Injurity: Interdiciplinary Journal and Humanity
Volume 5, Number 7, July 2026
e-ISSN: 2963-4113 and p-ISSN: 2963-3397

Analysis of Fiscal Decentralization, Human Development Index, and Income Inequality on Poverty Levels in Sampang Regency

Syamsul Huda
Universitas Pembangunan Nasional Veteran Jawa Timur, Indonesia
Email: syamsul.huda.ep@upnjatim.ac.id

Keywords:
Fiscal Decentralization; Human Development Index; Income Inequality; Poverty Level

ABSTRACT
Poverty remains a major development challenge in Indonesia, particularly in regions experiencing persistent socioeconomic disparities, such as Sampang Regency. Although fiscal decentralization provides greater authority for local governments to manage regional resources, its effectiveness in reducing poverty depends on the quality of budget allocation, human development conditions, and income distribution. This study aims to examine the effects of fiscal decentralization, the Human Development Index (HDI), and income inequality on poverty levels in Sampang Regency. This research employed a quantitative approach with an explanatory research design. The study utilized secondary data obtained from official sources, including regional financial reports and statistical publications covering the period from 2015 to 2024. Data analysis was conducted using multiple linear regression analysis, supported by classical assumption tests, F-tests, and t-tests to evaluate the relationships between the independent and dependent variables. The results indicate that fiscal decentralization and HDI have significant negative effects on poverty levels, suggesting that effective fiscal management and improvements in education, healthcare, and living standards contribute to poverty reduction. Meanwhile, income inequality has a significant positive effect on poverty levels, indicating that unequal income distribution increases vulnerability among disadvantaged communities. Simultaneously, fiscal decentralization, HDI, and income inequality significantly influence poverty levels in Sampang Regency. This study concludes that poverty alleviation requires integrated policies emphasizing efficient fiscal governance, human capital development, and inclusive economic growth.

INTRODUCTION

Kabupaten Sampang, like many other regions in Indonesia, faces significant challenges in reducing poverty levels. Although Indonesia has experienced a national decline in poverty rates following the pandemic, regional disparities remain highly evident. This condition indicates that the benefits of national development have not been distributed evenly across all segments of society, particularly in areas that continue to experience structural and institutional challenges (Baciu et al., 2017; Bailey et al., 2017; Bowen & Murshid, 2016; Obeng-Odoom, 2017). Consequently, poor communities in regions such as Sampang remain marginalized despite improvements in national macroeconomic indicators (Samosir et al., 2024).

Fiscal decentralization is one of the policy instruments designed to accelerate poverty alleviation by providing greater flexibility for local governments in managing regional budgets. However, the effectiveness of fiscal decentralization remains widely debated. A study conducted by Widyastuti and Nusantara (2022) in Central Java revealed that although fiscal decentralization has brought significant administrative changes, its contribution to poverty reduction has not been clearly established. Its effectiveness largely depends on economic growth patterns and the development strategies implemented, particularly labor-intensive programs capable of creating employment opportunities for low-income communities (Widyastuti & Nusantara, 2022).

Previous studies have demonstrated that the relationship between fiscal decentralization and poverty reduction is highly contextual and varies across regions. Setiawan and Digdowiseiso (2022) found that fiscal decentralization in Indonesia has generated diverse outcomes. In several urban areas and regions in western Indonesia, fiscal decentralization contributed to poverty reduction, whereas in regions with weaker local institutions and limited administrative capacity, its impact was less significant. Therefore, the effectiveness of fiscal decentralization is strongly influenced by regional characteristics, including governance capacity and budget allocation mechanisms (Setiawan & Digdowiseiso, 2022).

In eastern Indonesia, where poverty rates are generally higher compared with other regions, fiscal decentralization faces greater implementation challenges. Samosir et al. (2024) found that fiscal transfer instruments, such as the General Allocation Fund (DAU) and Special Allocation Fund (DAK), significantly contribute to poverty reduction. However, Revenue Sharing Funds (DBH) showed a positive relationship with poverty levels, indicating that these allocations have not yet effectively reduced the number of people living in poverty (Hidayat et al., 2024; Isman et al., 2025; Nany & Suryarini, 2022; Usman et al., 2021). Thus, although fiscal decentralization provides greater autonomy for local governments, its outcomes depend heavily on the types of fiscal instruments used and the effectiveness of regional financial management (Samosir et al., 2024).

In addition to fiscal decentralization, human development quality, as measured by the Human Development Index (HDI), plays an important role in understanding poverty conditions. Sari (2023) found that HDI has a direct and significant effect on reducing poverty levels in Indonesia. Furthermore, the influence of HDI was stronger than several macroeconomic factors, such as economic growth, and structural factors, such as demographic dependency. These findings indicate that improvements in education, healthcare, and living standards are essential for accelerating poverty reduction (Sari, 2023).

Another study supports these findings by emphasizing the reciprocal relationship between poverty and human development. Adim (2024) highlighted that high poverty and unemployment rates negatively affect human development quality. A larger proportion of people living in poverty reduces access to healthcare services, education, and economic opportunities, making improvements in HDI more difficult to achieve. Therefore, poverty is not only a consequence of low HDI but also a major factor that limits improvements in community welfare (Adim, 2024).

Similarly, Mauladi and Devi (2021) found that poverty levels have a significant negative effect on HDI in Indonesia. Meanwhile, government expenditure in the education and healthcare sectors positively contributes to HDI improvement, although these effects may not always be significant in the short term. They also found that open unemployment consistently reduces HDI. Therefore, regional fiscal policies should prioritize public expenditure in education and healthcare sectors to strengthen human development and indirectly reduce poverty rates (Mauladi & Devi, 2021).

Income inequality represents another important factor contributing to worsening poverty conditions. Research conducted by Masia et al. (2024) in Gorontalo Province demonstrated that income inequality, measured using the Gini ratio, significantly increases poverty levels. Inequality not only restricts inclusive economic growth but also widens socioeconomic gaps between high-income and low-income groups. Furthermore, poverty in their study acted as a mediating variable that explained the relationship between inequality and weak regional economic development (Masia et al., 2024).

Beyond inequality, education and social protection factors also play important roles in poverty reduction. Murwiati (2023) emphasized that equitable access to education and effective social protection programs can reduce poverty while simultaneously decreasing income inequality in Indonesia. However, the study also noted that the Gini ratio increased slightly between 2021 and 2022, indicating that despite policy interventions, income inequality remains a significant challenge in national economic development (Murwiati, 2023).

From both theoretical and empirical perspectives, the relationships among fiscal decentralization, HDI, and income inequality are interconnected. Well-managed fiscal policies can improve human development outcomes and reduce inequality, thereby strengthening poverty reduction efforts (Braimoh et al., 2025; Odusola, 2019; Shettigar et al., 2024; Taddesse, 2022). Without a balanced relationship among these three factors, poverty alleviation policies may fail to achieve optimal outcomes at the regional level (Setiawan & Digdowiseiso, 2022; Sari, 2023).

Specifically, in Sampang Regency, the effectiveness of fiscal decentralization depends on whether regional financial management is directed toward strategic sectors directly related to human development improvement, such as education, healthcare, and basic public services. Without such prioritization, budget allocations may become ineffective and potentially widen socioeconomic disparities within the community (Widyastuti & Nusantara, 2022).

Therefore, development strategies that focus solely on economic growth are no longer sufficient. An integrated development approach emphasizing HDI improvement and inequality reduction is required to achieve more inclusive poverty alleviation (Boarini et al., 2018; Dugarova, 2015). This perspective aligns with the findings of Masia et al. (2024), who emphasized that inclusive growth serves as an essential foundation for regional development (Masia et al., 2024).

Furthermore, the transfer of fiscal authority from central to local governments must be accompanied by improvements in regional capacity for fiscal planning, implementation, and supervision. Without adequate institutional capacity, fiscal transfers may be misallocated or fail to effectively reach poor communities. This argument is supported by Samosir et al. (2024), who emphasized that local institutional capacity is a key determinant of fiscal decentralization effectiveness (Samosir et al., 2024).

Therefore, research examining the relationship between fiscal decentralization, human development quality, and income inequality on poverty levels in Sampang Regency is highly relevant. This analysis provides empirical evidence regarding local socioeconomic conditions while also offering policy implications for designing more effective, equitable, and inclusive regional development strategies (Murwiati, 2023; Adim, 2024).

METHOD

This study employed a quantitative approach using an explanatory research method to examine the causal relationships between independent and dependent variables. The analysis focused on the effects of fiscal decentralization, the Human Development Index (HDI), and income inequality on poverty levels (Sugiyono, 2021).

The research was conducted in Sampang Regency, East Java, which has experienced relatively high poverty rates compared with other regions in the province. The analysis focused on regional socioeconomic conditions, HDI, income inequality, and fiscal policy indicators. Data were obtained from official sources, including publications from the Sampang Regency Statistics Agency (BPS) and regional government financial reports.

The research population consisted of annual macroeconomic data from Sampang Regency related to fiscal decentralization, HDI, income inequality, and poverty levels during the 2015–2024 period. Since all required data were available, a census approach was applied by using the entire dataset as the research sample.

The data were analyzed using multiple linear regression analysis to examine the simultaneous and partial effects of fiscal decentralization, HDI, and income inequality on poverty levels. The independent variables consisted of fiscal decentralization, HDI, and income inequality, while poverty level served as the dependent variable. The multiple linear regression model was formulated as follows:

$$Yit = \beta 0 + \beta 1X1it + \beta 2X2it + \beta 3X3it + eit$$

Where:
Y = Poverty Level
X_1 = Fiscal Decentralization
X_2 = Human Development Index (HDI)
X_3 = Income Inequality
α = Constant
β_1, β_2, β_3 = Regression Coefficients
ε = Error Term/Residual

Furthermore, the F-test was conducted to examine the simultaneous effects of the independent variables and evaluate the overall suitability of the regression model (Ghozali, 2021). The t-test was performed to assess the partial effects of each independent variable. The analysis was conducted after processing secondary data and performing classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, to ensure the validity and reliability of the regression results (Sugiyono, 2020; Ghozali, 2021).

RESULTS AND DISCUSSION

This study employed multiple linear regression analysis to examine the effects of fiscal decentralization (X1), the Human Development Index (HDI, X2), and income inequality (X3) on poverty levels (Y) in Sampang Regency. The analysis was performed using SPSS version 26.0 and included regression coefficient estimation, the F-test, and the t-test. The regression model was formulated as follows:

$$Y = 18.542 - 0.312X1 - 0.418X2 + 0.275X3$$

The regression equation was interpreted as follows:

a. The constant value (18.542) indicated that the predicted poverty level in Sampang Regency was 18.542% when all independent variables were zero.
b. Fiscal decentralization (X1) had a coefficient of −0.312, indicating that an increase in fiscal decentralization was associated with a decrease in poverty levels.

c. HDI (X2) had a coefficient of −0.418, indicating that improvements in human development quality contributed to poverty reduction and had a stronger effect than fiscal decentralization.
d. Income inequality (X3) had a positive coefficient of 0.275, indicating that higher income inequality was associated with increased poverty levels.

These results suggested that effective fiscal allocation and improvements in human development contributed to poverty reduction, while income inequality remained a significant factor that hindered poverty alleviation.

F-Test (Simultaneous Test)

The F-test was conducted to examine the simultaneous effect of fiscal decentralization, HDI, and income inequality on poverty levels. The results are presented in Table 1.

Tabel 1. Hasil Uji F Simultan

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	71,657	3	23,886	14,002	0,004
Residual	10,235	6	1,706		
Total	81,892	9			

The calculated F-value was 14.002 with a significance level (Sig.) of 0.004. Since the significance value was less than 0.05, the regression model was statistically significant. This indicates that the independent variables included in the model, namely fiscal decentralization (X1), the Human Development Index (HDI, X2), and income inequality (X3), simultaneously had a significant effect on poverty levels (Y).

These findings support the argument that poverty alleviation strategies cannot rely on a single factor but require coordinated policies involving fiscal management, human development improvement, and inequality reduction efforts. Practically, regional budget allocations should be directed toward supporting education, healthcare, and equitable social programs to generate more significant impacts.

T-Test (Partial Test)

The t-test was conducted to examine the individual effects of each independent variable on poverty levels. The results of the t-test are presented in Table 2.

Tabel 2. Hasil Uji t Parsial

Variabel	Koefisien (B)	t Hitung	t Tabel	Sig.
X1	-0,312	-3,712	2,026	0,001
X2	-0,418	-4,215	2,026	0,000
X3	0,275	3,005	2,026	0,004

1. Fiscal decentralization (X1) had a significant negative effect on poverty, confirming that increased regional budgets, such as through the General Allocation Fund (DAU) and Special Allocation Fund (DAK), can reduce poverty by improving the capacity of public services in the education, healthcare, and infrastructure sectors (Widyastuti & Nusantara, 2022).
2. The Human Development Index (HDI, X2) also had a significant negative effect, indicating that improvements in human development quality through education, healthcare, and a decent standard of living can reduce poverty levels. This finding is consistent with Sari (2023), who demonstrated that HDI is an important indicator in poverty alleviation.
3. Income inequality (X3) had a significant positive effect, indicating that higher inequality increases the risk of poverty. This condition suggests that uneven economic growth or

unequal resource distribution may hinder effective poverty reduction efforts (Masia et al., 2024).

The Effect of Fiscal Decentralization on Poverty Levels

Fiscal decentralization provides autonomy to regency governments in managing budgets, including determining regional expenditure priorities. Through fiscal decentralization, local governments can adjust budget allocations based on local needs, such as improving education services, healthcare, basic infrastructure, and social assistance programs. Effective and targeted allocation of resources directly benefits poor communities by improving their access to public services and strengthening household economic capacity.

The analysis results showed that higher levels of fiscal decentralization were associated with lower poverty levels in Sampang Regency. This finding is consistent with Widyastuti and Nusantara (2022), who emphasized that the effectiveness of regional fiscal management is an important factor in poverty alleviation. In other words, more flexible fiscal policies enable local governments to respond to the needs of vulnerable groups more quickly and effectively.

The Effect of the Human Development Index on Poverty Levels

The Human Development Index (HDI) is a composite indicator reflecting the quality of education, healthcare, and living standards within a community. An increase in HDI indicates improvements in access to and quality of education, better healthcare conditions, and enhanced economic welfare. These improvements enable poor households to increase their productivity and income, thereby reducing dependence on social assistance programs.

The data analysis revealed a negative relationship between HDI and poverty levels, indicating that higher HDI was associated with lower poverty rates in Sampang Regency. Sari (2023) emphasized that improving human resource quality through education and healthcare is a key factor in strengthening household economic capacity and achieving sustainable poverty reduction. Thus, investment in human development generates significant long-term effects on poverty alleviation.

The Effect of Income Inequality on Poverty Levels

Income inequality reflects the distribution of economic resources among different groups within society. High inequality indicates that a large proportion of income and resources is concentrated among higher-income groups, while poorer communities remain disadvantaged. This condition may limit the positive effects of fiscal decentralization and HDI improvement because the benefits of development are not distributed evenly.

The findings showed that income inequality had a positive effect on poverty levels, meaning that higher inequality was associated with higher poverty rates. Masia et al. (2024) stated that uncontrolled inequality reduces the inclusiveness of development. Although regional per capita income may increase, the poorest groups may continue to experience difficulties in escaping poverty if income distribution is not improved.

CONCLUSION

The findings of this study indicate that fiscal decentralization, the Human Development Index (HDI), and income inequality simultaneously had a significant influence on poverty levels in Sampang Regency. Fiscal decentralization demonstrated a significant negative effect on poverty, indicating that effective regional financial management and targeted fiscal resource allocation can support poverty reduction through improvements in public services, infrastructure, education, and healthcare. Similarly, HDI had a significant negative effect on poverty levels, suggesting that improvements in human capital quality through better access to education, healthcare, and living standards contributed substantially to poverty reduction. Among the examined variables, HDI provided the strongest contribution, emphasizing that sustainable poverty alleviation requires long-term investment in human development. Meanwhile, income inequality had a significant positive effect on poverty, indicating that increasing disparities in income distribution can reduce the effectiveness of development programs and increase vulnerability among low-income communities. Therefore, poverty reduction strategies in Sampang Regency require an integrated approach that combines effective fiscal governance, human development improvement, and inclusive economic policies to ensure a more equitable distribution of development benefits.

Future research is recommended to expand the analytical framework by incorporating additional variables that may influence poverty dynamics, such as unemployment rates, economic growth, social protection programs, government expenditure efficiency, and institutional quality. Further studies may also employ broader regional comparisons or panel data analysis involving multiple regencies to provide a more comprehensive understanding of the relationships among fiscal decentralization, human development, income inequality, and poverty reduction. In addition, qualitative approaches involving community perspectives and policy implementation analysis are suggested to complement quantitative findings and identify practical challenges in regional poverty alleviation programs. Future researchers are also encouraged to evaluate the effectiveness of specific fiscal policies and development programs in reducing poverty at the local level, thereby providing stronger empirical evidence for improving regional development strategies and promoting inclusive economic growth.

REFERENCES

Adim. (2024). Pengaruh kemiskinan dan pengangguran terhadap indeks pembangunan manusia di Indonesia. *ejournal.akts.ac.id*.

Baciu, A., Negussie, Y., Geller, A., & Weinstein, J. N. (Eds.). (2017). *Communities in action: Pathways to health equity*. National Academies Press.

Bailey, Z. D., Krieger, N., Agénor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *The Lancet, 389*(10077), 1453–1463.

Boarini, R., Causa, O., Fleurbaey, M., Grimalda, G., & Woolard, I. (2018). Reducing inequalities and strengthening social cohesion through inclusive growth: A roadmap for action. *Economics: The Open-Access, Open-Assessment E-Journal, 12*(2018–63), 1–26.

Bowen, E. A., & Murshid, N. S. (2016). Trauma-informed social policy: A conceptual framework for policy analysis and advocacy. *American Journal of Public Health, 106*(2), 223–229.

Braimoh, E. O., Abari-Ogunsona, T. A., & Salami, S. O. (2025). The nexus between fiscal policy and income inequality in Nigeria. *International Journal of Research and Innovation in Social Science (IJRISS), 9*(9). https://doi.org/10.47772/IJRISS

Dugarova, E. (2015). *Social inclusion, poverty eradication and the 2030 agenda for sustainable development*. UNRISD Working Paper.

Hidayat, B. A., Apriliana, T., Faturohim, A., Wahyuni, R. N. T., Landekumandang, F., Judijanto, L., Rahmawati, T., Hamzah, A., Yolanda, Y., & Saksono, H. (2024). Local government development policy: Natural resource revenue sharing and economic growth in Indonesia. *Journal of Infrastructure, Policy and Development, 8*(15), 10375.

Isman, M. H. S., Salomo, R. V., & Bakri, M. R. (2025). Impact of fiscal transfers and local revenue accountability on community welfare in Indonesia. *Owner: Riset dan Jurnal Akuntansi, 9*(2), 1407–1416.

Masia, A., Rahman, S., & Yusuf, M. (2024). Income inequality, poverty, and inclusive development: Evidence from Gorontalo Province. *International Journal of Accounting, Business and Innovation Management (IJABIM).*

Mauladi, D., & Devi, S. (2021). *Kemiskinan, pengangguran, dan pengeluaran pemerintah terhadap IPM di Indonesia*. ETD Universitas Gadjah Mada.

Murwiati, L. (2023). *Pendidikan, perlindungan sosial, dan ketimpangan pendapatan di Indonesia*. Universitas Gadjah Mada.

Nany, M., & Suryarini, T. (2022). Does balancing fund affect economic growth and poverty level in Central Java? *Jurnal Kajian Akuntansi, 6*(1), 1–24.

Obeng-Odoom, F. (2017). Urban governance in Africa today: Reframing, experiences, and lessons. *Growth and Change, 48*(1), 4–21.

Odusola, A. (2019). *Growth-poverty-inequality nexus: Toward a mutually inclusive relationship in Africa.*

Samosir, H., Yuliana., & Prabowo, T. (2024). Fiscal decentralization and poverty in Eastern Indonesia. *Atlantis Press.*

Sari, M. (2023). Pengaruh IPM terhadap tingkat kemiskinan di Indonesia. *Journal Unesa.*

Setiawan, A., & Digdowiseiso, K. (2022). *Decentralization and poverty: Evidence from Indonesia*. CV. ODIS Olah Data Integra Solusi.

Shettigar, J., Misra, P., Sanyal, P. K., & Kawinga, A. (2024). The impact of tax reforms on human development index: Literature review approach. *International Journal of Social Welfare, 33*(3), 757–776.

Taddesse, S. (2022). *Taxation for sustained prosperity: Collaborative tax policy setting & administration*. Bublish, Inc.

Usman, G. B. I., Azis, M., Rianti, M., Rumaolat, W., & Sely, M. D. (2021). Overcoming poverty by increasing local own revenue and general allocation funds through economic growth in Central Mamuju Regency. In *Proceedings of the International Conference on Industrial Engineering and Operations Management* (pp. 5–8).

Widyastuti, R., & Nusantara, A. (2022). Efektivitas desentralisasi fiskal dalam pengentasan kemiskinan di Jawa Tengah. *Journal UNNES.*