A STUDY ON IMPACT OF FOREIGN EXCHANGE RATE FLUCTUATION ON INDIAN FOREIGN TRADE

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ABSTRACT

Foreign exchange plays a vital role in the country's foreign trade. Foreign Exchange Rates and Foreign Trade are interrelated with each other and thus one variable has an impact on another in one way or other. The present paper studies impact of Exchange Rate fluctuations on India's Foreign Trade. The study used monthly time series data of Exchange Rates and India's Foreign trade for the period of 5years. It was analyzed with the aid of econometric tools like Unit-root test, co-integration, Granger-Causality. The result stated that there is a long run co-integration between Exchange rate and India's foreign trade, and there is a unilateral causality between the Exchange Rate and India's Foreign Trade. The study concludes that the past values of India's Foreign trade are more likely to forecast future value of the Exchange rates for the short term. From the study undertaken it very evident that, there exists a long run relationship between the exchange rates and India's Foreign Trade.

KEY WORDS: *Exchange Rate, Foreign Trade, long run, short run, Cointegration.*

INTRODUCTION:

Foreign exchange has been widespread throughout the world. Any country's growth rate performance is evaluated based on its ability to generate foreign exchange as well as the goods it can produce. It has also been argued that the nation's growth and performance are driven by its overseas trade. The development and moulding of the nation's economy rely heavily on international trade, which enables the nation to buy goods and services from other nations that would otherwise be expensive to manufacture. The world has become a single market thanks to international commerce, which allows any country with excess domestic output to conduct business there. It makes it possible for one country to trade domestically produced items with other nations around the globe.

The nation's foreign trade depends heavily on foreign exchange. Since 2009, the Indian Rupee has lost value. The profit margins of the nation's importers have decreased as a result. The burden of higher import costs has been transferred to the final consumer as the value of the Rupee has fallen versus the US Dollar. Since a weak currency increases the cost of imports for the domestic economy, the trade imbalance may become more strained. Before commercial transactions are conducted in local currency, a person is not concerned about changes in foreign exchange rates. Only when a person makes arrangements for international travel, import payments, and international transactions does the focus shift

REVIEW OF LITERATURE

Shelly Singala , Sanghita Chaudhary B, (2019). The study's conclusions imply that while the price of oil has a negative impact on Mexican stock prices, the price of international gold has a favorable impact. Long-term exchange rates are negatively impacted by oil prices, but the price of gold has no discernible effect

Rashid Latief and Lin Lefen, (2018). The results of this research revealed that exchange rate volatility has a major impact on both foreign direct investment and global trade, but adversely in OBOR-affiliated nations, which is consistent with the economic theory contending that exchange rate fluctuation may harm foreign direct investment.

Loice Koskei, (2020). The study looked into how performance was affected by changes in currency rates. The findings suggested that the inflation rate had an impact on the Nairobi Securities Exchange Market's performance as evaluated by NASI. Investors should be aware of the macroeconomic factors that affect the price of securities, especially during pandemics like the Coronavirus.

Saleh Sitompul , Reza Nurul Ichsan , Lukman Nasution, (2021). This study try to find out ascertain the degree to which the currency rate and inflation have a partial and simultaneously affect the increase in assets of Indonesian Islamic banks. The results showed that while the partial variable exchange rate and inflation have a positive, but not statistically significant, impact on the increase of assets held by Islamic banks,

Ashis Kr Mukherjee, (2022). The fundamental conclusion of this study is that as the rupee-to-dollar exchange rate increases, gold price lowers and vice versa, having a on the rise of the gold price, a negative and significant influence. The analysis also demonstrates that while the rupee-dollar exchange rate causes the gold price in the Indian economy, the growth rate of the gold price does not.

Rakesh Kumar Sharma, David Annan, (2019). The results of the investigation demonstrate how majority approaches based on deep learning were used to find the non-linear feature affecting the Indian IT stock market.

Sandamini, K. L. A., Jeewanthi, H. A. C., and Indrani, M. W, (2019). The results of this study will therefore be helpful for decision-makers in making decisions for developing the country's foreign commerce while managing exchange rate and monetary policies.

Oleksandra Ivanievna Stoykova, (2021). The aim of the piece is to investigate if fixed rate or currency union exchange rate regimes promote more bilateral commerce. Despite the fact that the index looked to be higher in nations with currency unions, the findings show that a fixed exchange rate system is preferable than a currency union in terms of the value of bilateral commerce.

Alaba David Alori , Adebayo Augustine Kutu, (2019). The export role of cocoa production was examined in this study, and the impact of changing exchange rates and export prices was noted. The outcome also showed that, in comparison to other factors in the model, exchange rate shocks were responsible for the value of exported cocoa experiencing greater volatility (positively significant for the entire time). Based on those conclusions, the report suggests in order to increase export growth and increase cocoa production, that a free exchange rate market determination be put into place in Nigeria.

Abdallah Mumuni, (2016). The performance of Ghana's manufacturing sector in response to exchange rate volatility was examined in this study. In light of this, it is advised that legislation be passed to control the importation of goods that could be made locally in order to enhance the manufacturing sector's performance.

Mochammad Fahlevi, (2019). This research study will concentrate on analyzing how interest rates, inflation rates, and foreign currency rates affect stock values. The study found that dependent and independent variables were found to be correlated. The study also found that interest rates and foreign exchange rates had a substantial impact on stock price. Inflation rates, on the other hand, do not significantly affect stock price.

Levi, Sriyank, (2020) & **Guntur Anjana Raju , Sanjeeta Shirodkar, (2021).** The current study looks at how exchange rates, the price of crude oil, and stock market returns are related. The study's overall conclusions show that crude oil significantly affects the USD/INR exchange rate. The decline in crude prices might theoretically drive down domestic prices of non-traded goods, which would then drive down the real exchange rate and stock market returns, perhaps causing an oil price shock.

Hamid Sepehrdoust , Morteza Ghorbanseresht, (2019). Study the implications of financial growth and information and communication technology (ICT) on the developing economies of the countries exporting petroleum (OPEC) The outcomes of the econometric model showed that an increase of 1% in the financial development index and 1% in the ICT variables, respectively, resulted in an increase in economic growth.

Ojonugwa Usman and Osama Mohammed Elsalih, (2018). Research the impacts of financial development and information and communication technology (ICT) on the emerging economies of the nations that export petroleum (OPEC). This study examine if the real exchange rate can accurately predict Brazilian unemployment. The long-run analysis of the nonlinear ARDL reveals a difference in how the unemployment rate reacts to RERT appreciations and depreciations, with depreciations having a significant impact. However, both in the short and long terms, the RERT's pass-through to unemployment is insufficient. The real exchange rate would have a considerable impact on monetary policy in reaction to an increase in unemployment brought on by the change.

Kizito Uyi Ehigiamusoe and Hooi Hooi Lean, (2019). The study tells us that, finance-growth nexus in West Africa is examined in relation to the volatility and moderating impacts of the real exchange rate. The intended economic benefits would not be obtained through the financial sector. In light of its results, the paper makes some recommendations for public policy.

Samuel E. Isaac, (2022). The study crucially examines how to demonstrate the interconnections between variables should affect monetary policy decisions, this study looked at the relationships between GDP, money supply, interest rate, and exchange rate. According to this study, The inflation, interest rate, money supply, and GDP of Nigeria are all significantly impacted by the exchange.

Musa, Nuhu, (2021). Inflation in Nigeria was explored in this study in relation to the impact of currency rate volatility. The nominal exchange rate, money supply, imports, and exports were utilized as the independent variables in the study, while the consumer price index was employed as a stand-in for inflation as the dependent variable. The results of the stationarity test showed The co-integration boundaries test confirmed that the variables have a lasting link and that the variables had mixed order of integration. Findings showed a substantial and positive association between the money supply, nominal exchange rate, and consumer price index, proving that both elements contribute to inflation in Nigeria.

Georgios Georgiadis , Johannes Gräb, (2020). This study establishes a link between the reduction in the impact of currency rates on import prices and an increase in global value chain participation. We calculate instrumental variable regressions using adopted trade agreements as instruments for economies' GVCP using a cross-country panel dataset for the years 1995 to 2014. We find that ERPT to import prices have been lower in nations whose trade partners exhibit stronger GVCP and higher in economies that display larger GVCP, which is consistent with the mechanism described in the theoretical model.

Joscha Beckmann and Mariarosaria Comunale, (2021). In this study, the financial channel of exchange rate variations for developing nations is evaluated together with its relationship to the traditional commerce channel. This is true only in the short term; an increase in foreign currency debt (due, for instance, to appreciation) reduces GDP in the medium and long terms.

Aleksaei Oskolokov, (2021). This study examines the role that exchange rate regimes play in predicting how monetary shocks from outside would affect distribution. Stabilizing the exchange rate would necessitate boosting domestic interest rates because the decline in wages disproportionately affects the poor rather than lowering them, which would produce a recession and expand the gap between consumers. A foreign tightening often widens the pro-tradeable wage differential, which is magnified when the currency rate is less flexible, according to my study on intermediate regimes between float and peg. To achieve parity in wage growth between tradable and non-tradable products, it is necessary to counteract a foreign constraint with a local real interest rate that generates a greater currency depreciation and may be linked to a preference for floating.

Mariana Hatmaanu , Cristina Cautisaanu and Mihaaela Ifrim, (2020). This study investigates the impact of the interest rate used for monetary policy, the impact of Romania's economic growth on the real exchange rate and the business climate in the Euro region. The results show that while the exchange rate has a favorable short-term influence on economic growth, the interest rate has a short-term impact that is negative. We also note that the Euro area's business environment has mixed results for economic expansion. Lastly, given the growing connectivity between the internal and external (European) business environments, the findings are particularly important for controlling interest and exchange rates in order to ensure economic growth.

Deepak Adhikari, (2018). This study investigates how Nepal's currency rate affects its trade imbalance and foreign exchange reserves. According to empirical findings, the Nepalese rupee's (NPR) one percentage point devaluation against the US dollar causes a 0.82 reserves rose by a percentage point, and the trade deficit shrank by 6.75 points. The government and central bank might, to some extent, correct the trade deficit and keep enough foreign exchange reserves to boost the external sector through the use of exchange rate regulation given the volatility and fragility of the Nepalese external sector.

Korhan Gokmenoglu, Baris Memduh Eren, and Siamand Hesami, (2021). This study's goal is to reevaluate how an assortment of emerging economies' stock market performance and exchange rates are related. The empirical results show that exchange rate flexibility is an important determinant of the bullish or bearishness of market returns. As a result of the asymmetrical nature of the relationship between the exchange rate and the stock market, the conclusions

Vinh Nguyen Thi Thuy and Duong Trinh Thi Thuy, (2020) This study examines how the fluctuation of exchange rates has an impact on Vietnamese exports. The results show that, as anticipated, exchange rate volatility has a long-term negative effect on export volume. According to the J curve effect, a depreciation of the home currency has a short-term negative impact on exports but a long-term favorable one. Surprisingly, the volume of a foreign country's real wealth increases, Vietnamese exports fall. These results suggest some possible policy implications for managing the exchange rate system and promoting Vietnam's exports.

Pournima Dhume, Ms Vitiksha Venji, (2019). The essay examines the effect of exchange rate fluctuations on India's international trade. According to the findings, The exchange rate and India's overseas commerce are causally related in a single direction, as well as a long-term co-integration between the two. The study comes to the conclusion that the short-term forecasting accuracy of India's foreign trade previous values is higher. India's overseas trade and exchange rates are closely related over time.

HYPOTHESIS

HO: There is no significant impact of currency fluctuation on India's foreign trade
H1 : There is significant impact of currency fluctuation on India's foreign trade

RESEARCH METHODOLOGY

Study Type : Descriptive Study
Data: Secondary information was gathered from. The monthly values for exchange rates and international trade were obtained from the Reserve Bank of India website.
Source of the data: Reserve Bank of India website
Period of the study January 2018 to December 2022

Tools and Techniques : Unit root test , Granger Causality Test , Johansen Co-integration Test

DATA ANALYSIS AND INTERPRETATION

UNIT ROOT TEST

Unit root	At level		At 1st differnce	
NULL HYPOTHESIS	T-statistic	Prob	T-statistic	Prob
Exchange rate has a unit root	0.466364	0.9838	-7.779284	0
India's Export trade has a unit root	-2.706419	0.0076	-9.007777	0
India's Import trade has a unit root	-4.181206	0.0016	-10.59543	0

Analysis : The data was initially run on its initial value at the level, and because the data was non-stationary at that level based on probability values greater than 0.05, the data was then performed once again on the first difference when the p-values were under 0.05

Granger Causality Test

NULL HYPOTHESIS	Obs	F-Statistic	Prob.	Decision	Nature of Causality
EXPORT does not Granger Cause EXCHANGE_RATE	58	0.27045	0.7641	Accepted	No Causality
EXCHANGE_RATE does not Granger Cause EXPORT	58	0.02448	0.9758	Accepted	No Causality
IMPORT does not Granger Cause EXCHANGE_RATE	58	0.81019	0.4502	Accepted	No Causality
EXCHANGE_RATE does not Granger Cause IMPORT	58	3.49600	0.0375	Rejected	Causality

Analysis : The null hypothesis, which states that there is no causal relationship between the variables, is also rejected if the probability value is less than 0.5%. Because the p-value is less than 0.05 and the null hypothesis is rejected by this test, it is evident that the exchange rate has no bearing on export trade. Export trade will occur if the p-value exceeds 0.05

Johansen Co-integration Test

Null hypothesis Trace rank test	Alternative Hypothesis	Eigenvalue	Trace Statistic	Critical values (0.05%)	P-values
Exchange Rate With India’s Foreign Trade					
H0:r=0	H1:r=0	0.399093	36.58386	29.79707	0.0071
H0:r ≤ 1	H1:r >1	0.113978	7.043576	15.49471	0.5726
H0: r ≤ 2	H1: r > 2	0.000427	0.024765	3.841466	0.8749
Max-Eigen Stastic	Alternative Hypothesis	Eigenvalue	Trace Statistic	Critical values (0.05%)	P-values
Exchange Rate With India’s Foreign Trade					
H0:r=0	H1:r=0	0.399093	29.54029	21.13162	0.0026
H0:r ≤ 1	H1:r >1	0.113978	7.018811	14.2646	0.4869
H0: r ≤ 2	H1: r > 2	0.000427	0.024765	3.841466	0.8749

Analysis : Both test show that one cointegrating equation is the initial null hypothesis at a 5% significance level Following that the Trace and Maximum Eigen value tests were used to test Johansen’s cointegration test for the specified variables. The result indicates that the cointegration equation which is represented by trace statistics and maximal Eigen statistic

FINDINGS

Null hypothesis is rejected in unit root test because the data was nonstationary at that level based on p value greater than 0.05, so null hypothesis is rejected because the p-value is higher than 0.05 and the exchange rate has no impact on India's import trade. As a result, there is no reciprocal relationship between currency rates and import-related trade. The result indicates that the co integration equation which is represented by trace statistics and maximal Eigen statistics, the test show that one co integrating equation is the initial null hypothesis at a 5% significance level

CONCLUSION

By examining how exchange rates affect international trade with India, this study adds to the body of literature. Cointegration, the unit root test, and the Granger causality model were all employed in this work. The nation's foreign trade depends heavily on foreign exchange. Because foreign trade and foreign exchange rates are tied to one another, one variable can have an effect on the other in different ways. The fact that the exchange rate and foreign trade have been found to be co-integrating suggests a long-term relationship between the two. This could be because whenever the value of a foreign currency increases, imports tend to decline by a certain percentage, which in turn affects how the exchange rate affects foreign trade. The study's findings support the notion that, for the short term, the exchange rate may be predicted using historical data on foreign trade. The primary focus of this article was the fluctuation in exchange rates and how it affected India's international trade. It also focuses on the question of whether currency rates and India's foreign commerce have a short- or long-term relationship.

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