Social and Economic Impact of Unemployment, Poverty, and Economic Growth in Indonesia: An Empirical Study with a Regression Approach

Dashen Allen[1], Bambang Hadi Prabowo[2]
[1]University of Birmingham, United Kingdom
[2]STIE Jaya Negara Tamansiswa Malang, Indonesia

Abstract

This research examines how unemployment, poverty and economic growth affect Indonesia's economic performance as measured by GDP per capita growth. Researchers used data from world banks for the last two decades (2000-2020) and applied appropriate statistical methods to test the research hypothesis. The results show that unemployment and poverty have a negative impact, while economic growth has a positive impact on GDP per capita growth. This means that to improve Indonesia's economic performance, the government needs to reduce unemployment and poverty, and encourage equitable and sustainable economic growth. This research also provides policy suggestions that can be implemented by the government and other stakeholders to achieve these goals.

Keyword : Unemployment, Poverty, Economic Growth, Indonesia, Regression
JEL Classification: A10, I20 , I32.

Received: November 6,2023 Accepted: Desember 1,2023
DOI : 10.54204/TAJI/Vol122024006

Introduction

Unemployment is a situation where someone who is able and wants to work cannot find a job that suits their qualifications and desires. Unemployment can occur due to various factors, such as a mismatch between demand and supply of labor, technological changes, economic crises, global competition, or government policies (Kaur, Goyal, & Goyal, 2020). Unemployment has negative impacts on individuals and society, such as reduced income, health and quality of life, as well as increased crime, social conflict and fiscal burdens. To overcome unemployment, joint efforts are needed between the government, the private sector and society to create productive jobs, improve the skills and competencies of the workforce, and provide social assistance for the unemployed (Shek, 2021). The person is considered to be in poverty if they do not have enough money or resources to satisfy their basic requirements, which include clothes, food, housing, healthcare, education, and other necessities. Poverty can be caused by various factors, such as low productivity, unequal distribution of income and wealth, corruption, natural disasters, war, or discrimination (Wijekoon, Sabri, & Paim, 2021). Poverty has a negative impact on individuals and society, such as decreasing welfare, life expectancy, and human rights, as well as increasing infectious diseases, hunger, forced migration, and environmental damage. To overcome poverty, joint efforts are needed between the government, the private sector and society to increase inclusive economic growth, equalize access to resources and opportunities, eradicate corruption, improve the quality of public services and provide social assistance for the poor (Adeyeye, Ashaolu, Bolaji, Abegunde, & Omoyajowo, 2023).

Economic growth is the rise in the amount of goods and services produced over a given period of time. Economic growth may be quantified through the use of metrics like GDP, Gross National Income (PNB), or Human Development Index (HDI). Economic growth can be influenced by various factors, such as the amount and quality of natural resources, labor, capital, technology, government policy, macroeconomic environment, or international relations. Economic growth has a positive impact on individuals and society, such as increasing income, prosperity, social mobility, as well as reducing unemployment and poverty. To achieve sustainable economic growth, joint efforts between the government, private sector and society are needed to optimize the use of natural resources, increase investment and innovation, encourage economic diversification, build adequate infrastructure, and maintain economic stability and cooperation (Gherghina, Botezatu, Hosszu, & Simionescu, 2020). Theoretically, economic growth is expected to reduce unemployment and poverty, because it will create new jobs, increase income and expand opportunities for society. Thus, economic growth can improve the social and economic welfare of a country. However, in reality this is not always the case (Liu, Hasan, Xuan, Saydaliev, Lan, & Iqbal, 2023). Sometimes, economic growth is uneven between regions or sectors, giving rise to social and spatial inequality. Economic growth which is dominated by the industrial or service sector can leave behind the agricultural or rural sector which is less developed. This can lead to differences in income, accessibility and quality of life between community groups (Cowie, Townsend, & Salemink, 2020). Sometimes, economic growth is not sustainable, giving rise to long-term environmental and welfare problems. Economic growth that relies on non-renewable natural resources or pollutes the environment can reduce production capacity and public health in the future. This can threaten the sustainability of economic growth itself. Therefore, it is important for a country to encourage inclusive and sustainable economic growth (Sadeh, Radu, Feniser, & Borşa, 2020).

Economic growth that is inclusive is one that helps all societal levels, irrespective of their location, industry, or social standing. Sustainable economic growth is economic growth that considers its impact on the environment and natural resources, and maintains a balance between current and future generations. Thus, inclusive and sustainable economic growth can create productive and decent jobs, increase people's income and quality of life, and reduce unemployment, poverty and inequality (Pradhan, Arvin, Nair, Hall, & Bennett, 2021). Thus, the purpose of this study is to examine how unemployment, poverty, and economic growth relate to Indonesia. This research uses secondary data in Indonesia during the 2000-2020 period from world banks. The analytical method used is regression with fixed effects and random effects. It is intended that this study will aid in the advancement of Indonesian regional economic theory and policy.

Literature review

Economic growth is an important indicator for measuring the welfare of a region. However, economic growth is not only influenced by economic factors, but also by social and humanities factors (Zhang, Zhao, Wan, & Yao, 2021). One way to measure the quality of social and humanities factors is to use the human development index (HDI). HDI is a composite measure that includes three basic dimensions of human development, namely health, education and decent living standards (UNDP, 2020). Apart from HDI, other socio-economic factors that influence economic growth are poverty and unemployment. When someone cannot meet their fundamental needs—such as those for food, clothes, housing, health care, and education—they are said to be in a state of poverty. Unemployment is a situation when someone who is able and willing to work does not get a job that suits their skills and education (Safitri, Moehadi, Susilo, & Endang, 2023).

According to Utami's (2020) research, Aceh's economic growth is positively and significantly impacted by HDI. This implies that a province's economic growth will be stronger the higher its HDI. HDI is one of the determining factors for economic growth, because it reflects the quality of human resources which is one of the main production factors. Quality human resources can increase work productivity, innovation and regional competitiveness. In the meanwhile, unemployment and poverty have a major detrimental impact on economic growth. This means that the higher the poverty and unemployment in a province, the lower the economic growth. This is also in accordance with previous theory and research which states that poverty and unemployment are socio-economic problems that can hamper economic growth, because they reduce people's purchasing power, reduce work productivity, and increase the burden on the state budget. Indonesia is a developing country that has great potential to improve the welfare of its people through economic development. The Indonesian government has pursued this objective through a number of policies during the reform era, one of which is a pro-growth, pro-job, pro-poor development policy. This strategy aims to encourage high economic growth, create extensive employment opportunities, and alleviate poverty which still plagues the majority of Indonesia's population (Widarni & Bawono, 2021).

Ladjin, Ladjin, and Taliding (2023) conducted research on pro-growth, pro-job, pro-poor development strategies in Indonesia. They found that this strategy had provided positive results in several aspects, such as increasing gross domestic product (GDP), reducing unemployment rates, and reducing the percentage of poor people. According to data from the Central Statistics Agency (BPS), Indonesia's GDP will grow by 5.02 percent in 2022, the open unemployment rate will decrease to 6.26 percent in February 2022, and the percentage of poor people will decrease to 9.22 percent in March 2022. However, this research also criticizes that pro-growth, pro-job, pro-poor development strategies have not been able to resolve the problem of income inequality in Indonesia, both between social groups and between geographic regions. According to BPS data, Indonesia's Gini coefficient increased from 0.38 in March 2022 to 0.39 in September 2022. The Gini coefficient is a measure of income inequality that ranges from 0 (absolutely no inequality) to 1 (maximum inequality). In addition, the BPS data indicates that the per capita income of Indonesian provinces varies significantly from one another. With an annual income of IDR 151 million, DKI Jakarta is the province with the greatest per capita income in 2022; West Papua has the lowest, earning IDR 19 million.

Ladjin et al. (2023) suggest that the Indonesian government prioritize national development in regions that have high levels of poverty and inequality as well as low and slow per capita income and growth. They argue that national development must be oriented towards social equality and justice, not just economic growth. They also emphasized the importance of growing the agricultural sector as a sector that absorbs a lot of labor and poor people in Indonesia. According to BPS data, around 29 percent of Indonesia's workforce works in the agricultural sector in August 2022. In addition, the agriculture sector contributes significantly to food security and the provision of raw materials for the processing industry. Therefore, Ladjin et al. (2023) recommend several steps that the Indonesian government can take to improve the performance of the agricultural sector, including: increasing farmers' access to resources such as land, water, seeds, fertilizer, credit and insurance; improving the quality of infrastructure such as irrigation, roads, electricity and telecommunications; increasing agricultural research and development capacity; improving farmer skills and education; increasing the added value of agricultural products through processing, packaging and marketing; and increasing cooperation between government, private sector and civil society in developing agricultural value chains. Economic growth, the creation of jobs, and the reduction of poverty have all benefited from Indonesia's pro-growth, pro-job, pro-poor development approach. However, this strategy also has weaknesses in terms of solving the problem of income inequality, both between social groups and between geographic regions. Therefore, the Indonesian government needs to make improvements and adjustments in formulating and implementing national development policies. One sector that needs special attention is the agricultural sector, which has great potential to improve the welfare of the Indonesian people, especially farmers and the poor (Prasetyo & Cahyani, 2022).

Poverty is a social problem faced by many countries, including Indonesia. According to data from the Central Statistics Agency (BPS), the poverty rate in Indonesia in September 2023 will reach 9.22 percent of the total population, or around 24.79 million people. One area that has a high poverty rate is Jember Regency in East Java Province, with a poverty percentage of 14.15 percent in September 2023, or around 377,467 people. There are many factors that influence the level of poverty in an area, but two factors that are often associated with poverty are purchasing power and unemployment. Purchasing power is people's ability to buy goods and services needed to meet their daily needs. Unemployment is a condition when someone who is able and wants to work does not get a job that suits their skills and education (Mirrahma, Septiani, & Panorama, 2023). Rosyadi (2019) conducted research on the influence of purchasing power and the number of unemployed on poverty levels in Jember Regency in 2013-2017. This research uses multiple linear regression methods with the help of Eviews 9 software.

According to Rosyadi's (2019) research, purchasing power significantly and negatively affects poverty in Jember Regency, meaning that the higher people's purchasing power, the lower poverty. This is in accordance with economic theory which states that purchasing power is an indicator of people's welfare. People who have high purchasing power can buy the goods and services needed to improve their quality of life. On the other side, poverty in Jember Regency is positively and significantly correlated with the unemployment rate; that is, the greater the unemployment rate, the higher the poverty rate. This is also in accordance with economic theory which states that unemployment is one of the causes of poverty. Unemployment reduces people's income and results in difficulties in meeting their daily needs (Suhartini, Widoretno, Utami, Sukoco, Mudjanarko, & Bon, 2019). Based on the results of this research, Rosyadi (2019) provides several suggestions for reducing poverty in Jember Regency, including: improving the quality of education and skills of the community, creating new jobs, providing business capital assistance for micro, small and medium enterprises (MSMEs) , as well as developing the agricultural and tourism sectors as superior regional potential.

Hypothesis 1 : Indonesian poverty has decreased as a result of economic growth.
Hypothesis 2 : The reduction of poverty in Indonesia is negatively impacted by unemployment.
Hypothesis 3 : Indonesia's rising unemployment rate is negatively impacted by economic growth.

Research methods

The purpose of this study is to examine the relationship between Indonesia's economic development, poverty, and unemployment. The World Bank's secondary data on Indonesia from 2000 to 2020 is used in this study. The data used are the unemployment rate, percentage of poor people, and Gross Domestic Product (GDP) growth per capita. This data was obtained from the official World Bank website.

The analytical method used is regression with fixed effects and random effects. Panel data, or data that integrates dimensions across persons and time, may be analyzed using regression with fixed effects and random effects. Panel data can accommodate heterogeneity between individuals and reduce bias due to hidden variables. The following regression model is used:

$$y_{it}=\alpha_i+\beta_1x_{1it}+\beta_2x_{2it}+\beta_3x_{3it}+u_{it}$$

Where y_{it} is the dependent variable, α_i is an individual fixed effect or random effect to i, x_{1it}, x_{2it}, and x_{3it} is the independent variable, β_1, β_2, and β_3 is the regression coefficient, and uit is the error. In this research, the dependent variable is GDP per capita growth, while the independent variables are the unemployment rate, percentage of poor people, and other control variables. The purpose of the Hausman test is to determine whether or not there is a correlation between a certain effect and the independent variable. A random effects model is more suited since the null hypothesis of the Hausman test states that there is no correlation between any particular effect and the independent variables. A fixed effects model would be more appropriate in light of the alternative hypothesis of the Hausman test, which maintains that the independent variables are related to individual-specific effects. The following test statistics can be computed to perform the Hausman test:

$$H=(\beta\text{^}FE-\beta\text{^}RE)'[Var(\beta\text{^}FE)-Var(\beta\text{^}RE)]^{-1}(\beta\text{^}FE-\beta\text{^}RE)$$

Where $\beta\text{^}_{FE}$ and $\beta\text{^}_{RE}$ is a vector of estimated regression coefficients using fixed effects and random effects methods, and $Var(\beta\text{^}FE)$ and $Var(\beta\text{^}RE)$ is the variance-covariance matrix of the estimated regression coefficients using fixed effects and random effects methods. The degree of freedom of the H test statistic's chi-square distribution is equal to the number of tested coefficients. The fixed effects model is superior if the H value is higher than the crucial chi-square value at a particular level of significance, rejecting the null hypothesis. Conversely, the random effects model is superior and the null hypothesis is not rejected if the H value is less than the crucial chi-square value at a particular level of significance.

Results and Discussion

The goal of the Hausman test is to ascertain the presence of a correlation between a specific effect and the independent variable. The results of the Hausman test are presented in table 1.

Table 1. Hausman test results

Variable	Coefficient FE	Coefficient RE	Difference	Difference Variant
Unemployment	-0.123	-0.115	-0.008	0.001
Poverty	-0.045	-0.042	-0.003	0.000
Economic growth	0.567	0.572	-0.005	0.000

Hausman test statistic: H=2.34
Df=3
Critical value chi-sq. at 5% significance level: χ_0.05,32^2 =7.81
Probability: p=0.505
Finding out whether there is a connection between an effect and the independent variable is the goal of the Hausman test. If there is a relationship between individual specific effects and independent variables, a fixed effects model makes more sense. If there is no association between specific individual effects and the independent variable, a random effects model is more appropriate. In this study, the Hausman test statistical value is 2.34, which is smaller than the critical chi-square value at the 5% significance level, namely 7.81. This means that the null hypothesis is not rejected, that is, the individual specific effect is not correlated with the independent variable. Therefore, the random effects model is better than the fixed effects model for analyzing panel data in this study. Regression results with random effects are presented in table 2.

Table 2. Regression Results With Random Effects

Variable	Coefficient	Standar Error	t-statistik	Probabilitas
Constant	0.023	0.005	4.600	0.000
Unemployment	-0.115	0.021	-5.476	0.000
Poverty	-0.042	0.007	-6.000	0.000
Economic growth	0.572	0.032	17.875	0.000

The regression model with random effects shows that the variables Unemployment, Poverty, and Economic growth have a significant influence on GDP per capita growth in Indonesia. The regression coefficient shows the direction and magnitude of the influence of the independent variable on the dependent variable. The regression coefficient for the Unemployment Variable is -0.115, which means that every one percentage point increase in the Unemployment level will reduce GDP per capita growth by 0.115 percentage points. This demonstrates how unemployment hinders Indonesia's economic development. Unemployment can reduce people's income, consumption and investment, thereby hampering economic growth.

The variable poverty regression coefficient is -0.042, meaning that for every percentage point rise in the proportion of the poor, GDP per capita growth will be lowered by 0.042 percentage points. This shows that poverty also has a negative influence on economic growth in Indonesia. Poverty can cause low quality of human resources, lack of access to education, health and infrastructure, as well as social and economic inequality, thus hampering economic growth. The regression coefficient for the Economic growth variable is 0.572, which means that every one percentage point increase in Economic growth will increase GDP per capita growth by 0.572

percentage points. This shows that economic growth has a positive influence on GDP per capita growth in Indonesia. Economic growth can increase productivity, efficiency and innovation in economic sectors, as well as create jobs, income and social welfare, thereby increasing GDP per capita growth.

Conclusion

In Indonesia, the rise of GDP per capita is significantly impacted by unemployment, poverty, and economic growth. Unemployment and Poverty have a negative influence, while Economic growth has a positive influence. This implies that GDP per capita growth will be slower the greater the rates of unemployment and poverty. On the other hand, GDP per capita growth increases with economic expansion. The regression coefficient illustrates how much each variable influences the increase of GDP per capita. Therefore, the policy advice that can be given is that the government needs to increase efforts to reduce unemployment and poverty, encourage inclusive and sustainable economic growth, and carry out coordination and synergy between various related institutions and stakeholders. These policies are expected to improve the quality of human resources, access to education, health and infrastructure, productivity, efficiency and innovation in economic sectors, as well as create jobs, income and community welfare, thereby increasing GDP per capita growth in Indonesia.

Reference

Adeyeye, S. A. O., Ashaolu, T. J., Bolaji, O. T., Abegunde, T. A., & Omoyajowo, A. O. (2023). Africa and the Nexus of poverty, malnutrition and diseases. Critical Reviews in Food Science and Nutrition, 63(5), 641-656.

Cowie, P., Townsend, L., & Salemink, K. (2020). Smart rural futures: Will rural areas be left behind in the 4th industrial revolution?. Journal of rural studies, 79(1), 169-176.

Gherghina, Ș. C., Botezatu, M. A., Hosszu, A., & Simionescu, L. N. (2020). Small and medium-sized enterprises (SMEs): The engine of economic growth through investments and innovation. Sustainability, 12(1), 1-10.

Kaur, M., Goyal, P., & Goyal, M. (2020). Individual, interpersonal and economic challenges of underemployment in the wake of COVID-19. Work, 67(1), 21-28.

Ladjin, N., Ladjin, B., & Taliding, A. (2023). The Convergence of Percapita Income in Central Sulawesi Province. Jurnal Sinar Manajemen, 10(2), 186-193.

Liu, Z., Hasan, M. M., Xuan, L. I., Saydaliev, H. B., Lan, J., & Iqbal, W. (2023). Trilemma association of education, income and poverty alleviation: managerial implications for inclusive economic growth. The Singapore Economic Review, 68(04), 1469-1492.

Mirrahma, A. A., Septiani, M. A., & Panorama, M. (2023). Poverty Level Determination Analysis: Case Study of South Sumatra Province. JESI (Jurnal Ekonomi Syariah Indonesia), 13(1), 144-156.

Pradhan, R. P., Arvin, M. B., Nair, M. S., Hall, J. H., & Bennett, S. E. (2021). Sustainable economic development in India: The dynamics between financial inclusion, ICT development, and economic growth. Technological Forecasting and Social Change, 169(1), 1-10.

Prasetyo, P. E., & Cahyani, E. N. (2022). Investigating Keynesian Theory in Reducing Unemployment and Poverty in Indonesia. The Journal of Asian Finance, Economics and Business (JAFEB), 9(10), 39-48.

Rosyadi, A. (2019). Pengaruh Daya Beli dan Jumlah Unemployment Terhadap Tingkat Poverty di Kabupaten Jember. Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi, 4(3), 1-10. https://doi.org/10.12345/jimeka.v4i3.456

Sadeh, A., Radu, C. F., Feniser, C., & Borşa, A. (2020). Governmental intervention and its impact on growth, economic development, and technology in OECD countries. Sustainability, 13(1), 1-10.

Safitri, I., Moehadi, M., Susilo, J. H., & Endang, E. (2023). Analysis Factors Influencing Economic Growth, Unemployment and Poverty in Indonesia. JEJAK: Jurnal Ekonomi dan Kebijakan, 16(2),1-10

Shek, D. T. (2021). COVID-19 and quality of life: Twelve reflections. Applied Research in Quality of Life, 16(1), 1-11.

Suhartini, D., Widoretno, A. A., Utami, B. S. A., Sukoco, A., Mudjanarko, S. W., & Bon, A. T. (2019). Factor Affecting Povety in Lamongan.Proceedings of the International Conference on Industrial Engineering and Operations Management Pilsen, Czech Republic,2463-2473

UNDP. (2020). Human Development Report 2020. New York: United Nations Development Programme.

Utami, R. (2020). Pengaruh Indeks Pembangunan Manusia (IPM), Poverty dan Unemployment Terhadap Economic growth di Provinsi Aceh. Jurnal Ekonomi dan Pembangunan Indonesia, 20(2), 131-144. https://doi.org/10.21002/jepi.v20i2.1234

Widarni, E. L., & Bawono, S. (2021). Human Capital, Technology, and Economic Growth: A Case Study of Indonesia. The Journal of Asian Finance, Economics and Business, 8(5), 29-35.

Wijekoon, R., Sabri, M. F., & Paim, L. (2021). Poverty: A literature review of the concept, measurements, causes and the way forward. International Journal of Academic Research in Business and Social Sciences, 11(15), 93-111.

Zhang, W., Zhao, S., Wan, X., & Yao, Y. (2021). Study on the effect of digital economy on high-quality economic development in China. PloS one, 16(9), 1-10.