

EXCHANGE RATE COMPETITIVENESS OF THE INDIAN RUPEE: INSIGHTS FROM NEER AND REER TRENDS (2007-2023)

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Abstract: Through a thorough examination of the Nominal Effective Exchange Rate (NEER) and the Real Effective Exchange Rate (REER), this study examines the Indian Rupee's exchange rate competitiveness from 2007 to 2023. In light of significant internal and international events like the COVID-19 epidemic, the global financial crisis, and economic reforms, it investigates how changes in these indicators reflect India's trade dynamics, inflation management, and governmental interventions. The results show a recent divergence between NEER and REER, indicating structural changes in the economy and highlighting the need of productivity and inflation control in maintaining export competitiveness. The report offers policy recommendations targeted at preserving currency stability and strengthening India's position in international commerce using data from the RBI and BIS.

Keywords: Indian Rupee, Exchange Rate Competitiveness, Nominal Effective Exchange Rate (NEER), Real Effective Exchange Rate (REER), Inflation, Trade Competitiveness, Currency Misalignment, Global Financial Crisis, COVID-19, Economic Policy

1. INTRODUCTION:

A country's exchange rate competitiveness plays a crucial role in its international economic performance. For India, as a major emerging economy, understanding the value of its currency, the Indian Rupee (INR), is essential for policymakers, businesses, and economists alike. While nominal exchange rates provide a basic measure, real effective exchange rates (REER), which account for inflation differentials, offer a more accurate picture of a country's competitiveness in international trade.

Two key indicators, the Nominal Effective Exchange Rate (NEER) and the Real Effective Exchange Rate (REER), are used to assess India's exchange rate competitiveness. NEER measures the value of the Rupee against a basket of major currencies, while REER adjusts for inflation to reflect the relative price competitiveness of Indian goods and services.

The period between 2007 and 2023 witnessed significant global and domestic economic events, including the global financial crisis, policy shifts in India, the COVID-19 pandemic, and geopolitical tensions. These events have had a substantial impact on the NEER and REER of the Indian Rupee. By analysing these trends, we can gain insights into India's economic strategies and its position in the global economy.

2. LITERATURE REVIEW

The literature on India's exchange rate dynamics has consistently emphasized the importance of the Nominal Effective Exchange Rate (NEER) and Real Effective Exchange Rate (REER) as indicators of external competitiveness. Kohli (2008), in her study on real exchange rate management in India, highlights the usefulness of REER in assessing exchange rate policy and the competitiveness of the Indian Rupee. The study further underscores the influence of macroeconomic conditions, particularly in the post-liberalization period. Similarly, Patnaik and Shah (2010) examine the functioning of exchange rate markets and their response to economic information, arguing that movements in NEER and REER provide important signals regarding India's competitiveness in an increasingly integrated global economy. Kumar and Dhiman (2013) further identify oil prices, trade deficits, monetary policy, and other external factors as major determinants of exchange rate behaviour in India.

The theoretical importance of REER in assessing currency valuation and competitiveness is also well established in the broader literature. Chinn (2006) provides a conceptual framework for understanding real effective exchange rates, particularly in relation to currency overvaluation, undervaluation, and macroeconomic fundamentals. This framework is particularly relevant for analysing the movement of the Indian Rupee during periods of substantial economic and financial volatility. Goldstein and Khan (1985) similarly demonstrate the importance of relative prices and exchange rates in influencing international trade flows. In the Indian context, Kundu and Banerjee (2012) examine exchange rate misalignment and assess whether the Rupee experienced periods of overvaluation or undervaluation, particularly around the global financial crisis. Their analysis illustrates the implications of REER movements for India's trade competitiveness.

Several studies have specifically investigated the relationship between exchange rate volatility and India's external trade performance. Singh and Mathur (2013) analyse the influence of exchange rate fluctuations on Indian trade and highlight the implications of NEER and REER movements for export competitiveness during periods of global uncertainty. Hutchison, Sengupta, and Singh (2012) similarly examine exchange rate volatility and export performance in the post-2008 financial crisis environment, noting that persistent REER misalignment may distort trade competitiveness through currency overvaluation or undervaluation. Misra and Rajeev (2016) further emphasize that fluctuations in NEER and REER can have significant consequences for trade balances and export performance, particularly during episodes of international financial turbulence. Mohanty and Bhanumurthy (2018) also highlight the importance of maintaining a relatively stable real exchange rate to support both export and import competitiveness.

Exchange rate policy and institutional interventions have also received considerable attention. Patnaik, Shah, and Veronese (2011) examine India's exchange rate management framework and demonstrate how policy interventions have sought to maintain stability in the Rupee while preserving external competitiveness. The Reserve Bank of India's Annual Reports for 2007–2013 similarly document important movements in NEER and REER and provide insights into policy responses to changing domestic and global economic conditions. These reports are particularly useful for understanding exchange rate developments during the global financial crisis and the subsequent recovery period. Joshi and Little (2011), in their broader examination of India's economic reforms and development, also provide important context for understanding how structural and policy reforms influenced exchange rate management and external sector performance.

Overall, the existing literature indicates that movements in NEER and REER are shaped by a combination of domestic macroeconomic conditions, international market developments, exchange rate policy, inflation differentials, and trade-related factors. The studies collectively suggest that REER is especially important for assessing India's price competitiveness because it incorporates both nominal exchange rate changes and relative price movements. At the same time, persistent exchange rate volatility or misalignment may adversely affect trade performance. The literature therefore provides a strong basis for examining the long-term movement of NEER and REER in India and assessing their implications for export competitiveness and exchange rate policy.

3. OBJECTIVE:

- I. Explore the relationship between NEER and REER in influencing India's global and regional trade competitiveness.
- II. Provide recommendations to ensure exchange rate stability and support trade and economic growth.
- III. To analyse the trends and patterns of NEER and REER for the Indian Rupee for the specified period, showing periods of appreciation, depreciation, and stability.
- IV. Identify key factors or events that have shaped the movements of NEER and REER, such as the global financial crisis, economic reforms, and the COVID-19 pandemic.

4. RESEARCH METHODOLOGY

The study is based on secondary data relating to the Nominal Effective Exchange Rate (NEER) and Real Effective Exchange Rate (REER) indices for the period 2007–2023. The data were collected from reliable and authoritative sources, primarily the Reserve Bank of India (RBI) and international databases such as the Bank for International Settlements (BIS). The exchange rate indices are based on a 40-currency basket, weighted according to India's trade shares, and normalized using 2015–16 as the base year. The use of official and internationally recognized data sources ensures consistency and reliability in the analysis.

The analysis focuses on two major dimensions of exchange rate movements. First, trade-weighted NEER and REER indices are examined to understand India's overall external competitiveness relative to its major trading partners. Second, export-weighted NEER and REER indices are considered to assess India's export competitiveness more specifically. Particular attention is given to important sub-periods such as 2007–2009, 2015–2017, and 2020–2023 in order to observe how major domestic and global economic developments influenced exchange rate behaviour and competitiveness.

Descriptive statistical techniques are employed to summarize the behaviour of the exchange rate indices over the study period. Measures such as mean, standard deviation, minimum, and maximum values are used to identify the central tendency and variability of NEER and REER. In addition, trend analysis is conducted to examine long-term movements and possible structural changes in the indices, particularly during and after 2015. A comparative assessment of NEER and REER is also undertaken to understand the divergence between nominal and real exchange rate movements and their implications for India's price competitiveness. The observed patterns are interpreted with reference to macroeconomic factors such as inflation, fiscal reforms, exchange rate movements, and global economic conditions.

Graphical visualization forms an important part of the analysis. Line charts are used to illustrate movements in trade-weighted and export-weighted NEER and REER over time, while competitiveness zones are identified to highlight periods in which the REER remains above the benchmark value of 100. These visualizations help demonstrate phases of relative appreciation or depreciation and their possible implications for trade competitiveness.

The interpretation of the findings is guided by established economic theory concerning the relationship between nominal exchange rate movements, inflation differentials, and real exchange rate adjustment. Particular emphasis is placed on understanding situations in which nominal depreciation is accompanied by relative stability or appreciation in the REER. The findings are further contextualized within major economic developments, including the global financial crisis, India's subsequent economic recovery, structural reforms, and the post-COVID evolution of trade and exchange rate conditions.

Finally, the study draws policy implications from the observed patterns in NEER and REER. The analysis emphasizes the importance of maintaining price stability, improving productivity, strengthening export capabilities, and ensuring appropriate management of nominal exchange rate movements. Such measures may help enhance India's international competitiveness and support sustainable export performance over the long term.

5. RESULTS AND DISCUSSION

Trends in NEER and REER (2007–2023)

The data on Nominal Effective Exchange Rate (NEER) and Real Effective Exchange Rate (REER) indices, based on a 40-currency basket and normalized to the base year 2015-16, highlights significant variations in the competitiveness of the Indian Rupee over the years.

2007–2009: Sharp decline in NEER, with export-weighted NEER falling from 136.55 (2007) to 118.46 (2009). The REER indices also reflect competitiveness pressures due to global economic turmoil.

2015–2017: A rebound in both NEER and REER aligns with India's economic recovery and fiscal reforms.

2020–2023: Post-COVID years reflect a steady depreciation in NEER, while REER remains stable above 100, suggesting resilience driven by controlled inflation relative to trading partners.

Table 1. Summary Statistics

Metric	Trade-Weighted NEER	Trade-Weighted REER	Export-Weighted NEER	Export-Weighted REER
Mean (2007–2023)	105.18	99.87	104.74	99.92
Standard Deviation	16.78	5.29	16.52	5.19
Maximum (Year)	138.76 (2007)	105.52 (2017)	136.55 (2007)	105.22 (2017)
Minimum (Year)	90.13 (2023)	93.23 (2013)	92.37 (2023)	93.52 (2013)

Periods with REER > 100 (e.g., 2017–2023) imply a loss of price competitiveness for Indian exports. A declining NEER coupled with an REER > 100 reflects that domestic inflation remains under control but nominal depreciation doesn't fully restore competitiveness. The observed trends call for policies addressing inflation control and nominal exchange rate adjustments to maintain export competitiveness.

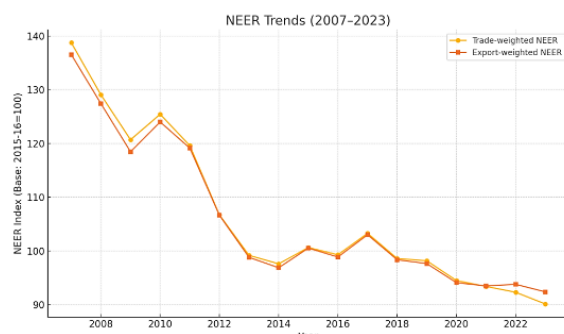


Fig. 1. NEER Trends (2007–2023)

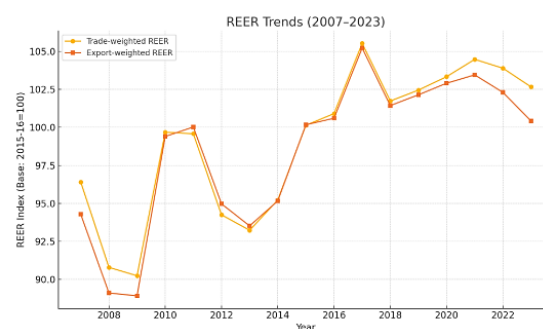


Fig. 2. REER Trends (2007–2023)

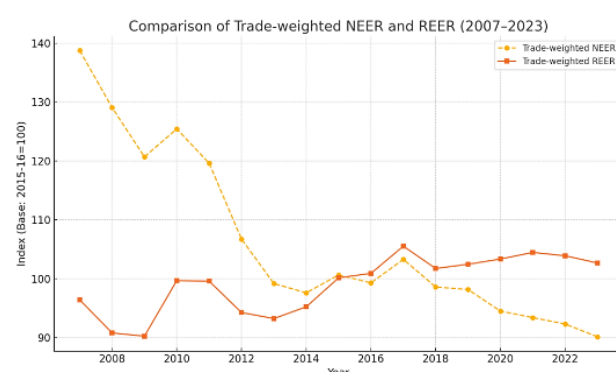


Fig. 3. Comparison of NEER and REER (2007–2023)



Fig. 4. Competitiveness Zones

The shift of REER > 100 post-2015 signals a structural change in India's trade dynamics, necessitating sustained productivity improvements. The divergence between NEER and REER in recent years'

underscores India's success in controlling inflation relative to trading partners, even as nominal depreciation continues.

6. CONCLUSION

The analysis of NEER and REER trends from 2007 to 2023 reveals significant insights into the evolving competitiveness of the Indian Rupee. The period from 2007–2009 saw a sharp decline in NEER, as global economic turbulence impacted trade dynamics in India. In contrast, the period from 2015–2017 demonstrated a recovery, driven by economic reforms and fiscal consolidation.

Post-COVID trends from 2020 to 2023 show a steady depreciation in NEER, while REER remains stable above 100, which reflects the resilience of the Indian economy through controlled inflation relative to its trading partners. However, the persistent $REER > 100$ indicates a potential erosion in price competitiveness for Indian exports, requiring further efforts to enhance productivity and manage the nominal exchange rate effectively. The divergence between NEER and REER, especially in recent years, reflects structural shifts in trade dynamics and inflation differentials. This calls for targeted policy measures to balance inflation control and exchange rate management while fostering sustained productivity growth to enhance global competitiveness. The study underscores the need for strategic interventions to support India's export sector amidst changing economic landscapes.

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