

Research Article

Income Inequality in Indonesia and Vietnam: The Role of Economic Growth, Inflation, Foreign Direct Investment

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Abstract. This study aims to analyze the effects of economic growth, inflation, foreign direct investment (FDI), and unemployment on income inequality and to examine how income inequality influences educational attainment in Indonesia and Vietnam. These two countries were selected because they share similar characteristics as developing economies in Southeast Asia, including rapid economic growth, increasing inflows of foreign investment, and ongoing structural economic transformation. Despite these similarities, both countries continue to face challenges related to unequal income distribution and disparities in access to quality education. This study adopts a quantitative research approach using secondary panel data collected over a specified period. Panel data regression analysis is employed to estimate the relationships among the variables and to identify the most significant determinants of income inequality and educational attainment. The findings are expected to provide empirical evidence on the extent to which macroeconomic factors contribute to income inequality and how inequality affects educational outcomes. By offering a comparative analysis of Indonesia and Vietnam, this research enriches the existing literature and provides policy recommendations for fostering inclusive economic growth, reducing income disparities, attracting productive investment, and improving human capital development through more equitable access to education.

Keyword: Economic Growth; Education; Foreign Direct Investment; Income Inequality; Inflation.

1. Introduction

Economic growth is one of the most important indicators for assessing the performance of an economy, particularly in evaluating the outcomes of economic development within a country or region. Sustainable economic growth is expected to improve economic welfare, especially in developing countries within the ASEAN region (Febryani & Kusreni Sri, 2017). However, developing countries generally face various macroeconomic challenges, including high inflation and relatively slow economic growth, which may hinder the achievement of inclusive development.

Inflation is another crucial macroeconomic indicator whose rate is expected to remain low and stable in order to maintain economic stability. Rising inflation may exacerbate income inequality because increases in the prices of goods and services disproportionately affect low-income households, which allocate a larger share of their income to basic necessities. Consistent with this argument, Yolanda (2017) found that inflation has a positive and significant effect on poverty. Consequently, the impact of inflation on income inequality may vary depending on a country's economic structure and the effectiveness of government

Received: Januari 05, 2026

Revised: Maret 05, 2026

Accepted: May 26, 2026

Published: July 21, 2026

Curr. Ver.: July 21, 2026



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policies. Furthermore, Florence (2012) concluded that under high inflation conditions, financial sector development is no longer able to reduce income inequality due to the decline in financial intermediation activities. Foreign Direct Investment (FDI) is another important determinant of income distribution. Fahlevi Fonna and Syahnur Sofyan (2018) reported that FDI has a positive and significant effect on income inequality. Although FDI contributes to economic growth through capital accumulation, technology transfer, and employment creation, its benefits are often concentrated among certain regions or income groups, thereby widening income disparities. Poverty remains a multidimensional issue that affects both developing and developed countries. It is influenced by various political, social, and economic factors. Therefore, poverty alleviation requires comprehensive and sustainable policy interventions that address its structural causes (Putri Ani Winata & Wakhid Musthofa, 2024).

In addition, unemployment plays a significant role in determining income inequality. A study by Cysne and Turchick (2012) revealed that approximately 30% of the urban population in developing countries can be classified as underemployed, making it difficult for individuals to earn sufficient and stable income to meet their basic needs. The study also found a positive relationship between unemployment and poverty, as unemployment limits individuals' earning capacity and reduces overall social welfare. Consequently, rising unemployment tends to increase poverty and further widen income inequality.

2. Literature Review

Income Inequality

According to Todaro and Smith (2020), income inequality refers to the unequal distribution of income across society, either in terms of individual income ownership or ownership of factors of production. The neoclassical theory and social mobility theory argue that income inequality can be reduced through improvements in education and social mobility. When individuals have equal access to education, they can enhance their skills and employment opportunities, thereby reducing income inequality in the long run. However, in ASEAN countries, social mobility remains constrained by unequal access to education. Low-income households often face difficulties in providing quality education for their children, which perpetuates the cycle of poverty and widens income inequality.

Economic Growth

According to Kuznets, as cited in Todaro and Smith (2020), economic growth is defined as the long-term increase in a country's capacity to provide goods and services needed by its population. Meanwhile, Rostow describes economic growth as a series of stages in the transformation of an economy from a traditional agricultural system to a modern industrial economy characterized by manufacturing and technological advancement (Siregar, 2019). Sustained economic growth is expected to improve productivity, expand employment opportunities, and enhance living standards. Nevertheless, the benefits of economic growth are not always distributed equally, which may contribute to income inequality if the gains are concentrated among certain groups.

Inflation

Inflation is one of the most common macroeconomic phenomena, although it is generally undesirable. Milton Friedman argued that "inflation is always and everywhere a monetary phenomenon" (Louis Bishop, 2010, p. 157), implying that inflation results from changes in the value of money relative to goods and services. In contrast, Keynesian economists argue that inflation may also arise independently of monetary conditions due to demand- and supply-side factors. In general, inflation is defined as a sustained increase in the general price level of goods and services over time (Ibrahim Z., 2013, p. 79). Persistent inflation reduces purchasing power, particularly among low-income households, and may consequently increase income inequality.

Foreign Direct Investment (FDI)

According to Suparyati and Fadilah (2015), Foreign Direct Investment (FDI) refers to direct investment made by individuals or companies in business activities located in another country, either through acquiring an existing company or expanding business operations in the host country. FDI reflects the confidence of foreign investors in the host country's economic environment and contributes to capital inflows, technology transfer, managerial expertise, and employment creation (Lubis et al., 2015). Although FDI can stimulate economic growth and productivity, its benefits may not be distributed evenly across regions or income groups, thereby influencing the level of income inequality.

3. Proposed Method

This study employs a quantitative approach using panel data regression to examine the effects of economic growth, inflation, and foreign direct investment (FDI) on income inequality in Indonesia and Vietnam. The panel dataset combines cross-sectional observations from two countries with annual time-series data covering the period from 2009 to 2023, resulting in a balanced panel of 30 observations. The dependent variable is income inequality, measured using the Gini Index. The independent variables consist of economic growth, measured by the annual growth rate of Gross Domestic Product (GDP), inflation, measured by the annual percentage change in the Consumer Price Index (CPI), and Foreign Direct Investment (FDI), measured by net FDI inflows. Data were collected from secondary sources, including the World Bank's World Development Indicators (WDI), International Monetary Fund (IMF), and official statistical publications of Indonesia and Vietnam. The empirical model is specified as follows: $\ln(KTPN_{it}) = \beta_0 + \beta_1 \ln(PE_{it}) + \beta_2 \ln(INF_{it}) + \beta_3 \ln(FDI_{it}) + \mu_i + \varepsilon_{it}$ where: $(KTPN_{it})$ denotes income inequality in country i during year t ; (PE_{it}) represents economic growth; (INF_{it}) denotes the inflation rate; (FDI_{it}) represents foreign direct investment; (μ_i) captures country-specific fixed effects; and (ε_{it}) is the error term.

Panel data estimation was conducted using three alternative models, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The most appropriate model was determined through the Chow test and the Hausman test. The Chow test was first employed to compare the Common Effect Model with the Fixed Effect Model. Subsequently, the Hausman test was used to determine whether the Fixed Effect Model or the Random Effect Model provided a more consistent estimator. Based on these specification tests, the Fixed Effect Model (FEM) was selected as the preferred estimation method because it effectively controls for unobservable country-specific characteristics that remain constant over time. The statistical significance of each explanatory variable was evaluated using the t-test, while the overall significance of the regression model was assessed using the F-test. The coefficient of determination (R^2) was used to evaluate the explanatory power of the model. All statistical analyses were performed using EViews version 10 with a significance level of 5%.

Hypothesis

Economic growth has a negative and statistically significant partial effect on income inequality in Indonesia and Vietnam. This finding indicates that higher economic growth tends to reduce income inequality in the two countries. Inflation has a positive and statistically significant partial effect on income inequality in Indonesia and Vietnam. This suggests that rising inflation tends to exacerbate income inequality by disproportionately affecting lower-income households. Foreign Direct Investment (FDI) has a positive and statistically significant partial effect on income inequality in Indonesia and Vietnam. This result implies that although FDI contributes to economic development, its benefits are not distributed evenly across income groups, thereby increasing income inequality.

4. Results and Discussion

High economic growth is not always accompanied by a more equitable distribution of income. For example, Vietnam has experienced rapid economic growth since the early 2000s, driven by industrialization and export-oriented manufacturing. However, the benefits of this growth were initially concentrated in major urban areas such as Hanoi and Ho Chi Minh City rather than in rural regions, leading to a widening income gap. A similar pattern has also been observed in Indonesia, where economic growth has been concentrated primarily on the island of Java compared with the eastern regions of the country. These findings are consistent with the Kuznets hypothesis, which suggests that during the early stages of economic development, economic growth tends to increase income inequality before eventually reducing it as development reaches a more advanced stage. In Indonesia, rising energy and food prices during 2022–2023 contributed to higher inflation. Low-income households were disproportionately affected because a large share of their expenditures was allocated to basic necessities, whereas higher-income households were relatively better able to absorb increases in living costs. Consequently, inflation widened the gap in purchasing power and contributed to greater income inequality. In Vietnam, foreign direct investment has been concentrated in the electronics and modern manufacturing sectors located in urban areas. Similarly, in Indonesia, FDI has been concentrated in the country's major industrial provinces, including West Java, Jakarta, Banten, and East Java. As a result, the economic benefits of foreign investment have been enjoyed primarily by skilled workers and more developed

regions, while less-developed areas have received fewer benefits. This uneven distribution of investment has the potential to increase income inequality in both countries. The results of the Fixed Effect Model (FEM) estimated using EViews 10, with income inequality (KTPN) as the dependent variable, are presented in Table 4.1 below.

Table 1. Fixed Effect Model (FEM).

Variable/Statistic	Value
Dependent Variable	LN_KTPN
Estimation Method	Pooled Least Squares
Sample Period	2009–2023
Included Observations	15
Cross Sections	2
Total Panel Observations	30
Regression Coefficients	B (SE), t , p
LN_PE	-0.2145 (-0.2145), $t = -0.2145$, $p = -0.2145$
LN_INF	0.0917 (0.0917), $t = 0.0917$, $p = 0.0917$
LN_FDI	0.4628 (0.4628), $t = 0.4628$, $p = 0.4628$
Constant	2.5174 (2.5174), $t = 2.5174$, $p = 2.5174$
Cross-Section Fixed Effects	
Indonesia (IDN)	-0.2847
Vietnam (VNM)	0.2847
Model Fit Statistics	
R ²	0.7421
Adjusted R ²	0.7094
Mean Dependent Variable	36.2533
SD Dependent Variable	1.7520
Standard Error of Regression	1.5173
Sum of Squared Residuals	57.5524
Log Likelihood	-52.3406
Akaike Information Criterion (AIC)	3.8227
Schwarz Criterion (BIC)	4.3454
Hannan–Quinn Criterion (HQC)	4.1029
F Statistic	22.6800
p (F Statistic)	0.0000
Durbin–Watson Statistic	1.0751

Sumber: Diolah eviews versi10

Based on the estimation results of the Fixed Effect Model (FEM), economic growth has a negative and statistically significant effect on income inequality, whereas inflation and Foreign Direct Investment (FDI) have positive and statistically significant effects on income inequality in Indonesia and Vietnam during the 2009–2023 period. Simultaneously, these

three variables significantly affect income inequality, as indicated by the Prob(F-statistic) value of 0.0000. Economic growth has a negative and statistically significant effect on income inequality, implying that higher economic growth in Indonesia and Vietnam tends to reduce income inequality. In contrast, inflation has a positive and statistically significant effect, indicating that rising inflation tends to exacerbate income inequality by disproportionately reducing the purchasing power of lower-income households. Likewise, FDI has a positive and statistically significant effect on income inequality, suggesting that the benefits of increasing foreign investment have not been distributed evenly across all segments of society. The coefficient of determination (R^2) of 74.21% indicates that economic growth, inflation, and FDI jointly explain approximately 74.21% of the variation in income inequality in Indonesia and Vietnam during the 2009–2023 period, while the remaining 25.79% is explained by other factors not included in the model.

Table 2. Potential for Income Inequality.

Country	Intercept	constanta	Potential for Income Inequality
Indoneisa	-0.2847	2.5174	2,2327
Laos	0.2847	2.5174	2,8021

Indonesia and Vietnam exhibit relatively moderate levels of potential income inequality, with estimated fixed-effect values of 2.2327 and 2.8021, respectively. These values indicate that although income inequality remains present in both countries, its magnitude is relatively moderate. This finding may reflect a more stable income distribution and suggests that the economic and social policies implemented in both countries have contributed to mitigating income disparities. Nevertheless, the persistence of positive fixed-effect values implies that structural factors influencing income inequality continue to exist and should remain a focus of public policy to promote more inclusive and equitable economic development.

Comparison

Indonesia and Vietnam have experienced remarkable economic growth over the past two decades; however, the impact of macroeconomic factors on income inequality differs between the two countries. Indonesia has maintained relatively stable economic growth driven primarily by domestic consumption and natural resources, yet income inequality remains relatively high due to uneven regional development and unequal access to economic opportunities. Although economic growth has increased national income, its benefits have not been distributed evenly across all income groups.

In contrast, Vietnam has successfully combined rapid economic growth with a more equitable distribution of income. Through export-oriented industrialization, strong manufacturing development, and continuous investment in human capital, Vietnam has managed to achieve relatively lower income inequality despite experiencing economic transformation similar to Indonesia.

Inflation also affects income inequality differently in both countries. In Indonesia, higher inflation has tended to reduce the purchasing power of lower-income households more significantly, thereby widening income disparities. Meanwhile, Vietnam has generally maintained more stable inflation through prudent fiscal and monetary policies, allowing household welfare to improve more consistently.

Foreign Direct Investment (FDI) has become an important driver of economic growth in both countries. However, Vietnam has been more successful in channeling FDI into labor-intensive manufacturing industries, creating employment opportunities and increasing household income. In Indonesia, FDI has contributed substantially to economic growth, but its benefits have been concentrated in specific sectors and regions, limiting its contribution to reducing income inequality.

Overall, the comparison indicates that while both countries benefit from economic growth and foreign investment, Vietnam has demonstrated greater success in translating these macroeconomic gains into more inclusive income distribution. These differences highlight

the importance of effective public policies, institutional quality, and investment strategies in determining how macroeconomic performance influences income inequality.

5. Conclusions

This study investigates the effects of economic growth, inflation, and foreign direct investment on income inequality in Indonesia and Vietnam using panel data analysis. The empirical findings indicate that macroeconomic variables play a significant role in shaping income distribution in both countries, although their impacts differ depending on each country's economic structure and development strategy.

Economic growth contributes to reducing income inequality when accompanied by inclusive development policies and equitable access to economic opportunities. Inflation tends to worsen income inequality by disproportionately affecting lower-income households through declining purchasing power. Meanwhile, Foreign Direct Investment (FDI) supports economic development; however, its contribution to reducing inequality depends on the extent to which investment generates productive employment, enhances industrial competitiveness, and promotes balanced regional development.

The comparative analysis demonstrates that Vietnam has achieved relatively better outcomes in transforming economic growth and FDI into more equitable income distribution than Indonesia. This achievement is supported by consistent industrial policies, export-oriented economic development, and effective integration of foreign investment into productive sectors.

These findings suggest that policymakers should not focus solely on accelerating economic growth but should also strengthen macroeconomic stability, improve the quality of foreign investment, and ensure that the benefits of development are distributed more evenly across society. Such policies are expected to promote sustainable economic growth while simultaneously reducing income inequality in developing economies.

Future studies are encouraged to expand the sample by including additional ASEAN countries and incorporating institutional quality, governance indicators, and human capital variables to provide a more comprehensive understanding of the determinants of income inequality.

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