Rupiah and Foreign Investment: Analysis of Impact on the Number of Foreign Tourists in Indonesia 2005-2023

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Abstract. This research aims to evaluate the impact of fluctuations in the Rupiah exchange rate and foreign direct investment (FDI) on the number of foreign tourists visiting Indonesia during the 2005-2023 period. Using a quantitative approach, this research adopts the Partial Least Squares Structural Equation Modeling (PLS-SEM) model to analyze secondary data from Bank Indonesia, the Central Statistics Agency (BPS), and the Investment Coordinating Board (BKPM). The main variables analyzed include fluctuations in the Rupiah exchange rate (IDR/USD), hotel occupancy rates, number of international flights, FDI in the tourism sector, and the number of foreign tourists. The research results reveal that fluctuations in the Rupiah exchange rate do not have a significant influence on FDI or the number of foreign tourists, either directly or indirectly. FDI also does not show a significant influence on the number of tourists. Meanwhile, hotel occupancy rates show a significant influence on the number of foreign tourists, but not on FDI. The number of international flights has a significant influence on the number of foreign tourists, but not on FDI.

Keywords: Exchange Rate Fluctuations, Foreign Investment, Foreign Tourists, PLS-SEM, Tourism Infrastructure.

1 Introduction

Indonesia's tourism sector, with its natural and cultural wealth, has long been a popular destination for foreign tourists. However, its appeal is closely tied to global economic dynamics, particularly fluctuations in the Rupiah exchange rate and foreign investment flows. For instance, the Rupiah weakened to IDR 15,000 per USD in 2018, significantly affecting Indonesia's attractiveness as a tourist destination [1], [2], [3]. The COVID-19 pandemic in 2020 had a severe impact on Indonesia's economy, weakening the Rupiah to IDR 16,575 per USD, which made Indonesia more affordable for tourists but increased costs for the tourism industry due to its reliance on imports [4], [5], [6], [7], [8]. Foreign direct investment (FDI) in the tourism sector had seen significant growth before the pandemic, peaking at USD 1.2 billion in 2019, primarily for developing infrastructure like hotels and resorts [5]. However, the pandemic led to a sharp decline in both FDI and foreign tourist arrivals in 2020.

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Foreign investment is essential not only for infrastructure development but also for improving tourism services and international promotion, such as the construction of Yogyakarta International Airport, which has increased accessibility to key tourist destinations [9], [10]. Studies highlight that exchange rate stability and strategic investment can enhance competitiveness, as seen in Indonesia's tourism sector over the last five years. This research aims to analyze how fluctuations in the Rupiah exchange rate and FDI flows have impacted foreign tourist arrivals to Indonesia from 2005 to 2023. By combining data from multiple sources, it hopes to inform more effective policy development for the tourism sector, helping it adapt to global economic changes and continue contributing to Indonesia's economy.

2 Method

This research applies a quantitative approach using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method through Smart PLS software [11]. PLS-SEM is chosen for its ability to handle complex models involving multiple latent variables, even with relatively small sample sizes [12]. The data used is secondary data from various sources, including Bank Indonesia, the Central Statistics Agency (BPS), and the Investment Coordinating Board (BKPM), covering variables such as Rupiah exchange rate fluctuations, hotel occupancy rates, number of international flights, foreign investment, and the number of foreign tourists from 2005 to 2023.

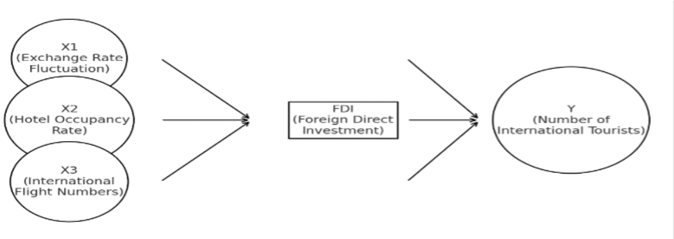

Fig. 1. Conceptual framework illustrating the relationship between exchange rate fluctuation (X1), hotel occupancy rate (X2), and the number of international flights (X3) on the number of international tourists (Y), with Foreign Direct Investment (FDI) serving as a mediating variable.

The study is grounded in several key theories, such as the Theory of Exchange Rates and Tourism Demand, which highlights the role of currency fluctuations in influencing tourist demand [13], [14, [15], [16]. Additionally, the Theory of Investment and Economic Growth suggests that FDI positively impacts economic sectors like tourism. Lastly, Tourism Infrastructure Theory underscores the importance of infrastructure quality, including hotels and international flights, in determining the attractiveness of a destination.

3 Results and Discussion

3.1 Bootstrapping Analysis

Bootstrapping analysis in the context of PLS-SEM (Partial Least Squares Structural Equation Modeling) is used to evaluate the reliability and stability of model estimates, especially in measuring R-square, direct effects and indirect effects. R-square describes how much variation in the dependent variable can be explained by the independent variables in the model, which provides a general idea of the predictive power of the model. Direct effects measure the direct influence of the independent variable on the dependent variable, showing the direct relationship between factors such as exchange rate fluctuations, hotel occupancy levels, and the number of international flights with the number of foreign tourists. Indirect effects, on the other hand, measure the indirect influence that occurs through intervening variables, such as foreign investment, which can strengthen or weaken the relationship between independent and dependent variables. By using bootstrapping, researchers can ascertain the significance and reliability of these effects, which is important in understanding the dynamics of relationships between variables in research models.

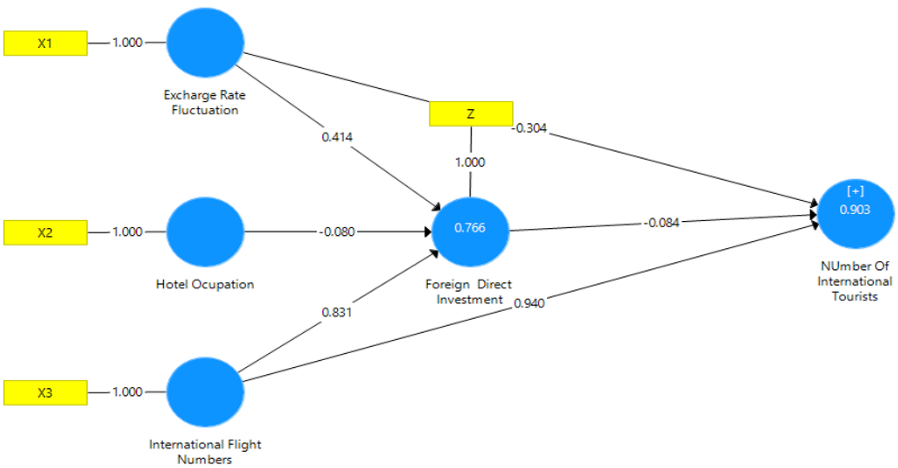

Fig. 2. Bootstrapping analysis

Table 1. R Square

Variable	R Square	R Square Adjusted
Foreign Direct Investment (FDI)	0.766	0.719
Number of International Tourists	0.903	0.884

The analysis using the PLS-SEM method shows that 76.6% of the variation in Foreign Direct Investment (FDI) can be explained by factors such as Rupiah Exchange Rate

Fluctuations, Hotel Occupancy Rate, and Number of International Flights. Similarly, 90.3% of the variation in the Number of International Tourists is explained by these variables, including FDI as an intervening factor. These findings highlight the significant influence of economic and infrastructure factors on both FDI and foreign tourist numbers, providing a solid foundation for strategic decision-making to enhance Indonesia's tourism sector through better management of these key determinants.

Table 2. Direct Effect

Path	Original Sample	T Statistics	P Values	Information
Exchange Rate Fluctuation -> Foreign Direct Investment	0.414	1,041	0.298	Rejected
Exchange Rate Fluctuation -> Number of International Tourists	-0.304	1.08	0.281	Rejected
Foreign Direct Investment -> Number of International Tourists	-0.084	0.166	0.868	Rejected
Hotel Occupation -> Foreign Direct Investment	-0.08	0.124	0.901	Rejected
Hotel Occupation -> Number of International Tourists	1,243	3,452	0.000	Accepted
International Flight Numbers -> Foreign Direct Investment	0.831	1,535	0.126	Rejected
International Flight Numbers -> Number of International Tourists	0.94	2,262	0.024	Accepted

The research shows that Rupiah exchange rate fluctuations do not significantly influence Foreign Direct Investment (FDI) in Indonesia's tourism sector, likely due to the Rupiah's stability and other factors like government regulations. Similarly, exchange rate fluctuations do not significantly impact the number of foreign tourists. However, hotel occupancy rates are significantly related to tourist numbers, indicating strong demand, though they do not influence FDI. International flights have a significant relationship with tourist numbers but not with FDI, highlighting the importance of other factors, such as bureaucracy, in attracting investment. These findings emphasize Indonesia's unique context in the tourism sector.

Table 3. Indirect Effect

Path	Original Sample	T Statistics	P Values	Information
Exchange Rate Fluctuation ->Foreign Direct Investment->Number of International Tourists	-0.035	0.143	0.886	Rejected

Path	Original Sample	T Statistics	P Values	Information
Hotel Occupation ->Foreign Direct Investment->Number of International Tourists	0.007	0.028	0.977	Rejected
International Flight Numbers ->Foreign Direct Investment->Number of International Tourists	-0.07	0.149	0.882	Rejected

The path analysis results indicate that exchange rate fluctuations, hotel occupancy rates, and international flight numbers do not have a significant indirect effect on foreign tourist numbers through foreign direct investment (FDI). For example, the relationship between exchange rate fluctuations and tourist numbers via FDI had a P value of 0.886, showing no significant impact. Similarly, hotel occupancy rates and international flights also showed insignificant effects through FDI on tourist numbers. These findings contrast with previous research that suggested these variables impact tourism through FDI. The results suggest that other factors, like government policies or domestic economic conditions, may play a more crucial role in attracting foreign tourists to Indonesia than FDI influenced by these variables.

3.2 Analysis of Tourism Demand Theory

Tourism demand theory suggests that tourists are sensitive to price changes, often influenced by currency exchange rates. However, despite fluctuations in the Rupiah, Indonesia did not always see a corresponding increase in tourist numbers, indicating that price is not the sole factor driving demand. Factors such as tourist income, destination attractiveness, and perceived safety also play significant roles. For example, while incomes in key markets like China and Australia increased, the rise in tourist numbers was not always proportional, highlighting the importance of other elements in influencing travel decisions.

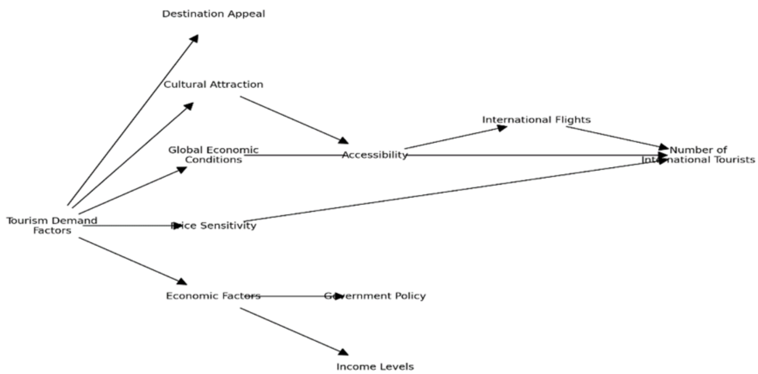

Fig. 3. Tourism Demand Analysis

Additionally, accessibility to destinations affects tourism demand. Although increasing international flights to Indonesia boosted accessibility, demand did not always meet expectations, as factors like travel costs and safety concerns posed barriers. This shows that accessibility, while important, must be complemented by other considerations like infrastructure and safety. Government policies aimed at improving tourism, such as visa facilitation and infrastructure investments, also require balanced implementation and promotion to effectively influence tourist numbers.

Moreover, external factors like the global economic situation and crises such as the COVID-19 pandemic have a strong impact on tourism demand. The pandemic saw a sharp decline in tourist arrivals due to travel restrictions and health fears, despite lower costs due to a weakened Rupiah. This highlights that non-economic factors, such as safety and health, are crucial in crisis situations. As post-pandemic recovery unfolds, the ability of destinations to adapt to global changes and meet evolving tourist preferences will be key to reviving tourism demand. A holistic approach, considering both economic and non-economic factors, is essential for sustainable tourism growth.

4 Conclusion

The research on "Rupiah and Foreign Investment: Analysis of the Impact on the Number of Foreign Tourists in Indonesia 2005-2023" concludes that fluctuations in the Rupiah exchange rate and foreign investment flows have a complex influence on tourist numbers. While a weaker Rupiah can make Indonesia more affordable, factors like political stability, infrastructure, and security significantly affect tourist decisions. Foreign direct investment (FDI) helps improve infrastructure and services but doesn't always directly boost tourist numbers. The COVID-19 pandemic emphasized the sector's vulnerability to external shocks, underscoring the need for adaptive strategies. A holistic approach, considering economic, infrastructural, and promotional aspects, is vital for sustainable tourism growth in Indonesia.

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