw (2000) in Putra and Yasa (2018) state that the Regional Minimum Wage (UMR) is the minimum wage standard received by workers from companies following the decent living needs (KHL) that apply in the province concerned.

Investment

In general, investment is investing capital with the hope that, at the right time, the owner of the capital will get a profit or profit. Hasyim (2016) defines investment as expenditure to increase or maintain the stock of capital equipment/goods. According to Rudianto (2012) in Ningsih (2010), investment in the short and long term can be realized through the procurement of assets such as houses, land, securities and assets in other forms tailored to the needs of the owner of the capital. Every investment made has the ultimate goal of making a profit or getting a better return, so for companies, it is identical to choosing investment assets that are easy to resell. Mankiw et al. (2014) define investment as the sum of purchases of capital equipment, inventories, and buildings or structures. Spending on houses, developing factories, and purchasing machinery used in production can be interpreted as an investment.

Methodology

The analysis method used in this research is the panel data regression method. Panel data regression is regression using panel data. Panel data itself is data consisting of cross-section and time series data. Panel data analysis is a regression technique that combines cross-section data and time-series data. Of course, it will have more observations than cross-section and time-series data (Gujarati, 2004) in Muhammad (2017). This method has the advantage of regression modelling, which will result in a greater degree of freedom to overcome the problem of variable omission. The independent variables to be studied are economic growth, inflation, HDI, minimum wage and investment on the dependent variable, namely interference in Indonesia in 2011-2021.

The panel data regression model can generally be written as follows:
$Yit= \alpha+\beta1X1it+\beta2X2it+\beta3X3it+\beta4X4it+\beta5X5it-1+ eit$

Description :

Yit	= Unemployment Rate
X1it	= Economic Growth
X2it	= Inflation rate in year
X3it	= Human Development Index level
X4it	= Regional Minimum Wage Rate
X5it	= Investment Rate
α	= Constanta
$\beta1, \beta2, \beta3, \beta4, \beta5$	= Regression coefficient of the independent variable
eit	= Error term / confounding coefficient

Results

Table 1. Descriptive Statistics

Variable	*Mean*	*Median*	*Maximum*	*Minimum*	*Std. Dev*	*Observation*
Unemployment (percent)	5.445	5.040	13.740	1.400	2.089	363

Economic Growth (billion)	286,000,000	121,000,000	1,860,000,000	1,5003,247	400,000,000	363
Inflation (percent)	127.941	129.680	164.850	103.820	13.473	363
HDI	69.087	69.050	81.110	55.010	4.473	363
UMR (rupiah)	1,980,774	1,807,600	4,416,187	675,000	2,326,785	363
Investment (billion)	2,326,785	3,026.600	62,094.80	0.100	11,447.84	363

Source: The results of data processing using Eviews 9 software

The data which was used in this study is secondary data obtained from the Central Bureau of Statistics. This study shows that there are 363 observations of each variable studied. The Open Unemployment Rate as the dependent variable shows that the lowest value during the research year in 33 provinces was 1.40 in Bali Province in 2018, and the highest value of 13.74 was in Banten Province in 2011. This study's average (mean) unemployment rate is 5.445840, with a standard deviation of 2.089451. Other independent variables can be seen in table 4.1.

In panel data regression testing, the first step must be to select a model through the Hausman test. This test is used to compare the best model between the fixed effect model and the random effect model.

Table 2 Hausman Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	18.259955	5	0.0026

Source: The results of data processing using Eviews 9 software

From the results of the Hausman test processing above, it can be seen that the resulting probability value is 0.0026 or less than alpha 5% (0.0026 <0.05). So the test result is to reject Ho or, in other words, the suitable model to use between the *random effect model* and the *fixed effect model* after going through this Hausman test model is the *fixed effect model*.

Table 3 Panel Data Regression Estimation Results with FEM Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	27.24802	5.029058	5.418117	0.0000
LOGX1	0.066478	0.314944	0.211079	0.8330
X2	-0.032995	0.004273	-7.721764	0.0000
X3	-0.118847	0.100202	-1.186071	0.0236
LOGX4	-0.744215	0.542344	-1.372220	0.0109
LOGX5	0.469950	0.046365	0.214525	0.0303
R-squared				0.820435
Adjusted R-squared				0.799993
S.E. of regression				0.934448
F-statistic				40.13332
Prob(F-statistic)				0.000000
Durbin-Watson stat				1.227819

Source: The results of data processing using Eviews 9 software

Based on the results of the *fixed effect model* regression table above, the equation in this study can be written as follows:

Yit = 27.24802 + 0.066478X1it - 0.032995 X2it - 0.118847 X3it - 0.744215 X4it+ 0.994650 X5it-1 + eit.

Classical Assumption Test

Normality Test

The normality test is carried out to determine whether the data distribution in a data group or research variable is normally distributed.

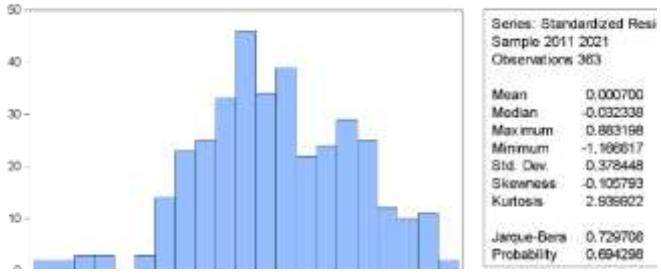

Figure 1 Normality Test Results
Source: Data processing results using Eviews 9 software

From the table 4 image above, it can be seen that the resulting probability value is 0.694298. This value shows 0.694298> 0.05, so it can be concluded that the data is usually distributed.

Multicollinearity Test

Table 5 Multicollinearity Test Results

	LOGX1	X2	X3	LOGX4	LOGX5
LOGX1	1.000000	-0.114984	0.457571	0.080300	0.715735
X2	-0.114984	1.000000	-0.216145	-0.409753	-0.194808
X3	0.457571	-0.216145	1.000000	0.345103	0.480927
LOGX4	0.080300	-0.409753	0.345103	1.000000	0.329350
LOGX5	0.715735	-0.194808	0.480927	0.329350	1.000000

Source: The results of data processing using Eviews 9 software

Based on the Multicollinearity test results above, the correlation value between independent or independent variables (X1-X2, X1-X3, X1-X4, X1-X5), (X2-X3, X2-X4, X2-X5), (X3-X4, X3-X5), and (X4-X5) shows < VIF 10, it can be concluded that there is no multicollinearity problem.

Heteroscedasticity Test

Heteroscedasticity testing is carried out to test whether the variable variants in this research model are the same (homogeneous) for all dependent variables with independent variables so that the estimation results are not biased. Identification of the presence and absence of heteroscedasticity symptoms is made through the *White Test.*

Table 6 Heteroscedasticity Test Results

Heteroskedasticity Test: White			
F-statistic	1.564732	Prob. F(20,342)	0.0590
Obs*R-squared	30.43160	Prob. Chi-Square(20)	0.0632
Scaled explained SS	44.18394	Prob. Chi-Square(20)	0.0014

Source: The results of data processing using Eviews 9 software

Based on table 6, it can be seen that the probability value of Obs*R-squared is 0.06. The probability value greater than 5% alpha (0.06> 0.05) indicates no heteroscedasticity problem. The proposed regression model is free from heteroscedasticity problems.

Table 7 Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	27.24802	5.029058	5.418117	0.0000
LOGX1	0.066478	0.314944	0.211079	0.8330
X2	-0.032995	0.004273	-7.721764	0.0000
X3	-0.118847	0.100202	-1.186071	0.0236
LOGX4	-0.744215	0.542344	-1.372220	0.0109
LOGX5	0.469950	0.046365	0.214525	0.0303
R Squared			0.820435	
F-statistic			40.13332	
Prob (F-stastistic)			0,000000	

Source: The results of data processing using Eviews 9 software

Based on the estimation results using the *Fixed Effect Model, the* regression results are as follows, from panel data regression with *a fixed effect* model, it is known that the coefficient of determination *(R-Squared) is* 0.820435. The independent variable can explain the dependent variable by 82.04%, while other variables outside the model explain 17.96%.

Discussion

The economic growth variable, as seen from the value of GRDP at constant prices, has a positive effect on the unemployment rate in Indonesia. If we look at the regression results that have been carried out, the estimation results show that the coefficient value of the GRDP variable is 0.66478. If the economic growth rate increases by 1%, it will increase unemployment in Indonesia by 0.66%. The resulting t-statistic value is 0.8330, and the probability value is greater than the 5% alpha significance level (0.8330 > 0.05). This means that the economic growth variable has no significant effect on the unemployment rate in Indonesia in the 2011-2021 period. This study's results align with research conducted by Basri et al. (2019), which states that economic growth has no significant effect on the unemployment rate.

The value of inflation is seen from the value of the Consumer Price Index (CPI), which is one of the indicators for measuring the inflation rate in Indonesia. Based on the regression results that have been carried out, the estimation results show that the inflation coefficient value is -0.032995, and the probability value is 0.0000. The probability value is smaller than the 5% alpha significance level. Partially, the inflation variable harms unemployment in Indonesia. The significant result on the inflation variable gives the conclusion that when inflation increases by 1%, it will influence the decrease of the unemployment rate in Indonesia by 3.29%. This research is in line with the research of Shafira et al. (2020), which states that inflation harms the unemployment rate. This also follows the Phillips Curve theory, which explains the relationship between inflation and unemployment, that an increase in inflation can reduce unemployment.

Based on the regression results, the Human Development Index variable has a negative influence on the unemployment rate. This is indicated by the coefficient value and the value of the Human Development Index, which negatively influences the unemployment rate. The resulting probability is -0.118847 and 0.0236, respectively. The resulting probability value is smaller than the 5% alpha significance level (0.0236 < 0.05). This means that the Human Development Index (HDI) variable significantly hurt Indonesia's unemployment rate from 2011-2021. If the Human Development Index increases by 1%, it will decrease Indonesia's unemployment rate by 11.88%. This is in line with the *human capital* theory, which explains that the high level of human resources obtained by a person will reduce the unemployment rate. An increase in the level of the Human Development Index (HDI) in Indonesia will create quality resources in terms of health and education so that when a region has a high HDI value, it will affect the high level of welfare as well.

In the variable of Regional Minimum Wage (UMR), the regression result obtained a coefficient value of 1.524054, which means that UMR has a positive effect on the unemployment rate. If the value of the UMR variable increases by 1%, it will increase the unemployment rate by 1.52%. The probability value obtained of 0.0001 is smaller than the alpha significance level of 5% (0.0001> 0.05), which means that the Regional Minimum Wage variable significantly affects Indonesia's unemployment rate for the 2011-2021 period. This study's results align with research conducted by Shafira et al. (2020), who

analyzed the effect of the Provincial Minimum Wage on the unemployment rate. In the study, it was found that the minimum wage had a positive impact on the unemployment rate.

On the investment variable, the regression result has obtained the coefficient value, and the probability of the investment variable is -0.163795 and 0.0305, respectively. The probability value is smaller than the alpha of 5% (0.0305 <0.05), so it can be concluded that the investment variable negatively affects the unemployment rate where when the investment increases by 1%, it will reduce the unemployment rate by 0.16%. by 0.469950 This means that the investment variable can be a solution in reducing the unemployment rate in Indonesia.

Conclusion

The unemployment discussed in this study uses the open unemployment rate indicator, and the research method chosen is the fixed effect model. Based on the analysis results, the Economic Growth variable partially has a positive and insignificant effect on the unemployment rate in Indonesia during the 2011-2021 period. This insignificant result is likely due to the increasing economic growth rate followed by high population growth. As a result, the labour force has also increased. It is not followed by the availability of jobs that can accommodate these workers, so the unemployment rate in Indonesia remains the same.

Inflation partially has a negative and significant influence on the unemployment rate in Indonesia. In the Phillips Curve, which illustrates the relationship between inflation and unemployment, increasing the inflation rate can reduce unemployment. An increase in the inflation rate will cause the consumption level to rise, and the high demand impacts will increase the demand for the number of company workers. They can reduce the unemployment rate in Indonesia.

The Human Development Index partially has a negative and significant influence on the unemployment rate in Indonesia. The increase in the Human Development Index will affect the community's quality of health, education and life expectancy. The result is in line with the human capital theory, which explains that a person's high level of human capital will reduce the unemployment rate. An increase in the level of Indonesia's Human Development Index (HDI) will affect the decrease in the number of unemployed people.

Regional Minimum Wage (UMR) partially negatively affects the unemployment rate in Indonesia. The Regional Minimum Wage, which is the general reference in determining wages for workers, is important in employment. If the applicable minimum wage is high, it will affect the decline in the unemployment rate because workers accept offers to work at the specified wage.

However, if the wage offered is below the wage level, then the worker will refuse to get the wage and choose to look for a job that suits his or her wishes. So a high wage level can reduce the unemployment rate in Indonesia.

Investment partially has a positive effect on the unemployment rate in Indonesia. Investment is an essential factor in increasing the expansion of employment. If employment expansion follows investment increases, the increase in investment will reduce Indonesia's unemployment rate.

References

Basri, H., Mayesti, I., & Nurdin, N. (2019). Analysis of the Effect of UMP, Inflation, IPM, and Economic Growth on Unemployment in JAMBI Province. *Journal Development*, *7*(1), 8- 14. https://doi.org/10.53978/jd.v7i1.126

Franita, R. (2016). *Analysis of Unemployment in Indonesia*. *1*, 6.

Hashim, A. I. (2016). *Macroeconomics* (First edition). Prenadamedia Group.

Johan, K., Marwoto, P. B., & Pratiwi, D. (2016). *Analysis of the Effect of Economic Growth, Inflation and Investment on Unemployment in Indonesia*. *13*, 13.

Mahihody, A. Y., Engka, D. S. M., & Luntungan, A. Y. (2018). The Effect of Wages and Human Development Index (Ipm) on Unemployment in Manado City. Journal Efficiency Scientific Periodical, 18(3), Article 3. https://ejournal.unsrat.ac.id/index.php/jbie/article/view/2 0253

Mankiw, G., Quah, E., & Wilson, P. (2014). Introduction to Macroeconomics (Asian Edition). Fourth Edition.

Ningsih, F. R. (2010). The Effect of Inflation and Economic Growth on Unemployment in Indonesia for the Period 1988-2008. 107.

Prayuda, M. G., & Dewi, M. H. (2015). The Effect of Inflation and Investment on Unemployment in Bali Province in 1994-2013. E-Journal Unud, 5, 69-95.

Putra, Y. D., & Yasa, M. (2018). The Effect of Economic Growth and Minimum Wage on the Unemployment Rate and the Level of Poverty in Bali Province. E-Journal EP Unud, 7, 2461-2489.

Romdhoni, A. H. (2017). The Effect of Investment on Labor Absorption in Central Java in 2009- 2013. Scientific Journal of Islamic Economics, 3(2), 139. https://doi.org/10.29040/jiei.v3i2.107

Sarimuda, T., & Soekarnoto. (2014). The Effect of GRDP, Inflation MSEs, and Investment on Open Unemployment in Districts / Cities of East Java Province in 2007-2011. Journal of Economics and Business, xxlv No. 02.

Shafira, V. A., Kuemenaung, A. G., & Niode, A. O. (2020). Analysis of the Effect of Ump, Economic Growth and Inflation on the Open Unemployment Rate in Manado City. 9.

Suhendra, I., & Wicaksono, B. H. (2020). Level of Education, Wages, Inflation, and Economic Growth on Unemployment in Indonesia. Journal of Economics-Qu, 6(1). https://doi.org/10.35448/jequ.v6i1.4143

Sukirno, S. (2012). Modern Macroeconomics Development of Thought from Classical to New Keynesian (Fifth). PT Raja Grafindo.

Yanti, N. F., Anam. H., & Adda. W. H., (2017). Analysis of the Influence of Inflation, Investment and GRDP on the Unemployment Rate in the Sulawesi Region for the Period of 2010-2014. 2010-2014. 12.