Signifikan: Jurnal Ilmu Ekonomi
Volume 13(2), 2024: 303 - 310
P-ISSN: 2087-2046; E-ISSN: 2476-9223
https://doi.org/10.15408/sjie.v13i2.40681

Foreign Debt: Causes and Theirs Impact on Economic Growth in Indonesia

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JEL Classification:
F34
F43
H63
O11

Received: 02 August 2024

Revised: 10 November 2024

Accepted: 15 November 2024

Available online: December 2024

ABSTRACT

Research Originality: This study presents a new analysis of the primary determinants of Indonesia's foreign debt and its impact on economic growth over the 1992-2022 period, offering new insights into debt management strategies.

Research Objectives: This study uses 31 years of time series data to analyze the main causes of Indonesia's foreign debt and its effect on economic growth.

Research Methods: This research employs a quantitative approach with data analysis techniques, including classical assumptions, Ordinary Least Squares (OLS), simple linear regression, and hypothesis testing.

Empirical Results: The results indicate that interest rates do not significantly affect Indonesia's foreign debt, while exchange rates and imports have substantial impacts. Additionally, a significant relationship between foreign debt and economic growth is confirmed.

Implications: This study suggests that the Indonesian Government should adopt a multifaceted approach to managing foreign debt, including policies aimed at maintaining low interest rates, strengthening the rupiah, boosting exports, and enhancing government spending efficiency without excessive reliance on external borrowing.

Keywords:

interest rate; exchange rate; import; foreign debt; economic growth

How to Cite:

Anggresta, V., Subiyantoro, H., & Astuty, P. (2024). Foreign Debt: Causes And Theirs Impact On Economic Growth In Indonesia. *Signifikan: Jurnal Ilmu Ekonomi.*, *13*(2), 303-310. https://doi.org/13.14560/sjie.v13i2.40681.

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INTRODUCTION

Indonesia's foreign debt has risen significantly in recent years, reaching $403 billion in 2023 (Bekele & Woldeyes, 2021). Loans have been sourced from a variety of countries, including Singapore ($59.54 billion), the United States ($33.52 billion), China ($21.03 billion), and Hong Kong ($26.84 billion). In addition to these, Indonesia also receives loans from other countries like Australia, France, Germany, the Netherlands, and South Korea. While this debt enables financing for crucial development projects such as infrastructure and education, it also poses a financial burden. The debt has the potential to increase interest rates and inflation, presenting a dilemma for the Indonesian government (Bekele & Woldeyes, 2021).

The challenges in managing foreign debt have been further exacerbated by the COVID-19 pandemic, which severely impacted Indonesia's economy by reducing tax revenues (Natallios et al., 2022). In addition, the global economic slowdown has led to decreased demand for Indonesian exports, further reducing state revenues from the trade sector (Kahfi, 2016). Rising interest rates have also contributed to an increase in debt payments, making it more expensive for Indonesia to manage its foreign debt.

The Indonesian government faces considerable pressure to manage its foreign debt efficiently. Failure to do so could erode investor confidence and lead to depreciation of the rupiah, potentially resulting in a slowdown in economic growth (Vechsuruck & Pratoomchat, 2024)manifesting two types of dualism: (i. The recent default of Sri Lanka on its foreign debt payments in May 2022 serves as a cautionary example, highlighting the consequences of mismanaging debt. Indonesia, therefore, must focus on maintaining economic stability, fiscal prudence, and a balanced trade outlook to avoid a similar crisis (Al Kharusi & Ada, 2018).

One critical factor influencing Indonesia's foreign debt is interest rates (Darwis et al., 2022). When interest rates rise, Indonesia must pay more to service its foreign debt, particularly because much of it is denominated in U.S. dollars (Thorbecke, 2021). A stronger U.S. dollar relative to the rupiah exacerbates this burden, as Indonesia has to pay more in rupiah to meet its dollar-denominated obligations. For example, when Bank Indonesia raised interest rates in 2017 to control inflation, the rupiah depreciated, leading to an increase in foreign debt (Dai, 2022; Born et al., 2021). Conversely, when the U.S. Federal Reserve cut interest rates in 2020 in response to the pandemic, Indonesia saw a reduction in foreign debt due to a favorable shift in exchange rates and increased foreign exchange reserves.

Other significant factors include the exchange rate and export levels. Indonesia's dependence on the U.S. dollar makes it susceptible to exchange rate fluctuations (Darwis et al., 2022; Dawood et al., 2021). A weaker rupiah makes imports more expensive, potentially causing inflation, while a trade deficit can increase foreign debt burdens. Conversely, a higher level of exports tends to reduce external debt, while lower exports can exacerbate it (Dai, 2022; Born et al., 2021). While taking on more debt may seem like a quick solution for financing development, it often leads to long-term challenges,

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especially for developing countries (Harsono et al., 2024). High levels of debt can lead to a situation where much of a country's tax revenue is used to pay interest, limiting spending on crucial areas like education, healthcare, and infrastructure. Excessive debt can also undermine investor and creditor confidence, potentially leading to currency devaluation and an economic slowdown.

Despite extensive research on Indonesia's foreign debt, there is a lack of comprehensive analysis regarding the specific interplay between interest rates, exchange rates, and export levels in shaping Indonesia's foreign debt trajectory. This study aims to fill that gap by examining how these factors influence Indonesia's foreign debt, providing a clearer understanding of their role. Unlike previous studies that focus on general debt management, this research offers a detailed exploration of economic factors that could help policymakers manage debt more effectively. By addressing this research gap, this study provides new insights into Indonesia's economic strategy for sustainable debt management and contributes to the broader academic debate on developing countries' debt dynamics.

METHODS

This study employed a quantitative approach, using secondary time-series data sourced from BPS (Badan Pusat Statistik) over a 31-year period, from 1992 to 2022. The data were collected on an annual basis, observing economic variables in Indonesia. The primary variables in the analysis were the interest rate (X1), exchange rate (X2), imports (X3), foreign debt (Y), and economic growth (WITH).

The data analysis was conducted using various econometric techniques, including classical assumption tests, Ordinary Least Squares (OLS) estimation, simple linear regression, and hypothesis testing. Two distinct research models were employed in this study.

Model I $\quad LogULN_{it} = \alpha_i - \beta_1 \, LogRate + \beta_2 \, LogExch + \beta_3 \, LogM + \varepsilon_{it}$

Model II $\quad LogZ_{it} = \alpha_i + \beta_1 \, LogY_{it} + \varepsilon_{it}$

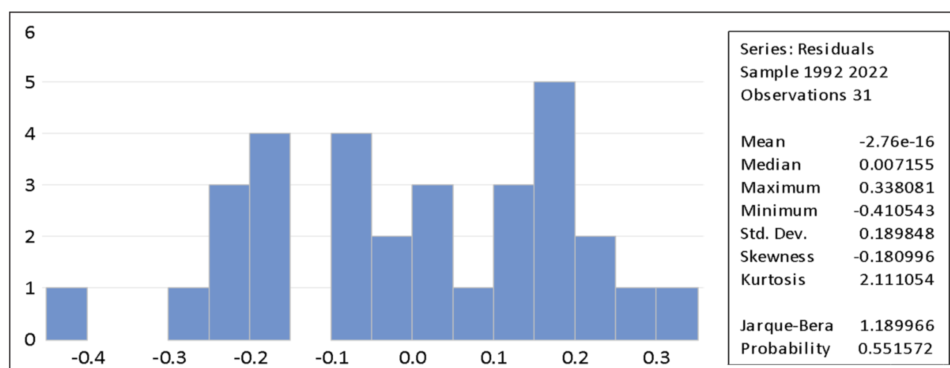
Given the extensive use of multiple regression in existing literature, this research differentiates itself by not only applying OLS but also incorporating an in-depth analysis of long-term data trends (spanning three decades), which allows for a broader and more nuanced understanding of the dynamic relationships between these macroeconomic variables in Indonesia.

RESULTS AND DISCUSSION

The normality test results shows in Figure 1. Based on the Figure 1, Jarque-Bera obtained a statistical value Z = 1.189966 with a probability of 0.551572, where the value is > α of 0.05. Thus, it was decided that the model residuals were normally distributed.

https://doi.org/10.15408/sjie.v13i2.40681

Figure 1. Normality test



The results of the multicollinearity test shows in Table 1. Based on the Table 1, the value of each variable-centered VIF is not more than 10, meaning that there is no problem with multicollinearity.

Table 1. Multicollinearity Test

Variable	Coefficient Varian	Uncentered VIF	Centered VIF
C	1,087874	842,1116	THAT
LogRate	0,0009934	39,26697	2,735811
LogExch	0,006385	407,9818	1,685055
LogM	0,008145	798,9222	3,725655

Source: Processed Eviews data, 2023

The results of the heteroscedasticity test shows in Table 2. Based on the test results from the Table 2, the value of *Note R-squared Probability Chi-Squared* is 0.4474 greater than 0.05. So, it can be revealed that there is no symptoms of heteroscedasticity faound in the regression model.

Table 2. Heteroscedasticity Test

Heteroscedasticity Test: Breusch-Pagan			
F-Statistic	0,844094	Prob. F (3,27)	0,4818
Obs*R-squared	2,658134	Prob. Chi-Square(3)	0,4474
Scaled Explained	1,120175	Prob. Chi-Square(3)	0,7722

Source: Processed Eviews data, 2023

The results of multiple regression model 1 are shown in Table 3. Table 3 shows that the variables that had an impact on foreign debt are exchange rate and imports, but interest rate does not impact foreign debt. The simultaneous influence of interest rates, exchange rates, and imports is shown by the p-value = 0.000, smaller than α = 0.05. This result means that interest rates, exchange rates, and imports simultaneously influence foreign debt. The value obtained from the R-Square is 0.844; 84.4 percent of Indonesia's foreign debt is influenced by interest rates, exchange rates, and imports, while 15.6 percent is influenced by other variables not included in model I.

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Table 3. OLS Linear Regression Model 1

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	19,65892	1,043012	18,84822	0,000
LogRate	-0,091234	0,099670	-0,917359	0,3671
LogExch	0,290452	0,079909	3,634770	0,0012
LogM	0,345406	0,090247	3,827334	0,0007
R-Squared	0,844027			
Adjusted R-square	0,826697			
F-Statistic	48,70247			
Prib (F-statistic	0,00000			

Source: Processed Eviews data, 2023

Then, the second model was tested, the impact of foreign debt (Y) on Indonesia's economic growth (Z) from 1992-2022. From the results of the significance test, it is found that the p-value is smaller than α = 0.05, which indicates that foreign debt has a partial effect on economic growth at an error level of 5%. The value obtained from the R-squared is 0.893. This means that 89.3 percent of Indonesia's economic growth is influenced by foreign debt, while 10.7 percent is influenced by other variables not included in model II.

Table 4. OLS Model II Linear Regression

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	7,755535	1,274359	6,085831	0,0000
LogUTL	+ 0,750711	0,049105	-15,28788	0,0000
R-Squared	0,893015			
Adjusted R-square	0,889194			
F-Statistic	233,7192			
Prib (F-statistic	0,00000			

Source: Processed Eviews data, 2023

The results of this study reveal that interest rates have a negative but insignificant effect on Indonesia's foreign debt. This result suggests that high interest rates do not significantly deter the Indonesian government from borrowing abroad. The finding aligns with the study by (Elkhalfi et al., 2024), which also found that interest rates have a negative and insignificant impact on foreign debt, primarily because higher interest rates increase borrowing costs (Tjia et al., 2021). Consequently, the government tends to rely more on domestic financial resources than external debt to finance development projects.

It is necessary to understand that the availability of domestic lending facilities may influence the relationship between interest rates and foreign debt. When insufficient, governments turn to foreign loans, often benefiting from more favorable terms despite interest rate fluctuations. Additionally, foreign debt is typically utilized for long-term investments, such as infrastructure development, which tend to offer returns that exceed the interest costs (Dey & Tareque, 2020). Therefore, even when interest rates rise, the government can still manage its foreign debt obligations due to the long-term nature of these investments.

The results indicate that the exchange rate has a positive and significant effect on Indonesia's foreign debt, meaning that a depreciation of the rupiah leads to an increase in foreign debt. This finding is consistent with the research by (Wahyudi et al., 2023), which also concluded that fluctuations in exchange rates significantly impact government debt. When the rupiah depreciates against the dollar, the value of foreign debt rises because the debt is often denominated in foreign currencies. As noted, the debt burden increases when the rupiah weakens because repayments and interest are calculated in stronger foreign currencies (Fendoğlu et al., 2020).

Several factors explain the strong link between exchange rates and foreign debt. First, when the rupiah depreciates, the cost of imports rises, putting pressure on government revenues and increasing the reliance on external borrowing. Second, foreign debt, mostly in dollars, becomes more expensive when converted back into rupiah. This condition increases the debt burden, making it harder for the government to finance its budget deficit. Lastly, a weakening currency may discourage foreign investment, forcing the government to seek foreign loans to maintain economic stability and growth.

Empirical data suggest that imports positively affect Indonesia's foreign debt (Kusumo & Purnomo, 2024). High imports are associated with an increased trade deficit, leading to greater reliance on foreign borrowing to finance this deficit (Towbin & Weber, 2013). This finding is in line with Hung's research (2022), which identified a direct relationship between trade balance deficits and the need for foreign loans.

Several mechanisms explain the connection between imports and foreign debt. Firstly, when the value of imports exceeds exports, the trade deficit widens, prompting the government to borrow externally to cover the shortfall. Secondly, imports pressure the government to stabilize the rupiah exchange rate. A weaker rupiah raises import costs, increasing the trade deficit and the need for foreign loans. Lastly, imports can also compel the government to boost foreign exchange reserves, which are necessary to ensure that future import payments can be met. If these reserves are insufficient, foreign borrowing becomes inevitable.

The findings indicate that foreign debt positively affects Indonesia's economic growth, provided it is utilized efficiently (Bouabidi, 2023). Foreign debt can contribute to economic development by financing infrastructure projects, investment, and consumption. Infrastructure investments, in particular, enhance productivity and reduce operational costs, making the economy more competitive(Senadza et al., 2018). The use of foreign debt for productive investment can create jobs and increase overall economic output (Esteve & Tamarit, 2018) (Ncanywa & Masoga, 2018) (Sultana et al., 2024).

Foreign debt can also fund essential government expenditures that improve public welfare and contribute to long-term growth when adequately managed. For example, investment in education, health, and social programs fosters human capital development and reduces poverty. In this context, foreign debt is vital in supplementing domestic financial resources, especially when insufficient to fund development projects.

CONCLUSION

This study has examined the impact of interest rates, exchange rates, and import levels on Indonesia's foreign debt from 1992 to 2022. The findings reveal that while

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interest rates have a negative but insignificant effect on foreign debt, the exchange rate and import levels significantly increase foreign debt. These results highlight the importance of prudent foreign debt management to support national development.

To address the research objectives, the Indonesian Government must prioritize strategies that enhance debt sustainability. These include stabilizing the exchange rate, optimizing imports, and ensuring foreign debt is directed toward productive, long-term investments with high returns. Furthermore, balancing domestic financing and foreign borrowing is essential to reduce the country's reliance on external debt. By increasing the efficiency of government spending and boosting export performance, Indonesia can better manage its foreign debt while ensuring sustainable economic growth.

Future recommendations include enhancing foreign exchange reserves to mitigate the impact of currency depreciation and developing policies that promote self-reliance in financing national development projects, minimizing the need for external loans. These efforts will help the Government reduce potential risks associated with foreign debt and maintain economic stability.

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