



Income Inequality Amidst Economic Growth: A Democratic Intervention Analysis in Indonesia's Urban Context

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Abstract. Income inequality remains a pressing issue in Indonesia, particularly in urban areas, despite notable economic growth. This study examines how democracy moderates the relationship between economic growth and income inequality in Indonesia's urban context. Using panel data from 33 provinces between 2014 and 2023, the research applies Moderated Regression Analysis (MRA) to assess the interaction of Economic Growth (X), Income Inequality (Y), and Democracy (Z). The results show that while economic growth alone does not significantly reduce income inequality, democracy plays a crucial role in moderating this relationship, enhancing the positive impact of growth on reducing inequality. This suggests that higher levels of democracy can make economic growth more inclusive by distributing its benefits more equitably. The findings emphasize the importance of maintaining strong democratic institutions to address the challenges of wealth disparity in rapidly growing economies like Indonesia. This study provides actionable insights for policymakers aiming to reduce inequality through more democratic governance frameworks.

Keywords: Income Inequality, Economic Growth, Democracy, Moderated Regression Analysis (MRA)

1 Introduction

Income inequality represents a significant challenge for many developing countries, including Indonesia. This concern is critical as income inequality has the potential to exacerbate social conflict within society [1]. The social envy arising from inequitable income distribution is frequently a primary driver of criminal behavior and other deviant actions, which in turn can undermine political stability, impede economic growth, and diminish employment opportunities, ultimately perpetuating and widening income inequality. This situation exemplifies an economic vicious cycle that is challenging to disrupt.

Although Indonesia has recorded significant economic growth in recent decades, income distribution inequality remains pronounced [2]. Disparities in income distribution are particularly evident in urban areas, where stark differences exist between individuals with greater access to economic resources and those who are

marginalized. This is evidenced by the income inequality in urban communities in Indonesia, as indicated by the average Gini index, which has remained relatively high at 0.407 over the past 15 years. Moreover, in the last five years since 2019, income inequality, as measured by the Gini index, has continued to rise. Concurrently, foreign investment in Indonesia has experienced substantial growth (see Fig. 1).



Fig. 1. The Gini ratio of urban areas in Indonesia over the past 15 years (2009-2023)

Massive rural-to-urban migration has generated complex economic dynamics within urban areas of Indonesia [3]. While these urban centers have emerged as hubs of economic growth, they have simultaneously witnessed the rise of inequalities in income distribution and access to resources [4]. The rapid economic expansion observed in Indonesia's urban areas has not been matched by an equitable distribution of public welfare; rather, it has intensified income inequality among various social groups [5]. This phenomenon underscores that swift economic growth has not facilitated a fair income distribution among urban residents. Such disparities prompt inquiries into the factors that influence the equitable distribution of benefits arising from economic growth, particularly within the context of an increasingly intricate and integrated economy [6]. One critical factor highlighted in political economy research is the role of democracy in regulating and balancing income distribution during periods of economic growth, as democratic systems promote public engagement in a more inclusive policymaking process [7].

Generally, the advancement of a country's democracy is assessed using a democracy index. According to Diamond [8], a democracy index quantifies the quality and extent of a country's democratic governance through a set of indicators that encompass civil liberties, political freedoms, political participation, and the fairness of the political system. An increase in the democracy index from one year to the next serves as a strong indicator of progress in democratic development.

Although the democracy index in Indonesia indicates a positive development trend, the current democratic system still presents fundamental challenges. According to Edward Aspinall [9], Indonesia's newly democratized political system is characterized by clientelism; at every level, formal political institutions are overshadowed by informal and personal networks through which material benefits and favors are distributed.

The democratic climate characterized by clientelism restricts the majority of the population from participating in political contestation [10]. This environment predominantly favors a limited subset of individuals with the financial resources necessary to compete for political power within both the executive and legislative branches. Consequently, this leads to a systemic injustice in political representation [11]. Political power becomes concentrated among a small elite with financial capital, resulting in the emergence of an oligarchy. In this context, the voices and interests of the majority remain inadequately represented.

Recent literature has revised the understanding of the relationship between economic growth and income inequality, particularly in developing countries. Piketty asserts that in contemporary economies, wealth tends to accumulate at a rate that exceeds labor income, resulting in increased income inequality [12]. Additionally, researchers such as Lakner and Milanovic indicate that global inequality continues to rise despite overall economic growth, a trend that is especially evident in urban areas of developing countries [13]. In the Indonesian context, the rapid economic growth following reform has exacerbated inequality, particularly in urban sectors, where economic opportunities are predominantly controlled by the upper class [14].

Modern democratic theory, particularly in the context of inclusive institutions as articulated by Acemoglu [15], posits that nations characterized by inclusive democratic institutions are likely to formulate more equitable economic policies. Democracy facilitates increased public engagement in policy-making processes, thereby fostering income redistribution and promoting equity. Additionally, research conducted by Inglehart [16] corroborates this perspective, indicating that more democratic societies are inclined to endorse inclusive public policies and reduce income inequality.

In this context, a comprehensive understanding of how the democratic system moderates the relationship between economic growth and income inequality is essential [17]. This study aims to address the existing knowledge gap by investigating the intricate interactions between economic and political factors in achieving equitable income distribution. Consequently, an interdisciplinary approach that integrates economic and political perspectives is necessary to examine how democracy, as a participatory governance system, can promote a more equitable distribution of the benefits derived from economic growth in the urban context of Indonesia, where economic and political dynamics are rapidly evolving, yet are not consistently accompanied by income equality [18]. Furthermore, understanding how democracy can serve as an effective policy instrument to mitigate inequality in high-growth economies is critical, with the ultimate objective of generating insights to inform more inclusive development policies in Indonesia.

2 Method

This study employs panel data from 33 provinces in Indonesia, covering a 10-year observation period from 2014 to 2023. The data utilized are secondary data sourced from the Central Bureau of Statistics of the Republic of Indonesia. This research is classified as quantitative and aims to measure, analyze, and interpret phenomena based on numerical data. The analytical technique applied is Moderated Regression

Analysis (MRA), which assesses whether the relationship between Economic Growth (X) and Income Inequality (Y) is influenced or moderated by Democracy (Z), acting as a moderator variable. In MRA, the moderating variable modifies the strength or direction of the relationship between the independent variable and the dependent variable. The operational definition of each variable is as follows:

- Income Inequality (Y): The measurement of income inequality in this study utilizes the Gini Index value for urban areas across 33 provinces in Indonesia. The data is obtained from poverty and inequality indicators by province and region, as published by the Central Bureau of Statistics (BPS) for the period 2014-2023.
- Economic Growth (X): Economic growth is quantified by the growth rate of Gross Regional Domestic Product (GRDP) per capita at constant 2010 prices, expressed in percentage terms, and categorized by province. The data source is derived from Indonesian statistical publications provided by BPS for the period 2014-2023.
- Democracy (Z): The assessment of the democratic system is based on the Indonesian Democracy Index (IDI), which captures the level of democratic development across all provinces in Indonesia, considering various aspects of democracy. This data is sourced from publications by BPS for the period 2013-2022.

3 Result

3.1 Simple Regression (Utilizing Economic Growth as a Predictor) The results of the initial regression model are as follows.

Table 1. Coefficient of Determination Test Results (R2)

Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.060 ^a	.004	.001	.04184

0. Predictors: (Constant), Economic Growth

The Model Summary table indicates an R-squared value of 0.004, signifying that merely 0.4% of the variation in the Gini Index is attributable to Economic Growth.

Table 2. Simple Regression Analysis

Mode	Unstandarize		Standarize		t	Sig.
	B	Std. Error	Beta			
1	(Constant	.36	.00		96.28	.00

	5	4	3	0
Economic Growth	.00	.00	.060	1.080
	1	1		1

0. Dependent Variable: Index Gini

Source: Output SPSS, 2024

Based on the Coefficients table above, a straightforward regression equation may be formulated as follows:

$$Y=0.365+0.001X \quad (1)$$

Y = Gini Index (Income Inequality)

X = Economic Growth

The constant coefficient (intercept) is 0.365.

The coefficient of economic growth is 0.001.

The p-value for the Economic Growth variable is 0.281 (>0.05), signifying that the impact of economic growth on income inequality is not statistically significant in this model.

3.2 Regression Analysis using Democracy as a Moderating Variable.

Table 3. Regression analysis with democracy as a moderating variable

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta			
1	(Constant)	.33	.00			39.70	.00
		4	8			4	0
	Economic Growth	-.01	.00	-1.156		-3.926	.00
		4	4				0
	Democracy	.00	.00	3.616		4.176	.00
	0	0				0	
	XZ	.00	.00	3.945		4.195	.00
		0	0				0

b. Dependent Variable: Index Gini

Source: Output SPSS, 2024

The regression equation may be derived from the model output data with the moderator (Democracy) as indicated in the Coefficients table above.

$$Y=0.334-0.014X+0.000Z+0.000(XZ) \quad (2)$$

Y = Gini Index (Income Inequality)

X = Economic Growth

Z = Democracy

XZ = Interaction between Economic Growth and Democracy

Table 4. Coefficient of Determination Test Results (R²)with democracy as a moderating variable

Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.243 ^a	.055	.046	.04092

0. Predictors: (Constant), Economic Growth

The Adjusted R-squared score is 0.046, signifying that the model accounts for approximately 4.6% of the variance in income inequality. This indicates that the moderation model is superior to the simple regression model in elucidating the variability in the data.

3.3 Importance of the Model:

Table 5. Analysis of Varians with democracy as a moderating variable

Mode		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.031	3	.010	6.269	.000 ^b
	Residual	.544	325	.002		
	Total	.576	328			

0. Dependent Variable: Index Gini
0. Predictors: (Constant, XZ, Economic Growth, Democracy)

The ANOVA table for the moderation model reveals an F-statistic of 6.269 and a p-value of 0.000 (<0.05), signifying that the entire model is statistically significant.

4 Discussion

1. The constant coefficient is 0.334, indicating that if both economic development and democracy are absent, the Gini index (representing income disparity) is anticipated to be 0.334.
2. The p-value for the Economic Growth variable is 0.281 (>0.05), signifying that economic growth does not directly influence income disparity.
3. The interaction coefficient (XZ) is significant, with a p-value of 0.000, indicating that democracy substantially moderates the relationship between economic growth and income disparity. This outcome indicates that a higher level of democracy correlates with a more pronounced association between economic growth and income disparity.
4. The positive interaction coefficient (0.000) signifies that democracy enhances the impact of economic growth on income disparity.

5 Conclusion

The findings of the Moderated Regression Analysis indicate that democracy moderates the association between economic growth and income disparity in Indonesia. While economic development alone may not substantially influence inequality, its impact on income inequality becomes more pronounced and significant when tempered by democratic governance. This underscores the significance of sustaining a robust democratic environment in Indonesia, as a healthy democracy can actualize justice about wealth equality.

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