THE EFFECT OF HUMAN DEVELOPMENT INDEX AND UNEMPLOYMENT ON POVERTY IN INDONESIA 2018-2023

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Abstract
Poverty remains a serious issue in Indonesia despite its declining trend in recent years. This study aims to examine the influence of the Human Development Index (HDI) and the unemployment rate on poverty levels in Indonesia from 2018 to 2023. The research utilizes panel data from 34 provinces and employs panel regression analysis using the Fixed Effect Model, selected through Chow and Hausman tests. The results show that HDI has a negative and significant effect on poverty, indicating that improvements in human development can reduce poverty. Conversely, the unemployment rate has a positive and significant effect, meaning that higher unemployment contributes to increased poverty levels. The high coefficient of determination indicates that the model explains most of the variation in poverty levels. These findings align with human development theory and structural poverty theory and can serve as a reference for poverty reduction policy formulation in Indonesia.

Keyword : *Human Development Index, Open Unemployment Rate, Poverty*

INTRODUCTION

Poverty is a multidimensional problem that is still a major challenge in various developing countries, including Indonesia. In addition to having a direct impact on people's welfare, poverty is also a significant obstacle to achieving sustainable economic development. In the context of development, high community welfare is one of the main indicators of economic success (Maulana, 2022). The UN through the Sustainable Development Goals (SDGs) agenda places poverty alleviation as one of the global priority goals. This emphasizes that poverty is not only a local problem, but also a global issue that requires comprehensive handling across sectors and policies (Azizah et al., 2023).

Indonesia as a developing country with a large population faces complex poverty challenges. Although the national poverty trend has shown a decline in recent years, the poverty rate is still at a relatively high level (Purwanti, 2024). Data from the Central Statistics Agency (BPS) shows that in March 2023, there were 25.90 million poor people or 9.36 percent of the total population, down from 26.36 million people in the previous year. This decline reflects economic improvements after the COVID-19 pandemic, which had increased the poverty rate to its highest level of 10.14 percent in 2021. Even so, the structural challenges in poverty alleviation remain large, especially in areas with limited access to education, health services, and basic infrastructure (Yuniarti, 2010).

One of the important factors that influences poverty is unemployment. The high unemployment rate indicates that human resources are not being utilized optimally in economic activities. Unemployment causes the loss of sources of income, thus increasing the risk of households falling into poverty (Hasibuan, 2023). BPS data (2024) noted that the open unemployment rate in Indonesia fluctuated during the 2018–2023 period, with the highest figure recorded in 2021 at 6.26% due to the impact of the pandemic. Although in 2023 the unemployment rate fell to 5.45%, this figure still shows a major challenge in creating inclusive and productive employment.

On the other hand, the Human Development Index (HDI) is an important indicator in describing the quality of life of the population, which includes aspects of health, education, and a decent standard of living (Wulandari, 2024). Indonesia's HDI has experienced an increasing trend from 71.39 in 2018 to 74.39 in 2023. This increase indicates progress in human development that

can contribute to reducing poverty rates (Sagala, 2022). The contribution of human capital, especially education, as well as the role of the government helps improve the development of human capital in order to increase human productivity (Cahyono et al., 2024). The relationship between HDI and poverty shows that improving the quality of human resources will have an impact on increasing productivity and community income, thereby reducing the risk of poverty (Sayifullah & Gandasari, 2016).

Based on the description, this study was conducted to analyze the extent to which the Human Development Index and the open unemployment rate affect the poverty rate in Indonesia during the period 2018–2023. This study is expected to provide empirical contributions in supporting poverty alleviation policies based on improving the quality of human resources and creating productive jobs.

THEORY

Human Development Theory

The Human Development Theory was developed by Amartya Sen and Mahbub ul Haq in response to the development approach that solely emphasizes economic growth. In Development as Freedom, Sen (1999) states that development is the process of expanding the real freedom enjoyed by humans. This means that the success of development is measured by the extent to which humans have the capability to live a life that they value—not just through increasing Gross Domestic Product (GDP).

Mahbub ul Haq then developed the Human Development Index (HDI) with UNDP in 1990, which measures development based on three main dimensions: long and healthy life (represented by life expectancy), education (average years of schooling and expected years of schooling), and a decent standard of living (GDP per capita or expenditure per capita). Thus, human development places humans at the center of the development process. An increase in the HDI reflects improvements in the quality of human life that are directly related to increased productivity, labor competitiveness, and increased income. When people have good access to education and health, their chances of escaping poverty will increase (Todaro & Smith, 2012). Therefore, in the context of this research, HDI is seen as a key variable in reducing poverty levels in Indonesia.

Structural Poverty Theory

Structural poverty theory holds that poverty is not merely the result of individual laziness or incompetence, but rather the result of unfair and unequal social and economic structures. This theory emphasizes the importance of socio-political systems and economic institutions that can create or hinder access to resources, education, employment, and basic services (Purwanto, 2012).

According to this theory, poverty arises because of systemic barriers that prevent some groups in society from having adequate access to formal employment, decent education, and business capital. Inequality in asset ownership, unequal distribution of income, and marginalization of the poor from political decision-making are also major causes. When the economic structure fails to create adequate employment or is discriminatory against certain groups (for example women, the disabled, or people in remote areas), the unemployment rate will increase and increase poverty. In the Indonesian context, high open unemployment rates often reflect the ineffectiveness of the labor market in absorbing the workforce. This is exacerbated by the mismatch between labor skills and industry needs, as well as the low quality of vocational education. This condition strengthens the view of the structural poverty theory that without systemic improvements to the economic and social structure, poverty alleviation is difficult to achieve.

METHOD

This study uses a quantitative approach with panel data type, which combines time series data (2018–2023) and cross-provincial data (34 provinces in Indonesia). The data used were obtained from the Central Statistics Agency (BPS) and include three main variables: poverty rate (as the dependent variable), and the Human Development Index (HDI) and Open Unemployment

Rate (TPT) as independent variables. The analysis technique used is panel data regression with the selection of estimation models through the Chow test and the Hausman test. The results of both tests indicate that the Fixed Effect Model (FEM) is the most appropriate model to use in this study. The analysis was carried out with the help of E-Views 12 software. In addition, to ensure the feasibility of the model, classical assumption tests were also carried out such as normality, multicollinearity, heteroscedasticity, and autocorrelation tests. Hypothesis testing was carried out using the t-test (partial), F-test (simultaneous), and coefficient of determination (R^2) to see how much influence the HDI and TPT had on poverty.

RESULTS AND DISCUSSION

This study analyzes the effect of the Human Development Index (HDI) and the Open Unemployment Rate (TPT) on poverty levels in 34 provinces in Indonesia during the period 2018–2023. After going through a model selection test using the Chow and Hausman tests, it was found that the Fixed Effect Model (FEM) was the most appropriate model to use. This shows that each province has unique characteristics that affect poverty levels, so it needs to be controlled in the analysis.

Table 1. Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Poverty	30.89551	2.690320	11.48395	0.0000
HDI	-0.301758	0.037623	-8.020477	0.0000
TPT	0.225420	0.052001	4.334944	0.0000

Source: E-views 12 output results (processed data)

Tabel 1 show outcome of the regression equation for the poverty model are obtained as follows:

$$POV_{it} = 30.89551 - 0.301758\,HDI_{it} + 0.225420\,TPT_{it} + \varepsilon_{it} \qquad \textbf{(1)}$$

The estimation results using the Fixed Effect model show that both the Human Development Index (HDI) and the Open Unemployment Rate (TPT) have a significant effect on the poverty rate in Indonesia from 2018 to 2023. The HDI regression coefficient of -0.301758 indicates that an increase in the HDI contribution is real in reducing poverty. This strengthens the idea that improving the quality of education, health, and living standards can increase the competitiveness of society in the economy, which ultimately reduces the number of poor people.

On the other hand, the TPT coefficient of 0.225420 shows that the increasing unemployment rate has an impact on the increasing poverty rate. The more labor force that is not absorbed, the greater the risk of them falling into poverty due to loss of income. This result is in accordance with the theory of structural poverty, which sees unemployment as a reflection of inequality in access to economic opportunities.

The Impact of HDI on Poverty

The Human Development Index (HDI), which measures the quality of development through three main dimensions, namely education, health, and standard of living, has been shown to have a negative and significant effect on poverty rates in Indonesia. This means that increasing the HDI, which reflects the quality of life of the community, directly contributes to reducing poverty rates. This finding is in line with the theory of human development which places quality of life as the main focus of development, not just economic growth. This approach refers to the views of Amartya Sen and Mahbub ul Haq, who emphasize the importance of expanding human choices and capabilities to live a meaningful life. Better access to education, health, and economic empowerment increases people's productivity and income, thereby reducing poverty. This study is also consistent with previous studies, such as by Nguyen Dinh Tuan (2022), which shows a negative correlation between the HDI and multidimensional poverty in Southeast Asian countries, including Vietnam. Education, especially average years of schooling, is an important factor in

reducing poverty. Thus, increasing human development through increasing access to education and health has been proven effective in reducing poverty in Indonesia.

The Impact of Open Unemployment Rate on Poverty

The Open Unemployment Rate (TPT) is the percentage of the workforce that is not yet working but is actively looking for work. The results of this study indicate that the TPT has a positive and significant effect on the poverty rate in Indonesia, which means that an increase in unemployment is followed by an increase in poverty. Areas with high unemployment rates tend to have higher poverty rates because many residents are unable to meet basic needs. This finding is consistent with the theory of structural poverty, which explains that unemployment is caused by unfair social and economic factors, especially during crises such as the COVID-19 pandemic. The informal sector and MSMEs that absorb a lot of labor are most vulnerable to economic shocks, so that unemployment increases sharply and deepens poverty. BPS data recorded an increase in the TPT from 4.94% in 2020 to 6.26% in 2021, having a direct impact on increasing poverty, especially in urban areas and the informal sector. This study is in line with research in Slovakia by Bžanová and Kováč (2023) which found a significant positive relationship between long-term unemployment and the risk of poverty, especially in young and old age groups. Another study by Jianu (2019) shows that the increase in the number of young people who are not in work, not in school, and not in training (NEETs) also contributes to the increase in poverty in the European Union. Therefore, reducing unemployment, especially through inclusive job creation and targeted job training, is a key element in Indonesia's poverty alleviation strategy.

CONCLUSION

Based on the results of panel data regression analysis, this study found that the Human Development Index (HDI) has a negative and significant effect on poverty rates in Indonesia. This means that improving the quality of life of the community through aspects of education, health, and standard of living directly contributes to reducing poverty rates. Conversely, the Open Unemployment Rate (TPT) has a positive and significant effect on poverty, indicating that the higher the unemployment rate, the greater the poverty rate. Therefore, unemployment is one of the main factors that worsens poverty conditions in various regions, especially in areas with high unemployment. Simultaneously, both variables, HDI and TPT, have been shown to play an important role in determining the overall poverty rate. In other words, poverty alleviation efforts must be carried out by improving the quality of human resources while reducing unemployment rates so that the impact can be felt widely and sustainably.

Based on these findings, this study recommends that the government focus more on two main aspects, namely improving the quality of human resources and creating jobs. In provinces with high unemployment rates such as Banten and the Riau Islands, job training based on local industry needs needs to be strengthened through vocational programs and practical skills certification that are in line with leading sectors such as manufacturing, logistics, and tourism. In addition, local governments can provide incentives for companies that prioritize the absorption of local workers, for example through tax cuts or easy access to project tenders. On the other hand, increasing the HDI must be realized through equal access to education and health services, especially in disadvantaged areas, by utilizing technology such as digitalization of learning and health education based on social media or instant messaging applications.

Poverty reduction will be more effective if efforts to increase the HDI and reduce unemployment are carried out simultaneously, for example through job training accompanied by small business assistance and the construction of basic facilities such as schools and health centers in villages. In addition, for further research, it is recommended to include other variables that also affect poverty such as inflation, economic growth, minimum wages, and education levels in more detail. This will enrich the analysis and provide a more comprehensive picture of the factors that affect poverty in Indonesia.

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