

Human Development and Poverty in Indonesia

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ABSTRACT: This study examines the relationship between Indonesia's Human Development Index (HDI) and poverty levels. Despite significant economic growth, poverty remains a serious issue in Indonesia. The main objective of this research is to understand how improvements in HDI, which includes dimensions of health, education, and standard of living, can influence the reduction of poverty levels. The study uses a quantitative approach with secondary data from the Central Statistics Agency of the Republic of Indonesia, covering the period from 2013 to 2022. Analysis was conducted using simple linear regression with the assistance of SPSS 26 software. The results of the study indicate that HDI has a significant impact on reducing poverty levels. This research emphasizes that increasing HDI through improved access to education, healthcare services, and a decent standard of living can significantly reduce poverty in Indonesia. These findings support existing literature and provide important implications for human development policies and poverty alleviation strategies. The study also suggests the need for further exploration with a more comprehensive approach to deepen the understanding of the relationship between HDI and poverty.

KEYWORDS: Human Development Index, Poverty, Welfare

I. INTRODUCTION

Indonesia, the largest archipelagic country in the world with over 270 million people, has experienced rapid development in recent decades. Significant economic growth, rapid urbanization, and various social and economic development programs have transformed Indonesia from an agrarian country into the largest economy in Southeast Asia. However, poverty remains a serious issue hindering the achievement of sustainable development goals. Data from the Central Statistics Agency (BPS) of Indonesia shows that in 2023, about 9.36% of Indonesians live below the national poverty line. Addressing poverty is a major challenge for Indonesia in achieving equitable social welfare. One important concept in this effort is the Human Development Index (HDI), which measures the quality of life based on income, health, and education.

Various studies have been conducted to examine the relationship between HDI and poverty in Indonesia. Mukhtar et al. (2019) found that HDI has a significantly negative effect on poverty, meaning that an increase in HDI reduces poverty. In contrast, Harman et al. (2022) found that HDI has a significantly positive effect on poverty. Another study by Nurlita et al. (2017) in Samarinda showed that HDI has a significant negative effect on poverty. In Banten Province, Sayifullah & Gandasari (2016) found that HDI positively affects poverty, while Utami (2020) stated that economic growth, unemployment, access to education and health, and inequality influence the relationship between HDI and poverty. Prasetyoningrum & Sukmawati (2018) found that HDI, economic growth, and unemployment have an indirect effect on poverty.

Although many studies have examined the relationship between HDI and poverty, the results are often contradictory and not always linear. Mukhtar et al. (2019) and Harman et al. (2022) provide conflicting findings, indicating a complexity in this relationship that is not fully understood. Some studies are also limited to certain regions and do not consider other contextual variables, such as inequality and access to basic services. This gap indicates the need for further research to understand the relationship between HDI and poverty in a more comprehensive and contextual manner. This research aims to examine the impact of the Human Development Index on poverty levels in Indonesia more deeply and comprehensively. The specific objectives of this study are to identify the factors influencing the relationship between HDI and poverty and to understand how HDI can be used as a tool to design effective policies for reducing poverty.

This study will contribute to the field of economics and development by providing a deeper analysis of the relationship between HDI and poverty in Indonesia. The results of this study can provide insights for the government and other stakeholders in designing

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and implementing more effective policies to reduce poverty. Additionally, this research can serve as a reference for future studies examining the relationship between human development and poverty in various contexts. This research is relevant to existing policies, practices, and theories as it provides new insights into the relationship between HDI and poverty, which is one of the main issues in sustainable development. A better understanding of how HDI can affect poverty levels will help policymakers design more targeted interventions. Moreover, this research is important for academics and practitioners interested in human development and poverty issues, as well as for journal readers seeking a deeper understanding of this topic.

II. RESEARCH METHOD

This study uses a quantitative approach to explore the relationship between the Human Development Index (HDI) and poverty levels in Indonesia. The selection of the quantitative method is based on the research objective, which aims to test the relationship between two variables using statistical data. This approach allows for objective and measurable data analysis, enabling clearer and more accurate interpretation of the research results. The quantitative approach also supports the use of statistical analysis techniques, such as simple linear regression, which are relevant for identifying the influence of independent variables on dependent variables. This research design is a descriptive quantitative design with a simple linear regression model. This model is chosen because it allows for the direct testing of the impact of HDI on poverty and provides an overview of how changes in HDI can affect poverty levels. This design also supports the use of secondary data from official sources, such as the Central Statistics Agency (BPS), ensuring high reliability and validity of the data used.

This research is conducted in Indonesia and focuses on provincial-level data. The research subjects are all provinces in Indonesia with complete data available for the period 2013-2022. The selection of subjects is based on the availability of consistent and representative data, enabling comprehensive and in-depth analysis of the relationship between HDI and poverty. The characteristics of the research subjects include various demographic, economic, and social dimensions, allowing the research results to provide a broad and in-depth overview of the poverty situation in Indonesia. The data used in this study are secondary data obtained from the Central Statistics Agency of the Republic of Indonesia. The collected data includes the percentage of poor people by province and HDI by province for the period 2013-2022. The data collection procedure involves accessing the BPS database and extracting relevant data for the study. The data is then processed and formatted for analysis using statistical software.

The primary instrument used in this study is the SPSS version 26 statistical software, which is used for conducting simple linear regression analysis. The validity and reliability of the data used are ensured by the data source, the Central Statistics Agency, which is an official government agency with standardized data collection methodologies. The use of SPSS as an analysis tool ensures that the statistical procedures used are reliable and valid. The data analysis technique used in this research is simple linear regression analysis. The regression equation used is $\hat{Y} = a - bX + e_i$, where \hat{Y} is the dependent variable (poverty level), X is the independent variable (HDI), a is the constant, b is the regression coefficient, and e_i is the error term. The analysis procedure involves inputting data into SPSS, modeling the regression, and interpreting the regression results to determine the impact of HDI on poverty levels. This analysis will help identify significant relationships between HDI and poverty.

To ensure the validity and reliability of the research, several steps are taken. First, the validity of the data is ensured by using official data sources from BPS, which are standardized. Second, the reliability of the analysis is ensured by using widely recognized and reliable statistical software. Third, the analysis is conducted transparently by documenting all steps and decisions taken during the research process. Internal validity is strengthened by ensuring that all relevant variables are included in the regression model. This research adheres to strict ethical research standards. As this study uses secondary data that is public and does not involve direct human subjects, ethical issues related to informed consent and participant confidentiality are not primary concerns. However, efforts are still made to use the data ethically and respect the privacy and data security policies of the source. Permission to use data from BPS is followed by complying with all applicable regulations and guidelines related to the use of official government data. With a systematic and methodologically rigorous approach, this research is expected to make a significant contribution to understanding the relationship between human development and poverty in Indonesia, as well as providing insights that can be used to design more effective policies to reduce poverty.

III. RESULTS AND DISCUSSION

This section presents the findings of the study conducted to examine the impact of the Human Development Index (HDI) on poverty levels in Indonesia. This research utilizes simple linear regression analysis to understand the relationship between these two variables. The main focus of these results is to determine how significant the effect of HDI is on poverty and to what extent the HDI variable can explain variations in poverty levels in Indonesia. The results of the simple linear regression analysis show that HDI has a significant impact on poverty levels in Indonesia. Table 1 presents the regression coefficient with a B value of -0.449,

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which means that each one-unit increase in HDI will reduce the poverty rate by 0.449%. The t-value of -6.390 with a significance of 0.000 indicates that this effect is highly statistically significant. This supports the hypothesis that an increase in HDI can reduce poverty in Indonesia.

Table 1. Regression Coefficient Values

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	42.088	4.980		8.451	.000
IPM	-.449	.070	-.914	-6.390	.000

Source: Data Analysis Results, 2024

Table 2 shows the results of the regression model significance test with an F value of 40.832 and a significance of 0.000, indicating that the regression model used in this study is highly significant. This means that the independent variable (HDI) as a whole has a significant effect on the dependent variable (poverty rate).

Table 2. Significance Test Values

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.304	1	4.304	40.832	.000 ^b
Residual	.843	8	.105		
Total	5.148	9			

Source: Data Analysis Results, 2024

Meanwhile, Table 3 presents the coefficient of determination (R Square) value of 0.836, which means that 83.6% of the variation in poverty levels can be explained by HDI. This high R Square value indicates that the regression model used in this study is very strong in explaining the relationship between HDI and poverty levels.

Table 3. Coefficient of Determination (R Square) Values

R	R Square	Adjusted R Square	Std. Error of the Estimate
.914 ^a	.836	.816	.32468

Source: Data Analysis Results, 2024

The relationship between the Human Development Index (HDI) and poverty is complex and closely related. The HDI, developed by the UN as an indicator of human welfare, reflects the level of development of a country by considering three key dimensions: health, education, and standard of living (Yakunina & Bychkov, 2015). Poverty is a social condition characterized by the inability of individuals or groups to meet their basic needs, such as food, housing, education, and healthcare (Crouch et al., 2021; Marrero & Servén, 2021). The relationship between HDI and poverty can be elucidated in various ways, from the potential impact of HDI on reducing poverty levels to how poverty can affect HDI components. The HDI is a multidimensional measure that includes health, education, and living standards. One of the main components of HDI is education, which reflects access to and participation in primary and higher education. Individuals with higher levels of education have better job opportunities and tend to have higher incomes. Thus, increasing HDI can directly contribute to reducing poverty levels. Empirical studies conducted by Syaifullah & Maliki (2017) found that increasing access to higher education significantly reduces poverty rates. Therefore, improving the educational aspects of HDI can be an effective way to tackle poverty.

The health component of HDI includes life expectancy and access to healthcare services. Poor health conditions are often a cause of poverty, as sick individuals may not be able to work or face high medical costs. Improving access to affordable healthcare services and increasing life expectancy can help reduce the risk of falling into poverty. According to research by Comim & Hirai (2022), investment in basic healthcare services in developing countries has a positive impact on reducing poverty and increasing HDI. Meanwhile, the standard of living component, which includes per capita income and access to adequate housing, also plays an important role in the relationship between HDI and poverty. A high HDI often reflects better access to decent jobs and higher

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incomes. Increasing per capita income can help individuals and families rise out of poverty. Research by Yakunina & Bychkov (2015) shows that increasing per capita income in several countries positively contributes to improving HDI and reducing poverty.

The relationship between HDI and poverty is not always unidirectional. Poverty can also negatively affect HDI components (Fosu, 2017). For example, individuals living in poverty may have limited access to quality education, adequate housing, and proper healthcare. This can lead to a decrease in HDI components, such as increased school dropout rates, lower quality education, and higher child mortality rates. Hassan et al. (2015) highlight how poverty can hinder the achievement of good education and health in various countries. Furthermore, inequality in income distribution and access to resources can also influence the relationship between HDI and poverty. When human development benefits are only enjoyed by a small segment of society, high-income inequality can increase disparities and create persistent poverty conditions for those marginalized. According to Goschin (2015), economic inequality can negatively impact overall social welfare and public health. Therefore, to effectively reduce poverty, it is important to ensure that the benefits of increasing HDI are distributed equitably across society.

In addition to internal factors within a country, external factors can also influence the relationship between HDI and poverty. Development aid from donor countries or international organizations can play an important role in improving HDI and reducing poverty in developing countries. According to Stiglitz et al. (2009), appropriate development aid can be used to improve access to education and healthcare services, which in turn can increase HDI and reduce poverty. In this context, it is important to remember that HDI is just one indicator of human development and does not encompass all aspects of human life. Therefore, in planning policies to reduce poverty, a holistic approach that also considers other aspects such as food security, decent employment, and social protection is necessary. Overall, the relationship between HDI and poverty is interconnected and complex, with various factors influencing and being influenced by these two concepts.

The results of this study are consistent with several previous studies that found HDI has a significant impact on poverty. For instance, Mukhtar et al. (2019) found that HDI has a negative impact on poverty, indicating that an increase in HDI can reduce poverty levels. These findings are consistent with research conducted by Nurlita et al. (2017) in Samarinda, which also found that HDI has a negative and significant impact on poverty. The study by Sayifullah & Gandasari (2016) in Banten Province shows similar results, where HDI has a significant impact on poverty, although the direction of the impact is positive. This difference may be due to contextual factors such as regional policies or different local economic conditions. The results of this study contradict the findings of Harman et al. (2022), which found that HDI has a positive impact on poverty. This difference could be due to different methodologies or variables used in their study. The study by Muqorrobin & Soejoto (2017) shows that economic growth, unemployment, access to education and healthcare, as well as inequality, influence the relationship between HDI and poverty, which is also consistent with this study's findings that highlight the importance of HDI in reducing poverty.

The research by Prasetyoningrum & Sukmawati (2018) shows that HDI, economic growth, and unemployment have an indirect impact on poverty. This study strengthens these findings by showing that HDI has a direct and significant impact on poverty, although this study does not account for intervening variables such as economic growth and unemployment. The study by Syaifullah & Malik (2017) also found that the relationship between HDI and poverty is not always linear. This study reinforces those findings by showing that although HDI generally has a negative impact on poverty, there are other factors that can influence this relationship. For instance, government policies, infrastructure, and education levels can affect how an increase in HDI impacts poverty (Mahroji & Nurkhasanah, 2019). Overall, this study's findings are consistent with much of the existing literature showing that HDI has a significant impact on poverty. However, findings that contradict some previous studies suggest that local context and other variables not considered in this study can influence the relationship between HDI and poverty.

This study provides an important contribution to the existing literature by showing that HDI has a significant impact on poverty in Indonesia. These findings enrich human development and economic theory by providing empirical evidence that improving quality of life, as measured by HDI, can significantly reduce poverty. These findings also challenge some previous studies that found the relationship between HDI and poverty is not always linear or significant. Additionally, this study strengthens the theory that human development, measured through indicators such as education, health, and decent living standards, is a key factor in reducing poverty. These findings provide new insights into the importance of investing in human development to achieve poverty reduction goals. From a practical perspective, the findings of this study have important implications for policy formulation in Indonesia. The results show that increasing HDI can significantly reduce poverty levels. Therefore, the government and policymakers should focus on efforts to increase HDI through investments in education, healthcare, and improved living standards. Policies that support better access to education and healthcare services, as well as increased opportunities for decent employment, can help achieve significant poverty reduction. Additionally, these findings can be used by non-governmental organizations and other stakeholders to design programs aimed at improving the quality of life of the community. Programs focused on increasing HDI can help reduce poverty and improve overall community well-being.

IV. CONCLUSION

HDI has a significant impact on poverty levels. These findings show that increasing HDI, which encompasses health, education, and living standards dimensions, can significantly reduce poverty in Indonesia. Although this study provides important insights into the relationship between HDI and poverty, there are some limitations to consider. For future research, it is recommended to undertake further development and exploration. Future research could involve collecting primary data in addition to secondary data to obtain more comprehensive and detailed information about the factors influencing the relationship between HDI and poverty. Primary data could include surveys or interviews with respondents in various regions to understand local contexts and specific factors that might affect this relationship.

REFERENCES

- 1) Comim, F., & Hirai, T. (2022). Sustainability and Human Development Indicators: A Poset Analysis. *Ecological Economics*, 198. <https://doi.org/10.1016/j.ecolecon.2022.107470>
- 2) Crouch, L., Rolleston, C., & Gustafsson, M. (2021). Eliminating Global Learning Poverty, The Importance of Equalities and Equity. *International Journal of Educational Development*, 82. <https://doi.org/10.1016/j.ijedudev.2020.102250>
- 3) Fosu, A. K. (2017). Growth, Inequality, and Poverty Reduction in Developing Countries, Recent Global Evidence. *Research in Economics*, 71(2), 306–336. <https://doi.org/10.1016/j.rie.2016.05.005>
- 4) Goschin, Z. (2015). Territorial Inequalities and Economic Growth in Romania, a Multi-Factor Approach. *Procedia Economics and Finance*, 22, 690–698. [https://doi.org/10.1016/s2212-5671\(15\)00285-3](https://doi.org/10.1016/s2212-5671(15)00285-3)
- 5) Harman, Rahman, A., & Sudirman. (2022). The Effect of the Human Development Index on Poverty and Economic Growth. *KINERJA: Journal of Economics and Management*, 19(2), 268–276. <https://doi.org/10.29264/jkin.v19i2.11174>
- 6) Hassan, S. A., Zaman, K., & Gul, S. (2015). The Relationship Between Growth, Inequality, Poverty Triangle and Environmental Degradation: Unveiling The Reality. *Arab Economic and Business Journal*, 10(1), 57–71. <https://doi.org/10.1016/j.aebj.2014.05.007>
- 7) Mahroji, D., & Nurkhasanah, I. (2019). The Effect of the Human Development Index on the Unemployment Rate in Banten Province. *Journal of Economics*, 9(1), 51–72. <http://jurnal.untirta.ac.id/index.php/>
- 8) Marrero, G. A., & Servén, L. (2021). Growth, Inequality and Poverty: a Robust Relationship? *Empirical Economics*. <https://doi.org/10.1007/s00181-021-02152-x>
- 9) Mukhtar, S., Saptono, A., & Arifin, A. S. (2019). The Analysis of The Effects of Human Development Index and Opened Unemployment Levels to The Poverty in Indonesia. *Journal of Ecoplan*, 2(2), 77–89.
- 10) Muqorrobin, M., & Soejoto, A. (2017). The Effect of the Human Development Index (HDI) on Economic Growth in East Java Province. *Journal of Economic Education*, 5(3).
- 11) Nurlita, C. A., Musa, A. H., & Suharto, R. B. (2017). The Effect of the Human Development Index (HDI) and Economic Growth on Unemployment and the Number of Poor People in Samarinda. *JTEM*, 2(1). <https://journal.feb.unmul.ac.id/index.php/JTEM/issue/view/51>
- 12) Prasetyoningrum, A. K., & Sukmawati, U. S. (2018). Analysis of the Effect of the Human Development Index (HDI), Economic Growth and Unemployment on Poverty in Indonesia. *EQUILIBRIUM: Journal of Sharia Economics*, 6(2), 217–240.
- 13) Sayifullah, & Gandasari, T. R. (2016). The Effect of the Human Development Index and Unemployment on Poverty in Banten Province. *Journal of Economics*, 6(2), 236–255. <http://jurnal.untirta.ac.id/index.php/>
- 14) Stiglitz, J. E., Sen, A., & Fitoussi, J. P. (2009). Report by the Commission on the Measurement of Economic Performance and Social Progress. www.stiglitz-sen-fitoussi.fr
- 15) Syaifullah, A., & Malik, N. (2017). The Effect of the Human Development Index and Gross Domestic Product on the Poverty Rate in ASEAN-4. *Journal of Economics*, 1(1), 107–119.
- 16) Utami, F. P. (2020). The Effect of the Human Development Index (HDI), Poverty, and Unemployment on Economic Growth in Aceh Province. *Journal of Samudra Economics*, 4(2), 101–113.
- 17) Yakunina, R. P., & Bychkov, G. A. (2015). Correlation Analysis of the Components of the Human Development Index Across Countries. *Procedia Economics and Finance*, 24, 766–771. [https://doi.org/10.1016/s2212-5671\(15\)00692-9](https://doi.org/10.1016/s2212-5671(15)00692-9)



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