

Impact of FDI and BOP Current Account on INR/Euro Exchange Rate Evolution in India

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Abstract

Balance of Payments, Foreign Direct Investment, and currency exchange rate impact each other and vice versa. This study was conducted to show how the INR/EUR exchange rate fluctuated over time in relation to India's current account of the balance of payments and its FDI inflows. A sum of 263 articles was identified after an initial search from databases like Web of Science, Google Scholar, research gate, and Scopus databases. 95 articles were selected based on keywords, titles, abstracts, contents, and contributions after the second screening. After the final screening, 28 papers were found and examined based on the impact factor, citations, and review procedure. Increases in both FDI and the current account of the balance of payments were shown to positively affect the INR/EUR exchange rate over the long run. Forecasts of future exchange rates are routinely made by economists and investors to extract monetary value. Many variables, including inflation rates, growth forecasts, political stability, and economic policies, influence the relative value of currencies among nations. Most of these things are hard to foresee. Because of this, the future of exchange rates is as unpredictable as the future of everything else. Therefore, there are challenges for market participants in making judgments based on anticipated future exchange rates.

Keywords: Foreign direct investment (FDI), balance of payment (BoP), exchange rate evolution, current account, international commerce

INTRODUCTION

Various nations manufacture their products and services at different costs, exchange rates are crucial in international commerce. Every day, billions of dollars are transferred as a result of international commerce in the form of corporate transactions, regular business receipts, remittances, foreign direct investments, foreign indirect investments, etc. [1]. Financial dealings include lending and borrowing by people, companies, and governments. Large exporters and importers used to be the most important customers, but since the rise of capital flows as the primary mover of exchange rates, other groups have taken over [2]. These groups include foreign institutional investors (FIIs), corporations that borrow money from banks, and corporations that acquire other businesses through mergers and acquisitions. Currency exchange rates are volatile because these factors set demand and supply. A parallel market for intermediaries in foreign exchange transactions has emerged to meet the growing demand and

supply resulting from the movement of significant quantities of money. Because of this, speculating activities have been encouraged in the hopes of profiting from price differences in foreign currency rates. Forecasting currency rate fluctuation is crucial in everyday business and financial speculation. Like "foreign direct investment (FDI)," which is included in the capital account of the BOP, imports and exports are included in the current account. The accumulation of capital is crucial to long-term economic growth. Policymaking in developing countries is often geared toward luring foreign direct investment [3]. "Human capital,

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knowledge transfer, and market competitions” are all ways in which FDI boosts host countries’ capital stock and encourages development [4].

FDI and Exchange Rate

There is a clear correlation between the value of a nation’s currency and the foreign direct investment a country receives. Depreciation of the currency of the host nation may lead to a significant rise in FDI in the economy, as has been underlined in existing finance research, most notably by Froot and Stein (1991) [5]. In addition, Harris and Ravenscraft (1991) [6] found that a weaker dollar was linked to a greater influx of FDI into the United States economy, and other studies have shown that a weaker host currency promotes FDI in the form of long-term investments from outside. According to the empirical research, there seem to be two basic assumptions about the link between FDI and exchange rates: either a depreciation of the host currency supports large FDI inflows, or exchange rate changes negatively influence FDI inflows. Investment from outside helps advance a country’s economy and society. Governments in developing countries often actively encourage investment to entice potential foreign investors. Therefore, FDI inflows play a significant role as necessary supplements to development initiatives. To encourage a flood of foreign direct investment (FDI) into the area, the “Association of Southeast Asian Nations (ASEAN)” negotiates investment cooperation agreements that make ASEAN a desirable investment destination and provide favorable circumstances for MNEs. It is clear that in terms of Asia-Pacific GDP, the ASEAN area has benefited the most from FDI. FDI is a major factor in the rapid progress and expansion of the economies of the ASEAN.

BoP and Exchange Rate

The balance of payments for a nation is an important indicator of its economic, social, and technical development; it is more than just a record of domestic and foreign trade. The interplay of “policy, institutions, tools, and markets” inside and outside the country is reflected in the balance of payments, which shows the structural shift from “a closed, traditional economy to an open, vibrant one.” Through the lens of government action, the evolution of the US balance of payments in the 1950s. Historians may draw connections between economic imperialism and colonial exploitation while discussing the balance of payments. “drain of wealth hypothesis” significantly advanced our understanding of the unilateral transfers of wealth that occurred in India when the British were in power.

The magnitude and direction of shifts in “the current account of the balance of payments” can provide insight into a country’s level of “economic openness, global demand conditions, trade competitiveness, technological and industrial transformation, domestic output sector shifts, macroeconomic imbalances, real exchange rate movements, international migration patterns, the competitiveness of its workforce, and the trade and tariff policy regimes” in place. The movement of a country’s exchange rate may be affected by the balance of payments. If a nation has a surplus in its balance of payments, its currency’s value against other currencies will rise; otherwise, it will fall in value. If the trade surplus shows that exports are more than imports, the country will see an influx of foreign investment. And when investments pour in, the worth of the nation’s currency rises in global trade. If a country’s imports exceed its exports, foreign investment will leave, decreasing demand for the local currency on global exchanges and leading to a depreciation of the national currency.

REVIEW OF RELATED LITERATURE

Nguyen, C. D. T., & Dang, H. T. T. (2022) [19] centered on how the fluctuating exchange rate affects the bottom line. The Vietnamese State Bank was the source of all statistics from 2000 to 2020. To assess “the effect of the currency exchange rate on the BoP,” the author used a model that included a unit root, an “Auto-Regressive Distributed Lag (ARDL), and a Granger Causality Test.” According to the results, the balance of payments benefited greatly from changes in the foreign exchange rate. The findings suggested that a stable currency exchange rate contributes to the growth and efficiency of an economy. A stronger economic foundation may then be built on top of these contributions. Foreign currency rate concerns and their effects were examined deeply, and suggestions were made for future government and managerial direction and remedies.

Khan, M. F. H. (2021) [17] examined how GDP growth was affected by price changes, currency rates, FDI, and unforeseen events. The presence of unit roots was determined, and the stationarity of variables was checked using an improved version of the “Dickey-Fuller and Phillips-Perron Unit Root Test.” Economic expansion was shown to be highly influenced by both the exchange rate and FDI. Economic growth is aided by inflation, foreign direct investment, and favorable exchange rates but stunted by calamities like Covid-19.

Qamruzzaman M. et al. (2021) [11] investigated foreign direct investment (FDI), financial innovation, and currency fluctuations. The research used the Toda-Yamamoto-style unit root test, ARDL, nonlinear ARDL, and causality test. Unit root tests show that not “all variables are stationary at a level” and that the number drops dramatically when the first difference is applied. By rejecting the no-cointegration null hypothesis, “empirical model estimation using ARDL” uncovered long-run cointegration through the FPSS, WPSS, and tBDM tests. The results indicated a correlation between financial innovation, FDI inflows, and currency fluctuations over the long term. Furthermore, the research revealed negative consequences ranging from foreign direct investment (FDI) inflows and financial innovation to long-term fluctuations in currency rates. These results imply that sustained FDI inflows and banking system innovation can mitigate currency market volatility.

Nnamdi, N. (2021) [12] analyzed how the currency exchange rate affected the trade surplus or deficit. The statistics bulletin published by the Central Bank of Nigeria (CBN) was mined for information about the study’s primary variables like “the balance of payments, currency rate, interest rate, trade openness, and crude oil price” from 1981 to 2019. The VECMA procedure is utilized to examine the data. According to the result, a positive correlation exists between the two variables, and both the level and the volatility of the exchange rate directly affect the state of the balance of payments.

Tuyet T. (2020) [7] studied the impact on export performance of shocks to the real exchange rate, imports from abroad, and overseas direct investment. “Augmented Dickey-Fuller test and vector error correction model” for cointegration analysis were used in this research. The findings showed that an increase in the value of imports greatly boosted export performance in the short term but had no discernible effect in the long run. Increases in the amount of foreign investment that is formally registered tend to have a negative impact on export performance. The research found that although fluctuations in the value of the currency exchange rate do affect exports and imports over the long term, they do not influence at all in the short term.

Lee, J. W., & Brahmasrene, T. (2020) [8] looked at how fluctuations in exchange rates affect foreign direct investment inflows over the long and short terms. The argument advanced was that this was an important undertaking because it would help determine how to help best China and other emerging nations achieve their economic growth goals. “Cointegration tests, vector error correction models, Wald tests, and impulse responses” are all part of the study’s methodology. “The People’s Republic of China’s National Bureau of Statistics’ monthly time series” data was examined. There may be short-term dynamics and mutual feedback between changes in exchange rates and FDI inflows. Still, the majority of empirical data indicates that such a shift has a negative effect on FDI inflows over the long term.

Ha, J. et al. (2020) [9] identified the type of shock that causes currency fluctuations and country-specific features as the primary elements accounting for variances in exchange rate pass-through. The study presents three sets of empirical findings. Firstly, empirical research shows that pass-through percentages might vary considerably depending on the local or international shock that was first experienced. Second, the policy frameworks that regulate monetary policy responses and other structural aspects impact an economy’s vulnerability to currency swings, and these factors vary from nation to country. Countries with realistic inflation objectives and a flexible currency rate system have lower pass-through percentages. Last, the empirical findings imply that an independent central bank

may substantially ease stabilizing inflation after major currency fluctuations and permit a complete use of the exchange rate as a buffer against external shocks.

Qamruzzaman M. et al. (2019) [10] used Autoregressive Distributed Lagged (ARDL) and nonlinear ARDL to analyze the symmetric and asymmetric links between the exchange rate and FDI. “The Bangladesh Economic Review issued by the Ministry of Finance, the Statistical Yearbook produced by the Bangladesh Bureau of Statistics, and the Annual Report published by the Bangladesh Bank” were all used to compile the data. In recent times, a lot of attention has been paid to the correlation between “the value of a country’s currency” and the amount of foreign direct investment it receives. Long-term connections between “FDI, exchange rate, monetary policy, and fiscal policy” were established. “NARDL findings confirm the existence of an asymmetric link in the long-term empirical equation when the asymmetric assumption is considered.” Upward movement, indicated by a higher exchange rate compared to the US dollar, was seen to reduce FDI inflows over the long term, whereas negative shocks lead to greater FDI inflows. However, the intensity of positive shocks in the exchange rate is greater than negative shocks.

Wong M. F. et al. (2019) [13] analyzed the trends in “macroeconomic policy, exchange rate, and FDI” in the chosen ASEAN nations from 1995 to 2015. The research used the panel unit root test, the panel cointegration test, and the total “modified ordinary least squares estimator and the dynamic ordinary least squares estimator.” The findings for the whole panel of nations showed that “fiscal and monetary policies, exchange rates, and FDI are cointegrated.” The panel estimators determined the macroeconomic policy, currency rate, and FDI to have a definite and statistically significant relationship.

Karmakar, A. K., & Jana, S. K. (2019) [14] examined the development of India’s BoP over 2.5 decades against the backdrop of global shifts and currency swings. Similar to the Indian instance, empirical evidence indicates that the exchange rate is a causative factor in the trade balance rather than the other way around. One of the most important aspects of external balance for the Indian economy is the exchange rate of the Rupee, which directly impacts the country’s trade deficit and its BoP. Since India’s trade deficits have been persistently big and rising, a cautious currency rate control and capital account management strategy must accompany the country’s internal macroeconomic policies.

Romelli D. et al. (2018) [15] examined how trade liberalization affected the relationship between “the current account and real exchange rates” through fast depreciation and lulls in the exchange rate. The author used data for industrialized and developing countries from 1970 to 2011 and found that more open economies tend to have smaller depreciation in their currency rates after the abrupt halt. More open economies see a greater shift in their current account and trade balance after bouts of sudden exchange rate depreciation. In other words, open economies saw less depreciation in their currency values due to improvements in their current account and trade balance. Different metrics of trade openness and methods of detecting unexpected pauses and abrupt exchange rate depreciations did not significantly alter these results.

Korir, J. K. (2016) [16] studied the relationship between FDI and the current account to predict future currency fluctuations. In this study, researchers relied on a descriptive method. The KBS, the CBK, and the World Bank database served as the primary data repositories. After checking for non-stationarity with the Breusch-Pagan test, the data were analyzed using descriptive statistics to model the association between two explanatory variables and a response variable using a linear equation fitting and OLS regression analysis to estimate the relationships between the study variables. Results showed that both FDI and the current account, the two factors of interest, affect the currency exchange rate.

OBJECTIVES

Obj-1: To study the evolution of the currency exchange rate in India.

Obj-2: To study the impact of money inflow and outflow on currency market value.

Obj-3: “To understand and examine various aspects concerned with the foreign exchange rate in India.”

Obj-4: “To identify macroeconomic performance indicators affected by fluctuation in the INR-Euro exchange rate.”

METHODOLOGY

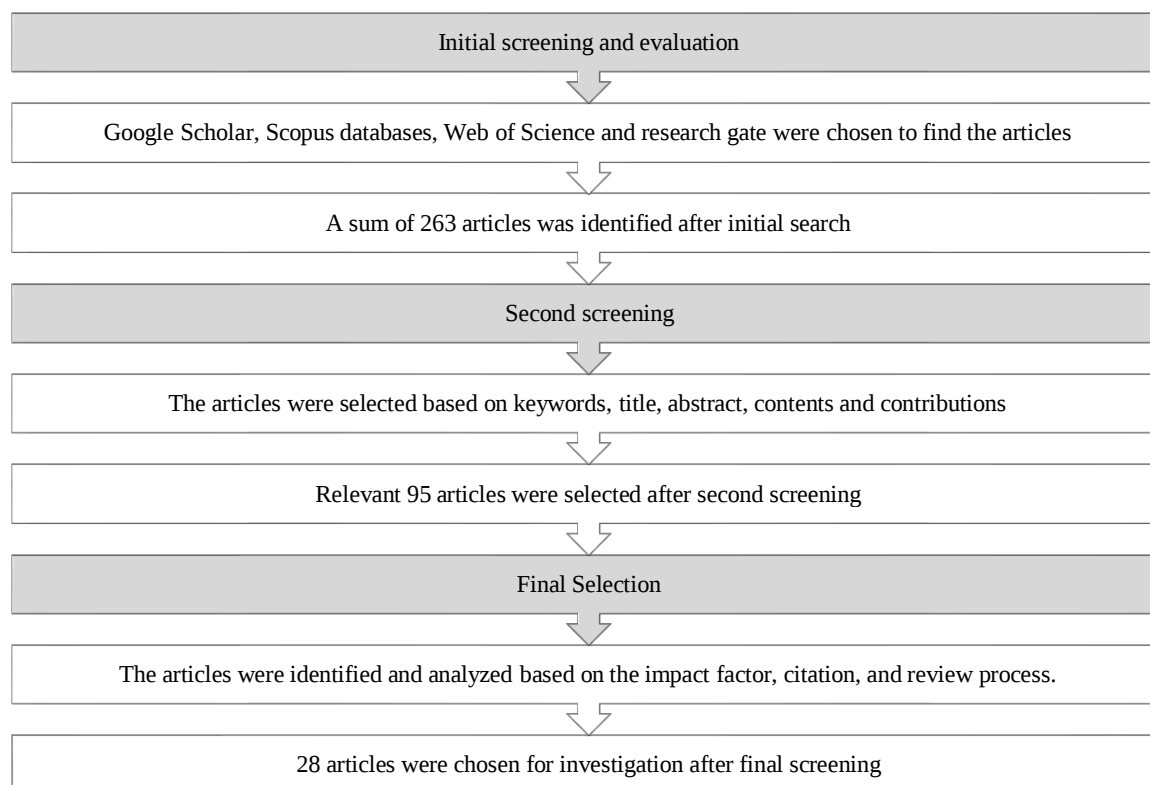


Figure 1. Review method.

DISCUSSION

Figure 1 Large-scale inflows of foreign money will affect the currency rate under market conditions, increasing exchange rate volatility. Trade, capital movement, and asset price stability are all impacted by exchange rate fluctuations. With more financial openness comes a fundamental change in the structure of the exchange rate system, from one based on fixed exchange rates to one based on freely fluctuating rates. However, countries with flawed financial systems and inadequate foreign currency reserves, such as developing nations, are particularly at risk from the financial hazards associated with international fluid capital.

For instance, Tuyet T. (2020) looked at the impact of “foreign direct investment, imports, and real exchange rate shocks” on export performance and showed that a boost in import value has a large short-term influence on export performance and a negligible long-term effect. Khan (2021) [17] looked at how inflation, nominal exchange rate, FDI, and unexpected events shock, influenced economic development and found that the exchange rate and FDI were the most influential. Economic growth is boosted by inflation, foreign direct investment, and the exchange rate but stunted by calamities like Covid-19. Using a battery of statistical methods, Qamruzzaman et al. (2019) [10] looked at “the nature of the connections between the exchange rate and FDI,” whether they be symmetric or asymmetric. There is a “long-run link between FDI, exchange rate, monetary policy, and fiscal policy,” which explains why the correlation between these variables is highly relevant. The results showed an asymmetric connection in “the empirical equation” over the long run, consistent with the asymmetric

assumption. Positive changes, such as an appreciation of the currency rate relative to the US dollar, were shown to reduce FDI inflows, whereas negative shocks resulted in greater FDI inflows. However, the intensity of positive shocks was found to be greater than that of negative shocks. Wong et al. (2019) [13] examined how macroeconomic policy, the currency rate, and FDI interacts over time. They showed that the exchange rate, FDI, and fiscal and monetary policies are all cointegrated for the whole panel of nations. Foreign direct investment (FDI) inflows are adversely affected by changes in exchange rates over the long term, according to research by Lee and Brahmasurene (2020) [8]. However, the data does not support short-term dynamics and feedback between shifts in the value of the currency and foreign direct investment. Qamruzzaman et al. (2021) [11] investigated the link between FDI, financial innovation, and currency fluctuations, and they concluded that, over the long term, these three variables tend to move in tandem. Nnamdi (2021) [12] looked at “the impact of changes in the currency rate on the balance of payments” and identified a causal relationship between them and a positive correlation between them. The form of the shock that causes currency fluctuations and country-specific variables were identified by Ha et al. (2020) as the two primary elements accounting for variances in exchange rate pass-through. Korir (2016) [16] looked into the connection between FDI and the current account and found that both factors do, in fact, impact “the value of a country’s currency in international markets.” In India, the direction of causation flows from exchange rate to trade balance rather than the other way around, as shown by Karmakar & Jana’s (2019) [14] analysis of the development of India’s BoP over the last 2.5 decades in the context of global changes and exchange rate swings and instability. More open economies see less currency depreciation when their current account and trade balance improves, as revealed in research by Romelli et al. (2018) [15] that examined “the impact of trade openness on the relationship between the current account and real exchange rates.” Tuyet T. (2020) looked specifically at how the exchange rate affected the balance of payments and found that it had a very beneficial effect. The economy seems to flourish and prosper when there is peace in the currency markets.

CONCLUSION

Exchange rate risk rises when there is volatility, making it harder to judge international commerce and investment. Those involved in international commerce aware of the hazards posed by fluctuating currency rates may shift their focus to local businesses, where the likelihood of making a profit is much higher. Foreign currency forward markets are another option for international merchants looking to protect themselves from potential loss. Since the 1990s, India has implemented several fundamental changes to the country’s foreign currency market. As part of a larger plan of macroeconomic reforms, exchange rate policy has adapted throughout time to reflect the growing liberalization of the economy. The Indian government implemented a two-stage devaluation of the Rupee to increase domestic competitiveness and win back the trust of foreign investors. In July 1991, the Indian government depreciated the Rupee twice to calm the currency market. These measures were crucial in ending the fixed exchange rate system. Most academics and economists at the time favored a system of flexible exchange rates.

Similarly, several reasons might cause a shift in the exchange rate. However, FDI and BoP have greater effects on currency values. Numerous studies show that the foreign currency rate and vice versa greatly influence the balance of payments. Foreign direct investment (FDI) also affects currency exchange rates significantly.

Various studies used the variables like FDI, BOP, Current Account, INR/Euro (currency) Exchange Rate, and Money Inflow/outflow.

From 1980 to 2017, Qamruzzaman et al. 2021 investigated the relationship among “financial innovation, foreign direct investment (FDI) and exchange rate volatility” in several South Asian nations. Their investigation used “the Toda-Yamamoto causality test, nonlinear ARDL, Autoregressive Distributed Lagged, and unit root test.” This result revealed a long-term relationship among exchange rate volatility, financial innovation, and FDI inflows. The dynamics of the links between changes in

“the currency rate and foreign direct investment (FDI) inflows in China” were examined by Lee and Brahmasrene in 2020 [8]. The argument to support the proposed topic was that it is crucial for formulating plans to further economic growth, making it a crucial course for China and other emerging nations. According to Bayoumi et al. (1996), most factors influencing FDI flows were secular, as expected for a long-term industry. However, this does not imply that short-term influences have no impact on such judgments. For example, a decline in the real exchange rate may encourage direct investment inflows by raising relative investor wealth and lowering the cost of local assets and production inputs.

On the other hand, a rise in the real exchange rate may also be linked to a rise in FDI if it reflects the effects of a general increase in capital flows or reduces protectionist forces. Using panel data from seven “Central and Eastern European nations with a Gross Domestic Product (GDP) per capita under 25,000 dollars,” Comes et al. (2018) [3] examined the effects of “foreign direct investment (FDI) and remittances on economic growth (EG).” The objective was to determine whether significant links among “FDI, remittances, and economic growth” existed in the seven nations under study. The experimental studies focused on the linkages among “FDI and remittances and economic growth.” The link between the value of the dollar and the volume and costs of cross-border acquisitions was examined by Dewenter, K. L. (1995) [18] using transaction-specific data on foreign purchases of U.S. targets between 1975 and 1989. Concerning “the foreign investment measure, the exchange rate measure, and the addition of a relative wealth proxy,” the researchers examined how robust previous test findings were.

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APPENDIX

Table 1. Variables considered in previous studies.

S.N.	Authors Name	FDI	BOP	Current Account	INR/Euro (currency) Exchange Rate	Money Inflow/outflow
1	Nguyen, C. D. T., & Dang, H. T. T. (2022)		✓		✓	
2	Khan, M. F. H. (2021)	✓			✓	
3	Qamruzzaman M. et al. (2021)	✓			✓	✓
4	Nnamdi, N. (2021)		✓		✓	
5	Nguyen, V. C., & Do, T. T. (2020)	✓			✓	✓
6	Lee, J. W., & Brahmasrene, T. (2020)	✓			✓	✓
7	Ha, J. et al. (2020)				✓	
8	Qamruzzaman M. et al. (2019)	✓			✓	✓
9	Wong M. F. et al. (2019)	✓			✓	
10	Karmakar, A. K., & Jana, S. K. (2019)		✓		✓	
11	Romelli D. et al. (2018)			✓	✓	
12	Korir, J. K. (2016)	✓		✓	✓	
13	Alsamara, M. et al. (2019)	✓			✓	
14	Bayoumi, T. et al. (1996)	✓	✓	✓	✓	✓
15	Comes, C. A. et al. (2018)	✓			✓	✓
16	Dewenter, K. L. (1995)	✓	✓		✓	✓
17	Erdal, L., & Gocer, I. (2015).	✓	✓			✓
18	Esmailpour Moghadam, H., & Dehbashi, V. (2018)	✓				✓
19	Froot, K. A., & Stein, J. C. (1991).	✓			✓	✓
20	Harris, R. S., & Ravenscraft, D. (1991)	✓			✓	✓
21	Kabir, S. et al. (2018)	✓			✓	✓
22	Klein, M. W., & Rosengren, E. (1994)	✓			✓	✓
23	Mamun, M. A., & Sohag, K. (2015)	✓				✓
24	Peng, H. et al. (2016)	✓				✓
25	Samad, A., & Akhtaruzzaman, M. (2014)	✓				✓
26	Sooreea-Bheemul, B., & Sooreea, R. (2013)	✓			✓	✓
27	Wang, H., & Liu, H. (2017)	✓				✓
28	Wang, T. C. et al. (2016)	✓				✓