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ANALYSIS OF THE EFFECT OF ECONOMIC GROWTH AND HUMAN DEVELOPMENT INDEX ON INCOME INEQUALITY IN THE REGENCIES/CITIES OF SOUTH SULAWESI PROVINCE

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Abstract

Income inequality remains one of the primary challenges in achieving sustainable economic development, particularly in regions endowed with abundant resources but facing uneven income distribution. South Sulawesi Province is recognized as a key economic growth center in Eastern Indonesia; however, it still ranks among the provinces with the highest levels of income inequality nationwide. This study aims to analyze the effect of economic growth and the Human Development Index (HDI) on income inequality across 24 regencies/municipalities in South Sulawesi Province over the period 2014–2023. The analytical method employed is panel data regression using the Fixed Effect Model (FEM) approach. The findings reveal that, simultaneously, both independent variables have a significant effect on income inequality. Partially, HDI has a significant negative effect, while economic growth does not significantly influence income inequality. These results highlight that enhancing human capital and ensuring equitable distribution of development outcomes are key to reducing income inequality at the regional level. The study provides policy implications for local governments to focus more on human resource development and the equalization of development across regions.

Keywords: Income inequality, economic growth, human development index.

INTRODUCTION

Indonesia is a unitary state transitioning from a developing country toward becoming a developed nation (Wisnubroto, 2025). One of the key steps in this transformation is the implementation of sustainable development, guided by the Sustainable Development Goals (SDGs). The SDGs aim to achieve sustainable development, with one of their central objectives being the reduction of inequalities in various forms—such as income disparity and regional development gaps—so that equitable prosperity can be realized for all segments of society (Alisjahbana & Murniningtyas, 2018). These goals must be met by all countries, including Indonesia.

Income inequality is a critical issue in the development of every country and entails more than just numerical indicators. It is closely tied to matters of justice, transparency, and equal access to opportunities and resources in the development process (Lala et al., 2023). The aim of development is to enhance the welfare of society not only economically, but also in non-economic dimensions (Sanjaya & Saskara, 2022).

However, the reality in many countries, including Indonesia, shows that inequality remains a significant challenge that needs to be addressed seriously.

Todaro and Smith (2021) state that income inequality arises when the distribution of income in a society is uneven, where a small portion of individuals or groups enjoy significantly higher income than the majority. This inequality reflects differences in access to resources, economic opportunities, and basic services. One commonly used indicator to measure this inequality is the Gini coefficient, which ranges from 0 to 1 and indicates the extent to which income distribution deviates from perfect equality.

Income inequality in Indonesia is largely driven by the diverse characteristics of natural resources and demographic conditions across its regions, resulting in uneven welfare and development levels, and thereby generating significant regional disparities (Caesarisma & Hamrullah, 2023). Regions endowed with abundant resources and production factors tend to earn higher incomes compared to those with limited resources (Hasyim, 2017). This situation leads to widening gaps, where resource-rich areas advance rapidly while under-resourced regions struggle to catch up.

South Sulawesi Province, located in Eastern Indonesia, is known as the "gateway to the eastern region" (Purwanto, 2022), a title reflecting its strategic role as an economic hub and trade corridor connecting western and eastern Indonesia (PUPR, 2017). Furthermore, Bado et al. (2023) emphasize that the province has abundant natural resources that could drive regional economic growth. However, this potential has not yet succeeded in resolving the region's income inequality problem. This is evident from national Gini ratio comparisons, where South Sulawesi remains among the top ten provinces with the highest Gini ratios.

Despite its vast economic potential and dynamic economic activities, income distribution across regions in South Sulawesi remains unequal. This disparity is attributed to differences in economic development patterns and growth capacities among regions, contributing to income inequality (Purba & Arka, 2024).

This condition is evident in areas such as Makassar City and Luwu Timur Regency, which are economically advanced yet still exhibit high levels of income inequality based on their Gini ratios. This suggests that certain areas in South Sulawesi are still in the early stages of the Kuznets curve, where economic growth has not yet been accompanied by equitable development across social groups.

Economic growth is often regarded as a primary indicator of a region's progress, as it reflects increased production capacity and economic productivity (Saefulloh et al., 2023). One common indicator used to represent economic progress is Gross Regional Domestic Product (GRDP) per capita, which reflects the average income earned by individuals in a region and provides a general picture of community welfare.

However, to fully understand the dynamics of economic advancement, the concept of economic growth must be viewed more comprehensively. Economic growth involves not only an increase in total and per capita income, but also considers population growth, shifts in economic structure (e.g., from agriculture to industry or services), and more equitable income distribution. In essence, economic growth aims to create inclusive and sustainable welfare.

It is essential to consider not just the rate of economic growth but also how it is distributed across all levels of society. As shown by Oktarina & Yuliana (2023), economic growth has a significantly positive effect on income inequality. Similar results were reported by Naflah & Sishadiyati (2024). However, contrasting findings from Triarsa & Purbadharmaja (2020) indicate that economic growth has a significantly negative effect on income inequality. Damanik et al. (2018) found that economic growth has no effect on income inequality.

Human development is a key component in achieving sustainable development goals, as human capital quality greatly influences a region's ability to manage its economic potential. The Human Development Index (HDI) is used to measure the level of development by considering three core dimensions: health, education, and standard of living (Simanjuntak et al., 2024). HDI serves as an important indicator in assessing the extent of human development within a particular area (Bhagaskara, 2023). If HDI is uneven across regions, those with higher HDI are likely to possess stronger human capital, enabling them to support regional development, or vice versa (Violin & Lutfi, 2022).

High-quality human capital plays a crucial role in increasing labor productivity. Individuals with better education, skills, and health are more likely to secure higher-paying jobs or generate greater output. This is reflected in the findings of Fadillah et al. (2023), who revealed that HDI has a significantly positive effect on income inequality. Similar conclusions were drawn by Bhagaskara (2023). In contrast, Aprilianti & Harkeni (2021) reported that HDI has a significantly negative effect on income inequality. Other studies, such as by Ersad et al. (2022), found no significant effect of HDI on income inequality.

In South Sulawesi, income inequality is not solely due to low income levels in certain areas, but rather to uneven development patterns, concentrated economic activities, and disparities in human capital across regions. Therefore, this study is crucial in investigating the effect of economic growth and HDI on income inequality across regencies and municipalities in South Sulawesi Province.

RESEARCH METHOD

This study employs an associative quantitative approach aimed at examining the effect of economic growth and the Human Development Index (HDI) as independent variables on the dependent variable, income inequality, across regencies and municipalities in South Sulawesi Province over the period 2014–2023. The data analyzed is panel data, which combines both time series and cross-sectional dimensions, with a total of 240 observations from 24 regencies/municipalities. The type of data used consists of secondary quantitative data, including the Gini ratio, GRDP per capita at constant prices, and HDI, obtained from official publications of Statistics Indonesia (BPS) and other relevant academic sources (Sugiyono, 2019; BPS, 2020).

Data collection was conducted using a non-participant observation method, whereby data were recorded from official sources such as BPS without direct involvement with the research subjects. The research instrument in the form of documentation was used to compile numerical data and theoretical references. The analytical technique applied is panel data regression, involving the Chow test, Hausman

test, and Lagrange Multiplier (LM) test to determine the most appropriate model among the Common Effect Model, Fixed Effect Model, and Random Effect Model. Subsequently, the model was evaluated against classical assumptions—normality, multicollinearity, heteroskedasticity, and autocorrelation—to ensure the validity of the analysis results (Ghozali, 2018; Winarno, 2017).

Multiple linear regression analysis was used to assess the extent to which economic growth and HDI affect income inequality. Hypothesis testing was conducted using the F-test to evaluate the simultaneous effects and the t-test to assess the partial effects of each independent variable. The coefficient of determination (R^2) was employed to determine the proportion of the dependent variable that can be explained by the model. Statistical significance was determined at a 95% confidence level (α = 0.05). The results of these tests provide insights into the causal relationships among the variables and offer empirical contributions for policies aimed at addressing income inequality in South Sulawesi (Wooldridge, 2020; Wirawan, 2017).

RESULTS AND DISCUSSION

Hypothesis Testing Results

Panel Data Estimation Model Approach

This study employs panel data analysis with the assistance of EViews 13 software. There are three commonly used estimation models in panel data regression: the Common Effect Model, the Fixed Effect Model, and the Random Effect Model. The independent variables in this study include Economic Growth (X_1) and the Human Development Index (HDI or X_2), while the dependent variable is Income Inequality (Y). To determine the most appropriate estimation model, three tests were conducted: the Chow Test, Lagrange Multiplier (LM) Test, and Hausman Test.

Panel Data Model Selection

The combination of time-series and cross-sectional data results in three types of panel regression models: Common Effect, Fixed Effect, and Random Effect. The estimation results using the Common Effect Model are presented in Table 1.

Table 1. Regression Results – Common Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.389237	0.040405	9.633340	0.0000
X1	3.83E-10	1.95E-10	1.961608	0.0510
X2	-0.000395	0.000627	-0.630084	0.5292
R-squared	0.018596	F-statistic		2.245403
Adjusted R-squared	0.010314	Prob(F-statistic)		0.108133

Source: Data attached in the author's thesis

Note:
X_1 = Economic Growth
X_2 = Human Development Index (HDI)

Table 1 presents the estimation results of the Common Effect Model using economic growth and HDI as independent variables across regencies/municipalities in South Sulawesi Province for the period 2014–2023. The F-statistic value of 2.123 with a probability of 0.108 indicates that the model is not statistically significant at the 5% level. Therefore, the analysis proceeded using the Fixed Effect Model approach.

Table 2. Regression Results – Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.808699	0.102931	7.856742	0.0000
X1	-7.97E-10	6.39E-10	-1.246614	0.2139
X2	-0.005914	0.001665	-3.551224	0.0005
R-squared	0.426397		F-statistic	6.363212
Adjusted R-squared	0.359387		Prob(F-statistic)	0.000000

Source: Data attached in the author's thesis

Information:
X_1 = Economic Growth
X_3 = HDI

Table 2 presents the estimation results of the Fixed Effect Model, where the variables economic growth and HDI were analyzed in relation to income inequality in regencies/municipalities across South Sulawesi Province during the 2014–2023 period. The F-statistic value of 6.363 with a probability of 0.000 indicates that this model is statistically significant at the 5% level.

To determine the most appropriate model between the Common Effect and Fixed Effect models, model validation tests were conducted in two stages: the Chow Test and the Hausman Test.

1) Chow Test

Table 3. Chow Test Results

Redundant Fixed Effects Tests
Equation: Untitled
Cross-section fixed effects test

Effects Test	Statistics	df	Prob.

Cross-section F	6.614889	(23,214)	0.0000
Cross-section Chi-square	128.891141	23	0.0000

Source: Data attached in the author's thesis

Based on the results in Table 3, the probability value is 0.0000, which is less than $\alpha = 0.05$. Therefore, the decision is to reject H_0, indicating that the Fixed Effect Model is more suitable than the Common Effect Model.

2) Hausman test

Table 4. Hausman Test Results

Correlated Random Effects - Hausman Test
Equation: Untitled
Cross-section random effects test

Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Random cross-section	43.352163	2	0.0000

Source: Data attached in the author's thesis

As shown in Table 4, the probability value is 0.0000, which is less than the significance level of $\alpha = 0.05$. Therefore, the null hypothesis (H_0) is rejected, and it can be concluded that the Fixed Effect Model is more appropriate than the Random Effect Model.

Taking into account the results of both the Chow Test and the Hausman Test, which consistently indicate that the Fixed Effect Model is the most appropriate model for the panel data analysis in this study, the implementation of the Lagrange Multiplier (LM) Test is deemed unnecessary. Once the Fixed Effect Model has been validated by these tests, it is considered a sound and final choice for the regression analysis.

Fixed Effect Model Regression Equation

Based on the estimation results of the panel data regression using the Fixed Effect Model (FEM), the following regression equation is obtained:

$\hat{Y} = 0.8086 - 0.000000000797x_1 - 0.005914x_2$
Sb = (0,102) (0.000000000639) (0.0016)
t = (7.856) (-1.2466) (-3.551)
Prob = (0,000) (0,2139) (0,0005)
$R^2 = 0,359$
F-statistik = 6,363
Prob(F) = 0,000

The regression results based on the Fixed Effect Model indicate that the economic growth variable has a probability value of 0.2139, which is greater than the significance level of 0.05. This implies that economic growth does not have a statistically significant effect on income inequality. Conversely, the Human Development Index

(HDI) has a probability value of 0.0005, which is less than 0.05, indicating that HDI has a significant effect on income distribution.

Classical Assumption Test

1) Autocorrelation Test

The autocorrelation test is used to detect the relationship between current and previous residuals. If a correlation exists, autocorrelation is present. This study applied the Durbin-Watson statistic, where values between -2 and +2 indicate no autocorrelation. The results of the autocorrelation test are shown in Table 5.

Table 5. Autocorrelation Test Results

R-squared	0.426397	Mean dependent var	0.372888
Adjusted R-squared	0.359387	SD dependent var	0.032314
SE of regression	0.025863	Akaike info criterion	-4.369985
Sum squared residual	0.143146	Schwarz criterion	-3.992916
Log likelihood	550.3982	Hannan-Quinn criter.	-4.218054
F-statistic	6.363212	Durbin-Watson stat	1.462147
Prob(F-statistic)	0.000000		

Source: Data attached inthe author's thesis

ased on Table 5, the Durbin-Watson value of 1.46 lies between -2 and 2, indicating that there is no autocorrelation in the model.

2) Multicollinearity Test

The multicollinearity test is conducted to identify any linear relationship between independent variables in a regression model. In a good regression model, there should be no high correlation between independent variables, as high multicollinearity can result in unstable regression coefficients and difficulties in econometric interpretation, thereby reducing the model's validity and accuracy in explaining inter-variable relationships.

One method used to detect multicollinearity is by examining the correlation matrix between the independent variables in the model. If the correlation coefficient between two independent variables is less than 0.8, it can be concluded that there is no multicollinearity.

The results of the multicollinearity test through correlation matrix analysis are shown in Table 6.

Table 4. Multicollinearity Test Results

	X1	X2
X_1	1,000,000	0.636476
X_2	0.636476	1,000,000

Source: Data attached in the author's thesis

Note:

X_1= Economic Growth

X_2= HDI

Based on Table 6, all independent variables in the model show low correlation levels, with coefficient values below 0.8. This indicates that there is no multicollinearity in the model. Variable X_1 has a correlation of 0.636476 with X_2. Thus, it can be concluded that there is no strong linear relationship between the independent variables, and the regression model in this study can be declared free from multicollinearity.

3) Heteroscedasticity Test

This test aims to determine whether the regression model has constant residual variance (homoscedasticity). An ideal regression model is one that is free from heteroscedasticity symptoms, as the presence of heteroscedasticity can lead to biased or inaccurate predictions. One method used to detect heteroscedasticity is the Glejser Test (Utama, 2016). If the significance value (p-value) > 0.05, then the model is considered free from heteroscedasticity.

The results of the heteroscedasticity test are presented in Table 7..

Table 7. Results of Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.022931	0.018101	1.266861	0.2066
X1	-3.98E-11	1.12E-10	-0.354164	0.7236
X2	-0.000261	0.000293	-0.889845	0.3745

R-squared	0.208333	F-statistic	2.252628
Adjusted R-squared	0.115849	Prob(F-statistic)	0.001006

Source: Data attached in the author's thesis

Note:

X_1 = Economic Growth

X_2 = HDI

Based on the results presented in Table 7, all independent variables show probability values above 0.05. Therefore, it can be concluded that the regression model does not contain heteroscedasticity and meets the homoscedasticity assumption..

Model Feasibility and Accuracy Test

a) Simultaneous Effect Test (F-Test) of Economic Growth and HDI on Income Distribution Inequality

Table 5. F Test Results (Simultaneous)

R-squared	0.426397	Mean dependent var	0.372888
Adjusted R-squared	0.359387	SD dependent var	0.032314
SE of regression	0.025863	Akaike info criterion	-4.369985

Sum squared residual	0.143146	Schwarz criterion	-3.992916
Log likelihood	550.3982	Hannan-Quinn criter.	-4.218054
F-statistic	6.363212	Durbin-Watson stat	1.462147
Prob(F-statistic)	0.000000		

Source: Data attached in the author's thesis

At a 95 percent confidence level (α = 5 percent), the F table with df = (3-1), (240-3) yields a value of 3.033. Based on the analysis results in Table 8, the obtained F-statistic is 6.363, which is greater than the F-table value (6.363 > 3.033). In addition, the probability value (p-value) of 0.000 is smaller than the significance level of 0.05 (0.000 < 0.05). Thus, H_0 is rejected, indicating that the variables of economic growth and Human Development Index (HDI) simultaneously have a significant effect on income inequality in regencies/municipalities of South Sulawesi Province.

b) Partial Test (t-Test)

Table 6. t-Test Results (Partial)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.808699	0.102931	7.856742	0.0000
X1	-7.97E-10	6.39E-10	-1.246614	0.2139
X2	-0.005914	0.001665	-3.551224	0.0005
R-squared	0.426397		F-statistic	6.363212
Adjusted R-squared	0.359387		Prob(F-statistic)	0.000000

Source: Data attached in the author's thesis

Note:
X_1 = Economic Growth
X_2 = HDI

1) Testing the hypothesis of economic growth (X_1) on income inequality (Y)

a) Hypothesis Formulation
H_0: $\beta_1 = 0$, meaning economic growth has no partial effect on income inequality.
H_1: $\beta_1 > 0$, meaning economic growth has a positive partial effect on income inequality.

b) Testing is conducted at a significance level of α = 0.05 or 95 percent confidence level.

c) Testing Criteria
H_0 is accepted if the significance value > 0.05
H_0 is rejected if the significance value ≤ 0.05.

d) Statistical Test
The t-count value is obtained from the regression results using the EViews application, which is 1.246. The t-table value at α = 0.05 is 1.969.

e) Conclusion

The partial test results on the effect of economic growth on income inequality show that the t-statistic value of 1.246 is smaller than the t-table value of 1.969. In addition, the obtained probability (significance) value is 0.214, which is greater than $\alpha = 0.05$. Based on these results, it can be concluded that H_0 is accepted and hypothesis H_1 is rejected, meaning that the variable economic growth (X_1) does not have a significant effect on income inequality in regencies/municipalities of South Sulawesi Province.

2) Testing the hypothesis of HDI (X_2) on income inequality (Y)

a) Hypothesis Formulation

H_0: $\beta 2 = 0$, meaning HDI has no partial effect on income inequality.

H_1: $\beta 2 < 0$, meaning HDI has a negative partial effect on income inequality.

b) Testing is conducted at a significance level of $\alpha = 0.05$ or 95 percent confidence level.

c) Testing Criteria

H_0 is accepted if the significance value > 0.05

H_0 is rejected if the significance value ≤ 0.05.

d) Statistical Test

The t-count value is obtained from the regression results using the EViews application, which is 3.551. The t-table value at $\alpha = 0.05$ is 1.969.

f) Conclusion

The partial test results on the effect of HDI on income inequality show that the t-statistic value of 3.551 is greater than the t-table value of 1.969. In addition, the obtained probability (significance) value is 0.0005, which is less than $\alpha = 0.05$. Based on these results, it can be concluded that H_0 is rejected and hypothesis H_1 is accepted, meaning that the HDI variable (X_2) has a negative and significant effect on income inequality in regencies/municipalities of South Sulawesi Province.

c) Coefficient of Determination Test

Table 7. Coefficient of Determination Test Results

R-squared	0.426397	Mean dependent var	0.372888
Adjusted R-squared	0.359387	SD dependent var	0.032314
SE of regression	0.025863	Akaike info criterion	-4.369985
Sum squared residual	0.426397	Schwarz criterion	-3.992916

Source: Data attached in the author's thesis

In the coefficient of determination test, if the number of independent variables exceeds two, the value used is Adjusted R-Square to eliminate bias due to the addition of variables. Based on the analysis results (Table 10), the Adjusted R-Square value of 0.359 indicates that 35.9 percent of the variation in income inequality in regencies/municipalities of South Sulawesi Province can be explained by the variables in the model, namely economic growth and HDI. Meanwhile, the remaining 64.1 percent is influenced by factors outside the model that are not examined in this study.

Although the Adjusted R-Square value is relatively low, this does not necessarily indicate that the regression model built is invalid or inappropriate to use. In line with Goldberger's view cited in Gujarati & Porter (2009:206), the coefficient of determination (R^2) has a limited role in regression analysis and is not the main benchmark for assessing model quality. In the context of the classical linear regression model (CLRM), a low R^2 does not necessarily indicate model weakness, and vice versa.

Discussion of Results

The Effect of Economic Growth and Human Development Index (HDI) on Income Inequality in Regencies/Cities in South Sulawesi Province from 2014 to 2023 (Simultaneous).

Based on the results of the F-test on the multiple regression model, the calculated F-value was 6.109 with a significance level of 0.000. The significance value is less than 0.05, so the null hypothesis (H_0) is rejected and the hypothesis (H_1) is accepted. This means that simultaneously, the variables of economic growth, number, and HDI have a significant effect on income inequality in the districts/cities of South Sulawesi Province. These results indicate that the three variables are related in explaining variations in income inequality in the study area.

These results indicate that income inequality is a complex phenomenon and cannot be explained by a single variable. Rather, it is the result of the interaction between economic growth dynamics and the HDI. These three variables complement each other in explaining variations in inequality levels across regions in this province.

Theoretically, this finding is supported by several theories of income inequality by Simon Kuznets. The Kuznets Curve (Kuznets, 1955) states that in the early stages of economic growth, income inequality tends to increase because the shift from the traditional (rural) sector to the modern (urban) sector creates income disparities between social groups. However, as the economy develops and the quality of human resources improves through education, health, and social development, inequality will decrease because economic opportunities become more equal. Therefore, this finding supports Kuznets' view that the interaction between economic growth, demographic dynamics, and human development significantly influences income distribution patterns in a region.

These results are also supported by empirical findings from various previous studies.Yoertiara & Feriyanto (2022)found that economic growth and the Human Development Index (HDI) simultaneously influence income inequality in provinces on Java Island. Similar findings were conveyed by(Silaban et al., 2024) which states that income inequality is influenced by a combination of economic growth and the quality of human resources. In addition, research(Rozi & Atmanti, 2024)shows that economic growth and the HDI jointly influence income inequality. A similar point was also made by(Handoyo et al., 2020).

The Effect of Economic Growth on Income Inequality in Regencies/Cities in South Sulawesi Province from 2014 to 2023 (Partial).

The test results indicate that economic growth does not have a significant effect on income inequality in the regencies/cities of South Sulawesi Province. This is shown by the t-test significance value of 0.213 > 0.05. Therefore, the increase in economic growth in the regencies/cities of South Sulawesi Province does not affect the increase or decrease in income inequality. Hence, although economic growth occurs, its impact on income inequality is not statistically significant within the employed model.

This result is not aligned with Simon Kuznets' theory, known for the Inverted U-Curve hypothesis. According to this theory, in the early stages of economic development, economic growth tends to increase income inequality because the benefits of growth are mostly enjoyed by high-income groups who have access to capital, education, and economic opportunities. However, over time, as per capita income increases, a region enters a more advanced stage of development, where the economic structure begins to shift from agriculture to industry and services, and access to education and employment expands. These changes encourage a more equitable income distribution, ultimately reducing inequality.

Thus, the inconsistency of this research result with Kuznets' theory may suggest that economic dynamics in South Sulawesi's regencies/cities do not entirely follow the general pattern described by the theory. In the context of South Sulawesi, the short-term increase in GRDP per capita more likely reflects average aggregate economic growth rather than equitable welfare. This means that although a region experiences growth, the benefits are not necessarily felt across all social strata. Such growth is often only enjoyed by certain groups, such as large business owners in urban areas, while rural communities or those in the informal sector are left behind.

Equitable distribution of development outcomes requires time and is highly dependent on policy quality, infrastructure equity, education, and access to economic opportunities. Structural inequalities, such as disparities in public services and education, cannot be resolved merely by increasing average income figures. Therefore, in the short term, increasing per capita GRDP alone is not sufficient to significantly reduce inequality. Economic growth will have a greater impact when accompanied by inclusive development and fair distribution.

This research finding is consistent with Firmansyah & Muchtolifah (2023), who showed that economic growth has no effect on income inequality in Indonesia. According to their study, the transformation from a traditional to a modern economy takes a long time, and initial growth tends to be concentrated in certain sectors (such as modern industry) that are not yet able to absorb labor widely. Thus, economic growth alone is insufficient without equitable access and improved human resource quality. A similar result was found by Zusanti et al. (2020), who concluded that economic growth does not influence income inequality

The Effect of HDI on Income Inequality in Regencies/Cities in South Sulawesi Province from 2014 to 2023 (Partial)

Based on the partial test results, it was found that HDI has a negative and significant effect on the level of income inequality in the regencies/cities of South

Sulawesi Province during the period 2014 to 2023. The regression coefficient value of HDI is -0.005, indicating that every 1 percent increase in HDI will reduce income inequality by 0.005 index points, assuming all other independent variables remain constant.

This study shows that a high HDI in a region indicates success in improving education, health, and a decent standard of living. In other words, when people have access to quality education, adequate healthcare, and stronger economic capabilities, their chances of earning a decent income also increase. Consequently, the gap between low- and high-income groups can be reduced. This also encourages more equitable social and economic mobility, thereby reducing income inequality in South Sulawesi Province.

This condition aligns with the objectives of the Sustainable Development Goals (SDGs), particularly Goal 4 (Quality Education), Goal 8 (Decent Work and Economic Growth), and Goal 10 (Reduced Inequalities). An increase in HDI reflects progress in providing basic services and expanding inclusive economic opportunities, ultimately supporting more equitable and sustainable development in South Sulawesi.

Moreover, this result supports Human Capital Theory, which explains that investments in education and health enhance the quality of human resources, thus increasing productivity and income. In regions with high HDI, people have better access to education, healthcare, and economic opportunities. This drives equitable development, reduces the income gap between rich and poor, and narrows income inequality across groups and regions.

This research finding is consistent with Firmansyah & Muchtolifah (2023), who found that HDI has a negative and significant effect on income disparity in the Yogyakarta Province. They argued that increased access to education and health services can improve human capital quality, allowing individuals to obtain better-paying jobs and thus reduce income inequality. Similar findings were reported by Zusanti et al. (2020), who concluded that HDI plays an essential role in reducing interregional inequality on Java Island during the 2010–2018 period, suggesting that equitable human development is key to reducing regional disparity.

A similar result was also found by Lala et al. (2023), whose research indicated that HDI increases in line with regional progress in providing access to education and healthcare. This directly impacts the improvement of human resource quality, which in turn enhances individuals' capacity to earn a decent income, thereby reducing income inequality. Other similar findings were also noted by Aprilianti & Harkeni (2021) and Yoertiara & Feriyanto (2022), who generally concluded that HDI has a negative and significant effect on income inequality levels.

Implications

This study provides a theoretical contribution to the field of development economics by showing that economic growth has no significant effect on income inequality. This finding challenges the Kuznets Hypothesis and indicates that the growth pattern in South Sulawesi is not yet inclusive. In contrast, the negative and significant impact of the Human Development Index (HDI) on inequality supports Human Capital Theory,

emphasizing the crucial role of human development in fostering more equitable growth.

Practically, the results highlight the importance of development policies that focus not only on increasing GDP per capita but also on ensuring equitable access to education, healthcare, and economic opportunities. These findings can serve as a reference for the formulation of regional development plans (RPJMD) and fiscal policies to support the achievement of the Sustainable Development Goals, particularly Goal 10: reducing inequality.

CONCLUSION

Based on the discussion results, the following conclusions can be drawn:

1) Economic growth and the Human Development Index (HDI) have a simultaneous effect on income inequality in the regencies/cities of South Sulawesi Province.
2) The Human Development Index has a negative and significant partial effect on income inequality in the regencies/cities of South Sulawesi Province. Meanwhile, economic growth does not have a significant partial effect on income inequality in the regencies/cities of South Sulawesi Province.

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