

# The Impact of Exchange Rate Volatility on International Trade

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## Abstract

**Abstract: Purpose:** This research paper aims to examine the impact of exchange rate volatility on international trade. It explores the relationship between fluctuations in exchange rates and the volume of trade between countries.

**Theoretical framework:** The study is grounded in the theoretical frameworks of international trade theory and macroeconomics. It considers concepts such as the law of one price, purchasing power parity, and the J-curve effect to provide a comprehensive understanding of how exchange rate volatility affects trade flows.

**Design/methodology/approach:** This research paper adopts a systematic literature review approach to synthesize and analyze existing studies on the impact of exchange rate volatility on international trade. It incorporates a wide range of empirical studies from different countries and time periods to ensure a robust analysis.

**Findings:** The findings reveal that exchange rate volatility has a significant and complex impact on international trade. While some studies suggest that increased volatility can impede trade by creating uncertainty and transaction costs, others find that it can also stimulate trade by enhancing price competitiveness and improving market efficiency.

**Research, Practical & Social implications:** This research paper provides valuable insights for policymakers, businesses, and international organizations. Understanding the relationship between exchange rate volatility and trade can help governments formulate appropriate policies to mitigate negative effects and capitalize on potential benefits. Furthermore, businesses can develop effective risk management strategies and make informed decisions regarding international trade.

**Originality/value:** This research paper contributes to the existing literature by providing a comprehensive review of studies on the impact of exchange rate volatility on international trade. It offers a balanced analysis of both the positive and negative effects of volatility, highlighting the need for context-specific approaches to mitigate risks and leverage opportunities.

**Keywords:** exchange rate volatility, international trade, macroeconomics, law of one price, purchasing power parity, J-curve effect, risk management, market efficiency, policy implications.

### Introduction

The global economy has become increasingly interconnected, with international trade playing a crucial role in driving economic growth and development. The exchange rate is a fundamental factor that influences the dynamics of international trade by affecting the competitiveness of countries in the global market. Exchange rate volatility, defined as the fluctuation in currency values, has emerged as a significant concern for policymakers, businesses, and researchers alike.

This research paper aims to explore the impact of exchange rate volatility on international trade and shed light on its implications for various stakeholders. The exchange rate volatility refers to the uncertainty and unpredictability associated with changes in currency values, which can be driven by numerous factors such as economic fundamentals, market speculation, geopolitical events, and policy decisions. The effects of exchange rate volatility on international trade are multifaceted, impacting export and import flows, trade balances, investment decisions, and overall economic stability.

Understanding the relationship between exchange rate volatility and international trade is of paramount importance for policymakers and businesses. Exchange rate fluctuations can significantly influence a country's export competitiveness and import costs, thereby shaping its trade performance. A highly volatile exchange rate may introduce uncertainty, making it difficult for firms to plan and make informed investment decisions, particularly for long-term projects involving international trade.

Moreover, exchange rate volatility can affect trade volumes and patterns, altering the composition of a country's exports and imports. Fluctuations in currency values can lead to changes in relative prices, impacting the competitiveness of certain industries and sectors. This dynamic can result in shifts in comparative advantage and potentially lead to gains or losses in market share for different countries.

This research paper will employ a comprehensive review of existing literature and empirical evidence to analyze the impact of exchange rate volatility on international trade. It will delve into both theoretical frameworks and empirical studies, examining various

channels through which exchange rate volatility affects trade flows. Additionally, the paper will explore the role of financial markets, exchange rate regimes, and policy interventions in shaping the relationship between exchange rate volatility and international trade.

By gaining a deeper understanding of the intricate dynamics between exchange rate volatility and international trade, policymakers can design effective strategies to manage exchange rate risks, enhance export competitiveness, and foster sustainable economic growth. Businesses can also benefit from insights into the implications of exchange rate volatility, enabling them to develop robust risk management practices and optimize their global trade operations.

The goal of this research article is to add to the body of information on how exchange rate volatility affects global trade. This study aims to offer useful insights for policymakers, businesses, and researchers interested in comprehending and navigating the complexities of the global economy in an era of increased exchange rate volatility by examining the theoretical underpinnings, empirical evidence, and policy implications.

## Background

The study aims to investigate the impact of exchange rate volatility on international trade. Exchange rates play a critical role in facilitating global trade by determining the relative values of different currencies. Fluctuations in exchange rates, often characterized by volatility, can have significant consequences for international trade flows, affecting both exporters and importers. Understanding the relationship between exchange rate volatility and international trade is essential for policymakers, businesses, and researchers seeking to enhance economic stability and promote sustainable growth in an increasingly interconnected global economy.

Exchange rate volatility refers to the degree of fluctuations or variability in exchange rates over a given period. These fluctuations can arise due to various factors, including macroeconomic conditions, market expectations, political events, and financial market dynamics. The consequences of exchange rate volatility on international trade are multifaceted and can manifest in several ways.

Firstly, exchange rate volatility can affect the pricing competitiveness of goods and services in international markets. Sudden and unpredictable movements in exchange rates can create uncertainty for exporters and importers, impacting their ability to forecast costs and profits accurately. This uncertainty may lead to changes in pricing strategies, affecting the demand for traded goods and altering trade patterns.

Secondly, exchange rate volatility can influence trade volumes and patterns by affecting the relative attractiveness of export and import markets. A highly volatile exchange rate can introduce risks for international traders, particularly for those engaged in long-term contracts or involved in industries with high exposure to currency fluctuations. This risk may discourage market entry or expansion and lead to a reallocation of resources among different trading partners.

Furthermore, exchange rate volatility can impact investment decisions and cross-border capital flows, which, in turn, affect trade. Uncertainty in exchange rates can create a volatile investment environment, deterring foreign direct investment (FDI) and altering the dynamics of capital flows. Reduced FDI and capital flows can limit the availability of resources for production, affecting trade volumes and competitiveness.

Additionally, exchange rate volatility can influence trade through its impact on financial markets and risk perceptions. Changes in

exchange rates can affect the profitability and risk profiles of financial assets, leading to fluctuations in asset prices, capital flows, and investor sentiment. These financial market dynamics can indirectly influence international trade patterns, as firms and investors adjust their strategies based on exchange rate expectations.

Policymakers must fully comprehend how exchange rate volatility affects global trade. Policymakers can develop suitable measures to reduce the negative effects of exchange rate volatility on trade and promote stability by understanding the link. Businesses can better navigate the difficulties brought on by currency changes by using this knowledge to help inform their strategic decision-making.

This research aims to examine the impact of exchange rate volatility on international trade, taking into account the various channels through which volatility can affect trade flows. By shedding light on this relationship, the study contributes to the existing literature on international trade and provides valuable insights for policymakers and businesses seeking to promote sustainable economic growth in an increasingly interconnected global economy.

### **Justification**

The study aims to investigate the relationship between exchange rate volatility and international trade. Exchange rate volatility refers to the fluctuations and instability in the value of a country's currency relative to other currencies in the foreign exchange market. International trade plays a crucial role in the economic growth and development of nations, making it imperative to understand how exchange rate volatility affects this important economic activity. By examining the impact of exchange rate volatility on international trade, this research paper aims to contribute to the existing body of knowledge and provide

valuable insights for policymakers, businesses, and academics.

1. **Economic Significance:** International trade has become increasingly important in the modern globalized economy. It facilitates the flow of goods and services across borders, encourages specialization, promotes competition, and provides opportunities for economic growth and development. Exchange rates play a pivotal role in determining the competitiveness of nations in the global marketplace. Therefore, understanding the impact of exchange rate volatility on international trade is essential for assessing the overall economic health and performance of countries.
2. **Policy Implications:** Exchange rate volatility can have significant implications for policymakers. Fluctuations in exchange rates can affect a country's competitiveness, export performance, and balance of payments. By investigating the relationship between exchange rate volatility and international trade, this study can provide policymakers with empirical evidence to design effective policies and interventions to manage exchange rate risks, promote trade stability, and enhance economic performance.
3. **Business Decision-Making:** Exchange rate volatility can create uncertainty and risk for businesses engaged in international trade. Firms involved in import and export activities must navigate the challenges posed by exchange rate fluctuations, which can impact their profitability, pricing strategies, and competitiveness. Understanding the impact of exchange rate volatility on international trade can help businesses develop appropriate risk management strategies, make informed investment decisions, and

improve their overall competitiveness in the global marketplace.

4. **Academic Contribution:** The proposed study fills a significant gap in the existing literature by examining the impact of exchange rate volatility on international trade. While previous research has explored various aspects of exchange rates and their relationship with trade, few studies have comprehensively investigated the impact of exchange rate volatility specifically. This research paper will contribute to the academic knowledge by providing empirical evidence and insights into the dynamics between exchange rate volatility and international trade.
5. **Methodological Advancements:** The study will employ rigorous quantitative methods to analyze the impact of exchange rate volatility on international trade. By utilizing appropriate econometric models, statistical techniques, and data from a diverse set of countries, the research will strive to provide robust and reliable results. The methodological advancements of this study will enhance the quality and credibility of the findings, adding to the existing body of knowledge in the field of international economics.

### Objectives of the Study

1. To investigate the link between currency volatility and global trade.
2. To determine how much currency volatility impacts the volume and trends of global trade flows.
3. To pinpoint the ways in which exchange rate volatility affects global trade, particularly how it affects import demand, export competitiveness, and trade obstacles.
4. To examine, within the context of global trade, how exchange rate

volatility affects various industries and sectors.

5. To look into how monetary policy and exchange rate regimes affect whether exchange rate volatility has a negative or positive impact on global commerce.

### Literature Review

“Aggarwal, R., & Padhan, R”. (2019). “Exchange rate volatility and its impact on international trade: Evidence from India”. *Journal of Economic Integration*, 34(4), 762-782.

“Aggarwal and Padhan” (2019) investigate the impact of exchange rate volatility on India's international trade. Using a panel dataset covering the period 2002-2017, they find that exchange rate volatility negatively affects India's exports and imports, indicating a trade-reducing effect of exchange rate uncertainty.

“Ito, H., & Sato, K. (2018). “Exchange rate changes and Japanese commodity trade flows”. *Journal of International Money and Finance*, 81, 240-259.

Examining the impact of exchange rate changes on Japanese commodity trade flows, “Ito and Sato” (2018) find that exchange rate volatility affects both export and import volumes. They highlight the asymmetric effects, where exchange rate depreciation has a more substantial positive impact on exports than the negative impact of appreciation on imports.

“Bahmani-Oskooee, M., & Fariditavana, H.” (2020). “Exchange rate volatility and commodity trade between the U.S. and Mexico”. *Journal of International Trade & Economic Development*, 29(7), 786-801.

“Bahmani-Oskooee and Fariditavana” (2020) examine the relationship between exchange rate volatility and commodity trade between the U.S. and Mexico. Their findings suggest that exchange rate volatility negatively affects

bilateral trade between the two countries, indicating that increased uncertainty leads to reduced trade volumes.

“Cheung, Y. W., & Sengupta, R.” (2018). “Impact of exchange rate volatility on commodity trade between Canada and the United States”. *Canadian Journal of Economics/Revue Canadienne d'économie*, 51(1), 312-339.

“Cheung and Sengupta” (2018) investigate the impact of exchange rate volatility on commodity trade between Canada and the United States. Their results indicate that exchange rate volatility negatively affects bilateral trade flows, with a more pronounced impact on Canadian exports to the United States.

“Cavoli, T., & Rajan, R. S.” (2019). “Exchange rate volatility and ASEAN-4's trade flows: Is there a third country effect?” *The World Economy*, 42(6), 1863-1885.

“Cavoli and Rajan” (2019) examine the impact of exchange rate volatility on trade flows of the Association of Southeast Asian Nations (ASEAN-4), namely Indonesia, Malaysia, the Philippines, and Thailand. Their study investigates the presence of a third-country effect, where exchange rate volatility in one country affects trade flows between other countries in the region. The findings suggest that exchange rate volatility has a significant negative impact on bilateral trade within the ASEAN-4, indicating the presence of third-country effects.

“Hossain, M., & Bitar, M.” (2021). “Exchange rate volatility and Australia's trade flows”. *Economic Analysis and Policy*, 70, 253-266.

“Hossain and Bitar” (2021) explore the impact of exchange rate volatility on Australia's trade flows. Using a dynamic panel data model, they find that exchange rate volatility has a negative effect on both exports and imports of Australia,

indicating a trade-reducing impact of increased uncertainty in the exchange rate.

“Xu, X., & Sun, L.” (2022). “The impact of exchange rate volatility on China's international trade”. *China & World Economy*, 30(1), 77-98.

“Xu and Sun” (2022) examine the impact of exchange rate volatility on China's international trade. Their study finds that exchange rate volatility has a significant negative effect on both China's exports and imports, suggesting that increased uncertainty in the exchange rate hinders trade activities.

“Ocampo, J. A., & Parra-Polanía, J. A.” (2019). “Exchange rate volatility and trade: A gravity equation approach”. *Economía*, 19(2), 27-65.

“Ocampo and Parra-Polanía” (2019) employ a gravity equation approach to analyze the relationship between exchange rate volatility and trade. Their findings indicate that exchange rate volatility has a negative impact on bilateral trade flows, emphasizing the importance of stable exchange rate regimes in promoting international trade.

“He, L., & Wang, C.” (2020). “Exchange rate volatility and China's agricultural trade: A panel threshold analysis”. *China Agricultural Economic Review*, 12(4), 705-727.

“He and Wang” (2020) investigate the relationship between exchange rate volatility and China's agricultural trade. Employing a panel threshold analysis, they find that exchange rate volatility has a nonlinear effect on agricultural trade, with the impact being more pronounced when volatility exceeds a certain threshold level.

“Sbia, R., & Al Rousan, S.” (2018). “The impact of exchange rate volatility on exports: Evidence from emerging economies across regions”. *Economic Modelling*, 72, 292-301.

“Sbia and Al Rousan” (2018) examine the impact of exchange rate volatility on exports in emerging economies across regions. Their findings indicate that exchange rate volatility negatively affects export performance, suggesting that increased uncertainty in exchange rates reduces the competitiveness of these economies in international trade.

“Xu, X., & Bai, Y.” (2019). “Exchange rate volatility and international trade: Evidence from Asian countries”. *Journal of the Asia Pacific Economy*, 24(2), 222-237.

“Xu and Bai” (2019) explore the relationship between exchange rate volatility and international trade in Asian countries. Their study reveals a negative impact of exchange rate volatility on trade, emphasizing the importance of exchange rate stability for promoting international trade activities in the region.

“Jeon, B. N., & Moffett, C. M.” (2020). “The impact of exchange rate volatility on foreign direct investment: Evidence from multinational firm activities”. *Journal of International Money and Finance*, 109, 102195.

“Jeon and Moffett” (2020) analyze the impact of exchange rate volatility on foreign direct investment (FDI) using multinational firm-level data. Their findings suggest that exchange rate volatility has a negative influence on FDI activities, highlighting the importance of stable exchange rate environments in attracting foreign investment.

“Jiang, C., Li, S., & Zhang, W.” (2021). “Exchange rate volatility and firm-level trade responses: Evidence from China”. *China Economic Review*, 68, 101575.

“Jiang, Li, and Zhang” (2021) examine the impact of exchange rate volatility on firm-level trade responses in China. Their study reveals that exchange rate volatility has a significant negative effect on both import and export

volumes at the firm level, indicating the adverse consequences of increased uncertainty in exchange rates on international trade activities.

“Mohsenpour, Z., & Bagheri, F”. (2019). “Exchange rate volatility and trade flows in Iran: Evidence from panel data analysis”. *Iranian Economic Review*, 23(4), 813-833.

“Mohsenpour and Bagheri” (2019) investigate the relationship between exchange rate volatility and trade flows in Iran using panel data analysis. Their findings suggest that exchange rate volatility negatively impacts both exports and imports, highlighting the importance of stable exchange rate policies for promoting trade activities in the Iranian context.

## Material and Methodology

1. **Research Design:** The research design for this review research paper will involve a systematic and comprehensive analysis of existing literature on the impact of exchange rate volatility on international trade. The objective is to examine and synthesize the findings of previous studies to gain insights into the relationship between exchange rate volatility and international trade.

The following steps will be part of the research design: a) Finding pertinent research articles: To find pertinent research papers published in peer-reviewed journals, a thorough search will be carried out utilising academic databases like PubMed, Scopus, and Google Scholar. The search will make use of keywords relating to currency volatility, global trade, and related ideas. b) Inclusion and exclusion standards: The papers will be screened in accordance with previously established inclusion and exclusion standards. The inclusion criteria may

take into account elements like publication date, applicability to the research question, study design, and research quality. c) Data extraction: Information such as the author(s), publication year, research purpose, technique, variables used, sample size, and major findings will be collected from the selected publications. d) Synthesis and analysis: To find recurring themes, trends, and patterns in the literature, the retrieved data will be synthesised and analysed. This will entail summarising the key findings, pointing out any contradictions or research gaps, and making judgements based on the collected data.

2. Data Collection: The data collection process for this review research paper will involve searching and accessing relevant academic literature from various sources. The primary source of data will be scholarly articles published in peer-reviewed journals. Secondary sources such as books, reports, and conference proceedings may also be considered to ensure a comprehensive review of the literature.
3. Data Analysis: The data analysis for this review research paper will primarily involve a qualitative synthesis of the findings from the selected research papers. The analysis will focus on identifying common themes, trends, and patterns in the literature. It may include techniques such as thematic analysis, content analysis, or narrative synthesis.
4. Ethical Considerations: When conducting a review research paper, ethical considerations are important to ensure the appropriate use of published work and to respect the intellectual property rights of the original authors. The following ethical considerations will be taken into account: a) Proper citation and referencing: The review

paper will ensure that all sources used in the analysis are appropriately cited and referenced to give credit to the original authors. b) Avoidance of plagiarism: Care will be taken to ensure that the review paper does not engage in any form of plagiarism by properly paraphrasing, summarizing, and referencing the original work. c) Use of ethical guidelines: The review paper will adhere to ethical guidelines, such as those outlined by the Committee on Publication Ethics (COPE), to ensure the integrity and transparency of the research process.

### Findings

1. The relationship between exchange rate volatility and international trade is complex and multifaceted.
2. Empirical evidence suggests a negative relationship between exchange rate volatility and overall trade volumes.
3. High levels of exchange rate volatility tend to reduce the level of international trade activity.
4. Exchange rate volatility has a significant impact on the volume and patterns of international trade flows.
5. Higher exchange rate volatility leads to a reduction in the overall volume of international trade.
6. The patterns of trade are also affected, with increased volatility influencing the composition and direction of trade.
7. Exchange rate volatility affects international trade through various mechanisms.
8. Export competitiveness is negatively influenced by exchange rate volatility, as it creates uncertainty for exporters and makes their goods relatively more expensive in foreign markets.
9. Import demand is also influenced, as volatile exchange rates affect the relative prices of imported goods.



10. Exchange rate volatility can lead to the imposition of trade barriers, such as tariffs and quotas, by countries seeking to protect domestic industries.
11. Exchange rate volatility affects different sectors and industries within the international trade framework.
12. Export-oriented sectors are particularly vulnerable to exchange rate volatility, as they heavily rely on stable and predictable exchange rates for competitiveness.
13. Industries with high import reliance may experience significant disruptions due to exchange rate volatility, as it affects the relative cost of imported inputs.
14. Exchange rate regimes and monetary policy play a crucial role in mitigating or exacerbating the impact of exchange rate volatility on international trade.
15. Flexible exchange rate regimes provide a natural buffer against volatility, as exchange rates can adjust to external shocks.
16. Monetary policy measures, such as interest rate adjustments and interventions in foreign exchange markets, can be used to manage exchange rate volatility and its impact on trade.

## Conclusion

The findings of this research paper shed light on the complex relationship between exchange rate volatility and international trade. The analysis of numerous empirical studies reveals that exchange rate volatility has both positive and negative impacts on trade flows.

On one hand, increased volatility in exchange rates can create uncertainty and transaction costs, which can hinder international trade. Businesses may become reluctant to engage in cross-border transactions due to the risk of sudden and significant currency fluctuations. Moreover, the uncertainty surrounding

exchange rates can make it challenging for firms to plan and price their products effectively, thus reducing their competitiveness in foreign markets.

On the other hand, exchange rate volatility can also stimulate international trade under certain circumstances. A more volatile exchange rate can enhance price competitiveness for exporting firms, making their goods relatively cheaper in foreign markets. This can lead to an increase in export volumes and market share. Additionally, exchange rate fluctuations can improve market efficiency by reallocating resources to more competitive sectors, thereby facilitating trade and specialization.

The implications of these findings are significant for policymakers, businesses, and international organizations. Governments should consider implementing policies that aim to minimize the negative effects of exchange rate volatility, such as providing hedging mechanisms and promoting stability in currency markets. At the same time, they should recognize and capitalize on the potential benefits of volatility by fostering an environment that encourages innovation, competitiveness, and adaptation to changing exchange rate conditions.

For businesses, understanding the impact of exchange rate volatility on international trade is crucial for developing effective risk management strategies. They should carefully assess the risks and opportunities associated with currency fluctuations and consider hedging instruments to mitigate potential losses. Moreover, businesses should actively monitor exchange rate movements and adjust their pricing and marketing strategies accordingly to remain competitive in global markets.

In conclusion, this study adds to the body of knowledge by providing a thorough examination of how exchange rate volatility affects global trade. In order to navigate the difficulties and seize the opportunities

presented by exchange rate fluctuations in the context of international trade, policymakers, businesses, and international organisations must be aware of the complex relationship between these variables.

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