DETERMINANT OF UNEMPLOYMENT IN INDONESIA

Galih Aga Lumayung[1] Firsty Ramadhona Amalia Lubis[2], Budi Jaya Putra[3]

l.galihaga@gmail.com[1], firsty.ramadhona@ep.uad.ac.id[2], budijayaputra@gmail.com[3]

Universitas Ahmad Dahlan [1,2,3]

Abstract. Unemployment is a social and economic phenomenon that has a significant impact on individuals, society, and the economy as a whole. This study aims to investigate the effects of FDI (Foreign Direct Investment), economic growth, inflation, and exchange rate on the unemployment rate in Indonesia. Using macroeconomic data from a specific period, this study applies a regression model to assess the relationship between these variables. The model used in this study is multiple linear regression using time series data between 1990-2021. The regression results show that FDI and inflation significantly positively affect unemployment in Indonesia, the exchange rate hurts unemployment in Indonesia, and economic growth does not affect unemployment in Indonesia

.**Keywords:** *Unemployment, FDI, time series model*

1 INTRODUCTION

One economic phenomenon that is often faced by countries in the world is the problem of unemployment. Whether in developed or developing countries, unemployment is a severe problem because it can cause various economic and social issues. The impact of unemployment itself can reduce the level of community prosperity in a region or country. (Suyuthi, 1989:139). In addition, for the unemployed themselves, unemployment can affect their psychology, which can interfere with their confidence, which can lead to criminal acts such as theft, disputes, and so on.. (Prasaja, 2013). If left unchecked, unemployment can eventually create the problem of poverty because people will have low purchasing power and insufficient purchasing power to fulfill their needs. (Sartika dkk, 2016).

Unemployment is the labor force that is not working and actively looking for employment. (Mantra, 2009; (Marini & Putri, 2019)). In other words, unemployment occurs as a result of an imbalance between the number of the labor force and the number of employment opportunities. The cause of this imbalance in employment can occur because the quantity of specific jobs has been fulfilled or the field of work needs to be by the required qualifications. In fact, in some areas of development, high unemployment is one of the main factors in the case of poverty. (Zakiyyah et al., 2023).

Indonesia, as a developing country, is also inseparable from the problem of unemployment. BPS recorded unemployment in Indonesia in February 2021 at 6.26 percent, which then rose to 6.49 percent in December 2021. According to BPS, this increase was triggered by COVID-19, which has affected the stability of the Indonesian economy for some time, where the most significant decline came from agriculture. The agricultural sector is one of the critical sectors in providing essential commodities and is one of the buffers of economic growth when there is a decline in economic development. (Yuniarti & Sukarniati, 2021). In February 2022, BPS again recorded the number of unemployed people falling by 5.83 percent due to job openings in several sectors, such as agriculture, forestry, and fisheries. In Indonesia, providing employment is a challenge to reduce unemployment and create prosperity. (Arsyad, 2016:360). Labor productivity reflects how much product is produced and provides information on the company's labor needs. Therefore, it provides insights to policymakers on the policies implemented to improve labor productivity. (Salim et al., 2024). However, some regions still need to improve their balance between the labor force and jobs available. (Aprillia, 2022).

Based on the description above, this research aims to analyze the phenomenon of unemployment, gain a deeper understanding, and find a solution to the problem of unemployment.

2 LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

3 RESEARCH METHODOLOGY

This study uses unemployment as the dependent variable, while economic growth, Foreign Direct Investment, inflation, and exchange rate are the independent variables. This study uses a quantitative analysis method with annual time series secondary data from 1990-2021. This study uses the Ordinary Least Square (OLS) multiple regression research model with the following equation:

$$U = \beta_0 + \beta_1.Exc_1 + \beta_2.GDP_2 + \beta_3.FDI_3 + \beta_4.INF_4 + e$$

Where β0 is a constant, while β1, β2, β3, and β4 are regression coefficients. U is the number of unemployed in the labor force, Exc is the exchange rate of the Rupiah against the US Dollar, GDP is the Growth of Domestic Product, FDI is foreign investment, inf is inflation, and e is the error term.

4. RESULT AND DICUSSION

In selecting the OLS model, it is necessary to test the classical assumptions to determine whether the model has no problems or biases. The classic assumption test in the OLS model is divided into four tests: normality, heteroscedasticity, autocorrelation, and multicollinearity. The normality test uses the Jarque-Bera test model, assuming that the Chi-Square probability is above 5% alpha or above 0.05, so the model is considered to fulfill the normality assumption. The heteroscedasticity test uses the Glesjer test, assuming that if the Chi-Square probability is above 0.05 (5%), then the model has met the assumptions. The autocorrelation test using Breusch-Godfrey has the assumption that the Chi-Square probability is above 0.05 (5%), so the model is free from autocorrelation problems. A multicollinearity test using variance inflation factor (VIF) assumes that the mean-centered VIF value of each variable is not more than 10. Then, the model is free from multicollinearity problems. The results of the respective classification assumption tests can be seen in Tables 1 and 2 as follows.

Table 1

Test	Prob
Normality	0.111534
Heteroskedasticity	0.6103
Autocorrelation	0.0874

Data Processed

Tabl3 2

Multikolinierity

Variabel	*Centered VIF*
Exchange Rate	*5.769430*
Economic Growth	*1.102064*
FDI	*1.604273*
Inflationn	*5.136285*

Data Processed

Tables 1 and 2 show that the model does not have classical assumption problems and can be continued in the OLS estimation test process.

Table 3

Result

Variabel	Coeficient	T-Statistic	Prob
Exchange Rate	-0.99072	-3.069419	0.00496
GDP	-0.01223	-0.188085	0.85227
FDI	0.540242	2.84336335	0.00857
Inflation	0.049887	1.9976449	0.05631
R-Squared	0.45237		

Table 3 shows the data processing results using Ordinary Least Square (OLS) regression. To find out if the model in OLS regression has a significant influence, test the t-statistic or probability value. The variable is assumed to influence if the t-statistic value is above the t-table value (in this study, the t-table is 2) and the probability value is below 5% alpha (0.05). R-squared is used to see how much the overall independent variable affects the dependent variable. In this model, the R-squared value is 0.45, which means that the overall independent variable influencing the dependent variable is 45 percent, while variables outside this study explain the remaining 55 percent. The effect of each variable partially shows that the exchange rate variable hurts unemployment in Indonesia, FDI positively affects unemployment in Indonesia, and GDP and inflation together have no significant impact on unemployment in Indonesia. Explanation and discussion of the results of the model will be explained below.

Exchange Rate

The negative impact of the exchange rate on unemployment can be assumed that when the exchange rate depreciates, it will cause imported products to have higher prices, so people tend to look for domestically produced goods with lower prices than imported goods. (Ginting, 2013). This increases the demand for domestic goods. When there is an increase in demand, companies will open new jobs and labor to meet the demand (Lestari, 2018). Another view states that the exchange rate of one currency impacts the economy when the exchange rate appreciates or depreciates. Depreciation makes the foreign currency more expensive and causes a decline in the relative value of the domestic currency. Conversely, appreciation makes the foreign currency cheaper and increases the relative value of the domestic currency. These exchange rate fluctuations are the main focus of the foreign exchange market. (Manurung & Manurung, 2009; Lestari, 2018).

GDP

The test results in Table 3 show that the Gross Domestic Product has no significant effect on unemployment in Indonesia. This is expected because economic growth is often measured by considering macro variables only, such as an increase in the value of GRDP, controlled inflation, currency exchange rates, etc. On the other hand, the real sector of society, especially MSMEs, needs to develop better. The low competitiveness of MSMEs hinders job creation (Romadhoni et al., 2018; Setyawan, 2023).

FDI

The increase in Foreign Direct Investment is directly proportional to the increase in unemployment. In developing countries, FDI from developed countries tends only to utilize the available natural resources, resulting in ineffective labor absorption and becoming a competitor for domestic companies. (Agarwal, 1996). However, suppose the destination country's government can control foreign investment with a series of policies and agreements for mutual benefit. In that case, FDI can be an aspect of industrial and business development. So that it can solve a country's employment problem (Mucuk & Demirsel, 2013).

Inflation

Inflation is driven by aggregate demand and supply and can occur due to factors outside the economy, such as disasters (Wulandari, 2019; Suharti et al., 2021)). On average, inflation caused by disaster factors is temporary and will slowly recover when the production and distribution of goods return to normal. This does not directly affect employment because production and employment will also return to normal when things normalize. (Suharti et al., 2021).

5 CONCLUSION & RECOMMENDATION

Unemployment significantly affects a country, especially a large population. In this study, like Indonesia, some variables can directly or indirectly affect unemployment in Indonesia.

The exchange rate has a negative influence on unemployment in Indonesia. Rising prices of imported goods can increase the production of domestic goods and increase employment. However, maintaining exchange rate stability is essential because Indonesia still needs imported goods. The implementation of policies or regulations must be reviewed regularly to maintain economic and employment stability in Indonesia.

Gross Domestic Product has no significant effect on unemployment in Indonesia. The discussion section assumes that the real sector of society, such as MSMEs, has yet to develop fully, so employment is still low. MSMEs are one of the sectors that can support the country's economy. By creating a foundation for MSMEs, it is hoped that they will open up many new jobs and reduce the problem of unemployment.

Foreign Direct Investment (FDI) has no effect on unemployment in Indonesia. However, the entry of FDI should solve the unemployment problem. New companies will open, creating new jobs. Therefore, the entry of FDI must be considered mutually beneficial to both the country of origin of FDI and the destination country of FDI.

Another variable that has no significant effect is inflation. Inflation occurs not only due to market errors but can also be caused by other factors such as disasters, monopoly abuse, or policies that cause economic imbalances. Supervision and prevention are needed to have more impact on society and society so that all parties can also feel the occurrence of economic phenomena

REFERENCES

Agarwal, J. P. (1996). *Does foreign direct investment contribute to unemployment in home countries? An empirical survey*. http://hdl.handle.net/10419/47220

Aprillia, F. (2022). Analisis Pengaruh Indeks Pembangunan Manusia dan Inflasi Terhadap Tingkat Pengangguran Terbuka di Indonesia Periode 1992-2021. *Profit: Jurnal Manajemen, Bisnis Dan Akuntansi*, *1*(4).

Arsyad, L. (2016). *Ekonomi Pembangunan* (5th ed.). UPP STIM YKPN.

Ginting, A. M. (2013). PENGARUH NILAI TUKAR TERHADAP EKSPOR INDONESIA The Influence of Exchange Rate on Indonesia’s Exports. In *Buletin Ilmiah Litbang Perdagangan* (Vol. 7, Issue 1). https://doi.org/https://doi.org/10.30908/bilp.v7i1.96

Lestari, D. (2018). *ANALISIS PENGARUH INFLASI, UPAH MINIMUM REGIONAL, PDRB, DAN NILAI TUKAR TERHADAP PENGANGGURAN DI INDONESIA PADA PERIODE 2003-2014*.

Marini, L., & Putri, N. T. (2019). PELUANG TERJADINYA PENGANGGURAN DI PROVINSI BENGKULU : SEBERAPA BESAR? In *CONVERGENCE : THE JOURNAL OF ECONOMIC DEVELOPMENT. VOL* (Vol. 1, Issue 1).

Mucuk, M., & Demirsel, M. T. (2013). THE EFFECT OF FOREIGN DIRECT INVESTMENTS ON UNEMPLOYMENT: EVIDENCE FROM PANEL DATA FOR SEVEN DEVELOPING COUNTRIES.

Journal of Business, Economic and Finance, *2*(3). https://dergipark.org.tr/en/pub/jbef/issue/32415/360489

Prasaja, M. H. (2013). *PENGARUH INVESTASI ASING, JUMLAH PENDUDUK DAN INFLASI TERHADAP PENGANGGURAN TERDIDIK DI JAWA TENGAH PERIODE TAHUN 1980-2011*. http://journal.unnes.ac.id/sju/index.php/edaj

Salim, A., Wen, J., Bello, A. U., Lubis, F. R. A., Khoirudin, R., Khasanah, U., Sukarniati, L., & Nasir, M. S. (2024). Does information and communication technology improve labor productivity? Recent evidence from the Southeast Asian emerging economies. *Growth and Change*, *55*(1). https://doi.org/10.1111/grow.12708

Setyawan, A. L. (2023). *Analisis Pengaruh Pertumbuhan Gross Domestic Product, Pengeluaran Pemerintah*.

Suharti, S., Dzaki Naufal, M., & Paiman, F. L. (2021). INFLATION EFFECT ON UNEMPLOYMENT IN INDONESIA: A COMPARATIVE STUDIES BETWEEN SHARIA AND CONVENTIONAL ECONOMIC PERSPECTIVES. In *Jurnal Bisnis STRATEGI •* (Vol. 30, Issue 2).

Yuniarti, D., & Sukarniati, L. (2021). Penuaan Petani dan Determinan Penambahan Tenaga Kerja di Sektor Pertanian. *AGRIEKONOMIKA*, *10*(1), 38–50. https://doi.org/10.21107/agriekonomika.v10i1.9789

Zakiyyah, N. A. A., Lubis, F. R. A., & Wahyuni, I. (2023). Determinants of Poverty In Indonesia. *EKO-REGIONAL: Jurnal Pembangunan Ekonomi Wilayah*. https://doi.org/10.32424/1.erjpe.2023.18.2.3182