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Economic and non-economic factors on gross domestic product growth that impacts income Distribution in Indonesia

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ABSTRACT

This study aims to examine and analyse the effects of economic and non-economic factors on Gross Domestic Product (GDP) growth and their implications for income distribution in Indonesia. Economic factors are represented by household consumption, domestic investment, foreign investment, government expenditure, and loans, while the non-economic factor is represented by the Indonesian Democracy Index. This research employs a quantitative approach using panel data. The data consist of secondary data covering 33 provinces in Indonesia (cross-section) over an annual period (time series) from 2014 to 2023. The data were collected through documentation and library research, utilizing official publications from government institutions and relevant scientific literature. The analytical tool used in this study is EViews version 13. The results indicate that household consumption, domestic investment, foreign investment, government expenditure, loans, and the Indonesian Democracy Index have both simultaneous and partial effects on GDP growth in Indonesia. Furthermore, GDP growth is proven to have a significant effect on income distribution in Indonesia, with a strong explanatory power of the model. Among the explanatory variables, government expenditure has the largest coefficient ($\beta = 0.373430$) and is statistically significant (p-value = $0.0430 < 0.05$), indicating that government expenditure is the most dominant factor in driving GDP growth.

INTRODUCTION

Economic growth is an important indicator and phenomenon that reflects the increasing economic value of a country or region over time. This includes increased production and economic development, which can be seen in the growth of gross domestic product (GDP) (Chongbang et al., 2025; Iskamto et al., 2025; Maryanti et al., 2023). Gross domestic product growth in developing countries often relies more on the industrial sector and natural resources. Factors influencing Indonesia's economic growth are inseparable from the social inequality in economic management, where large capital owners often have more opportunities than small and medium-sized business owners (Ratnasih & Bernaditos, 2022). As a developing country, Indonesia implements sustainable development, while adhering to the level of equity and economic stability. The following is a graph of Indonesia's economic growth.

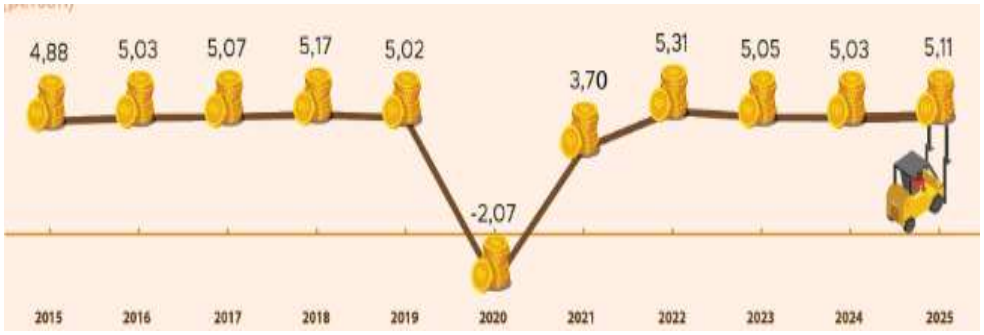

Figure. 1. GDP Growth in Indonesia
Source: (Central Statistics Agency, 2025)

Based on Figure 1 above, Indonesia's economic growth was stable between 2015 and 2019, ranging from 4.88 to 5.17 percent, reflecting controlled macroeconomic conditions prior to the external shocks. However, in 2020, the economy experienced a significant contraction of -2.07 percent due to the COVID-19 pandemic, which suppressed domestic and global economic activity. This impact was primarily reflected in weakening household consumption, investment, and trade. Subsequently, the economy demonstrated a consistent recovery process from 2021 to 2025. Growth increased to 3.70 percent in 2021 and returned to around 5 percent in 2022 to 2025. This pattern indicates that the Indonesian economy has successfully returned to its post-crisis medium-term growth trend, although it has not yet shown significant improvement. This stable growth underscores the importance of structural policies to ensure that economic growth is not only sustainable but also inclusive and impacts improving public welfare (Rasyidah et al., 2025; Rudiningtyas et al., 2025).

Economic growth is influenced by a combination of government policies and national economic activity, which in turn has implications for income distribution. Government spending and public debt management stimulate aggregate demand and expand production capacity, while interest rate policy influences consumption and investment through the cost of capital. Export and import activities increase output and economic efficiency, while domestic investment (PMDN) and foreign direct investment (PMA/FDI) strengthen capital accumulation, technology transfer, and job creation. GDP growth influences income distribution, but the direction and magnitude of this influence depend heavily on the structure and quality of economic growth. Inclusive and labour-intensive growth tends to improve income equality, while growth dominated by capital-intensive sectors has the potential to increase inequality. As Alamanda (2020) points out, increased GDP growth does not necessarily reduce inequality in society. This suggests that the benefits of growth have not been shared equally, meaning that the benefits are enjoyed primarily by the rich and leave the poor behind.

The phenomenon of economic growth is influenced by various interconnected factors. Numerous empirical studies, both in the form of national and international scientific articles, as well as various previous research, have identified various determinants that play a role in driving economic growth. This research focuses on several key factors grouped into economic and non-economic factors. The factors examined include the Indonesian Democracy Index, household consumption, investment consisting of Domestic Direct Investment (PMDN) and Foreign Direct Investment (PMA), government spending, and loans, as variables suspected of influencing economic growth. Furthermore, the resulting economic growth is analysed for its implications on income distribution, given that the quality of growth is a crucial factor in determining the level of equality in social welfare.
Numerous previous studies related to economic growth have been conducted, including (Mohammadi & Boccia. 2023), who stated that in developing countries, democracy alone does not trigger economic

growth and that real GDP per capita growth depends on other important structural variables such as social and physical infrastructure. Economic growth is a key indicator for assessing a country's development performance and success. These growth dynamics are influenced by economic factors such as household consumption, investment, and government spending, as well as non-economic institutional factors, including the quality of democracy, as reflected in the democracy index. This aligns with (Fadillah & Viphindrartin 2024), who stated that achieving inclusive and sustainable economic growth requires improvements in the quality of institutions and infrastructure, as well as increased efficiency in the use of public resources.

Increased economic growth has the potential to boost public welfare if supported by government policies oriented toward economic development. Government spending and investment need to be efficiently directed toward the creation of sustainable strategic projects to not only increase output but also improve income distribution through expanding employment opportunities and equitable distribution of development benefits. Good economic growth can be indicated by a healthy GDP, or gross domestic product. Research by (Ratnasih & Yolanda. 2018) found that simultaneously, the financial sector (interest rates, rupiah exchange rate appreciation, access to expectations, asset price channels, and access to credit) and capital significantly influence gross domestic product. However, a t-test showed that the interest rate variable had a positive but insignificant effect on gross domestic product. Furthermore, economic growth in developing countries, including the Philippines, is driven more by consumption, both household and government consumption, than by investment (Lumabao et al., 2022). A country's economy can grow if supported by sustainable economic growth. One indicator that can be used to measure economic growth is Gross Domestic Product (GDP) at the national level or Gross Regional Domestic Product (GRDP) at the regional level. All government activities, both directly and indirectly, significantly impact economic growth. A favourable investment climate is essential to achieving stable economic growth, as investment is the primary source of capital for building a stable economy.

A similar trend is evident in Indonesia, where there is a causal relationship between domestic and foreign direct investment (PMDN) and GDP in the 2014-2023 period. Based on this data, domestic investment plays a relatively more stable role in driving economic growth, while foreign investment contributes through increased productivity and technology transfer, although its effects are more sensitive to global economic dynamics. According to (Anita et al. 2023), increasing investment and net exports, together or synergistically, have a greater potential to drive higher economic growth. Therefore, efforts to increase economic growth can be achieved through efforts to increase investment and net exports, which have been shown to have a positive effect together. Government spending that can increase GDP growth is productive spending, particularly capital expenditure, spending on human resource development, and spending that supports the investment climate. Conversely, consumptive and inefficient spending tends to have a limited impact on economic growth. This is in line with the research findings of (Purnomo et al. 2024), which states that productive government spending can boost economic growth, particularly government spending in the areas of health, education, infrastructure, and so on.

The overview of Indonesian democracy index data, household consumption, domestic investment, foreign investment, government spending and loans in Indonesia in 2014 - 2023 is presented in the following table:

Table 1.
The Determinants of Economic Growth in Indonesia
2014-2023

Years	IDI (%)	Household Consumption (%)	DDI (%)	FDI (%)	Government Expenditure (%)	Loans (%)	Income Distribution (Scale)
2014	9,3	11,2	21,8	13,7	9,6	24,8	0,40
2015	(0,3)	9,7	15,0	(4,6)	12,8	26,8	0,40
2016	(3,7)	8,3	20,4	(0,7)	5,2	27,9	0,39
2017	2,9	8,5	21,3	10,7	4,5	29,2	0.38
2018	0,4	8,4	25,3	(9,0)	8,4	29,8	0,38
2019	3,4	8,4	17,6	(3,8)	4,2	30,2	0,38
2020	(1,7)	(0,7)	7,0	1,8	6.9	39,6	0,39
2021	5,7	3,8	8,1	8,4	5,3	40,7	0,38
2022	2,9	10,0	23,6	46,6	(4,0)	39.6	0,38
2023	(1,1)	9,3	22,1	10,3	3,4	38,1	0,39

Source: (Central Statistics Agency, 2025)

Table 1 presents data on Indonesia's democracy index from 2014 to 2023. The highest level was in 2014 at 9.3 percent, influenced by increased political participation and the quality of the democratic process following the national elections. The lowest level was in 2016 at -3.7 percent, reflecting a decline in the quality of democracy due to rising political tensions and social conflict in several regions.
Household consumption reached its highest growth rate in 2014 at 11.2 percent, driven by increased purchasing power and the effects of the election cycle, which stimulated economic activity. However, in 2020, household consumption experienced its deepest contraction of -0.7 percent as a direct impact of the COVID-19 pandemic, which depressed incomes and limited economic activity.
Domestic investment growth peaked at 25.3 percent in 2018, driven by increased confidence among domestic business actors and accelerated infrastructure development. Conversely, domestic direct investment (PMDN) growth was the lowest in 2020 at 7.0 percent, driven by increased economic uncertainty and investment delays due to the pandemic. Meanwhile, the highest increase in foreign investment occurred in 2022, at 46.6 percent, driven by the global economic recovery, industrial down streaming policies, and increased investment flows to strategic sectors. Meanwhile, the lowest growth in FDI occurred in 2018, at -9.0 percent, due to global economic uncertainty and the impact of the trade war, which reduced foreign investor interest.

Government spending reached its highest growth rate in 2015, at 12.8 percent, in line with expansionary fiscal policies focused on infrastructure development and economic stimulus. Conversely, in 2022, government spending contracted by -4.0 percent due to the impact of post-pandemic fiscal consolidation policies and reduced stimulus spending. Meanwhile, the highest government borrowing distribution occurred in 2021, at 40.7 percent, reflecting the increasing need to finance the budget deficit to support pandemic response programs and national economic recovery. The lowest borrowing value occurred in 2014, at 24.8 percent, when fiscal conditions were relatively stable and financing needs were still manageable. The highest income distribution ratio was recorded at 0.40, occurring in 2014 and 2015. This value indicates a relatively higher level of income inequality compared to subsequent years. Meanwhile, the lowest income distribution ratio was 0.38, occurring in 2017, 2018, 2019, 2021, and 2022. This figure reflects relatively lower and more stable income inequality during those periods. In 2016, 2020, and 2023, the income distribution ratio hovered around 0.39, indicating moderate inequality and falling between the highest and lowest values during the observation period.
Thus, referring to the explanation presented above, it is essential to demonstrate the influence of the index, investment, and net exports on economic growth in Indonesia.

LITERATURE REVIEW

Economic growth can be demonstrated by a sustained increase in the quality and quantity of aggregate production of goods and services for a country's population (Kuznets, 1955). Stable and sustainable economic growth is a desirable condition in efforts to improve public welfare. Population growth is generally accompanied by rising consumption levels, so public incomes need to grow to maintain economic balance. In addition to driving demand, population growth also demands expanded employment opportunities as the primary source of income.

Classical economists argue that several factors contribute to increased or decreased economic growth. According to Pentecost (2000), economic growth is influenced by household consumption, investment, and government spending, as the main indicators of aggregate demand. The effectiveness of this growth is highly dependent on economic stability and equitable income distribution. According to Pentecost, economic growth is influenced by economies of scale and specialization of production, which encourage efficiency and increased output. Market integration and trade strengthen this process through the concentration of economic activity. However, without appropriate policies, the resulting growth has the potential to widen inequality in income distribution. Furthermore, Krugman (1991) states that economic growth is driven by concentrated investment and production expansion due to economies of scale and market integration. Household consumption and government spending strengthen aggregate demand in growth centers. However, without equitable policies, this growth can lead to unequal income distribution.

According to Barro (1994), the relationship between democracy and economic growth is not linear. Moderate levels of democracy can support economic growth through the protection of property rights, rule of law, and policy stability. However, democracy that is too weak or too strong has the potential to reduce economic efficiency due to political instability, pressure from interest groups, and populist policies.

Household consumption is strongly influenced by income levels and economic stability. Increased consumption drives aggregate demand and GDP growth. However, unequal income distribution can weaken consumption's driving force for economic growth (Samuelson & Nordhau, 2009).

Economic studies explain investment as a key factor in the economic development process, particularly in developing countries. Investment plays a role in increasing production capacity, creating jobs, and accelerating structural economic transformation. Furthermore, investment—both domestic and foreign—drives capital accumulation and technology transfer, ultimately increasing economic growth and public welfare (Todaro & Smith, 2006).

In line with the aforementioned opinion, Mankiw (2008) argues that investment is a crucial component of capital formation, which determines the level of economic output. Within the neoclassical growth model, investment increases the capital stock, which in turn drives increases in production and national income. However, the level of investment is influenced by factors such as interest rates, savings, and government policy. The level of output and economic growth is primarily determined by aggregate demand, which consists of consumption, investment, and government spending. Consumption is influenced by income (the psychological law of consumption), while investment is determined by expected profits (marginal efficiency of capital) and interest rates. When aggregate demand weakens, the economy can experience unemployment and low growth. Therefore, government intervention is needed to stabilize the economy, primarily through fiscal policy, to stimulate aggregate demand and restore economic growth (Keynes, 1936).

Meanwhile, Musgrave (1959) in The Theory of Public Finance offered a more systematic conceptual framework regarding the government's fiscal role. He identified three main functions of the public sector: allocation, distribution, and stabilization. In the allocation function, government spending is necessary to provide public goods that cannot be efficiently provided by market mechanisms. In the distribution function, government spending plays a role in correcting income inequality through transfers and social programs. Meanwhile, in the stabilization function, fiscal policy is used to maintain

macroeconomic balance. Musgrave's approach affirms the normative legitimacy of government spending as an instrument of social welfare.
Irving Fisher (1933) in his article, "The Debt-Deflation Theory of the Great Depression," explained that excessive borrowing (debt) can trigger an economic crisis through the debt-deflation mechanism. This is because, when the economy's debt level is too high, when financial problems arise, debtors will engage in massive asset sales (distress selling) to pay off their obligations, which then depresses prices (deflation). This price decline increases the real value of debt, worsens the repayment burden, lowers profits, reduces investment and production, and increases unemployment. This process creates a mutually reinforcing cycle of contraction between debt and deflation. Thus, he emphasized that the imbalance in the debt structure and falling prices are key factors in deepening and prolonging economic depressions.

Max O. Lorenz (1905) introduced the Lorenz Curve as a graphical tool to depict the distribution of income in a society. This curve shows the relationship between the cumulative percentage of the population (from the lowest to the highest income groups) and the cumulative percentage of income they receive. The further the curve is from the diagonal line (the line of perfect equality), the higher the level of income inequality. Lorenz's concept became an important basis for analyzing economic inequality and was later used as the foundation for the development of the Gini coefficient. Meanwhile, Corrado Gini (1912) introduced the Gini coefficient as a quantitative measure to assess the level of inequality in income distribution within a society. Through a mathematical approach and the Lorenz curve, Gini demonstrated that inequality can be measured on a scale from 0 (perfect equality) to 1 (perfect inequality). This concept became an important basis for empirical analysis of income distribution and evaluation of economic equality policies.

Considering the characteristics and availability of the data, the number of observations in this study is considered representative enough to examine and assess the influence of the determinants of economic growth in the medium and long term. Therefore, this study uses GDP growth as the dependent variable, while the Indonesian Democracy Index, household consumption, domestic investment, foreign investment, government spending, and loans (debt) are treated as independent variables. Income distribution is placed as an intervening variable that bridges the relationship between the explanatory variables and economic growth. Therefore, the research concept is formulated as follows:

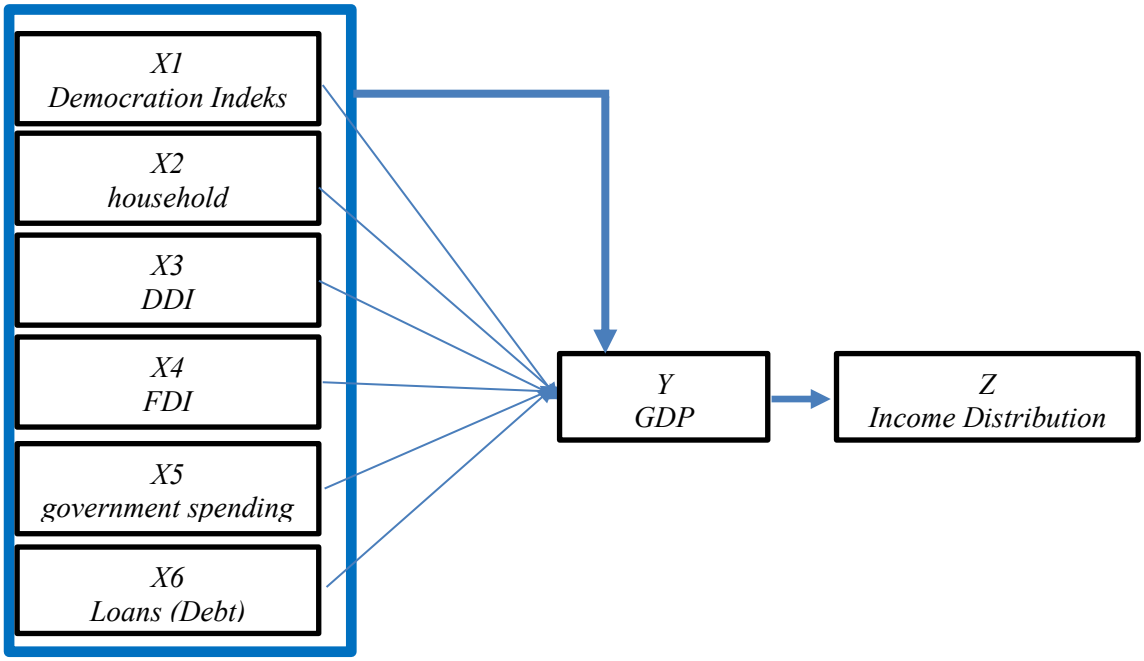

Figure 2. Schematic Research Design

Based on the research framework, this research design uses two model structures, presented as follows:

Model 1 :

$$\hat{Y} = \beta_0 - \beta_{1it} X_{1it} + \beta_{2\,it} X_{2\,it} + \beta_{3\,it} X_{3\,it} + \beta_{4\,it} X_{4\,it} + \beta_{5\,it} X_{5\,it} - \beta_{6\,it} X_{6\,it} + \varepsilon_{it}$$

$$Ln\ \hat{Y}it = \beta_0 - \beta_1 \ln X_{1it} + \beta_2 \ln X_{2it} + \beta_3 \ln X_{3it} + \beta_4 \ln X_{4it} + \beta_5 \ln X_{5it} - \beta_6 \ln X_{6it} + \varepsilon_{it}$$

Model 2 :

$$Z = \beta_{02} - \beta_{12} \hat{Y} + \varepsilon_{it}$$

$$Ln\ Z = \beta_{02} - \beta_{12} \ln \hat{Y} + \varepsilon_{it}$$

METHOD

Given the research problem, this study is a quantitative panel data study, using cross-sectional data for 33 provinces in Indonesia over an annual time series period from 2014 to 2023. The variables studied are the Indonesian Democracy Index, household consumption, domestic investment, foreign investment, government spending, and debt, Secondary data was collected through documentation and literature review techniques, sourced from the Indonesian Central Bureau of Statistics (https://www.bps.go.id), the Indonesian Ministry of Finance, and other relevant supporting data from 2014 to 2023. In the context of this study, the population includes all 33 provinces in Indonesia, with the criteria of complete data availability on the variables of economic growth, the Indonesian Democracy Index, household consumption, domestic investment, foreign investment, government spending, regional debt, and income distribution during the 2014–2023 period. In this study, the technique used was total sampling, or saturated sampling, a sampling method in which all members of the population serve as observation units. According to Sugiyono (2013), saturated sampling is applied when the population is relatively limited so that all elements of the population can be studied comprehensively. This study employed an explanatory research design, or hypothesis testing study, focused on analysing and testing the hypothesized relationships between previously formulated variables. This approach aims to explain causal relationships (cause and effect) in accordance with the conceptual model developed in the study. The analytical technique or method used in this study was panel data regression analysis, an econometric analysis method that utilizes combined cross-sectional data (several individuals/regions) and repeated time periods over a specific period. The analysis tool used by the researchers was EViews 13th Version software.

RESULT AND DISCUSSION

To summarize, as described above, the influence of the Indonesian Democracy Index, household consumption, domestic investment, foreign investment, government spending, and loans (debt) on Gross Domestic Product Growth, as well as their implications for income distribution in Indonesia, is presented in the table below.

Tabel 2 Regresi Data Panel Model – 1

Method: Panel Least Squares
Date: 09/15/25 Time: 14:58
Sample: 2014 2023
Periods included: 10
Cross-sections included: 33
Total panel (balanced) observations: 330

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.491748	3.145891	1.745689	0.0019
X1	-0.020234	0.513885	-0.039375	0.0086
X2	0.052400	0.344891	0.151932	0.0293
X3	0.048019	0.029260	1.641092	0.0019
X4	0.074640	0.028620	2.607970	0.0096
X5	0.373430	0.183746	2.032321	0.0430
X6	-0.099218	0.198579	-0.499641	0.0177

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.829931	Mean dependent var	1.504697
Adjusted R-squared	0.812431	S.D. dependent var	0.538129
S.E. of regression	0.468379	Akaike info criterion	1.431517
Sum squared resid	63.83932	Schwarz criterion	1.880501
Log likelihood	-197.2004	Hannan-Quinn criter.	1.610610
F-statistic	3.770630	Durbin-Watson stat	1.939765
Prob(F-statistic)	0.000000		

Source: Data processed by researchers, 2026

The table above shows the simultaneous influence of the Indonesian Democracy Index, household consumption, domestic investment, foreign investment, government spending, and debt on Gross Domestic Product growth. The strength and magnitude of this simultaneous influence are indicated by a multiple correlation coefficient R of 82.99% and a multiple determination coefficient R2 of 81.24%.

The Effect of the Indonesian Democracy Index, Household Consumption, Domestic Investment, Foreign Investment, Government Spending, and Debt on Gross Domestic Product Growth.

The results of this study indicate that the Indonesian Democracy Index, household consumption, domestic investment, foreign investment, government spending, and debt have a significant simultaneous and partial influence on Gross Domestic Product growth. Based on these predictor variables, both positive and negative, household consumption, domestic investment, foreign investment, and government spending have a positive influence on Gross Domestic Product growth. Meanwhile, the Indonesian Democracy Index and debt have a negative influence on Gross Domestic Product growth.

Based on the model estimation results, the variables that show the most dominant influence on Gross Domestic Product Growth are Foreign Investment and Government Expenditure. This is reflected in the relatively higher t-statistic values compared to other independent variables, namely 2.607970 for Foreign Investment and 2.032321 for Government Expenditure. These values indicate that these two variables have a stronger contribution in explaining variations in Gross Domestic Product Growth. This finding confirms that foreign investment flows and government spending play a significant role as

drivers of economic growth. Foreign investment has the potential to encourage increased production capacity, technology transfer, and job creation, while government spending functions as a fiscal stimulus that strengthens national economic activity. On the other hand, although not all are the most dominant variables, variables with positive coefficients, namely Household Consumption, Domestic Investment, Foreign Investment, and Government Expenditure, simultaneously show a constructive contribution to Gross Domestic Product growth. This indicates that the synergy between increased public consumption, expansion of domestic and foreign investment, and expansionary fiscal policy will produce a more optimal impact in driving Gross Domestic Product Growth.

The results of this study indicate that the model developed to analyze the influence of various factors on Gross Domestic Product growth has an excellent level of goodness of fit. This is reflected in the relatively high adjusted coefficient of determination, suggesting that the variables in the model are capable of explaining a significant portion of the variation in economic growth. However, from the perspective of policy development and empirical model refinement, these results do not preclude further research. There are a number of other factors that theoretically have the potential to influence Gross Domestic Product growth but were not included in this research model. Therefore, future studies could consider expanding the variables and using different methodological approaches to obtain a more comprehensive picture of the determinants of economic growth.
As an alternative framework for encouraging increased Gross Domestic Product growth, the model estimation results indicate that accelerated Gross Domestic Product growth can be achieved through strengthening Household Consumption, Domestic Investment, Foreign Investment, and Government Spending. These four variables have been shown to have positive coefficients and simultaneously contribute to increasing national output. These findings suggest that an integrated policy strategy, through increasing public purchasing power, strengthening the domestic investment climate, optimizing foreign capital flows, and increasing the effectiveness of government spending, has the potential to produce a more optimal impact in driving sustainable Gross Domestic Product growth.
The findings of this study are supported by several other research findings, including: (Densumite, 2024) who stated that a well-functioning political system with increased democratic accountability can positively contribute to higher levels of economic growth. Rasasi et al.'s (2021) study, "On the Causal Relationship between Household Consumption and Economic Growth in Saudi Arabia," states that the causality between economic growth and household consumption in Saudi Arabia is reciprocal. The dominance of the public sector, particularly the large government wage spending, increases public incomes during economic growth, thus driving consumption. The private sector's reliance on government spending and various social assistance programs also strengthens household consumption and aggregate demand.

Research by Hobongwana et al. (2023) shows that domestic investment influences long-term sectoral output growth in South Africa. Their estimates emphasize the importance of encouraging domestic investment as a driver of economic growth, in line with the Keynesian view that places investment as a primary determinant of output growth. To some extent, domestic investment has been shown to contribute to the expansion of output across economic sectors in South Africa.
In general, empirical findings indicate a positive correlation between economic growth (GDP) and FDI, which is not entirely consistent with the views of some development authorities. This relationship indicates that adequate FDI flows into Cambodia have contributed to increased economic growth. In addition to increasing capital, FDI also plays a role in technology transfer, improving workforce skills, and creating knowledge spillovers that strengthen domestic production capacity (Khun, 2019).
Tammar's (2021) research, entitled "The Impact of Government Spending on the Economic Growth of a Sample of Developing Countries Using Panel Data, Theoretical and Applied Economics," states that in both the short and long term, government spending has been shown to have a positive and significant relationship with economic growth in developing countries. This phenomenon can be explained through Keynes's concept of effective demand, in which government spending acts as a stimulus for economic

activity. Furthermore, budget allocations to the education and health sectors improve the quality of human resources, thereby increasing community productivity and ultimately driving increased national output.

Meanwhile, Peterson et al. (2023) state that an abnormal surge in credit supply significantly impacts economic growth in Nigeria. In general, this increase in credit has a positive impact on real GDP growth. However, during the global financial crisis, the abnormal increase in credit significantly depressed real GDP per capita. Furthermore, abnormal expansion of domestic credit to the private sector increases GDP per capita when the legal system is strong, but can also negatively impact real GDP growth under similar legal institutional conditions.

The following will look at how gross domestic product growth affects income distribution.

Tabel 3 Regresi Data Panel Model - 2

Dependent Variable: Z
Method: Panel Least Squares
Date: 01/05/26 Time: 09:28
Sample: 2014 2023
Periods included: 10
Cross-sections included: 33
Total panel (balanced) observations: 330

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.051678	0.009807	107.2405	0.0000
Y	-0.007902	0.006235	-1.267450	0.0206

Effects Specification
Cross-section fixed (dummy variables)

R-squared	0.820777	Mean dependent var	1.039788
Adjusted R-squared	0.800796	S.D. dependent var	0.116260
S.E. of regression	0.051889	Akaike info criterion	-2.982075
Sum squared resid	0.796985	Schwarz criterion	-2.590653
Log likelihood	526.0423	Hannan-Quinn criter.	-2.825942
F-statistic	41.07796	Durbin-Watson stat	1.187630
Prob(F-statistic)	0.000000		

Source: Data processed by researchers, 2026

The table above shows the simultaneous influence of Gross Domestic Product growth on income distribution. The strength and magnitude of the simultaneous influence are indicated by the multiple correlation coefficient R of 82.07% and the multiple determination coefficient R2 of 80.07%. These results indicate that GRDP growth simultaneously contributes 80.07% to income distribution in Indonesia, while the remaining 19.92% is contributed by other variables other than GRDP growth.

The Effect of Gross Domestic Product Growth on Income Distribution

Based on the panel fixed effects estimation for the 2014–2023 period, GDP growth has a negative and significant effect on income distribution, with a coefficient of –0.007902 and a probability of 0.0206 (<0.05). This indicates that increased economic growth tends to reduce income inequality. Furthermore, the model has strong explanatory power (Adjusted R^2 = 0.800796) and is simultaneously significant (Prob F = 0.0000). The estimation results indicate that during the study period, economic growth in Indonesia tended to be inclusive, reflected in the negative and significant influence of GDP growth on income distribution. This finding indicates that increased economic growth contributes to a decrease in

income inequality, particularly if the growth is driven by labor-intensive sectors or supported by equitable fiscal policies. However, the Durbin–Watson value of 1.1876 indicates the potential for positive autocorrelation in the model, so further testing is needed to ensure the consistency and robustness of the estimation results.

The results of this study are supported by several other research findings, including; (Topolewski, 2020) in his paper entitled "The impact of income inequalities on economic growth" stated that income inequality has a statistically significant impact on economic growth. Increasing income inequality has a negative impact on economic growth. Meanwhile, (Riskiani, 2024) in his paper "Analyzing the Impact of Economic Growth, Poverty, and Unemployment on Income Inequality in West Nusa Tenggara Province (2018–2022)" concluded that economic growth had a negative but insignificant effect on income inequality at the provincial level during the 2018–2022 period. Meanwhile, the poverty rate had a negative and significant effect on income inequality during the same period. On the other hand, unemployment showed a positive but insignificant relationship to income inequality in West Nusa Tenggara Province. Simultaneously, these three variables, economic growth, poverty, and unemployment, were shown to have a significant effect on income inequality.

CONCLUSION

This research produces an empirical model adequately explaining the determinants of economic growth in Indonesia. Based on panel data estimates from 33 provinces, simultaneous testing results indicate that the Indonesian Democracy Index, household consumption, domestic investment, foreign investment, government spending, and loans collectively have a significant influence on GDP growth. The Adjusted R-Squared value of 81.24% indicates that the model has high explanatory power, with most of the variation in economic growth explained by the variables used in the study. Individually, household consumption, domestic investment, foreign investment, and government spending have been shown to have a positive and significant impact on GDP growth. These results indicate that the dynamics of regional economic growth in Indonesia are strongly supported by domestic demand, capital accumulation, and expansionary and productive fiscal interventions. Conversely, the Indonesian Democracy Index and the loan variable show a significant negative effect on economic growth. These findings suggest possible adjustment costs in the democratization process, which could impact the efficiency of economic policies in the short term. Furthermore, the negative impact of loans reflects potential fiscal pressures resulting from suboptimal debt utilization or increased repayment obligations. Furthermore, the analysis also shows that GDP growth significantly impacts income distribution, with an apparent power level of 80.08%. However, increased economic growth does not automatically result in more equitable income distribution. Therefore, the characteristics and quality of growth are crucial factors in determining the extent to which economic expansion can improve public welfare in an inclusive manner.

RECOMENDATION

Based on the research findings, several strategic steps can be considered. First, the government needs to maintain and strengthen people's purchasing power through productive job creation, price stability, and targeted social protection policies, given that household consumption has proven to be a key driver of economic growth. Second, investment policies need to be directed at increasing regulatory certainty, simplifying licensing, and strengthening the business climate so that domestic and foreign investment can develop sustainably and have a broad multiplier effect on the regional economy. Third, the quality of government spending must be continuously improved by prioritizing sectors capable of driving long-term productivity, such as infrastructure, education, health, and technology development. The effectiveness and efficiency of public spending are key to ensuring fiscal policy optimally contributes to growth.

Fourth, debt management needs to be carried out carefully and based on the principle of fiscal sustainability. Loans should be focused on financing projects with clear economic added value and capable of increasing regional revenue capacity, thereby preventing future fiscal pressures. Fifth,

strengthening the quality of governance and institutions needs to be a priority so that the democratization process can proceed in line with the effectiveness of economic policies. Bureaucratic reform, increased transparency, and policy consistency will minimize the potential costs of adjustment in a democratic system.

Overall, development policies need to be directed at growth that is not only high, but also high-quality and inclusive, so that increases in GDP can be followed by improvements in income distribution and a more equitable increase in social welfare.

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