Buletin Ekonomika Pembangunan
https://journal.trunojoyo.ac.id/bep
Vol. 7 No. 1 February 2026, hal 125-133

E-ISSN : 2807-4998 (online)

The Impact of The Human Development Index and Economic Poverty in Sorong City Southwest Papua 2010-2024

May Husnul Khotimah[1*], M. Yusril Kholik[2]
[1,2]Sharia Economics, Islamic Economics and Business, UIN Sunan Kalijaga, Yogyakarta
Email: mayhusnulkhotimah@gmail.com, 24208012017@student.uin-suka.ac.id
DOI: https://10.21107/bep.v7i1.33524

ABSTRACT
This study aims to analyze the effects of the Human Development Index (HDI) and economic growth on poverty levels in Sorong City, Southwest Papua Province, from 2010 to 2024. This research employs a quantitative approach using ordinary least squares (OLS) regression. The analysis results indicate that the HDI has a positive but insignificant effect on poverty. Meanwhile, economic growth has a positive and significant effect on poverty. Simultaneously, all independent variables can explain the variation in the dependent variable. These findings suggest that a corresponding reduction in poverty has not accompanied ongoing Development and economic growth. Therefore, the results of this study are expected to serve as a basis for the Sorong City government in formulating poverty alleviation policies that consider both the quality of human Development and the equitable distribution of the benefits of economic growth. The limitation of this study lies in the number of variables used, which does not yet fully reflect the complexity of socioeconomic factors influencing poverty.

Keyword: *Economic Growth, Human Development Index (HDI), Poverty*

INTRODUCTION

Poverty is a global problem that continues to be a significant challenge. Every country, both developing and developed, experiences poverty without exception (Ibn Muhdir et al., 2021). Indonesia is among the countries affected by this condition on an ongoing basis, with its effects transmitted from generation to generation. Absolute poverty results in a situation where individuals are unable to meet basic human needs, or severe deprivation of basic human needs, because their income falls below the minimum requirements, including food, clothing, shelter, and basic services (Kitime, 2019). Meanwhile, relative poverty is reflected in the unequal distribution of income, which creates disparities even when an individual's basic needs are met. (Wulandari & Rambe, 2024). His condition fosters a recurring poverty mechanism in which individuals growing up in economically constrained environments have limited opportunities to improve their standard of living, thereby remaining trapped in low-income conditions. (Lutfiah et al., 2025).

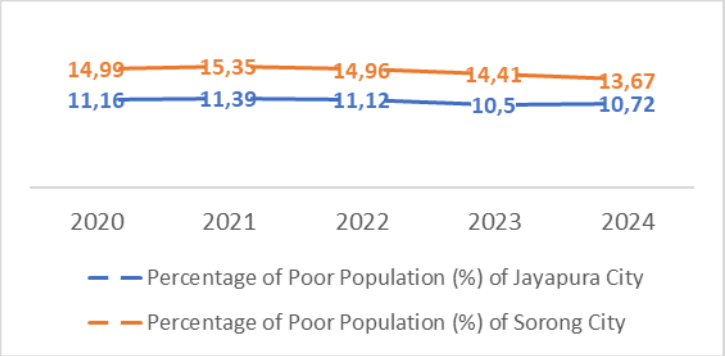
The Human Development Index (HDI) is an important indicator of poverty levels, as it represents a community's quality of life across the dimensions of health, education, and a decent standard of living (Mike Apriyanti, 2025). In theory, an increase in the Human Development Index (HDI) is expected to reduce

poverty levels by expanding access to better economic opportunities (Herlambang & Rachmawati, 2023). However, in practice, increases in the HDI are often uneven across regions. Areas with relatively high HDI scores tend to attract migration from poorer regions, thereby triggering the formation of new pockets of poverty in urban areas (Hidayat, 2020).

In addition to the Human Development Index (HDI), economic growth is another factor influencing poverty levels. (Wulandari & Rambe, 2024). Economic growth is considered a key means of reducing poverty, with the expectation that increased growth will create more jobs, raise incomes, and improve people's Well-being. (Dalimunthe et al., 2022; Tsaurai, 2021). However, research indicates that economic growth in Indonesia remains non-inclusive, so its benefits are not evenly distributed across society. (Mike Apriyanti, 2025).

The disparity between human Development and economic growth is a prominent phenomenon in urban areas in eastern Indonesia, including Sorong City. Sorong City serves as the center of economic activity and the capital of Southwest Papua Province, with a historical background as an oil industry region since the colonial era, when the Nederlands Nieuw-Guinea Petroleum Maatschappij (NNGPM) began petroleum exploration in 1935 (Mashad, 2020). From a demographic perspective, Sorong ranks as the second-largest city in Papua after Jayapura. However, this condition still reflects poverty, driven by strong population movements, limited access to basic services, and an unequal distribution of Development benefits. (Raras, 2023).

Figure 1. Poverty Percentage in Sorong City and Jayapura City 2020-2024



Source: BPS Sorong City and Jayapura City 2020-2024

The graph compares the poverty rates of Sorong City and Jayapura City for the 2020–2024 period. Sorong City consistently has a higher percentage of people living in poverty. Trend-wise, the poverty rate in Sorong City fluctuates, increasing from 14.99% in 2020 to a peak of 15.35% in 2021, then gradually decreasing to 13.67% in 2024. Meanwhile, Jayapura City shows a relatively stable downward trend, from 11.16% in 2020 to 10.72% in 2024, although it did increase slightly in 2021. This difference indicates that the depth of poverty in Sorong City is greater, with the average expenditure of the poor in the city further from the poverty line than in Jayapura City. Therefore, an empirical study is needed to elucidate the relationships among the quality of human Development, economic growth, and poverty dynamics in this city.

This research contributes to the growing literature on economic Development and regional welfare, particularly in understanding poverty at the

Buletin Ekonomika Pembangunan
https://journal.trunojoyo.ac.id/bep
Vol. 7 No. 1 February 2026, hal 125-133

E-ISSN : 2807-4998 (online)

city level. Several previous studies have examined the relationship between the HDI, economic growth, unemployment, and poverty in Indonesia, both at the national and regional scales, with mixed results, including by Wibowo (2024), Rizky et al., (2022), Syofya (2024), Wulandari & Rambe (2024), Bawowo et al., (2022) Rambe (2022), Abdilah & Suliswantob (2021), Lutfiah et al., (2025), Anjelly S. P. Way et al., (2025), and Sadikin (2022). However, studies focusing on Sorong City with long-term data coverage remain relatively limited. Therefore, this study seeks to fill this research gap by presenting a more contextual empirical analysis of the characteristics of eastern Indonesia. Based on this description, this study aims to analyze the influence of the Human Development Index (HDI) and economic growth on poverty levels in Sorong City from 2010 to 2024.

RESEARCH METHODS

This study uses a quantitative approach with an explanatory research method. Explanatory research is a type of research used to examine the relationship between variables and examine the influence of one variable on another. This approach was chosen to empirically test the influence of the Human Development Index (HDI) and economic growth on poverty levels in Sorong City, using time-series data. The study population comprises all annual data on poverty levels, the Human Development Index, and economic growth. The research sample comprises annual time-series data for the period 2010–2024. This study uses secondary data obtained from official sources, namely publications from the Central Statistics Agency. Data for the HDI, economic growth, and poverty are from the annual reports of BPS for Sorong City. Data analysis was conducted using multiple linear regression with the Ordinary Least Squares (OLS) method in EViews 12. Data analysis in this study began with descriptive statistics to provide an overview of the characteristics of the study variables. Next, the relationships between variables were analyzed using multiple linear regression. The results were then evaluated using classical assumption tests, including tests for normality, multicollinearity, heteroscedasticity, and autocorrelation. Hypothesis testing was performed using the F-test to examine the effect of variables collectively and the t-test to assess the effect of each variable individually. The relationships between variables in this study are expressed in the following regression model:

$$Yit = \beta^0 + \beta^1 \text{IPM} + \beta^2 \text{PDB} + \varepsilon$$

In this model, Y is the poverty rate, β_0 is a constant, β_1 and β_2 denote the regression coefficients, X_1 represents the Human Development Index, X_2 is economic growth, and ε is the error component.

RESULT AND DISCUSSION

RESULT

After collecting all the data on the Human Development Index (HDI), economic growth or Gross Domestic Product (GDP), and poverty, the data were then processed using Eviews, yielding the following results:

Table 1. Descriptive Statistics

	POVERTY	HDI	GDP
Mean	16.19600	76.61267	5.573400
Median	15.45000	76.73000	6.540000
Maximum	19.36000	79.93000	12.10000

Minimum	13.67000	71.96000	-3.240000
Std. Dev.	1.974414	2.431291	5.181246
Skewness	0.339390	-0.453807	-0.407091
Kurtosis	1.656228	2.208359	1.769218
Jarque-Bera	1.416542	0.906536	1.361074
Probability	0.492495	0.635548	0.506345
Sum	242.9400	1149.190	83.60100
Sum Sq. Dev.	54.57636	82.75649	375.8343
Observations	15	15	15

Based on descriptive statistics, the poverty variable has a mean of 16.19600 and a median of 15.45000. The lowest poverty value was 13.67000, and the highest was 19.36000, with a standard deviation of 1.974414. The positive skewness value was 0.339390. The Human Development Index (HDI) had a mean of 76.61267 and a median of 76.73000. The lowest HDI value was recorded at 71.96000, while the highest value reached 79.93000, with a standard deviation of 2.431291. The skewness value was -0.453807. Meanwhile, the Gross Domestic Product (GDP) variable had a mean of 5.573400 and a median of 6.540000. The lowest GDP value was -3.240000, and the highest was 12.10000, with a standard deviation of 5.181246. The negative skewness value was -0.407091. In addition, the Jarque–Bera test statistic for all variables exceeded the 0.05 threshold, indicating that the data were normally distributed and that the assumptions for further regression analysis were met. The number of observations used in this study was 15 per variable.

Table 2. Multiple Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.373713	18.59366	-0.450353	0.6605
HDI	0.295038	0.236775	1.246070	0.2365
GDP	0.352754	0.111106	3.174924	0.0080*

R-squared	0.505901	Mean dependent var	16.19600
Adjusted R-squared	0.423551	S.D. dependent var	1.974414
S.E. of regression	1.499058	Akaike info criterion	3.824408
Sum squared resid	26.96611	Schwarz criterion	3.966018
Log likelihood	-25.68306	Hannan-Quinn criterion.	3.822899
F-statistic	6.143321	Durbin-Watson stat	1.093612
Prob(F-statistic)	0.014551*		

*significant at level 5%

t-test (Partial Test)

The t-test is used to assess the effect of each independent variable on the dependent variable, with the results of multiple linear regression informing the interpretation. Based on the regression results, the Human Development Index (HDI) variable has a positive coefficient of 0.295038 (p-value = 0.2365> 0.05), indicating a positive but insignificant effect on the poverty rate in Sorong City. Meanwhile, the Gross Domestic Product (GDP) variable has a positive coefficient of 0.352754 (p-value < 0.05), indicating a positive and significant effect of GDP

Buletin Ekonomika Pembangunan
https://journal.trunojoyo.ac.id/bep
Vol. 7 No. 1 February 2026, hal 125-133

E-ISSN : 2807-4998 (online)

on the poverty rate.

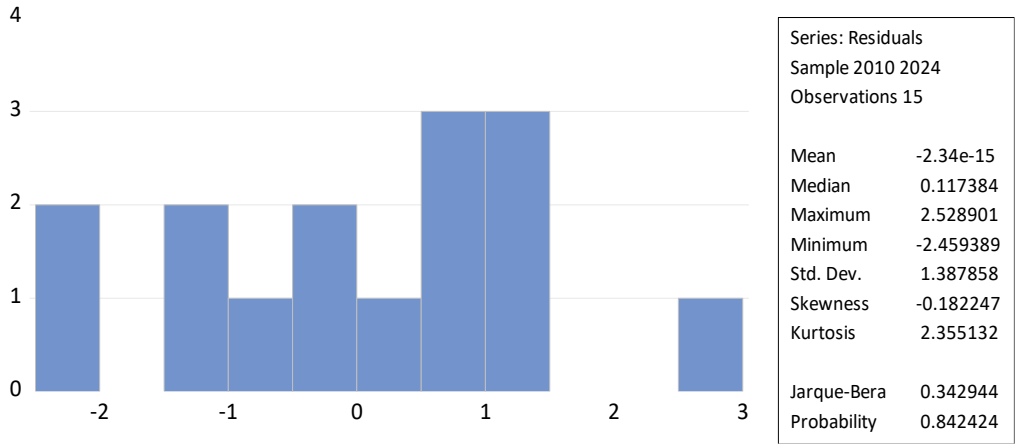
F Test (Simultaneous)

The F test is used to determine the simultaneous effect of independent variables on the dependent variable. Based on the regression analysis, the F-statistic is 6.143321 (p = 0.014551), which is less than 0.05. This indicates that the HDI and GDP variables jointly have a significant effect on the poverty rate in Sorong City.

Coefficient of Determination

The coefficient of determination is used to assess the regression model's ability to explain variation in the dependent variable using the independent variables employed in the study. Based on the results of the coefficient of determination test, the Adjusted R-squared value was 0.423551. This value indicates that the independent variables in the research model, namely the HDI and GDP, account for 42.36% of the variance in the dependent variable. Meanwhile, the remaining 57.64% of the variation is attributable to factors not included in the regression model.

Table 3. Normality Test Results



Based on the normality test, the residuals using the Jarque–Bera method showed a probability value of 0.842424, which is above the significance limit of 0.05. This finding indicates that the distribution of regression residuals is approximately normal. Therefore, the regression model satisfies the normality assumption, indicating that the data in this study are normally distributed.

Table 4. Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	345.7240	2307.723	NA
HDI	0.056062	2198.543	2.064604
GDP	0.012345	4.624203	2.064604

Based on the results of the multicollinearity test, the Variance Inflation Factor (VIF) values for all independent variables were below the set critical limit,

which is 10. The VIF values for the Human Development Index (HDI) and Gross Domestic Product (GDP) variables were 2.064604, respectively. These values indicate that there is no strong linear relationship between the independent variables. Thus, the regression model does not exhibit multicollinearity.

Table 5. Heteroscedasticity Test Results

F-statistic	1.147600	Prob. F(2,12)	0.3499
Obs*R-squared	2.408362	Prob. Chi-Square(2)	0.2999
Scaled explained SS	1.736193	Prob. Chi-Square(2)	0.4197

The heteroscedasticity test indicates that the Chi-Square statistic (0.2999) exceeds the 0.05 significance level. This condition indicates that the distribution of error variance is homogeneous, so that the regression model used does not exhibit heteroscedasticity.

Table 6. Autocorrelation Test Results

F-statistic	1.215814	Prob. F(1,11)	0.2937
Obs*R-squared	1.492918	Prob. Chi-Square(1)	0.2218

Based on the results of the Breusch–Godfrey Serial Correlation LM Test, the F-statistic probability value is 0.2937 and the Chi-Square probability is 0.2218, both of which are greater than the significance level of 0.05. Thus, it can be concluded that the regression model does not experience autocorrelation.

DISCUSSION

Based on the results of the empirical analysis that has been carried out, the influence of the Human Development Index (HDI) and economic growth or Gross Domestic Product (GDP) on the poverty rate can be described as follows:

The Effect of the Human Development Index (HDI) on Poverty in Sorong City

Based on the analysis, the Human Development Index (HDI) has a positive coefficient of 0.295038 (p-value = 0.2365), which exceeds 0.05. This indicates that the HDI has a positive but insignificant effect on poverty in Sorong City. In other words, despite the increase in the HDI, some residents still experience limitations in meeting their basic needs, so the effect of the HDI on poverty is not yet significant.

This study aligns with Wibowo (2024) and Rizky et al. (2022), who found no significant association between the Human Development Index (HDI) and the poverty rate. This phenomenon aligns with the concept of absolute poverty and Amartya Sen's perspective, which emphasizes individuals' limited capacity to live a decent life and the lack of better economic opportunities. (Kitime, 2019; Sen, 1999; Herlambang & Rachmawati, 2023). The unequal distribution of human Development in Sorong City is evident across several sectors. In the interior, educational facilities remain very limited, while access to health services, including hospitals and medicines, is inadequate. In the mining sector, despite

Buletin Ekonomika Pembangunan
https://journal.trunojoyo.ac.id/bep
Vol. 7 No. 1 February 2026, hal 125-133

E-ISSN : 2807-4998 (online)

Sorong City's reputation as an oil city, the majority of workers are migrants from outside the region, as residents have limited skills and education. This situation leads to intense competition and unequal income distribution, leaving some residents below the poverty line. These findings emphasize the importance of broader government measures and policies to improve HDI measurements beyond health, education, employment, and a decent standard of living, so that the HDI can more effectively support community welfare and Development.

The Impact of Economic Growth on Poverty in Sorong City

Based on the analysis, economic growth has a positive coefficient of 0.352754 (p-value = 0.0080), which is less than 0.05. This means that economic growth has a positive and significant effect on poverty in Sorong City. In other words, economic growth has increased, but it has been accompanied by rising poverty in Sorong City.

His research findings align with Wulandari & Rambe (2024), Bawowo et al., (2022) and Rambe (2022), which shows a significant positive impact of economic growth on poverty levels. Sorong City has shown growth, but the benefits are not evenly distributed across the community. This growth is concentrated in certain sectors, such as mining and trade, which migrants and the middle class largely manage. Indigenous Papuans, especially those living in the interior, have limited access to employment, education, and healthcare. This situation widens the income gap, so some residents remain poor despite the city's economic growth.

CONCLUSION

Based on the analysis, the Human Development Index (HDI) has a positive but insignificant effect on poverty in Sorong City, indicating that despite the increase in the HDI, some residents still face limitations in meeting their basic needs. Meanwhile, economic growth has a positive and significant effect on poverty, indicating that poverty increases with economic growth in Sorong City. This phenomenon is driven by the concentration of economic activity in certain sectors, such as mining and trade, which are largely managed by migrants and the middle class, leaving indigenous people, particularly in the interior, to benefit only partially. Given that poverty significantly affects quality of life, efforts to reduce poverty should be a top priority to ensure that the benefits of economic growth are distributed more equitably. The Sorong City Government is expected to strengthen equitable Development by maximizing the education sector through the provision of quality schools and universities, as well as a more pro-local workforce recruitment system. Furthermore, health sector Development should not only focus on improving hospital facilities in urban areas but also extend to rural areas through the equitable distribution of services, medical personnel, and adequate supporting facilities. Utilization of natural resource potential should be accompanied by improvements in the quality of human resources, particularly for the underprivileged, through skills training, access to capital, and job creation in the agriculture, plantation, and fisheries sectors. However, this study still has limitations in the number and types of variables used. Therefore, further research is recommended to incorporate macroeconomic variables, such as unemployment, investment, and income inequality, to yield more comprehensive results and inform the formulation of more effective Development policies.

REFERENCES

Abdilah, F., & Suliswantob, M. S. W. (2021). Pengaruh Pengeluaran Kesehatan, Dana Perimbangan, Dan Penduduk Miskin Terhadap Indeks Pembangunan Manusia Di Provinsi Papua Barat. *Jurnal Ilmu Ekonomi (JIE)*, *5*(4), 738–750.

Anjelly S. P. Way, Ita P. F. Rorong, K. D. T. (2025). Analisis Pengaruh Indeks Pembangunan Manusia, Tingkat Kemiskinan, Dan Tingkat Pengangguran Terhadap Pertumbuhan Ekonomi Di Kota Sorong Provinsi Papua Barat Daya Tahun 2010- 2023. *Jurnal Riset Multidisiplin Edukasi*, *2*(3), 72–88.

Bawowo, I. J., Kalangi, J. B., Masloman, I., Pembangunan, J. E., Ekonomi, F., & Ratulangi, U. S. (2022). Jurnal Berkala Ilmiah Efisiensi Volume 22 Nomor 7 Bulan September 2022 Analisis Pengaruh Indeks Pembangunan Manusia Dan Pertumbuhan Provinsi Sulawesi Utara (Studi Pada Kabupaten Kepulauan Sangihe , Kabupaten Kepulauan Talaud , Kabupaten Minahasa Tenggara. *Jurnal Berkala Ilmiah Efisiensi*, *22*(7), 85–96.

Dalimunthe, M. B., Sitanggang, B. E., & Panggabean, F. Y. (2022). *The Relationship Between Economic Growth And Poverty In*. *5*.

Herlambang, B., & Rachmawati, N. S. A. (2023). Pengaruh Pdrb, Ipm, Dan Jumlah Penduduk Terhadap Tingkat Kemiskinan Di Jawa Timur. *Ekonomi Dan Bisnis: Berkala Publikasi, Gagasan Konseptual, 27*(1), 52–60.

Hidayat, N. (2020). Fenomena Migrasi dan Bias Perkotaan di Indonesia. *Jurnal Geografi*, *12*(1), 22–31. https://jurnal.unimed.ac.id/2012/index.php/geo/article/view/16236

Ibn Muhdir, Avianto Nugroho, M. Z. A. (2021). Teori Kemiskinan Ibn Khaldun: Model Pengetahuan Tingkat Kemsikinan di Indonesia. In M. G. Wibowo (Ed.), *Akselerasi Pembangunan Ekonomi Indonesia* (pp. 127–146). Magister Ekonomi Syariah, Fakultas Ekonomi dan Bisnis Islam, Universitas Islam Negeri Sunan Kalijaga Yogyakarta.

Kitime, E. (2019). *Lectures on Development Studies*. StudyLib. https://studylib.net/doc/25306574/eliud-kitime--lectures-on-development-studies--2019

Lutfiah Firlian, Idhia Sriliana, Della Nur Afni, Ukasyah Aflah, P. N. (2025). Analisis Kemiskinan, Ketimpangan, Dan Pengangguran Terhadap Ipm Di 3 Provinsi Sumatera Menggunakan Spline Truncated. *JOURNAL GAUSSIAN, 14*(2), 480–488. https://doi.org/10.14710/j.gauss.14.2.480-488

Mashad, D. (2020). *Muslim Papua: Membangun harmoni berdasar sejarah agama di Bumi Cendrawasih* (1st ed.). Pustaka Al-Kautsar.

Mike Apriyanti, L. R. (2025). Pengaruh Indeks Pembangunan Manusia Indeks Gini Dan Pertumbuhan Ekonomi Terhadap Kemiskinan Di Indonesia 2014-2023. *JIMEA | Jurnal Ilmiah MEA (Manajemen, Ekonomi, Dan Akuntansi)*, *8*(2), 439–455.

Rambe, R. A. (2022). Determinan kemiskinan di jawa dan sumatera, indonesia. *PARETO : Jurnal Ekonomi Dan Kebijakan Publik*, *5*(1).

Buletin Ekonomika Pembangunan
https://journal.trunojoyo.ac.id/bep
Vol. 7 No. 1 February 2026, hal 125-133

E-ISSN : 2807-4998 (online)

Raras, A. Yan Hanggono, F. S. G. (2023). *Kota Sorong dalam Angka 2023* (B. K. Sorong (ed.)). BPS-Statistics of Sorong Municipality.

Rizky Febrian Saragih, Purnama Ramadani Silalahi, K. T. (2022). Pengaruh Indeks Pembangunan Manusia, Tingkat Pengangguran Terbuka Terhadap Tingkat Kemiskinan di Indonesia Tahun 2007–2021. *PESHUM : Jurnal Pendidikan, Sosial Dan Humaniora*, *1*(2), 71–79.

Sadikin, A. (2022). *Terbuka Terhadap Indeks Pembangunan Manusia Di Provinsi Jawa Timur Tahun 2018*. *3*(1), 2798–2807.

Sen, A. (1999). *Development as Freedom*. Oxford University Press. https://www.worldcat.org/title/440214714

Syofya, H. (2024). *Pengaruh Tingkat Kemiskinan dan Pertumbuhan Ekonomi terhadap Indeks Pembangunan Manusia Indonesia*. *5*(7), 3844–3856.

Tsaurai, K. (2021). Is Economic Growth a Panacea for Poverty Reduction in Emerging Markets? *The Journal of Developing Areas*, *55*(2), 223–237.

Wibowo, M. G. (2024). *The Effect Of Human Development Index (Hdi), Inequality, And Consumption On Poverty Levels In All Provinces In*. *9*(2), 257–269. https://doi.org/10.20473/jiet.v9i2.59249

Wulandari, F., & Rambe, R. A. (2024). *Impact of the Human Development Index, Economic Growth, Investment, and Government Expenditure on the poverty of districts and cities in Bengkulu Province*. *12*(1), 569–578.