# EFFECT OF GDP GROWTH RATE OF INDIA AND UNITED STATES ON USD-RUPEE RELATIONSHIP

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***ABSTRACT:*** *This paper aims to analyze the impact of GDP Growth Rate on Currency exchange value against the changes in GDP Growth Rate of the Domestic and Overseas Market major economies (i.e. United States). Although all countries want stable and sustainable growth whereas GDP Growth Rate rates (even of other countries) impacts economy at significant level. Through the 20 years GDP Growth Rate data has shown that there is impact of United States & India GDP Growth Rate also on the INR value against USD. This article aims to describe the strategy adopted by policy makers to achieve sustainable growth b monitoring the GDP Growth Rate.*

***Keywords:*** *GDP Growth Rate and Currency Values, US GDP Growth Rate, Devaluing Indian Rupee*

## INTRODUCTION

Foreign risk management is a technology that minimizes risk due to concerns about currency fluctuations. When we talk about Indian rupee against the US dollar. It can be easily observed that the US dollar is estimated against the value of the Indian rupee over time. Though it is difficult to comment on such a gratitude or a single reason for currency depreciation. Because there are so many factors at micro and macro levels: GDP growth rates, interest rates, export imports, balance sheets, trade deficits, currency in use, country or union economic policy, foreign exchange dealer/speculator/speculator trends, distribution, distribution, interest rates, economic policy, etc.

It is difficult to comment that accurate monetary policies must be passed to ensure sustainable growth in the economy. This is because a strong local currency always shows that the economy is productive and sustainable. However, at the same time, strong local currencies must also attract cheap imports and turn them into favorable businesses, and evaluate them as being bad in the country's long-term economy. This scenario was observed in Singapore dollars compared to USD.

The fundamental distinction between the Indian national rupee and the US dollar is that the rupee acts as a dependent variable, and the US dollar is an independent variable that affects other aspects of the currency value, rather than the affected Indian national rupee. As an example, the US-Forex market appears to be more robust than the Indian market. With many factors, recent debate, and the hope that the UK will come out of the loss of one of its members, this Brexit cannot be isolated from an Indian perspective. The world has been a global village for decades. It has a population of about 5 billion people, and the European economy is worth $16 trillion, which is about a quarter of the world's GDP. Economic health is directly reflected in the state of currency. Rupee is down value in the dollar due to the dual effects of discharge from overseas and increased demand for the dollar. It also raises gasoline and diesel prices to levels. The government appears to want to cut additional sales taxes that could be raised to fuel if it is on a downward trend. This will increase the fiscal deficit unless sales increase the actual price of gold, electronic goods, but India's exports, including IT and ITE, are cheap. If UK exits the European Union which is expected from current scenario, the probability of investors moving more from emerging market currencies and euro/GBP investments, which in turn finally will lead investors to save their funds in safe haven of USD and US treasury, strengthens dollar against the other currencies. As EU is among the biggest trading partner to India, high depreciation in Rupee/Dollar could be expected. Even big giants Tata Motors-owned Jaguar Land Rover (JLR) has reportedly an estimated 1 billion pounds loss by 2020 after Britain's exit from the European Union.

## REVIEW OF LITERATURE

The theoretical literature provide substantiation regarding foreign exchange – Paridhi Saini, ShivaliDhameja (2014) in the trend of repeddle values affecting factors proposed by experts that negative correlations of USD Bombay exchanges (sensitivity index) do not always work. The negative relationship between the dollar sensitivity index and the BSE sensitivity index has become very clear in recent years. However, this inverse correlation may not have always been the same. Tax treatment of profits or losses in the markets of futures or futures currency is considered business revenue.

Deepa Divakaran.N (2014) in If currency depreciation and more dollars are needed in the currency market and the other expected is not adequately addressed as it is constant, then the price of the US dollar will rise in the Indian economy of adequate supply and demand. India has to import a large portion of its oil needs to meet domestic demand, and it is increasing significantly each year. Domestic demand for oil will increase, ultimately leading to oil prices, increasing the global market. Your dollar requirement increases as you have to pay in USD. It also handles output of current account deficits. This is because imports are high against low exports. The impact of Rup depreciation under the general condition of Professor Ravel kaur, Professor Robin Sirohi and Rup Depreciation's lower Roconto Defict is also one of the reasons why the 2G and Coal Gate Fraud corruption scandal rejected the image outside of India.

Paridhi Saini, Shivali Dhameja (2014) in "The trend of repeddle values affecting factors proposed by experts that negative correlations of USD Bombay exchanges (sensitivity index) do not always work. The negative relationship between the dollar sensitivity index and the BSE sensitivity index has become very clear in recent years. However, this inverse correlation may not have always been the same. Tax treatment of profits or losses in the markets of futures or futures currency is considered business revenue.

Eduardo Borenstein (IMF), We often analyze the general occurrence of large and sudden depreciation when exchange spices are uncontrolled, in the context of solid market burdens and payment balance. Although there are always clear indications of overvaluation of the local currency in these circumstances, we determine the size of significant nominal depreciation. It can be considered that depreciation should only compensate for estimated overvaluations and return the exchange rate to the line. However, some passport thru at local prices is inevitable, so you will need to exceed the required depreciation first.

Shahid Ahmed Khan (2010) analyzed that interest rates are a very important factor in a country's financial growth, while exchange rates are a crucial factor in international trade and a crucial factor in a country's sustainable financial growth. The exchange rates of the US dollars in various currencies showed, for example, that variations lost their value against the euro and GBP, but increased their value against the Pakistani rupee. The Pakistani rupee was reduced by 38% in just two months. At the same time, US interest rates reached a low, but at PAK, 13%, more than 260 (November 9, 0.05%). Pakistan has the highest interest rate in the world. This will make Pakistani banking a lucrative job. Pakistan despite its terrible legal and order situation, its worst political situation and its small economy.

Eduardo Borenstein (IMF), analyzed that as a rule, in many cases, a huge, sudden depreciation occurs when the exchange board pencil is uncontrolled, in relation to a solid market load or balance of payments. Although there are always clear indications of overvaluation of the local currency in these circumstances, we determine the size of significant nominal depreciation. It can be considered that depreciation should only compensate for estimated overvaluations and return the exchange rate to the line. However, some passport thru at local prices is inevitable, so you will need to exceed the required depreciation first.

India's GDP growth rate has always been an increasing trend towards devaluing the rupee and eroding the purchasing power of savings. Despite government intervention, INRs are in a free case and have become one of the most frightening currencies in the world. However, although the Reserve Bank has increased the increase in interest on its experiments to curb GDP growth in recent years, few significant results have been achieved. GDP growth continued to trend. This is now reflected in currency devaluation. GDP growth rates directly increase prices and therefore affect the purchasing power of money. Currency prices and GDP growth rates have simple cooperation and mutual influence. Currency cuts are also important to change regional prices affected by the circular forces of GDP growth. If a price index variation does not make a proper change, the currency is considered hyped. As the world becomes a global village, it is not so important for businesses to acquire finances and invest somewhere. Therefore, we take the concept of cross and apply the concept of absolute advantage and relative advantage theory. It is the time that it is not a difficult task in resource mobilization and exploitation.

GDP growth rate as one of the main parameters of determining currency value is Purchasing Power Parity (PPP) (PPP). The exchange rates between the two countries are said to correspond to prices at both the price level of goods and services in the north. If the country's domestic price level rises (prices for national experience), the country's exchange rate must be reduced to return to the PPP.

The origin of PPP is the law of individual prices. In the absence of transportation or other operating costs, the appropriate markets in the two countries will compensate for the price of the indistinguishable goods if the price is expressed in the same exchange. For example, a particular laptop set selling for SAD 550 in Singapore [SAD] would cost 300 US dollars in Seattle if Singapore and US foreign exchange is 1.833 CAD/USD. If a Singapore laptop priced at just 550 people, Seattle customers would prefer to buy a Singapore laptop. If this procedure (called "arbitrage") is carried out at an oversized level, US consumers purchasing Singaporean goods will increase the value of the Singapore dollar and make Singaporean goods even more expensive. This procedure continues until the product reaches its corresponding price again. There are three important aspects to this law of awards. 1. Transportation costs, commercial barriers, 2. Important markets for both countries' products and services 3. The pricing law applies only to marketable services and products. Static products such as homes and many local services are of course not traded with connected countries.

## OBJECTIVES OF THE STUDY

The purpose of the research work is to analyze the relationship between India and the US GDP growth rate and the value of the rupee to the US dollar. GDP growth is not an independent factor for determining currency value, but it remains an important factor when determining currency value. GDP growth affects investment and imports, so exports are also exports.

## RESEARCH METHODOLOGY

To check the impact of Rupee value in context of US dollars, the data of 20 Years of GDP Growth Rate of United States and India along with 1USD=X Rupees value annual has been taken and Multiple Correlation/ Regression analysis in SPSS has been applied.

### Hypothesis

1. H0: Rupee Appreciation is not dependent on GDP Growth Rate of US.
   H1: Rupee Appreciation has significant dependence on GDP Growth Rate of US.
2. H0: Rupee Appreciation is not dependent on GDP Growth Rate of India.
   H1: Rupee Appreciation has significant dependence on GDP of India.

In the Table GDP- US represents the GDP of United Stated (Independent Variable) and GDP-India (Independent Variable) denotes the GDP of India from period 2004-2023 and USD-INR is representing the value of 1 USD against rupees (Dependent Variable). This data is average of first date of every month of the said year. (For i.e. Year 2004 to Year 2023 and so on, Source - https://www.macrotrends.net/).

## DATA ANALYSIS AND INTERPRETATION

TABLE 1

DESCRIPTIVE STATASTICS

| | MEAN | STANDARD DEVIATION | N |
|---|---|---|---|
| USD-INR | 59.234 | 13.778 | 20 |
| INDIA-GDP GROWTH RATE | 6.37% | 0.033 | 20 |
| US GDP GROWTH RATE | 2.08% | 0.019 | 20 |

TABLE 2

CORRELATIONS

| | USD-INR | INDIA-GDP GROWTH RATE | US GDP GROWTH RATE |
|---|---|---|---|
| **USD-INR** | 1 | -0.21 | 0.07 |
| **INDIA-GDP GROWTH RATE** | -0.21 | 1 | 0.63 |
| **US GDP GROWTH RATE** | 0.07 | 0.63 | 1 |

Table 3

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| TABLE 3 | | | | | | | | |
| SUMMARY OUTPUT | | | | | | | | |
| *Regression Statistics* | | | | | | | | |
| Multiple R | 0.37407496 | | | | | | | |
| R Square | 0.13993207 | | | | | | | |
| Adjusted R Square | 0.03242358 | | | | | | | |
| Standard Error | 13.5249562 | | | | | | | |
| Observations | 19 | | | | | | | |
| ANOVA | | | | | | | | |
| | *df* | *SS* | *MS* | *F* | *Significance F* | | | |
| Regression | 2 | 476.1855775 | 238.0928 | 1.301590901 | 0.299407048 | | | |
| Residual | 16 | 2926.791065 | 182.9244 | | | | | |
| Total | 18 | 3402.976642 | | | | | | |
| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
| Intercept | 65.5774792 | 6.771870231 | 9.683806 | 0.0000000429 | 51.22 | 79.93 | 51.22 | 79.93 |
| 0.0792 | -184.03947 | 121.8269492 | -1.51066 | 0.1503706602 | -442.30 | 74.22 | -442.30 | 74.22 |
| 0.0385 | 300.167134 | 217.1394108 | 1.382371 | 0.1858515485 | -160.15 | 760.48 | -160.15 | 760.48 |

It could be easily observed that since last 20 Years from (2004-2023) the average of Indian Rupee against USD is Rs 59.234 and average Gross Domestic Product Growth Rate is 6.37% in India and 2.08% in US it could be seen that even in average of these 20 years the GDP Growth Rate of India is 3 times the US GDP Growth Rate. But the result of correlation we could see that USD-INR prices are negatively correlated to GDP Growth Rate of India and very minimal correlated to GDP Growth Rate of US. It means that increase in GDP Growth Rate in India would decrease the value of Rupee against USD by -0.21. Bit still Taking the GDP Growth Rate of both the places separately can't give us the right picture we have to represent it with the help of changes in GDP Growth Rate of both years together.

In the above table it could be seen the "R" column shows the value of R, the multiple correlation coefficient. R can be considered to be one measure of the quality of the expectation of the dependent variable.

From the above table of model summary from the above table as value of R is 0.374. A value of 0.374, in this example, specifies not very good level of extrapolation. R-Square column denotes the R2 value (also termed the coefficient for determination), which is the proportion of discrepancy in the dependent variable that can be explained by the self-determining variables. You can see from our value of 0.1399 that our independent variables explain 13.99 % of the variability of our dependent variable, USD-INR.

**Testing of hypothesis**

From Table Number 3- For Gross Domestic Product- India significance value is 0.0000000429 which is less than the 0.05 level of significance which indicated the hypothesis-Ho is not acceptable (

rejected ) i.e. USD- INR is not dependent on GDP Growth Rate-US hypothesis (H1) is accepted .i.e. Currency Exchange value has significant dependence on GDP Growth Rate of US.• For Gross Domestic Product –India value is 0.0000000429 which is higher than the 0.05 level of significance which means the hypothesis (H0) is accepted i.e. USD-INR is not independent on GDP Growth Rate- US and alternate hypothesis (H1) is accepted .i.e. Currency Exchange value has significant dependence on GDP Growth Rate of US .

**CONCLUSION**

This study had to determine the relationship between GDP growth rate (Gross Domestic Product India, USA) and important economic factors, and achieved some useful results. Analyses were performed based on an annual basis using multiple correlation/regression studies. Finally, GDP growth will have a significant impact on the value of the rupee to the US dollar for both India and the US. Differences in GDP growth and interest make USD more advantageous for speculators and arbitrators. How can we use low GDP growth and low interest rates from the US market? This gap between GDP growth and interest rates is very high, and even USD purchases still make profits at certain premiums for speculators and arbitrators. These Exim retailers use profits by protecting Rupie by acquiring the same technology from RBI to profit from RBI. - Demand and offer are not effectively matched with the offer if the dollar is needed to add to the currency market. The others will remain the same, increasing the value of the dollar magnifying glass or the rupee will sink. Dollar demand can be formed by importers, which are more dollars for imports, foreign institutional investors who dilute investments and take US dollars other than US dollars. - BOP's account deficit is the current account deficit in a situation where the country imports more goods and services than exports. - The high demand for high gold demand for gold or gold insufficient gold is considered another reason for the financial crisis. In India, there is a habit of attracting gold and diamond ones for low opportunities. They have more needs, but there are not many available in India.

It is not wrong to say that GDP growth is the main reason for the rupee that is always built against the US dollar.

**SUGGESTIONS**

Forex rates are compound variables that depend on a set of macroeconomic variables, such as the level of Forex Reserve, and are another reason for the currency decline. India's foreign exchange reserves have been declining recently. Usually the main reason FO. Therefore, India needs to import this at a higher price. If the value of the rupee is amortized. The dollar, which captures strength compared to other currencies, is another reason, as is the case with today's exchange courses due to the arbitrage and lightness in global financial transactions. -Unknown in political reform - Unconfusing in guidelines in reform is another reason for reducing currency.

Secondly, important guidelines such as direct tax codes and goods and services taxes have been discussed for years. - Interest profit diversity is another factor that generally attracts top interest rates for investments, but growth in growth puts pressure on RBI to lower political interest rates. Under these circumstances, investors are separated from the domestic market. This has an effect.

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