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RUPIAH EXCHANGE RATE FLUCTUATIONS, GDP, AND TRADE: THEIR IMPACT ON THE INVESTMENT CLIMATE IN INDONESIA

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Abstract

This study examines whether fluctuations in the rupiah exchange rate, gross domestic product (GDP), and trade affect the investment climate in Indonesia. Using a quantitative explanatory approach, the study estimates a simultaneous equation model with EViews, in which investment and GDP are treated as endogenous variables. The two-stage least squares (2SLS) estimation shows that GDP has a positive and significant effect on investment (coefficient = 0.185646; significant at the 5% level). The exchange rate (KR) has a negative but insignificant coefficient (−57.86067), and trade (TR) has a positive but insignificant coefficient (0.316032). The F-test results show that the explanatory variables in each equation jointly have a significant effect on the respective endogenous variable. These findings indicate that the rupiah exchange rate and trade have not significantly influenced the investment climate in Indonesia, whereas GDP is the most influential and significant determinant. The results suggest that strategies to strengthen the investment climate should be accompanied by efforts to maintain sustainable economic growth.

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1. Introduction

The investment climate is one of the key drivers of a country's economic growth. As a developing country, Indonesia has significant investment potential from both domestic and foreign sources. However, investment decisions are heavily influenced by macroeconomic conditions, including the rupiah exchange rate, gross domestic product (GDP) growth, and trade activity. Fluctuations in these three components can create uncertainty that directly affects investors' perceptions and interest. The rupiah exchange rate often serves as an

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indicator of a country's economic stability. When the exchange rate fluctuates sharply, particularly when it depreciates, import costs rise and inflation risk increases. This situation erodes foreign investors' confidence because currency instability raises the risk of losses. Conversely, a stable exchange rate sends a positive signal to investors because it indicates macroeconomic stability.

GDP is also a key indicator of national economic performance. High GDP growth reflects increased productivity and domestic demand, which can ultimately enhance a country's attractiveness to investors. Investors tend to favor countries with strong economic growth because of their more promising profit prospects; therefore, changes in GDP often serve as a primary benchmark for investment decisions. Meanwhile, the trade sector also plays a crucial role in shaping the investment climate. Rising exports indicate the competitiveness of domestic products in international markets, while stable imports reflect the national industry's ability to meet its raw material and technology needs. A healthy trade balance typically signals economic stability and strengthens investor confidence.

In recent years, the Indonesian economy has been overshadowed by concerns about the fluctuations of the rupiah against the US dollar in both the primary and secondary markets. From a fundamental perspective, this situation has arisen because Indonesia's foreign trade relies on the US dollar as the benchmark currency for transactions and because import growth has outpaced export growth. As a result, domestic market players face fluctuations in the rupiah–dollar exchange rate. At the beginning of 2015, the rupiah was in the range of IDR 12,625 per dollar, whereas in the second half of 2013 it had begun to weaken, breaking through IDR 10,300 per dollar. The rupiah depreciated to around IDR 13,000 per dollar at the end of 2016 and has not returned to its earlier level, standing at around IDR 15,420 in December 2023. The latest data show that the rupiah exceeded IDR 16,000 per dollar at the end of 2024 (Figure 1).

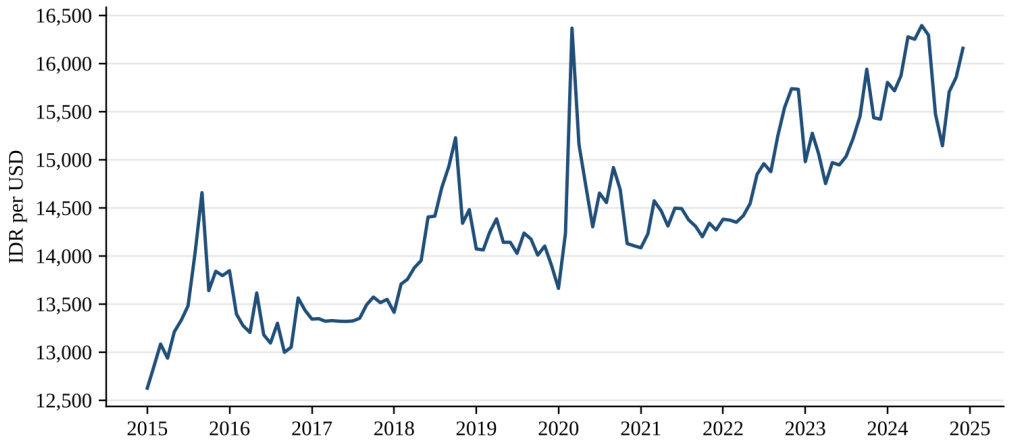


Figure 1. Fluctuations of the Rupiah against the US Dollar, 2015–2024
Source: Bank Indonesia (2025), processed

Figure 1 shows a significant change in the rupiah–dollar exchange rate, with the rupiah weakening to IDR 13,795 per dollar in December 2015 from around IDR 12,000 per dollar

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previously, a change likely associated with the conclusion of the presidential election. Rupiah fluctuations can be influenced by high inflation in certain periods, bank interest rates, the trade balance, public debt, exports and imports, economic and political conditions, income levels, government intervention in the money market to prevent disorder in foreign exchange transactions, and market expectations about the future. However, the initial weakening of the rupiah was driven by a current account deficit, the maturity of Indonesia's foreign debt payments, and market expectations that the government's foreign exchange reserves were declining. The real sector responded immediately to this negative sentiment, with investors withdrawing funds, which further exacerbated the problem.

The exchange rate indicates the number of units of one currency that can be exchanged for another currency (David, 2003, p. 103). Indonesia has adopted a floating exchange rate system, meaning that the value of the rupiah is determined by supply and demand in the foreign exchange market. Under a floating system, Indonesia can be expected to experience fluctuations in economic growth, particularly through exchange rate movements. These fluctuations tend to be caused by external factors, as almost all production sectors still import raw materials to meet domestic and foreign demand. Currency speculation is another contributing factor.

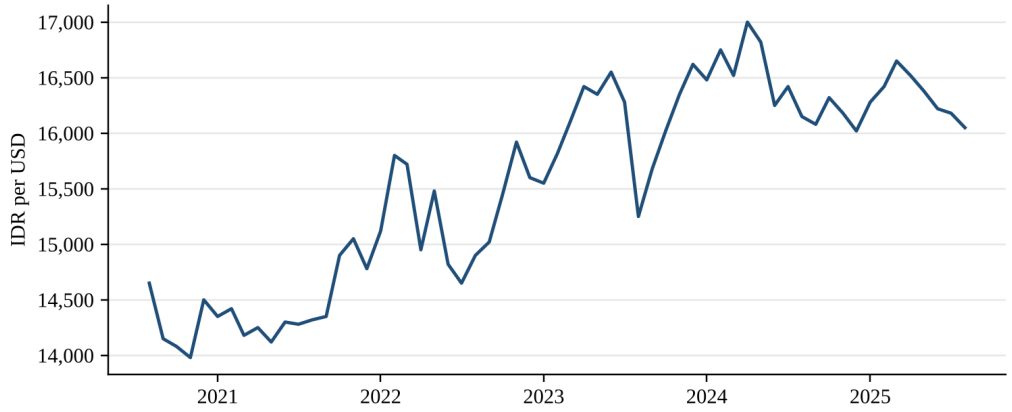


Figure 2. Movement of the Rupiah against the US Dollar, August 2020–August 2025
Source: Wise.com (2025); Seputarforex (2025), processed

Figure 2 shows the movement of the rupiah over the last five years, with a spread of around 689 points, indicating that Indonesia's domestic financial system has remained relatively stable. Among ASEAN countries, Indonesia tends to be sought after by foreign investors because its large population represents a promising market and its economic growth is relatively strong compared with other Southeast Asian countries. Investment, also referred to as capital investment or capital formation, is the second component that determines the level of aggregate expenditure. Indonesia's GDP during 2014–2024 shows a fairly positive growth trend, reflecting stability and sustained economic improvement. In 2014, Indonesia's GDP was around USD 890.81 billion, making it the 18th-largest economy in the world. By 2023, GDP had increased significantly to around USD 1.37 trillion, making Indonesia the 16th-largest economy in the world. This increase reflects accelerated economic growth supported

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by effective fiscal and monetary policies and massive infrastructure development under the government of that period. Indonesia's quarterly GDP growth during 2020–2023 is presented in Figure 3.

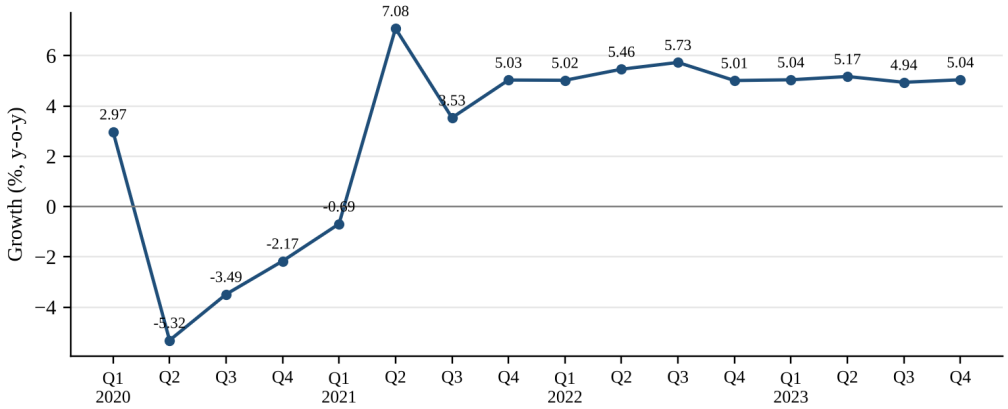


Figure 3. Indonesia's Quarterly GDP Growth, 2020–2023 (Year-on-Year)
Source: Ministry of Investment and Downstreaming (2025), processed

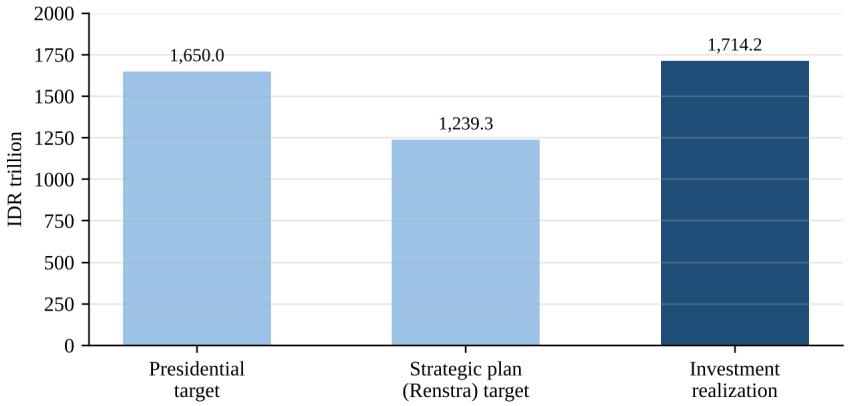


Figure 4. Investment Targets and Realization in Indonesia, January–December 2024
Note: Labor absorption from investment realization in 2024 reached 2,456,130 workers.
Source: Ministry of Investment and Downstreaming (2025), processed

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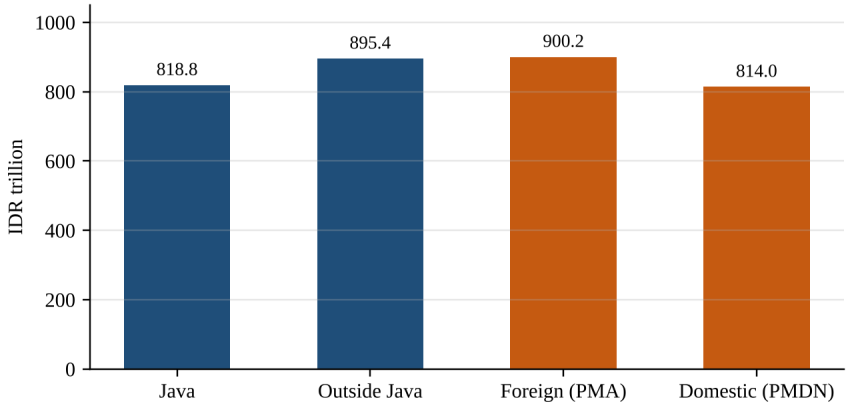


Figure 5. Composition of Investment Realization in Indonesia, 2024
Source: Ministry of Investment and Downstreaming (2025), processed

Figures 4 and 5 show that Indonesia's investment realization in January–December 2024 (IDR 1,714.2 trillion) exceeded its targets. Of total investment, 47.8% was realized in Java and 52.2% outside Java, while foreign direct investment (PMA) accounted for 52.5% and domestic direct investment (PMDN) for 47.5%. Because rupiah fluctuations are feared to have a negative impact on investment growth in Indonesia, investment may decline if exchange rate movements reduce people's purchasing power for products produced by PMA and PMDN investors, thereby weakening Indonesia's competitiveness in attracting foreign and domestic investors.

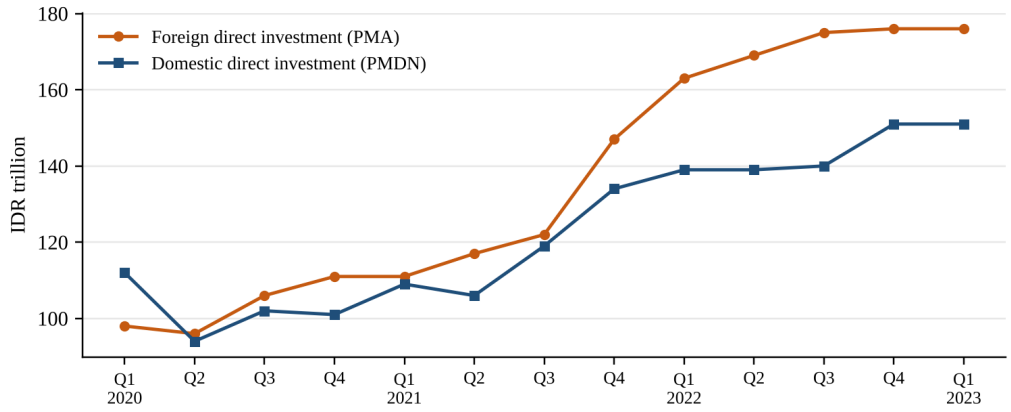


Figure 6. Quarterly Realization of Foreign Direct Investment (PMA) and Domestic Direct Investment (PMDN), 2020–2023
Source: Investment Coordinating Board (BKPM) (2025), processed

According to the Investment Coordinating Board (BKPM), Indonesia's investment reached IDR 282.4 trillion in the first quarter of 2022 (Figure 6). This achievement, the highest in the last ten years, reflects increased investor confidence in Indonesia, with growth of 28.5% year-on-year (yoy) and 16.9% quarter-to-quarter (qtq). Domestic direct investment (PMDN) reached IDR 135.2 trillion and foreign direct investment (PMA) IDR 147.2 trillion in the

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same period. In the first quarter of 2022, the basic metal, non-machinery metal goods, and equipment industries received investments of IDR 39.7 trillion, followed by the telecommunications, transportation, and warehousing sectors with IDR 39.5 trillion. The Ministry of Investment also recorded 319,013 workers employed in various investment projects in the first quarter of 2022, an increase of 2.3% from the same period of the previous year.

As explained earlier, significant fluctuations in the rupiah exchange rate can affect companies' returns on investment, especially companies that rely on imported raw materials or on US dollar-denominated foreign loans to finance their operations. Depreciation of the rupiah raises these companies' costs and reduces their profits. Investment in a region depends on its investment competitiveness, which does not develop overnight. In Indonesia, the formation of investment competitiveness is an ongoing process influenced by many factors, including the level of creativity and the diversity of natural resources, which attract investors. A region's success in increasing its investment competitiveness also depends on its ability to formulate investment and business policies and to improve the quality of public services.

Attracting investors requires not only macroeconomic stability but also the development of infrastructure and human resources in a broad sense, which encourages private-sector participation in the economy (KPPOD, 2005). Regions differ in competitiveness because each has unique characteristics in terms of human resources, natural structure, and geographical location. However, a region's investment competitiveness also reflects its ability to spur economic growth, its capacity to absorb investment, labor, goods, services, and savings, and its market share for industrial, agricultural, and service products. Based on the above discussion, it is worth examining how fluctuations in the rupiah exchange rate, GDP, and trade affect the investment climate in Indonesia. A deep understanding of the relationships among these factors is essential for formulating economic policies that enhance investment appeal and support sustainable economic growth. Accordingly, this study addresses the following research questions:

1) How do fluctuations in the rupiah exchange rate affect the investment climate in Indonesia?
2) How does GDP affect the investment climate in Indonesia?
3) How does trade affect the investment climate in Indonesia?

2. Literature Review

2.1. Currency Fluctuations

A country's exchange rate can change because of several factors, namely (1) government policy (political conditions), (2) economic conditions (economic growth), and (3) unexpected events, such as natural disasters or riots, that affect the economy (Putri, 2014). Under these conditions, a currency typically appreciates when demand exceeds the available supply and depreciates when demand falls short of supply. In most major economies, a floating exchange rate system causes currency fluctuations. Many fundamental and technical factors affect exchange rates, including economic performance, resistance and support levels, interest rate

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differentials, capital flows, and the supply of and demand for both currencies. Other factors that influence changes in a country's exchange rate include the money supply, real income, interest rate differentials, and exchange rate expectations (Kindleberger, 1986, p. 359).

2.2. Definition of the Exchange Rate

According to Mankiw (2007), the exchange rate between two countries is the price at which residents of the two countries trade with each other. Fabozzi and Modigliani (1995) define the exchange rate as the amount of one country's currency that can be exchanged per unit of another country's currency. Abimayu (2004) states that the exchange rate is the price of a currency relative to another country's currency; because it involves two currencies, its equilibrium is determined by the supply of and demand for both currencies. The exchange rate of a country's currency is the amount of domestic currency that can be exchanged for one unit of foreign currency (Levi, 1983, p. 13). A country's exchange rate therefore reflects its international purchasing power, so exchange rate fluctuations indicate changes in that purchasing power (Scott, 1978, p. 218). In general, a country can adopt one of three exchange rate systems (Lindert & Kindleberger, 1986, p. 542): (1) a pure floating exchange rate system, (2) a managed floating exchange rate system, or (3) a fixed exchange rate system.

2.3. Gross Domestic Product (GDP)

GDP is a key indicator of economic health. Stable and positive GDP growth boosts investor confidence and shows that the domestic market has considerable potential for profit and business expansion. Previous studies show that GDP has a significant positive impact on the overall investment climate and on foreign direct investment flows in Indonesia (Ulan Tri & Astuti Dwi Rini, 2025). Assessing whether an economy is performing well requires appropriate indicators that capture the aggregate income received by all individuals in the economy. GDP simultaneously reflects two aspects: the total income of everyone in the economy and the total expenditure on the economy's output of goods and services. Because income equals expenditure for the economy as a whole, GDP measures both total income and total expenditure.

2.4. Trade

Trade is based on mutual agreement rather than coercion. Before money was invented, goods were exchanged directly through barter. In modern times, trade is conducted through monetary exchange, in which each item is valued at a certain amount of money and buyers exchange money for goods or services at the price set by the seller. Trade involves producers, who carry out production, that is, the process of making goods; distribution, the process of delivering goods from producers to consumers; and consumers, who purchase and use these goods through consumption.

According to Marwati Djoened, trade is an economic activity that connects producers and consumers and functions as distribution, ensuring that goods are delivered and available through market mechanisms. Eeng Ahman and Epi Indriani define trade as an exchange or sale-and-purchase transaction between two or more parties, while Ranti Fauza Mayana describes trade as a service industry that supports economic growth among members of

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society and between countries. According to Loo Chee Kuang, trade is a branch of commerce that involves selling or buying goods in order to make a profit.

2.5. Investment

Investment, also known as capital investment or capital formation, is the second component that determines the level of aggregate expenditure. Investment can be defined as expenditure by investors or companies to purchase capital goods and equipment that increase the economy's capacity to produce goods and services.

The investment function is a curve that shows the relationship between the level of investment and national income. It may be parallel to the horizontal axis or slope upward to the right, indicating that investment increases with national income. An investment curve parallel to the horizontal axis represents autonomous investment, whereas an upward-sloping curve represents induced investment. In macroeconomic analysis, corporate investment is usually treated as autonomous investment. According to Joseph Alois Schumpeter, the determinants of investment include:

1. The expected rate of return on investment;
2. Interest rates;
3. Forecasts of future economic conditions;
4. Technological progress;
5. The level of and changes in national income; and
6. Profits earned by companies.

3. Research Methods

3.1. Research Approach and Type

This study uses a quantitative research approach. According to Singarimbun and Effendi (1995), in a quantitative approach, researchers establish concepts as related variables derived from previously reviewed theories before collecting data. Based on its objectives, this study is classified as explanatory research, that is, research that emphasizes the relationships among variables and tests the hypotheses formulated (Singarimbun & Effendi, 1995).

3.2. Types, Sources, and Collection of Data

Valid and reliable data are required to analyze and interpret results accurately. This study uses secondary time-series data published by relevant institutions and agencies. The data were collected through library research, that is, by searching for and studying information related to the research problem in books, journals, media, expert opinions, and previous studies to build a theoretical basis for the research.

3.3. Data Analysis Technique

This study employs a simultaneous equation model estimated using two-stage least squares (2SLS) in EViews. The model consists of two equations, in which investment (INV) and GDP are treated as endogenous variables:

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$$INV_t = \alpha_0 + \alpha_1 GDP_t + \alpha_2 KR_t + \alpha_3 TR_t + \varepsilon_{1t} \quad (1)$$

$$GDP_t = \beta_0 + \beta_1 INV_t + \beta_2 INV_{t-1} + \beta_3 GDP_{t-1} + \varepsilon_{2t} \quad (2)$$

where INV denotes investment, GDP denotes gross domestic product, KR denotes the rupiah exchange rate, TR denotes trade, INV_{t-1} and GDP_{t-1} are the one-period lags of investment and GDP, α and β are the parameters to be estimated, and ε is the error term.

Before estimation, the residuals of each model were tested for normality (Jarque–Bera test), autocorrelation (Breusch–Godfrey LM test), and heteroskedasticity (Breusch–Pagan–Godfrey test). The endogeneity of INV and GDP was examined using the Hausman exogeneity test, followed by a simultaneity test. The partial t-test is used to determine whether each independent variable individually influences the dependent variable, assuming the other variables are constant (Ghozali, 2010). The t-statistic is calculated as follows:

$$t = B_n / SB_n \quad (3)$$

where t follows the t distribution with the corresponding degrees of freedom, B_n is the regression coefficient of each variable, and SB_n is the standard error of each coefficient. The F-test is used to determine whether the explanatory variables jointly affect the endogenous variable in each equation, and the coefficient of determination (R^2) measures the proportion of variation in the endogenous variable explained by each model.

4. Results and Discussion

A simultaneous model is considered good if its residuals are normally distributed, homoskedastic, and free from autocorrelation. Both models were therefore subjected to classical assumption tests, the results of which are presented below.

4.1. Normality Test

The normality test determines whether the residuals of each model are normally distributed, using the Jarque–Bera test with the hypotheses H_0: residuals are normally distributed, and H_1: residuals are not normally distributed. H_0 is rejected if the Jarque–Bera probability value is less than α (0.05) and is not rejected if the probability value is greater than α (0.05).

Table 1. Normality Test Results

Model	Jarque–Bera	Probability
Model 1 (INV)	6.179826	0.045506
Model 2 (GDP)	225.2720	0.000000

Source: EViews output (processed data), 2025.

As shown in Table 1, the Jarque–Bera probability values for Model 1 and Model 2 are 0.045506 and 0.000000, respectively, both less than α (0.05); thus, H_0 is rejected. This indicates that the normality assumption is not met and the residuals are not normally distributed.

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4.2. Autocorrelation Test

The autocorrelation test identifies whether the residuals at the current observation (t) are correlated with those at the previous observation (t−1). The Breusch–Godfrey serial correlation LM test was used with the hypotheses H_0: no autocorrelation, and H_1: autocorrelation is present. H_0 is rejected if the chi-square probability value is less than α (0.05) and is not rejected if it is greater than α (0.05).

Table 2. Breusch–Godfrey Serial Correlation LM Test Results

Model	Obs*R-squared	Prob. Chi-Square
Model 1 (INV)	23.83436	0.0000
Model 2 (GDP)	0.201698	0.9041

Source: EViews output (processed data), 2025.

As shown in Table 2, the chi-square probability value for Model 1 is 0.0000 < α (0.05); thus, H_0 is rejected, indicating autocorrelation in the INV model. The chi-square probability value for Model 2 is 0.9041 > α (0.05); thus, H_0 is not rejected, indicating no autocorrelation in the GDP model.

4.3. Heteroskedasticity Test

The heteroskedasticity test determines whether the variance of the regression residuals is constant. The Breusch–Pagan–Godfrey test was used, with H_0 (no heteroskedasticity) rejected if the F probability value is less than α (0.05) and not rejected if it is greater than α (0.05).

Table 3. Breusch–Pagan–Godfrey Heteroskedasticity Test Results

Model	F-Statistic	Prob. F
Model 1 (INV)	7.368150	0.0009
Model 2 (GDP)	5.266020	0.0057

Source: EViews output (processed data), 2025.

As shown in Table 3, the F probability values for Model 1 (0.0009) and Model 2 (0.0057) are both less than α (0.05); thus, H_0 is rejected, indicating heteroskedasticity in both models.

4.4. Exogeneity Test of the Simultaneous Model

The Hausman test examines whether the endogenous variables (INV and GDP) in the simultaneous equation system are truly endogenous. The results are presented in Table 4.

Table 4. Hausman Exogeneity Test Results

Equation	Regressors	F-Statistic	Prob.
INV	C, GDPF, KR, TR	13.10620	0.000021***
GDP	C, INVF, INV(−1), GDP(−1)	294.6954	0.000000***

*Note: *** significant at the 1% level; GDPF and INVF are the fitted values of GDP and INV.*

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Source: EViews output (processed data), 2025.

The exogeneity test for the INV equation, which includes the fitted value of GDP (GDPF), yields an F-statistic of 13.10620 with a probability of 0.000021 < α (0.05); thus, H_0 is rejected. Similarly, the test for the GDP equation, which includes the fitted value of investment (INVF), yields an F-statistic of 294.6954 with a probability of 0.0000 < α (0.05). These results indicate that INV and GDP are endogenous variables in the simultaneous equation system.

4.5. Simultaneity Test

The simultaneity test requires both the sufficient condition (error probability < 0.05) and the necessary condition (F-statistic probability < 0.05) to be met. The results are presented in Table 5.

Table 5. Simultaneity Test Results

Equation	Prob. Error	Prob. F-Statistic
INV	0.0136**	0.000000***
GDP	0.0000***	0.000000***

*Note: ** and *** significant at the 5% and 1% levels, respectively.*
Source: EViews output (processed data), 2025.

The INV model has an error probability of 0.0136 < 0.05 and an F-statistic probability of 0.000 < 0.01, meaning that it meets both the sufficient and necessary conditions. The GDP model has an error probability of 0.000 < 0.01 and an F-statistic probability of 0.000 < 0.01, meaning that it also meets both conditions. Therefore, both equations are appropriately estimated as a simultaneous system.

4.6. Two-Stage Least Squares (2SLS) Estimation

4.6.1. t-Test

The parameter estimates obtained using the 2SLS method are presented in Table 6.

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Table 6. 2SLS Estimation Results

Equation	Variable	Coefficient	t-Statistic	Prob.
(1) INV	C	160578.2	0.420893	0.6756
	GDP	0.185646	2.615498	0.0116**
	KR	−57.86067	−1.257849	0.2141
	TR	0.316032	1.154615	0.2535
(2) GDP	C	−161191.3	−0.429853	0.6691
	INV	0.715348	0.509827	0.6123
	INV(−1)	−0.905070	−0.604540	0.5481
	GDP(−1)	1.123695	11.64473	0.0000***

*Note: ** and *** significant at the 5% and 1% levels, respectively.*
Source: EViews output (processed data), 2025.

Based on the t-test for Equation (1) (INV), GDP has a coefficient of 0.185646 and is significant at the 5% level, indicating that GDP has a positive effect on investment; a 1% increase in GDP increases investment by 0.185646%. The exchange rate (KR) has a coefficient of −57.86067 but is not significant, indicating a negative but insignificant relationship. Trade (TR) has a coefficient of 0.316032 but is not significant, indicating a positive but insignificant relationship.

For Equation (2) (GDP), GDP(−1) has a coefficient of 1.123695 and is significant at the 1% level, indicating that lagged GDP has a positive effect on current GDP; a 1% increase in GDP(−1) increases GDP by 1.123695%. Investment (INV) has a coefficient of 0.715348 but is not significant, indicating a positive but insignificant relationship, and INV(−1) has a coefficient of −0.905070 but is not significant, indicating a negative but insignificant relationship.

4.6.2. F-Test

The F-test determines whether the explanatory variables jointly affect the endogenous variable in each model. H_0 (the explanatory variables jointly have no significant effect) is rejected if the F-statistic probability value is less than α (0.05). The results are presented in Table 7.

Table 7. F-Test Results

Equation	F-Statistic	Prob.
(1) INV	18.07546	0.000002***
(2) GDP	297.2472	0.000000***

*Note: *** significant at the 1% level.*
Source: EViews output (processed data), 2025.

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The F-statistic probability for Equation (1) (INV) is 0.000002 < α (0.01); thus, H_0 is rejected, indicating that GDP, KR, and TR jointly have a significant effect on investment. Similarly, the F-statistic probability for Equation (2) (GDP) is 0.000000 < α (0.01); thus, H_0 is rejected, indicating that INV, INV(−1), and GDP(−1) jointly have a significant effect on GDP.

4.6.3. Coefficient of Determination (R^2)

The coefficient of determination measures the proportion of variability in the endogenous variable explained by the explanatory variables included in each model. The results are presented in Table 8.

Table 8. Coefficient of Determination (R^2)

Equation	R^2
(1) INV	0.674784
(2) GDP	0.971671

Source: EViews output (processed data), 2025.

The explanatory variables in Equation (1), namely GDP, KR, and TR, explain 67.48% of the variation in investment, while the remaining 32.52% is influenced by variables outside the model. In Equation (2), INV, INV(−1), and GDP(−1) explain 97.17% of the variation in GDP, while the remaining 2.83% is influenced by variables outside the model.

4.7. Discussion

GDP was found to have a positive and significant effect on investment. The coefficient of 0.185646 indicates that a 1% increase in GDP leads to a 0.1856% increase in investment, holding other factors constant. Although the elasticity is inelastic (< 1), this relationship is theoretically relevant and consistent with the investment accelerator principle: an expansion in national output reflects higher aggregate demand and higher profit expectations for investors. This finding is consistent with empirical studies in developing countries, including Agosin and Machado (2005), who found that the size of the domestic market is a primary determinant of foreign direct investment decisions. In the Indonesian context, consistent GDP growth over the past two decades, supported by strong domestic consumption, has made the Indonesian market increasingly attractive to both domestic and foreign investors. The policy implication is that strategies to boost investment cannot be separated from efforts to maintain sustainable economic growth.

The exchange rate variable has a negative coefficient (−57.86067), which theoretically indicates that rupiah depreciation can weaken the investment climate. Conceptually, depreciation increases the cost of imported capital goods and raw materials while creating uncertainty about asset values and cash flows for foreign investors. However, this effect is not statistically significant. The insignificance of the exchange rate can be explained by the long-term orientation of investors and their use of hedging strategies. Methodologically, the insignificant coefficient in a simultaneous model may also reflect multicollinearity between the exchange rate and other variables in the system. Statistical insignificance does not necessarily mean that the exchange rate is economically irrelevant; a cautious interpretation

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is required, and these findings should be confirmed through sensitivity analysis or by expanding the scope of the data.

The trade variable has a positive coefficient (0.316032), consistent with the theory that greater trade openness is associated with increased investment through technology transfer, stronger competition, and wider market access. However, like the exchange rate, this variable is not statistically significant. The insignificance of trade can be understood in the context of Indonesia's trade structure, which remains dominated by primary commodities. Overall, the estimation results indicate that, in the Indonesian context, the size of the domestic economy (GDP) is the most dominant and reliable factor in explaining investment dynamics. External variables such as the exchange rate and trade openness, although theoretically relevant, have not shown a sufficiently strong and consistent influence in this model, suggesting that Indonesia's investment attractiveness is determined more by domestic demand dynamics than by external conditions alone.

5. Conclusion and Suggestion

This study examined the effects of rupiah exchange rate fluctuations, GDP, and trade on the investment climate in Indonesia using a simultaneous equation model estimated by 2SLS. The conclusions are as follows:

1. The F-test shows that the explanatory variables in each equation jointly have a significant effect on the endogenous variables, investment (INV) and GDP.
2. In Equation (1), GDP has a positive and significant effect on investment (coefficient = 0.185646; significant at the 5% level), indicating that higher GDP is associated with a better investment climate in Indonesia. The exchange rate (−57.86067) and trade (0.316032) have negative and positive effects, respectively, but neither is statistically significant.
3. In Equation (2), lagged GDP has a positive and significant effect on GDP (coefficient = 1.123695; significant at the 1% level), whereas investment (0.715348) and lagged investment (−0.905070) have no significant effect.

This study has limitations regarding model specification and variable selection, as it includes only three main explanatory variables of investment: GDP, the exchange rate, and trade. Future research is recommended to (1) expand the scope of variables by including governance and infrastructure indicators; (2) explicitly test for stationarity and cointegration; (3) report and validate the instrumental variables used; (4) include a comprehensive set of residual diagnostic tests; and (5) consider an inter-provincial panel data analysis to capture the spatial heterogeneity of investment in Indonesia.

References

1. Adriana, E. (n.d.). *Globalisasi dan perubahan politik Indonesia*. Masyarakat Ilmu Pemerintahan Indonesia. Retrieved October 24, 2015.
2. Agosin, M. R., & Machado, R. (2005). Foreign investment in developing countries: Does it crowd in domestic investment? *Oxford Development Studies*, *33*(2), 149–162.

This work is licensed under a Creative Commons Attribution 4.0 International License.

3. Bandoeng, A. (2013). *Modernisasi dan globalisasi* [Slide presentation]. Retrieved November 13, 2023, from http://slideplayer.info/slide/3056216/
4. Branson, W. H. (1989). *Macroeconomic theory and policy*. Harper & Row.
5. The Brookings Institution. (n.d.). *Top ten global economic challenges: An assessment of global risks and priorities*. Retrieved October 24, 2020.
6. Faisal, A. (2012). *Globalisasi dan Indonesia*. Rangkaian Kolom Kluster, Universitas Bina Nusantara.
7. Fluctuations in direct investment in Indonesia. (2023). *Jurnal Ekonomi dan Perdagangan*. Universitas Muhammadiyah Surakarta.
8. Ghazy, N. (2009). *Pengaruh globalisasi terhadap kedaulatan negara Indonesia* [Undergraduate thesis, Universitas Islam Negeri Syarif Hidayatullah].
9. Hausmann, R., & Fernández-Arias, E. (2000). *Foreign direct investment: Good cholesterol?* (Working Paper No. 417). Inter-American Development Bank.
10. Kuncoro, A., & Resosudarmo, B. P. (2006). Survey of recent developments. *Bulletin of Indonesian Economic Studies*, *42*(1), 7–31.
11. Kurniati, Y., Prasmuko, A., & Yanfitri. (2007). *Determinan FDI: Faktor-faktor yang mempengaruhi investasi langsung* (Working Paper). Bank Indonesia. Retrieved August 12, 2025, from http://www.bi.go.id
12. Latief, D. (2000). *Pembangunan ekonomi dan kebijakan ekonomi global*. Muhammadiyah University Press.
13. Madura, J., & Fox, R. (2009). *International financial management*. Thomson Learning.
14. Mankiw, N. G. (2006). *Pengantar teori ekonomi makro* (3rd ed.). Salemba Empat.
15. Marsuki. (2017). *Meningkatkan investasi dan daya saing produk-produk unggulan*. Seminar Investasi LEKPIS.
16. Nanga, M. (2017). *Teori makroekonomi: Masalah dan kebijakan*. PT RajaGrafindo Persada.
17. Pasaribu, R. B. F. (2009). *Dampak globalisasi dalam kehidupan berbangsa dan bernegara*. Universitas Gunadarma.
18. Putri, E. I. (2014). *Fluktuasi dollar terhadap rupiah dapat berpengaruh terhadap technopreneur di Indonesia* [Undergraduate thesis, Universitas Muhammadiyah Malang].
19. Sarwedi. (2020). *Investasi asing langsung di Indonesia dan faktor yang mempengaruhinya*. Jurusan Ekonomi Akuntansi, Universitas Kristen Petra.
20. Schwab, K., Sala-i-Martín, X., & Brende, B. (2013). *The global competitiveness report 2013–2014*. World Economic Forum.
21. Simanjuntak, P. J. (2019). *Strategi peningkatan produktivitas dan daya saing Indonesia*. Seminar Segmen Integrasi ECOSOC.
22. Sulistiana, I. (2017). Model vector autoregression (VAR) and vector error correction model (VECM) approach for inflation relation analysis, gross regional domestic product

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(GDP), world tin price, BI rate, and rupiah exchange rate. *Integrated Journal of Business and Economics*, *1*(2).

23. Thoha, M. (2002). *Globalisasi, krisis ekonomi dan kebangkitan ekonomi kerakyatan*. Pustaka Quantum.
24. Trading Economics. (n.d.). *Indonesia foreign direct investment*. Retrieved April 2024, from http://id.tradingeconomics.com/indonesia/foreign-direct-investment
25. Ulan Tri, & Astuti Dwi Rini. (2025). Macroeconomic determinants of foreign direct investment in Indonesia: The role of GDP, inflation, and exchange rate (1990–2023). *Jurnal Magister Ilmu Ekonomi Universitas Palangka Raya*.
26. Wahyuni, A., & Satria, D. (2024). Dampak investasi portofolio terhadap nilai tukar di Indonesia. *MedRep PPJ UNP*.
27. Wayanwija. (2019). *Pengaruh globalisasi terhadap kehidupan berbangsa dan bernegara*. Data Analytics.
28. Wilyaini, N. (2014). *Globalisasi dalam bidang ekonomi*. Retrieved November 13, 2023, from https://noviwilyaini.wordpress.com/2014/03/11/globalisasi-dalam-bidang-ekonomi/
29. Wise. (2025). *USD to IDR exchange rate history*. Retrieved August 16, 2025, from https://wise.com/id/currency-converter/usd-to-idr-rate/history

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