The Influence of Poverty and Unemployment on the Human Development Index in Indonesia from 2010-2024

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Info Article

Abstract

This study examines the impact of poverty and unemployment on the Human Development Index (HDI) in Indonesia from 2010 to 2024, utilizing secondary data from Statistics Indonesia (BPS) and multiple linear regression analysis. The results indicate that poverty has a significant negative effect on the Human Development Index (HDI), with a 1% increase in poverty resulting in a 2.26-point decline in HDI. Conversely, unemployment exhibits a positive yet complex relationship with HDI, suggesting potential moderating factors, such as government interventions. Together, poverty and unemployment explain 93% of the variation in HDI (adjusted R^2 = 0.91), underscoring their critical role in human development. The findings align with Human Capital Theory and Islamic principles, which emphasize equitable wealth distribution (Zakat, Infāq, and Waqf) and the protection of basic needs (maqāṣid al-sharī'ah) to address socioeconomic disparities. The study emphasizes the importance of implementing integrated policy measures, including targeted budgeting for education, healthcare, and job creation, to mitigate poverty and unemployment and foster sustainable human development in line with both empirical evidence and Islamic teachings. These insights contribute to the broader discourse on achieving Sustainable Development Goals (SDGs) in developing economies.

INTRODUCTION

Poverty and unemployment are two interrelated factors that significantly impact the Human Development Index (HDI) in Indonesia. Data from the BPS-Statistics Indonesia show that, despite a decline in poverty rates, unemployment remains a significant challenge that hinders the growth of the HDI. This phenomenon reflects that high unemployment rates can lead to increased poverty, which ultimately affects the quality of life through limited access to education and healthcare services. This suggests that poverty and unemployment affect not only the economy but also the social and public health dimensions (Mulyadi, 2017).

The primary issue arising from this condition is the low HDI in regions with high poverty and unemployment rates. According to previous research, a significant relationship exists between poverty levels and HDI (Wibowo et al., 2021), where poverty negatively impacts the quality of life within the community (Machell et al., 2016). However, it can exacerbate existing poverty conditions (Wahyuningrum & Soesilowati, 2021). Nevertheless, it can exacerbate existing poverty conditions (Haataja, 1999; Wahyuningrum & Soesilowati, 2021). This is reinforced by experts who state that economic instability due to unemployment can reduce community purchasing power and hinder investment in education and health, which are key components in measuring HDI.

This study aims to quantitatively analyze the influence of poverty and unemployment on HDI in Indonesia. Using secondary data from the BPS-Statistics Indonesia and multiple regression analysis methods, this study will explore the relationship between these two variables and HDI components, including life expectancy, average years of schooling, and per capita income. The urgency of this research lies in the importance of understanding the interaction between poverty and unemployment in the context of human development. The results are expected to provide policy recommendations for the government to formulate effective strategies for reducing poverty and unemployment and improving the quality of life, thereby achieving the Sustainable Development Goals (SDGs).

The Keynesian theory posits that poverty is often a result of unemployment and that the government plays a crucial role in alleviating poverty. British economist John Maynard Keynes developed this theory in the 1930s. The causes of poverty include unemployment, economic imbalance, and the inability of the system to adapt, which in turn leads to inequality, reduced social cohesion, and hindered economic growth (Arestis et al., 2018). Poverty is a condition in which an individual or group experiences a lack of wealth or valuable assets. This deficiency causes them to feel unable to meet their basic living needs adequately (Arifin, 2020). Poverty can be understood in various ways. Generally, there are three main interpretations: First, poverty is often described as a lack of material resources, including basic needs such as daily food, clothing, shelter, and healthcare services. In this context, poverty is understood as limited access to essential goods and services. Second, poverty also reflects social needs, such as social alienation, dependency, and inability to participate in community life. This includes access to education and information. Although often considered separate from economic poverty, social alienation also involves political and moral issues. Third, poverty can be viewed as a lack of sufficient income and assets to meet basic living needs (Solikatun & Masruroh, 2014).

Unemployment refers to individuals who are part of the labor force and actively seeking employment at a certain wage level but fail to obtain the desired job (Ipmawan et al., 2022). Unemployed persons can be defined as individuals without work who have actively sought employment in the last four weeks (Tayfur et al., 2022). They may also be included in this category if they are waiting to be called back to a job after dismissal or waiting to report to a new job within four weeks (Ipmawan et al., 2022). The HDI, according to the United Nations Development Programme (UNDP), is a method to evaluate the level of success in human development (Priambodo, 2021). HDI is derived from measurements comparing life expectancy, literacy rates determined by the highest level of education completed, and purchasing power across countries worldwide (Muqorrobin, 2017). A high human development index positively influences economic growth because it reflects the community's ability to contribute more significantly to improving productivity and creativity (Saida et al., 2021).

Table 1. HDI, Unemployment and Poverty

Year	HDI	Unemployement(%)	Poverty(%)
2010	66.53	7.14	13.33
2011	67.09	7.48	12.49
2012	67.7	6.13	11.66
2013	68.31	6.17	11.47
2014	68.9	5.94	10.96
2015	69.55	6.18	11.13
2016	70.18	5.61	10.7

2017	70.81	5.5	10.12
2018	71.39	5.3	9.66
2019	71.92	5.23	9.22
2020	71.94	7.07	10.19
2021	73.16	6.49	9.71
2022	73.77	5.86	9.57
2023	74.39	5.32	8,97
2024	75.02	4.91	8.57

Source: Statistics Indonesia (2025).

Data obtained from Statistics Indonesia highlights the trends in the HDI, unemployment rate, and poverty rate in Indonesia from 2010 to 2024. The HDI showed a significant increase, rising from 66.53 in 2010 to 75.02 in 2024, reflecting an overall improvement in the quality of life for the Indonesian population, including aspects of health, education, and living standards. The unemployment rate experienced fluctuations, decreasing from 7.14% in 2010 to 5.23% in 2019, then sharply increasing to 7.07% in 2020 due to the COVID-19 pandemic, before declining again to 4.91% in 2024..

The poverty rate also demonstrated a notable decline, from 13.33% in 2010 to 8.57% in 2024, despite a slight increase in 2020 likely caused by the pandemic's impact. Overall, these data suggest a negative correlation between the HDI and the levels of unemployment and poverty, where improvements in the HDI are associated with reductions in both social indicators. However, the spike in 2020 highlights the impact of external factors on national socioeconomic conditions, underscoring the need for further statistical analysis to assess the strength and significance of the relationships among these variables.
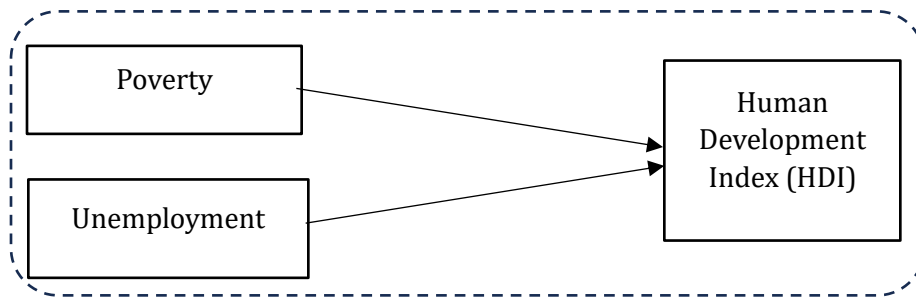

Figure 1. Framework

METHOD

This study employs a quantitative research approach, utilizing the E-Views application, among other statistical software, for data processing. The term 'quantitative' is used because this research is based on numerical data and involves a factual investigation. The data used in this study is time series data obtained from Statistics Indonesia, including annual information on HDI, poverty rates, and unemployment rates. The research variables consist of two independent variables: (1) Poverty, measured by the percentage of the population living below the poverty line, and (2) Unemployment, measured by the unemployment rate. The dependent variable is the HDI, which includes dimensions of health, education, and living standards. Data collection was conducted by accessing secondary data available from BPS. Additional information was also obtained from BPS-Statistics Indonesia to

complement the research data. The data were then analyzed using multiple linear regression with the following equation:

$Y = \alpha + \beta1*X1 + \beta2*X2 + \varepsilon$
Y = Human Development Index
X1 = Unemployment
X2 = Poverty
β1 β2 = Slope α = Constant (intercept)
 ε = Error

RESULTS AND DISCUSSION
RESULTS
The multicollinearity test was conducted to evaluate whether there is a correlation between independent variables in the regression model. If there is a strong relationship between independent variables, the relationships among them may be affected.

Tabel 2. Multicolinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
Poverty	0.055849	157.2509	2.204056
Unemployement	0.165675	152.3654	2.204056

Source: Data processed (2025).

Table 1 shows that the Variance Inflation Factor (VIF) values for poverty and unemployment are 2.204, indicating no multicollinearity since the values do not exceed 10. In this study, the Chi-Square probability for Obs*R-Square is 1.731163, which is greater than 0.05 (5%), indicating no autocorrelation, as shown in Table 2.

Table 3. Autocorrelation Test

F-statistic	0.634961	Prob. F (2,9)	0.5521
Obs*R-squared	1.731163	Prob. Chi-Square (2)	0.4208

Source: Proceed (2025).

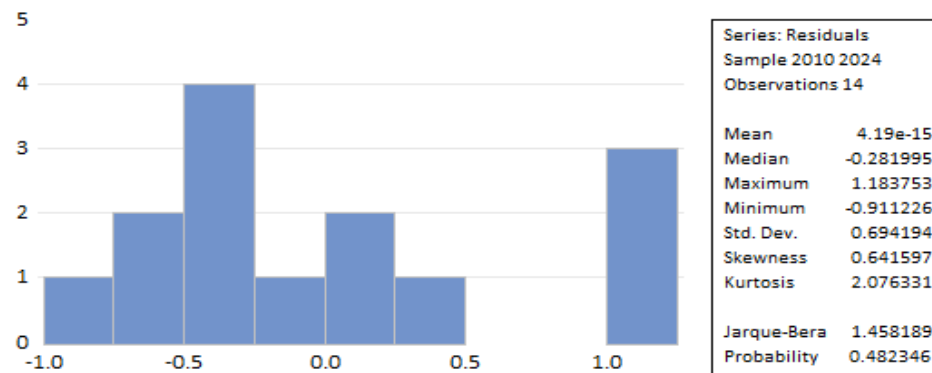| Series: Residuals	
Sample 2010 2024	
Observations 14	
Mean	4.19e-15
Median	-0.281995
Maximum	1.183753
Minimum	-0.911226
Std. Dev.	0.694194
Skewness	0.641597
Kurtosis	2.076331
Jarque-Bera	1.458189
Probability	0.482346

Figure 2. Normality Test
Source: Proceed (2025)

The normality test results from the E-Views software show a Jarque-Bera (JB) probability value of 0.482346, which is greater than 0.05. This indicates that the classical assumption of normality is met, as the residuals are normally distributed.

Table 4. Heterocedasticity Test

F-statistic	0.058093	Prob. F(2,11)	0.9438
Obs*R-squared	0.146327	Prob. Chi-Square (2)	0.9294
Scaled explained SS	0.048615	Prob. Chi-Square (2)	0.9760

Source: Data processed (2025).

The Chi-Square probability for Obs*R-Square is 0.9294, which is greater than 0.05, indicating no heteroscedasticity, as shown in Table 4—the multiple regression test results with HDI as the dependent variable and unemployment and poverty as independent variables.

Table 5. Multiple Regression Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	88.72201	1.811351	48.98113	0.0000
Poverty	-2.263790	0.236323	-9.579199	0.0000
Unemployement	0.952459	0.407032	2.340008	0.0392
R-squared	0.927766	Mean dependent var		70.44786
Adjusted R-squared	0.914633	S.D dependent var		2.582918
S.E of regression	0.754668	Akaike info criterion		2.462332
Sum squared resid	6.264761	Schwarz criterion		2.599272
Log likelihood	-14.23632	Hannan-Quinn criter		2.449655
F-statistic	70.64172	Durbin-Watson stat		0.971778
Prob(F-statistic)	0.000001			

Source: Data processed (2025).

The regression equation can be formulated as:
Y = 88.72201*C – 2.263790*X1 + 0.952459*X2
Y = HDI value
C = Constant Value (α)
X1 = Poverty
X2 = Unemployement

Based on this equation, a 1% increase in the poverty rate results in a 2.263790-point decrease in the HDI. Conversely, a 1% increase in the unemployment rate results in a 0.952459-point increase in the HDI. The F-statistic test shows a value of 70.64172 with a probability of 0.000001, which is less than 0.05. This indicates that poverty and unemployment simultaneously have a significant positive effect on HDI, with a certainty level of 92.77%. This means that 93% of the variation in HDI changes is attributed to poverty and unemployment, while the remaining 7% is attributed to other factors. The adjusted R-squared value of 0.914633 indicates that the model has a 91% chance of explaining all the independent variables used in this study.

DISCUSSION

Poverty has had a negative and significant impact on the HDI in Indonesia from 2010 to 2024. Regression results indicate that a 1% increase in poverty can lead to a 2.26-point decrease in the HDI. The variables of poverty and unemployment together explain 93% of the variance in HDI changes, with poverty serving as the dominant factor. This study is supported by the Human Capital Theory

(1962), built by Gary Becker, which posits that poverty restricts access to basic needs, including education, healthcare services, and a decent standard of living. These limitations directly affect the core components of the HDI—life expectancy, average years of schooling, and per capita income—thereby hindering human capital accumulation (Limbong & Haryanto, 2024).

Given these findings, and in alignment with the principles of Human Capital Theory, this study emphasizes the need for policies that prioritize investments in human capital through improved access to education, healthcare services, and job creation in order to mitigate the negative effects of poverty on the HDI. However, when compared to the poverty standards set by the National Board of *Zakat* Indonesia (BAZNAS), discrepancies may exist in the poverty data used. BAZNAS employs the National *Zakat* Index (IZN) as a measurement tool for poverty alleviation, which may involve different methodologies and scopes compared to data from Statistics Indonesia (BPS). Thus, a comprehensive evaluation involving the government and related institutions, including BAZNAS, is necessary to harmonize and ensure the consistency and accuracy of poverty data. Such an evaluation is essential to ensure that poverty alleviation policies are well-targeted and effective in improving the quality of life and overall HDI.

The effect of unemployment on HDI, according to regression results, is positive and significant, indicating a complex relationship between the two variables. A previous study conducted in Jombang Regency also found a significant correlation between unemployment and the HDI. However, the direction of the effect may vary depending on local contexts and the quality of available jobs. Other studies have shown that high unemployment typically hurts income and well-being. However, under certain conditions, factors such as job training programs and employment opportunities may moderate these effects. Therefore, the influence of unemployment on HDI requires further analysis, considering supporting variables to ensure that the resulting policies are more accurately targeted.

Poverty and unemployment both show a significant correlation with the HDI in Indonesia from 2010 to 2024. These findings align with Dependency Theory, which posits that poor countries tend to remain underdeveloped due to exploitation by wealthier nations, resulting in limited access to resources and development opportunities (Muzaky et al., 2023). Conversely, unemployment exhibits a positive effect on HDI, though this must be interpreted with caution. This positive correlation may be attributed to the presence of government interventions, such as social programs and job training initiatives, in response to the rising unemployment rate. This finding aligns with those of (Fayzullokh et al., 2023; Khan et al., 2024), who also found that improvements in HDI can contribute to poverty reduction.

CONCLUSION

This study concludes that poverty and unemployment have a significant, simultaneous impact on Indonesia's HDI. Poverty exhibits a negative regression coefficient, indicating that an increase in poverty is associated with a decrease in the HDI. Meanwhile, unemployment shows a positive coefficient, although its implications require further interpretation. Poverty and unemployment together explain 93% of the variation in HDI (Adjusted R-squared = 0.91), with F-test significance at $p < 0.05$. These results suggest the need for integrated policy interventions to address poverty and unemployment, thereby improving human development in Indonesia. This study also recommends that the government optimize targeted budgeting to reduce poverty and unemployment by increasing access to education, healthcare, and employment opportunities, as well as developing skill training programs for people experiencing poverty. Periodic evaluation of the effectiveness of poverty and unemployment alleviation programs is essential to ensure equitable and sustainable improvement of the HDI across Indonesia.

From an Islamic perspective, unemployment and poverty are viewed as significant social challenges that require serious attention. Islam emphasizes the importance of education and work as

means to improve quality of life and to avoid poverty. Moreover, Islam emphasizes the importance of equitable wealth distribution through mechanisms such as *Zakat, Infāq, and Waqf* in order to mitigate social inequality and ensure the fulfillment of every individual's basic needs. The concept of *maqāṣid al-sharīʿah*, which includes the protection of religion (*ḥifẓ al-dīn*), life (*ḥifẓ al-nafs*), intellect (*ḥifẓ al-ʿaql*), lineage (*ḥifẓ al-nasl*), and wealth (*ḥifẓ al-māl*), provides a normative foundation for inclusive and equitable human development efforts. In this context, initiatives to address poverty and unemployment align with Islamic teachings that emphasize social justice and the well-being of the community..

ACKNOWLEDGEMENTS

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