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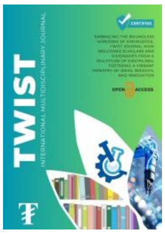

Impact of Inflation on the Exchange Rate and External Debt of India

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Abstract

India is one of the few emerging economies that is proliferating. India is facing inflation due to geopolitical issues, and the war between Russia and Ukraine. This has led to cost-push inflation due to disruption in the supply. It is evident that external debt and exchange rates depict a country's economic development status. The aim of this study is to understand India's external debt, exchange rate, and inflationary trend and analyse the impact of inflation on both indicators. The current study is based on an extensive literature review and secondary data analysis on inflation, exchange rate, and external debt from different published reports. To understand the trend of inflation, exchange rate, and external debt, a trend analysis has been done. Further to measure the impact of inflation and exchange rate a correlation test has been performed. The result of the correlation test inflation rate and external debt are strongly positively correlated. A one-unit increase in the inflation rate would increase the external debt by 0.84. Further, the correlation results between the inflation rate and exchange rate show a moderately negative correlation at -0.58. The association between public debt and inflation is important to measure the inflationary trend of an economy.

Keywords

Inflation, Exchange rate, External debt

INTRODUCTION

Inflation is a matter of concern when it is beyond the tolerable limit. It is associated with a decrease in the purchasing power of money because, when general price levels grow, each unit of currency may be able to buy lower quantities of products and services; as a result, inflation is tied to the general increase in prices. Without a central bank to moderate its highs and lows, an economy would almost certainly spiral out of control, making aberrations such as the Great Depression unavoidable. A modest degree of inflation is viewed as a positive indicator for the economy.

Inflation that is kept under control is seen as a sign of economic development. A little increase in the prices of products and services contributes to economic expansion over the long term. The products become more competitive on the global market as a result of inflation. With higher wages, salaries, and other income, consumers have more purchasing power, which ultimately raises demand for goods. It is a chain reaction that prevents an economy from stagnating. According to opinion polls conducted in India and other nations, people's top worry is inflation because it seriously lowers their level of living. The degree to which governments and political leaders in India and elsewhere have been able to combat the inflation problem has greatly influenced their political fortunes.

Inflation and Exchange rate

The purpose of foreign exchange is to indicate the relative worth of the various currencies by comparing those currencies to one another. In order to compare the diverse purchasing powers of nations, purchasing power parity employs the general price level as opposed to the exchange rate. This helps determine which country has the highest standard of living costs. Alterations in both inflation and purchasing power parity have an effect on the exchange rate. If both countries' rates of inflation remain unchanged, there will be no change to the exchange rate. When inflation is higher in one nation compared to another, it would impact the value of currency.

The connection between inflation and exchange rates has always been one of the most intriguing and thought-provoking issues in the field of economics. The correlation between the value of the currency and the rate of inflation is an extremely important and significant factor, particularly in developing economies. Changes in these economies' respective exchange rates have a large and pervasive effect on the overall pricing structure. When the value of the home currency rises in relation to other currencies or when the exchange rate falls, it is typical for prices to fall as a consequence. When exchange rates changes, so do the costs of production and the prices of goods that are brought in from other countries. While a country's exchange rates with other nations are unlikely to suffer from an excessive increase in inflation, a decline in the rate of inflation does not guarantee a favourable exchange rate.

Inflation and External debt

External funding is required for many low-income nations to meet their development goals. Savings and external borrowing go hand in hand, which also enables an economy to be an active part of the investment activities. It is anticipated that it will provide the funding required for infrastructure investment and productive economic activity, hence promoting economic growth and macroeconomic stability. The way inflation affects debt is generally more intricate. Nominal debt is the total of a government's previous deficit expenditures. The nominal debt value is divided by the price level to determine the actual government debt, which is its value relative to the goods and services. The ratio of government debt to gross domestic product (GDP) is a commonly examined metric by economists due to the significant correlation between a country's ability to manage debt and its tax base, which is contingent upon the magnitude of the national economy. The ability to compare debt levels across different time periods and among various nations is facilitated by this feature. Therefore, it can be observed that an upward movement in prices leads to an increase in nominal GDP, assuming that all other variables remain unchanged. Additionally, an escalation in the price level has a direct impact on reducing the real value of government debt, as well as the debt-to-GDP ratio.

OBJECTIVE

1. To understand the factors that influence the exchange rate and analyse the exchange rate trend and external debt.
2. To analyse the links between inflation and exchange rate and inflation and external debt.

METHODOLOGY

The current study is based on an extensive literature review and secondary data analysis on inflation, exchange rate and external debt from different published reports. To understand the trend of inflation exchange rate and external debt, a trend analysis has been done. Further to measure the impact of inflation and exchange rate a correlation test has been performed.

LITERATURE REVIEW

There have been numerous studies or evaluations conducted on inflation, currency rates, and external debt. An empirical investigation was undertaken by Anwer (2019) to analyse the interdependency of exchange rate and inflation in India. A descriptive research methodology was employed in this study to assess the interaction between the two indicators. The study implied secondary data from World Bank, International Monetary Fund (IMF), and Reserve Bank of India (RBI). The data was analyzed utilizing a linear regression model in the study. The findings indicate a statistically insignificant and negative link between the exchange rate and inflation. Jacob (2021) did a study aimed at analyzing the factors influencing exports in India, emphasised on the impact of inflation and exchange rates. This research is particularly relevant given the growing significance of exports in the Indian economy. The basic data has been obtained from the database maintained by the Reserve Bank of India (RBI). This report strongly recommends that the Government of India should focus on implementing export promotion methods to enhance the export of products and services, with the aim of sustaining a trade surplus and a favorable balance of payments situation. In a recent study undertaken by Ring, T.S. and colleagues (2021), the objective was to examine the association between external debt and economic development. The countries included in the study's sample are divided into two distinct categories based on their level of governance, namely low governance and good governance. For both research samples, the results highlight the significance of institutional quality as a mediator in the link between foreign debt and economic progress. The paper indicates that effective management of external debt and the implementation of feasible policy recommendations are key strategies for controlling external debt. In a study conducted by Kwofie (2018), assessed the influence of exchange rate and inflation on stock market returns in Ghana. The study utilized monthly inflation and exchange rate data received from the Bank of Ghana. The participants also engaged in a discussion regarding many elements that have the potential to significantly contribute to inflation within an economy, including income levels, high nominal salaries, swings in revenue, and the repayment of debt. The Ghanaian economy has exhibited a notable feature of price fluctuations over an extended period, resulting in a non-constant inflation rate. The research discovered a statistically significant and enduring positive correlation between inflation and GSE market returns. However, no such association was observed in the short term. In the study conducted by Were (2001), Based on the research outcomes, it is evident that Kenya possesses a considerable volume of official external debt, primarily originating from multilateral sources. At present, there exists a challenge in both attaining sustainable economic growth and effectively managing external responsibilities. Without the implementation of significant measures, the attainment of this objective may remain unattainable. If the monies derived from debt relief initiatives are allocated towards productive public expenditures, resulting in the crowding-in of private investment and increased social spending for marginalized populations, the government might potentially have a substantial impact on stimulating economic growth (Gona, 2020). The exchange rate policy is an endogenous element that can exert influence on a nation's economic performance in this context. The significance of exchange rates in international economic contacts arises from the inability of any nation to remain isolated due to variations in factor endowments. The research proposes the adoption of new technology across all sectors of the Indian economy, emphasizing the need to minimize excessive budgetary inflation and execution in order to avoid reliance on external borrowing, which could result in the outflow of services and accumulation of foreign debt. The policy implications of this study indicate that economic growth can be utilized as a means to promote the advancement of India's economy. The research findings may prove valuable for policymakers and enterprises seeking to improve their domestic resources (Aloulou, 2023). The objective of this study is to conduct an empirical analysis on the symmetric and asymmetric effects of external debt on the economic growth of Tunisia from 1965 to 2019. The findings indicate that the premise of asymmetry has remained valid over an extended duration. Furthermore, the empirical analysis demonstrates the adverse effects of positive fluctuations in foreign debt and the beneficial effects of negative fluctuations in external debt. This suggests that economic growth exhibits greater sensitivity and favourability towards reductions in external debt as opposed to increases (Valogo, 2023). The gradual depreciation of the exchange rate in Ghana is giving rise to apprehensions regarding its potential effects on inflation and the overall economy utilizing monthly data spanning from January 2002 to December 2018. It is posited that financial regulators should consider exchange rates at various levels to effectively modify policy rates. In an empirical study conducted by Thanh, T.H., Van Anh, N.T., & Hoang, D.M. (2019)., the VAR self-regression vector model was used to analyse exchange rates' effects on Vietnam's inflation and economic growth from 2005-2018. Six endogenous and two exogenous variables are in the model. Vietnam's macro environment, trade balance, inflation management, and economic growth support should be improved for macroeconomic stability and competitiveness. An analytical study conducted by Piyush, C., Aniket, S., Ketan, S., & Yuvraj, Y. (2020), it is learnt that external debt reduces government revenue and capital shortfalls in emerging nations. Interest rates, currency denominations, and payback schedules affect borrowing. External debt funds economic activity but increases repayment costs. Many fall into debt traps when fresh debt is accepted to service old debt. The report examines India's external debt borrowing trends and economic growth from 1970-2018. It offers ways to improve debt if external borrowing worsens.

RESULT & DISCUSSIONS

Impact of inflation on the Exchange rate

Inflation weakens the currency's worth. It lowers foreign exchange rates. Most of the time, currencies with low inflation rates have higher values than those with high inflation rates. A drop in the currency's value relative to other currencies is often indicated by rising inflation, which also lowers the purchasing power of the currency. The purchasing power rises when inflation declines, indicating a rise in the worth of the currency relative to other currencies and an increase in exchange rates. The change in exchange rates does not, however, occur in nations with the same inflation rates. Only when there is a difference in the inflation rates and currency values between two countries, where one is higher than the other, is an effect detected.

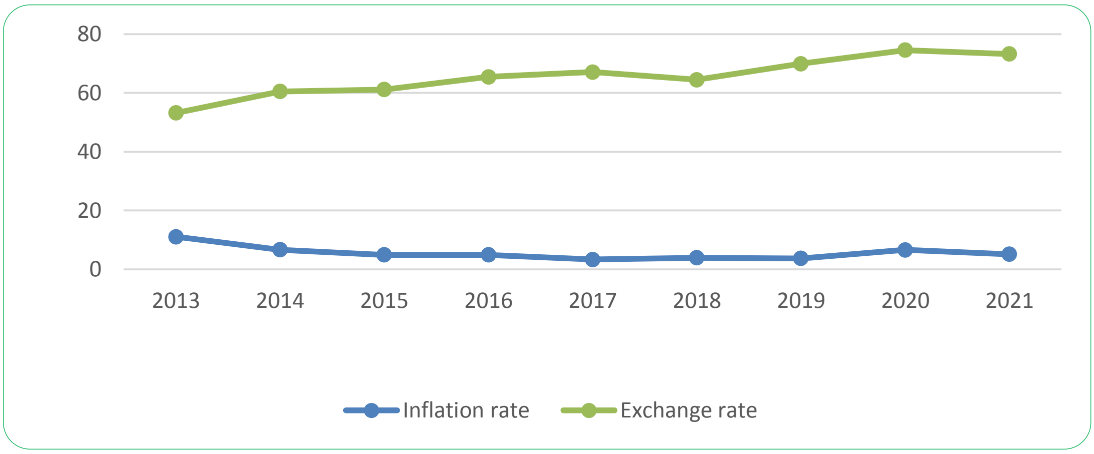

Fig. 1 Trend Analysis of Inflation rate and Exchange rate of India

Inflation rate and exchange rate share an inverse relationship. When inflation rises the exchange rate of the country devalues. Keeping this in mind a trend analysis was carried out to note the relation between the two over the years. As per the analysis, there was a huge drop in the inflation rate in the year 2014. In the year 2016, though there was an increase in the inflation rate, the exchange rate also increased; this is because the value of the dollar had decreased and weakened. This is due to a decline in food and fuel prices. Moving forward, the inflation rate was changing at a slow to medium pace and these changes happened due to the change in price levels of food and fuel. The inflation rate of the year 2020 is to be noted as there was a sudden hike in the price levels which was caused by the pandemic-induced supply chain disruptions, staled economic activities, and rising food prices. In this year the exchange rate has also increased irrespective of the inverse relationship between the two.

Impact of inflation on external debt

Inflation does not directly affect debt but it results in a drop in the currency value. So, when it costs more dollars to pay off a fixed amount of debt, it just means the payment is more. On the other side, deflation has a negative impact. Inflation brings the most benefits to debtors because the debtors demand more money to keep up with the increasing prices of commodities. On the other hand, when the prices are rising, debtors gain and creditors lose plus there is a fall in the value of money.

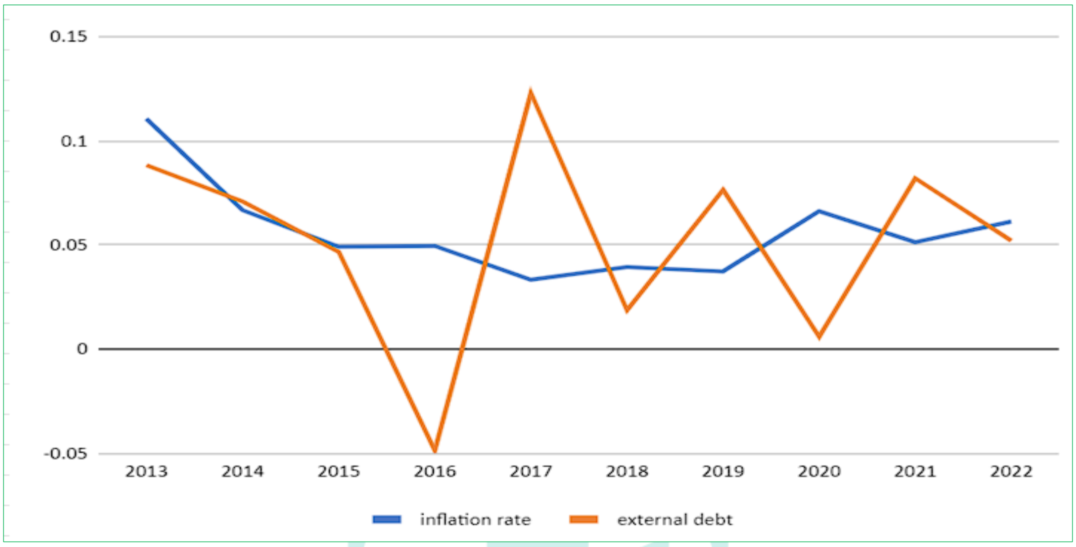

Fig. 2 Trends analysis on inflation and external debt in India for 2013-2022

Inflation and external debt share a positive relationship. When the inflation rate increases the debtors are benefited which is why the relationship is a positive one. Keeping this in mind a trend analysis was carried out to note the relation between the two over the years. As per the analysis, there was a huge drop in the inflation rate in the year 2014. As shown in the chart there was a massive drop in the external debt percentage in the year 2016 and this can be because of the fall in long-term external debt, to be more precise - the fall in NRI deposits. The inflation rate of the year 2020 is to be noted as there was a sudden hike in the price levels which was caused by the pandemic-induced supply chain disruptions, staled economic activities, and rising food prices. The trend of external debt is not stable but dynamic.

CORRELATION TEST

To understand the impact of inflation on external debt and exchange rate, the co-relation test has been performed.

	Inflation rate
Inflation rate	1
External debt	0.847008318
Exchange Rate	-0.584477938

The result of the correlation test depicts that the inflation rate and external debt are strongly positively correlated. A one-unit increase in the inflation rate would increase the external debt by 0.84. Further, the correlation result between the inflation rate and exchange rate shows a moderately negative correlation at -0.58. The association between public debt and inflation is important to measure the inflationary trend of an economy. Exchange rate and inflationary trend show a negative relationship which represents that inflation tends to devalue a currency. This will decrease the money value, hence the purchasing power of the consumers.

CONCLUSION

The effect of inflation on a country's exchange rate is more on the negative side because it devalues a country's currency value. On the other side, the link between external debt and inflation portrays a positive relationship. According to the trend analysis and correlation analysis, it is evident that the above statement is valid. The main motive of this study was to bring out the impact that a rise in inflation will have on the exchange rate and external debt and the effect it has on an economy. The value of a nation's currency is directly proportional to the rate of inflation in that nation up to a certain extent. A country's exchange rate with other countries is quite likely to be negatively impacted by an extraordinarily high inflation rate. Simultaneously, it is important to note that a diminished level of inflation does not necessarily provide a beneficial exchange rate for a nation. On the other side, an increase in the exchange rate aids in reducing inflation, preserving a favourable trade balance, boosting the export of domestic goods, and, most importantly, ensuring continuous economic growth. Exchange rate volatility is quite significant and has an impact on a nation's total trade and economic growth and development. The findings demonstrated that, despite solid governance and high regulatory standards, countries with large foreign debt may experience negative effects on economic growth. This study suggests that, even when a nation is practicing excellent governance, it is crucial to ensure that the measures proposed for addressing the problem of foreign debt are feasible and capable of producing desired outcomes.

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