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The Effect of Poverty Rate, Gross Regional Domestic Product, Provincial Minimum Wage, and Unemployment Rate on the Human Development Index in 34 Provinces of Indonesia (2015–2024)

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ABSTRACT
This study aims to analyze the influence of poverty level, Gross Regional Domestic Product (GDP), Provincial Minimum Wage (UMP), and unemployment rate on the Human Development Index (HDI) in 34 Indonesian provinces for the period 2015–2024. The study used a quantitative approach with secondary panel data from the Central Statistics Agency. The model used is the Fixed Effect Model (FEM) because it is able to control unobserved heterogeneity between provinces that is constant during the observation period. The estimated results showed that the poverty and unemployment levels had a negative and significant effect on HDI ($p < 0.05$), while GDP and UMP had a positive and significant effect ($p < 0.05$). Simultaneously, all independent variables had a significant effect on HDI with a probability value of the F test < 0.05 and a high coefficient of determination (R^2), demonstrating the model's ability to explain variations in HDI between provinces. These findings confirm that improving regional economic performance and adequate wage policies contribute to improving the quality of human development, while poverty and unemployment are the main inhibiting factors. Therefore, development policies need to be focused on reducing economic inequality and increasing employment opportunities to encourage equitable distribution of human development in Indonesia.

Keywords: Human Development Index, Poverty, GRDP, Minimum Wage, Unemployment.
JEL Code: O15, I32, R11, J31, J64

I. Introduction

National development is a sustainable process to realize a fair, prosperous, and prosperous Indonesian society in accordance with Pancasila and the 1945 Constitution. Development not only focuses on economic growth, but also on improving the quality of human life in social, economic, educational, and health aspects. On a macro level, development success is often measured through GDP, GDP, and per capita income. However, high economic growth does not necessarily reflect equitable distribution of welfare, so a more comprehensive indicator such as the Human Development Index (HDI) is needed that assesses the quality of human resources. In a modern perspective, economic growth and human development complement each other. Economic growth increases production capacity, while human development expands the ability of individuals to live productively. Todaro and Smith emphasized that development is not only about increasing

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income, but also expanding people's life choices. Therefore, development must be able to increase people's access to education, health, and a decent standard of living.

Indonesia has experienced fairly stable economic growth, as can be seen from the increase in GDP from Rp 11,540.8 trillion in 2015 to Rp 22,139.0 trillion in 2024. However, there are still inequality between regions, especially between the western and eastern regions of Indonesia. This shows that economic growth is not yet fully inclusive. HDI is an important indicator to see the impact of development on quality of life. Indonesia's HDI value increased from 69.55 in 2015 to 75.02 in 2024, reflecting progress in education, health, and living standards. However, disparities are still visible, where the Java and Bali regions have higher HDI than Papua, East Nusa Tenggara, and Maluku. This indicates a gap in access to basic services. HDI introduced by UNDP measures three main dimensions, namely longevity and health, education, and decent living standards. In Indonesia, the increase in HDI is in line with national development policies, such as the Smart Indonesia Program (PIP) and the National Health Insurance (JKN). However, its implementation still faces obstacles such as economic inequality and differences in regional capabilities.

Some of the economic factors that affect HDI include poverty rates, GDP, UMP, and unemployment. High poverty limits people's access to education and health, thereby reducing the quality of life. On the contrary, increasing GDP and UMP can increase welfare and economic opportunities. Data shows that the poverty rate in Indonesia decreased from 11.22% in 2015 to 9.03% in 2024, although it had increased during the COVID-19 pandemic. In addition, unemployment is also an important factor that affects HDI. Indonesia's Open Unemployment Rate (TPT) in 2024 is 4.91%, a slight increase from the previous year. Unemployment leads to low income and limited access to basic services. Based on Okun's theory, the increase in unemployment has a negative impact on economic growth. Meanwhile, the human capital theory explains that improving education and skills can reduce unemployment while improving the quality of human development.

The results of previous research also support the existence of a negative relationship between the unemployment rate and HDI. The study shows that unemployment has a significant effect on the decline in HDI in Indonesia in the 2014-2020 period. A similar thing was found by those who explained that the increase in unemployment tends to reduce the dimensions of education and income in HDI because people lose the opportunity to participate in productive economic activities. Therefore, reducing the unemployment rate is an important part of the sustainable human development strategy. The Indonesian government needs to strengthen job creation policies through vocational training programs, empowerment of micro and small businesses, and the development of labor-intensive sectors that are able to absorb labor widely in various regions.(Wulandaari & Santoso, 2022)(Kurniawati & Prasetyo, 2023). A number of other previous studies have also provided empirical evidence regarding the relationship between these variables. found that poverty levels and GDP have a significant effect on HDI in Regencies/Cities of West Nusa Tenggara Province. also stated that GDP per capita, regional spending, dependency ratio, poverty, and technology had a significant effect on HDI in Indonesia in the 2014-2019 period. However, different results were shown by , which found that GDP and HDI had no significant effect on poverty in Indonesia.(Murniati, 2022) (Hidayat & Woyanti, 2020) (Arifin & Hendriyani, 2021)

In addition, the Provincial Minimum Wage (UMP) policy is an important instrument in improving the welfare of the workforce. Research shows that UMP, GDP, and HDI together have a significant effect on reducing poverty rates on the island of Sumatra. These findings indicate that UMP not only plays a role in the employment aspect, but also has the potential to affect the increase in HDI through improving decent living standards. However, research that directly examines the influence of UMP on HDI is still limited, as most studies place UMP as a variable related to poverty. (Permana & Pasaribu, 2023). Most previous studies have focused more on the partial influence of one variable on HDI, without looking at the simultaneous interaction and dynamics between variables in the Indonesian regional context. In addition, many previous studies have only used cross-section data in a given year, so they have not been able to describe the long-term trend of HDI changes. Therefore, this study tries to fill this gap by using panel data covering a wider time period, namely

2015-2024, in order to analyze the dynamics of the relationship between poverty rates, GDP, UMP, and Unemployment Rates to HDI more comprehensively.

The novelty of this study lies in the analytical approach used, namely by combining four main economic variables that are interrelated in influencing the quality of human development in Indonesia. In addition, this research focuses on the aspect of equitable development between regions, so that it is expected to provide a new understanding of how macroeconomic policies, such as poverty alleviation and the establishment of minimum wages, contribute to improving the quality of life of people at the regional level. This research is also expected to be an empirical basis for local governments in formulating human development policies that are more targeted. Although various previous studies have examined the relationship between macroeconomic variables and the Human Development Index (HDI), there are still some gaps that need to be considered. Most studies tend to partially analyze the influence of variables, such as focusing only on poverty or Gross Regional Domestic Product (GDP), so they do not provide a comprehensive picture of the simultaneous interaction between poverty, GDP, Provincial Minimum Wage (UMP), and unemployment rates on HDI. In addition, research on UMP is still relatively limited in the context of direct influence on HDI because it is generally positioned as a determinant of poverty, not as a factor that directly affects human development. In terms of methodology, many previous studies have used cross section data over a certain period of time, so they have not been able to capture the dynamics of changes in HDI between provinces longitudinally and have the potential to ignore the heterogeneity of regional characteristics. Therefore, this study seeks to fill the gap by using panel data for the 2015–2024 period covering all provinces in Indonesia and simultaneously analyzing the influence of poverty, GDP, UMP, and unemployment rates on HDI. Thus, this research is expected to make a more comprehensive empirical contribution in understanding the factors that affect human development as well as being the basis for more inclusive and targeted policy formulation at the regional level.

From this description, it can be concluded that there is still a main problem that is the basis of this study, namely the lack of optimal HDI increase in Indonesia even though economic growth and minimum wage policies continue to increase every year. The still high level of poverty in some regions is the main obstacle to the achievement of equitable human development, and also the high unemployment rate in some areas which causes low purchasing power of the community so that it hinders the access of the community to education and health which can indirectly affect the level of human development. Therefore, it is important to empirically examine how the three variables poverty level, GDP, and UMP affect HDI in Indonesia over the past decade. The formulation of the problem that can be drawn from this background is as follows: how does the poverty level affect the Human Development Index in Indonesia? how does the Gross Regional Domestic Product affect the Human Development Index in Indonesia?, how does the Provincial Minimum Wage affect the Human Development Index in Indonesia?, and how does the Unemployment Rate affect the Human Development Index in Indonesia? These questions are the basis for the formulation of the hypothesis and the direction of analysis in this study.

The purpose of this study is to analyze and empirically test the influence of poverty level, Gross Regional Domestic Product (GDP), Provincial Minimum Wage (UMP), and Unemployment Rate on the Human Development Index (HDI) in Indonesia. More specifically, this study aims to find out how much each variable contributes to improving the quality of human development, as well as to provide policy recommendations that can be used by the government in efforts to equalize welfare between regions in Indonesia. Through this research, it is hoped that a deeper understanding of the relationship between macroeconomic indicators and human development can be obtained, as well as how economic policies can be directed to improve people's welfare in a sustainable manner. Thus, the results of this research not only have an academic contribution in the field of development economics, but also practical relevance for the formulation of more inclusive and evidence-based public policies.

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II. Literature Review and Hypothesis Development

2.1. Poverty and Human Development

Poverty is a multidimensional problem that is not only related to low income, but also limited access to education, health, and a decent standard of living. Conceptually, poverty can be distinguished into absolute and relative poverty. Absolute poverty occurs when income or expenditure is below the poverty line set based on the fulfillment of basic needs, while relative poverty is related to the inequality of income distribution between community groups. In the perspective of human development put forward by Amartya Sen, development is understood as the process of expanding the capabilities and freedom of individuals to live a valuable life. Therefore, the high level of poverty will limit people's ability to access basic services and develop their potential. This condition has a direct impact on the low achievement of the Human Development Index (HDI), so that theoretically poverty has a negative relationship with HDI.

2.2. Economic Growth and Gross Regional Domestic Product (GDP)

Economic growth reflects the increase in the capacity of a region to produce goods and services in a sustainable manner. One of the main indicators used to measure regional economic growth is Gross Regional Domestic Product (GDP) per capita, which is the added value of goods and services produced in an area divided by the number of its population. In the classical theory of growth pioneered by Adam Smith, economic growth is influenced by the accumulation of capital, labor, and productivity. Meanwhile, the neoclassical growth model developed by Robert Solow emphasizes the importance of investment, technological advancement, and improving the quality of human resources in driving long-term economic output. An increase in GDP per capita indicates an increase in people's productivity and income, which ultimately expands access to education, health, and other public facilities. Thus, theoretically, GDP has a positive relationship with HDI because inclusive economic growth can encourage improvement in people's quality of life.

2.3. Minimum Wage and Unemployment in a Development Perspective

The provincial minimum wage (UMP) is a government policy that aims to ensure workers earn a decent minimum income to meet basic living needs. In Adam Smith's The Wealth of Nations view, wages are influenced by the mechanisms of labor demand and supply, and must be at a level that can guarantee the survival of workers. Increasing the minimum wage can strengthen purchasing power, increase household consumption, and improve access to education and health, thereby contributing positively to HDI. On the other hand, unemployment reflects the imbalance of the labor market and the economy's inability to absorb the labor force optimally. High unemployment lowers people's incomes, narrows access to basic services, and has the potential to widen social disparities. Therefore, theoretically, UMP is estimated to have a positive effect on HDI, while the unemployment rate has a negative effect on HDI because both are directly related to people's welfare and quality of life.

III. Research Method

The type of approach used in this study is a quantitative approach with an associative type of research. The quantitative approach is used because this study aims to examine the relationship or influence between the variables that are objectively and measurably using numerical data. Associative research itself aims to determine the relationship or influence between two or more variables (Sugiyono, 2018). The type of data used in this study is secondary data. Secondary data is a data source that does not directly provide data to data collectors, but is obtained through documents, records, reports, archives, and publications that have

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been available (Sugiyono, 2018). In this study, secondary data was obtained from the Central Statistics Agency (BPS), as well as other relevant sources such as official government publications, reports from related institutions, and previous research results that support the analysis.

The data collection technique in this study is carried out through documentation studies, namely by collecting and reviewing data that has been published by related agencies. The data used is time series data or panel data according to the needs of the research, which includes the variables studied in a certain period. Furthermore, the data analysis technique used is quantitative statistical analysis using the regression analysis method to determine the relationship and influence between variables. Before the regression analysis is carried out, a classical assumption test is first carried out which includes the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test to ensure that the regression model used meets the BLUE (Best Linear Unbiased Estimator) requirements. Data processing is carried out with the help of statistical software such as SPSS or EViews. With this method, it is hoped that the results of the study can provide a clear picture of the relationship between the variables being studied and can be used as a basis for drawing valid and reliable conclusions.

IV. Results and Discussion

4.1. Analysis Model Selection

The model selection test is the initial stage in panel data analysis which has the aim of determining the most suitable model to be used, here is a table of the results of the model selection test:

Table 1. Model Selection Test

Testing	Probability	Results	Verdict
Chow Test	Prob.>0.05 Prob.<0.05	0,0000	EMC FEM
Hausman Test	Prob.>0.05 Prob.<0.05	0,0000	REM FEM

Based on the model selection test table above, it can be concluded that the selected regression model is a fixed effect model.

4.2. Classic Assumption Test

a. Multicollinearity Test

Table 2 Multicollinearity Test

	X1	X2	X3	X4
X1	1,000000	-0,331396	-0.073497	-0.220229
X2	-0,331396	1,000000	0.051533	0.3927668
X3	-0,073497	0,51533	1,000000	0,0360156
X4	-0,220229	0,392767	0,036016	1,000000

Based on the results of the multicollinearity test shown through the correlation matrix between independent variables, it can be seen that all correlation values are in the range of 0.03 to 0.39. This value is well below the limit of multicollinearity vigilance (0.80), so it can be concluded that the regression model does not experience multicollinearity problems. This means that the relationships between independent variables do not strongly influence each other and each variable can explain the variability in the dependent variables without the interference of the high correlation between the independent variables.

b. Heterokedasticity Test

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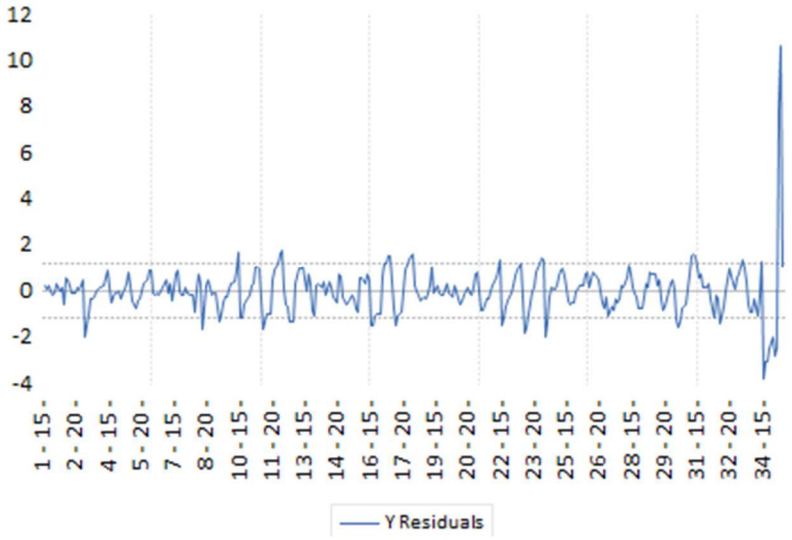

Figure 1. Heterokedasticity Test

The results of the heterokedasticity test based on the residual graph show that the residual spread is in a relatively small range of values, which is between about -4 to 12. When compared to the standard used in this study, which is that a model is considered to be free of heterokedasticity if the residual value is in the range of -500 to 500, it can be concluded that the regression model does not show any symptoms of heterokedasticity. All residuals are still well within these tolerance limits, so the variance of error can be considered constant and the regression model meets the assumption of homogeneity. Thus, the model is feasible to use at a later stage of analysis.

4.3. Multiple Linear Regression Analysis

The following are described the results of multiple linear regression analysis using the selected model, namely the Fixed Effect Model.

Table 3. Multiple Linear Regression Estimation Results

Dependent Variable: Y				
Method: Panel Least Squares				
Date: 11/19/25 Time: 22:31				
Sample: 2015 2024				
Periods included: 10				
Cross-sections included: 34				
Total panel (balanced) observations: 340				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	53.26216	5.765419	9.238212	0.0000
X1	-1.212732	0.071199	-17.03304	0.0000
X2	5.410391	1.061769	5.095638	0.0000
X3	0.763415	0.273599	2.790268	0.0056
X4	-0.013667	0.102983	-0.132708	0.8945
Cross-section fixed (dummy variables)				
R-squared	0.927148	Mean dependent var		71.00762
Adjusted R-squared	0.918222	S.D. dependent var		4.095268

S.E. of regression	1.171118	Akaike info criterion	3.258806
Sum squared resid	414.1986	Schwarz criterion	3.686747
Log likelihood	-515.9971	Hannan-Quinn crister.	3.429323
F-statistic	103.8747	Durbin-Watson stat	0.761937
Prob(F-statistic)	0.000000		

From the results of the multiple linear regression analysis above, the following equations can be made:

$$Y = 53.26216 - 1.212732X1 + 5.410391X2 + 0.763415X3 - 0.013667X4$$

Based on the regression equation above, it can be interpreted as follows:

a. The constant value of 53.26216 indicates that if all independent variables in the model, namely the poverty rate (X1), GDP (X2), UMP (X3), and unemployment rate (X4), are considered unchanged or have a zero value, then the value of the Human Development Index (HDI) is estimated at 53.26216 points. This means that without the influence of these four factors, the basic HDI of a province is at that level.
b. A coefficient of -1.212732 means that every 1% increase in the poverty rate (X1) will decrease the HDI value by 1.212732 points, assuming the other variables remain (ceteris paribus). This shows that the higher the poverty rate, the higher the quality of human development in a province, the more likely it is to decline significantly.
c. A coefficient of 5.410391 indicates that every 1 billion increase in GDP (X2) will increase HDI by 5.410391 points, assuming other variables remain the same. This means that the higher the economic capabilities of the region, the greater the opportunity to improve the quality of life of the community.
d. A coefficient of 0.763415 indicates that every increase of 1 million rupiah UMP (X3) will increase HDI by 0.763415 points, assuming other variables remain the same. This interpretation shows that the policy of increasing the minimum wage contributes positively to improving the welfare and quality of life of the population.
e. A coefficient of -0.013667 means that every 1% increase in the unemployment rate (X4) will decrease the HDI by 0.013667 points, assuming other variables remain. However, since the probability value is 0.8945 (greater than 0.05), this effect is not statistically significant. This means that, despite the negative relationship direction, the unemployment rate does not exert a strong influence on the change in HDI in this model.

4.4. Statistical Significance Test

a. T test (Partial test)

Table 4. Results of the t-test (Partial test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	53.26216	5.765419	9.238212	0.0000
X1	-1.212732	0.071199	-17.03304	0.0000
X2	5.410391	1.061769	5.095638	0.0000
X3	0.763415	0.273599	2.790268	0.0056
X4	-0.013667	0.102983	-0.132708	0.8945

1) Prob value. For the poverty level variable (X1) which is 0.0000, where the Prob. value of the poverty level is less than 0.05 so that it can be concluded that the poverty level variable has a significant effect on the Human Development Index (HDI)

2) Prob value. For variable GDP (X2) is 0.000, where the Prob value. GDP is smaller than 0.05 so it can be concluded that the GDP variable has a significant effect on the Human Development Index (HDI)
3) Prob value. For the UMP variable (X3) which is 0.0056, where the Prob.UMP value is less than 0.05, so it can be concluded that the UMP variable has a significant effect on the Human Development Index (HDI)
4) Prob value. For the variable Unemployment Rate (X4) is 0.8945, where the value of Prob. The unemployment rate is greater than 0.05, so it can be concluded that the unemployment rate variable has an effect but is not significant on HDI.

b. F Test (Simultaneous Test)

Table 5. F Test Results (Simultaneous Test)

F-statistic	Prob. (F-statistic)
103.8747	0.000000

From the results of the analysis above, it can be found that the value of Prob. (F-statistic) is smaller than 0.05 (0.000000<0.05), or F-statistic is greater than F-table (103.8747 > 2.39) so that it can be concluded that the variables of Poverty Rate, Gross Regional Gross Product (GDP), Provincial Minimum Wage (UMP), and Unemployment Rate have a simultaneous effect on the variables of the Human Development Index (HDI).

c. Determination Coefficient Analysis (R^2)

Table 6. Results of Determination Coefficient Analysis ( )R^2

R-squared	Adjusted R-squared
0.927148	0.918222

The value of the determination coefficient is found at the R-squared value of 0.927148, meaning that the variables of Poverty Rate, Gross Regional Domestic Product (GDP), Provincial Minimum Wage (UMP), and Unemployment Rate can affect the HDI variable of 0.927148 or 92.7148%, so that there is 0.07286 or 7.286% which is explained by other variables that are not explained by the regression model.

4.5. Discussion

a. Effect of Poverty Level (X1) on HDI

Coefficients for variables *Poverty Rate* (X1) is −1.212732 with a value *t*-statistics −17.03304 and the probability (p-value) is very small (0.0000). This shows that the poverty variable has a negative and significant effect on HDI. In other words, the higher the poverty rate in a province, the lower its Human Development Index. These findings make sense because poverty tends to limit people's access to education, health services, and a decent standard of living, all of which are key components in HDI calculations. These results are in line with research (Wijayanti & M. Raihansyah, 2024) which found that poverty had a significant negative effect on HDI in Riau Province. In addition, poverty is also often seen as a structural obstacle to human development, as the limited resources of poor households hinder investment in education and health.

b. Effect of Gross Regional Domestic Product (GDPB0 (X2) on Human Development Index (HDI)

The GDP (Gross Regional Domestic Product) variable has a coefficient of 5.410391 with *a* t-statistic of 5.095638 and p-value = 0.0000, showing a positive and significant influence. That is, the increase in GDP (which reflects regional economic output) is related to the increase in HDI. This is logical: a large GDP indicates a more productive regional economy, higher earning potential, and the possibility of investment in the social sector (education, health) that can improve people's quality of life and HDI. Research (Sania et al., 2021) also

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supported this where they found that GDP had a significant positive effect on HDI in Regencies/Cities of East Java Province. In addition, in human development analysis, economic growth (measured through GDP) is often seen as a "driver" of the capacity of governments and communities to improve quality of life indicators, for example through taxes, public spending, and social investment.

c. The Effect of the Provincial Minimum Wage (UMP) (X3) on the HDI Human Development Index

For the UMP variable or provincial minimum wage (X3), the coefficient is 0.763415 with a t-statistic of 2.790268 and p-value = 0.0056, which means that the effect is positive and significant at the conventional level (α = 0.05). This shows that the increase in the provincial minimum wage statistically encourages an increase in HDI. A higher minimum wage can increase the income of low- or low-middle-income households, allowing them to allocate more to education and health, which indirectly increases the HDI components. Other relevant research is in (Tria Resmana & Gunawan, 2025) which found that UMP had a positive and significant effect on HDI in Indonesia.

d. Effect of Unemployment Rate (X4) on Human Development Index (HDI)

Based on the results of the panel regression analysis, the unemployment rate variable (X4) showed a coefficient of –0.013667 with *a* t-statistical value of –0.132708 and a probability of 0.8945. A probability value well above the significance level of 0.05 indicates that the unemployment rate has no significant effect on HDI in the 10 years of observation and 34 provinces in Indonesia. These findings indicate that variations in unemployment rates between provinces are not strong or unstable enough to have a direct impact on human development achievements. The insignificance of this relationship can be caused by several factors. First, the unemployment indicator used in this study only measures *open unemployment*, so the impact on quality of life is not captured directly in the official unemployment indicator. Second, local governments have various social programs such as health insurance, free education, and social assistance that can withstand the negative impact of unemployment so that it is not strongly reflected in HDI. In addition, HDI components such as education and health are long-term so changes in the labor market do not always directly affect HDI values in short periods.

Findings of this study is also in line with research conducted by (Kasnelly & Wardiah, 2021) in Indonesia found that unemployment has a negative but insignificant effect on HDI, supporting the argument that unemployment is more reflective of macroeconomic conditions than changes in the population's quality of life in the short term. Based on the results of simultaneous regression analysis through the F test, it is known that the variables of poverty level, GDP, UMP, and unemployment rate together have a significant effect on the Human Development Index (HDI) in 34 provinces in Indonesia during 2015-2024. This is evidenced by the Prob(F-statistic) value of 0.0000 which is well below the significance level of 0.05. These findings show that although there is a partial insignificant variable, namely the unemployment rate, the combination of these four variables still makes a major contribution to improving the quality of human development. In other words, changes in economic and social factors are simultaneously able to explain changes in HDI because they have a strong relationship with the dimensions of health, education, and decent living standards.

Theoretically, the combination of these four variables can have a complementary impact on human development. Increased GDP will expand regional fiscal capacity to finance education, health, and social protection services that increase HDI. On the other hand, poverty reduction can improve people's access to basic needs so as to improve the quality of life. The increased UMP functions as an instrument to improve the welfare of workers, which ultimately increases purchasing power and the ability to meet educational and health needs. Meanwhile, although the unemployment rate is not partially significant, this variable still plays a role in the model because employment conditions have an indirect relationship with the ability of households to improve the quality of life. Thus, the synergy between poverty reduction, increasing economic productivity through GDP, improving workers' welfare through UMP, and strengthening the employment sector as a whole are important factors that can support the increase in HDI. These four variables show that human development is not only influenced by one social or economic aspect, but is the result of the

interaction of various factors that run simultaneously. This emphasizes the importance of the government to strengthen integrated policies that target poverty reduction, increased economic growth, fair wage policies, and expansion of employment opportunities so that the increase in HDI can take place sustainably in all provinces in Indonesia.

V. Conclusion

Based on the results of the analysis of panel data from 34 provinces in Indonesia during the 2015-2024 period, this study concludes that the variables of poverty rate, GDP, UMP, and unemployment rate have different roles in influencing the Human Development Index (HDI). Partially, the poverty level has been proven to have a negative and significant effect on HDI, so that the higher the poverty rate, the lower the human development achievement of a region. This confirms that low purchasing power and limited access to education and health for the poor are serious obstacles to improving the quality of life. On the other hand, GDP shows a positive and significant influence on HDI. The increase in regional economic output, which is reflected in the increase in GDP, strengthens the regional fiscal capacity to finance education, health, and other social needs services so that it can improve the quality of human development more evenly

Similarly, UMP has a positive and significant effect on HDI. Increases in the minimum wage increase workers' incomes, strengthen purchasing power, and indirectly increase the ability of households to meet basic needs, including education and health, which are key components of HDI. In contrast to these three variables, the unemployment rate does not have a significant effect on HDI. The variation in unemployment between regions is not strong enough to show a direct impact on HDI, it can be caused by the existence of various government social protection programs or the long-term nature of HDI indicators so that they are not sensitive to short-term changes in unemployment. However, through the F test, it was found that these four variables simultaneously had a significant effect on HDI. This emphasizes that human development is the result of a complex interaction of various socio-economic factors that complement each other in affecting people's health, education, and living standards

References

Agusalim, L., & Novianti, T. (2024). Empirical Proof of Wage Efficiency Theory in Indonesia. Journal of Economics and Public Policy, 14(2), 119–132. https://doi.org/10.22212/jekp.v14i2.2951

Arifin, A. S. (2023). Human Capital Investment: Increasing Global Competitiveness Through Education Investment. Journal of Education and Development, 11(2), 174–179. https://doi.org/10.37081/ed.v11i2.4672

Darman, D. (2013). The Effect of Economic Growth on Unemployment Rates: Okun's Legal Analysis. The Winners, 14(1), 1. https://doi.org/10.21512/tw.v14i1.639

Dr. . Suparmono, M. S. (2018). Introduction to macroeconomics. Translated by Chriswan Sungkono. Jakarta: Salemba Empat, 223.

Hammer, P., Friedman, S. B., & Shah, P. B. (1979). Economic development. In The practice of local government planning. https://doi.org/10.26417/ejes.v3i1.p133-142

Husna, W., Juanda, R., Saharuddin, & Murtala. (2024). The Influence of UMP, PMA, and GDP on HDI in Indonesia. Journal of Unimal Regional Economics, 07, 22–28.

Hinds, P. (2013). Global Poverty in the Perspective of "Development as Freedom" Amartya Sen Case: Indonesia. Scientific Journal of International Relations UNPAR, 9(1), 98363.

Influence, T. H. E., Human, O. F., Index, D., Living, O. N., Quality, E., In, I., Using, I., & Data, P. (2021). Ecology: Scientific Journal of Basic and Environmental Sciences. 21 (April).

Kasnelly, S., & Wardiah, J. (2021). The Effect of Unemployment and Poverty Rates on the Human Development Index in Indonesia. 44–54.

Komang Jodi Wiryawan, & Ida Ayu Meisthya Pratiwi. (2024). The Effect of GDP and Provincial Minimum Wage on Poverty and HDI in Indonesian Provinces. Gemawisata: Scientific Journal of Tourism, 20(3), 198–224. https://doi.org/10.56910/gemawisata.v20i3.405

Linda Murniati. (2022). Analysis of the Influence of Poverty Level, Gross Regional Domestic Product and Capital Expenditure on the Human Development Index in Regencies/Cities of NTB Province in 2016-2020. Indonesian Journal of Economics and Business, 7(1), 27–32. https://doi.org/10.37673/jebi.v7i1.1993

Luhgiatno, Anggita Permata Yakup, I. A. P., Fara Dina, Abdurohim, R. W., Hasibuan, S. N., Hari Setia Putra, T. W., & Anggelina Delviana Klau, . Hariono, D. A. R. (2016). Introduction to Development Economics. https://www.researchgate.net/publication/366465504_Pengantar_Teori_Pembangunan

Permana, H., & Pasaribu, E. (2023). The Effect of Inflation, HDI, UMP and GDP on Poverty on the Island of Sumatra. Scientific Journal of Management, Economics, & Accounting (MEA), 7(3), 1113–1132. https://doi.org/10.31955/mea.v7i3.3516

Priyono and Zainuddin Ismail. (2017). Economic Theory.

Sania, L., Balafif, M., & Imamah, N. (2021). The Influence of GDP, Open Unemployment Rate and UMR on the Human Development Index in Regencies and Cities of East Java Province. Bharanomics, 2(1), 33–46. https://doi.org/10.46821/bharanomics.v2i1.189

Saputro, M. H. (2022). Analysis of the Influence of Poverty Rate on Human Development Index (HDI) Using a Linear Regression Model. Scientific Journal of Economics and Business, 10(2), 809–816.

Schilir'o, D. (2018). A Glance at Solow's Growth Theory. Journal of Mathematical Economics and Finance, 3(2(5)), 83. https://doi.org/10.14505/jmef.v3.2(5).04

Tria Resmana, R., & Gunawan, R. (2025). The Effect of Provincial Minimum Wage, Poverty Rate, and Unemployment Rate on HDI in Indonesia. Indonesian Journal of Economics and Development, 3(2), 34–47. https://doi.org/10.61132/jepi.v3i2.1310

UNDP. (2023). UNITED NATIONS DEVELOPMENT PROGRAMME 2 Foreword 4 Our Offer 6 Global Ambition: Poverty and Inequality 8 Global Ambition: Climate, Nature and Energy 12 Global Ambition: Accountable and Inclusive Governance 16 Global Ambition: Development Financing 20.

Wijayanti, D., & M. Raihansyah. (2024). The Impact of Poverty, GDP, Unemployment, and Government Expenditure on the Human Development Index (HDI) An Empirical Study in Riau Province in 2018-2023. Journal of Business Applications, 21(2), 595–602. https://doi.org/10.20885/jabis.vol21.iss2.art1