



Factors Influencing the Exchange Rate of Indian Rupee Against Three Leading Currencies – An Analysis

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ABSTRACT

The exchange rate of Indian rupee against the leading currencies of the world like US Dollar, Euro and British Pound has been fluctuating over a period of time. Therefore, this study makes an attempt to estimate the impact of different independent variables on the Exchange Rate of Indian Rupee (ER of INR) against these three currencies during the study period of 12years i.e., from 2005-2017.This study has selected the six independent variables that are influencing the exchange rate of Indian Rupee in order to estimate their impact on the exchange rate of Indian rupee against three currencies. Descriptive statistics, ANOVA test and multiple regression analysis are used to draw the meaningful inferences. From the R square values of regression results, it is clear that all the independent variables together have shown significant impact on the Exchange rate of Indian Rupee against US Dollar (97.9%) Euro (99.3%) and GBP (78.9%). Thus, the model is found as the good fit in this study. Further, it is evident that the regression model of exchange rate of INR/Euro is the best fit, since 3 out of 6 independent variables considered in the model are found significant. Finally it is interesting to identify that the coefficient of Foreign Institutional Investment as the common variable, which has shown significant impact on exchange rate of Indian rupee against all three currencies considered for this study.

Key Words: Exchange rate, Trade Balance, Inflation, Interest Rates, GDP, Foreign Ex Reserves, Foreign Institutional Investments, ANOVA, Regression analysis

Introduction

The foreign exchange rate is a very important monetary policy instrument for emerging an economy like India. A foreign exchange rate is the price of the domestic currency stated in terms of another country's currency. In other words, a foreign exchange rate compares one currency with another to show their relative values. The exchange rate of the currency determines the real

return of the portfolio that holds the bulk of its investment. The exchange rate influences purchasing power of income and capital gains derived from returns, income factors such as interest rates, inflation and even capital gains from domestic securities, profitability of firms, and growth of specific sectors amongst various other determinants of the economy. The fluctuations of exchange rates also influence Foreign Direct Investments through relative wage channels, relative wealth channels, and imperfect capital market arguments. On the whole, the volatility of exchange rate creates uncertainty in GDP and in both country's balance of trade and balance of payments.

The exchange rate may be divided into two types namely fixed exchange rate and floating (flexible) exchange rate. The value of any currency in an economy is difficult to be stable for a long period of time as there are number of factors influencing its appreciation and the depreciation.

As per the basic law of supply and demand mechanism of Economics, if the demand for \$ in India exceeds its supply then the exchange rate will go up and vice versa. If the demand for the Indian rupee is more than its supply in the foreign exchange market, its value will appreciate and vice-versa. Besides the basic law of Economics, there are many other factors also which can cause a fluctuation in the exchange rate of a currency in international market. Some factors are oil prices, forex reserves, relative inflation rates, interest rates, trade balance, foreign institutional investment, money supply, capital flows into the stock market of India, global currency trends, RBI intervention, political factors etc.

Review of Literature

It deals with earlier studies are made by different researchers on different factors that are influencing the exchange rate in the era of development. In the international finance, various theoretical models are available to analyse exchange rate determination and behaviour. Prior to the 1970s, most of the studies on exchange rate models were based on the assumption of fixed price. With the advent of the floating exchange rate regime across major industrialized countries in the early 1970s, many developments have taken place in the process of exchange rate determination. With liberalization and development of foreign exchange and assets markets, variables such as capital flows, volatility in capital flows and forward premium have also become important in determining exchange rates.

Bjonnes. G (2003) in his study explores on the development of foreign exchange markets and the rise in the volume of trade in selected markets, the micro level dynamics in foreign exchange markets increasingly became important in determining exchange rates. Agents in the foreign exchange market have access to private information about fundamentals or liquidity, which is reflected in the transactions they do, that are termed as order flows. Microstructure theory evolved in order to capture the micro level dynamics in the foreign exchange market another variable that is important in determining exchange rates is central bank intervention in the foreign exchange market in the form of devaluation and revaluation. Pros and Cons of currency appreciation and depreciation and their implications on economic growth are discussed. Keeping current trends in view, this study also provides certain suggestions to control as well as to overcome ill-effects of excessive fluctuations between rupee and dollar.

Due and Sen (2006) attempted to investigate the interactions between the real exchange rate, level of capital flows, volatility flows, fiscal and monetary policies indications and the current account surplus for Indian economy during the period 1993Q2 to 2004Q1. The results conclude that the variables are cointegrated and each Granger causes to the real exchange rate.

Dukich J, Kim K, Lin H (2010) in their study discussed about ARCH and GARCH models and different models that are used by many authors to predict the volatility of exchange rates from time to time.

Muhammad Jamil, et al (2010) made an attempt to estimate the impact of exchange rate volatility on industrial production before and after the introduction of common currency for eleven European countries included in European Monetary Union and for four European countries that did not adopt 'Euro' as common currency. This study employed monthly data of exchange rate and macroeconomic variables from January 1980 to April 2009 for the analysis. AR(k)-EGARCH (p,q) models have been employed for the estimation of volatility in growth rate of nominal and real exchange rates for all countries before and after the introduction of common currency separately. In this paper, we used Pooled instrumental variables and panel data methods. Results of this study conclude that all the countries enjoyed benefits after the introduction of common currency by reduction in negative impacts of real exchange rate volatility even some countries also faced increase in real exchange rate volatility.

Dua P, Ranjan R (2011) reported that the Bayesian Vector Autoregressive Models generally surpass their corresponding VAR variants. This study also explains that exchange rate fluctuations are very difficult to predict using economic models, and that a random walk forecasts currency rates are better than any economic model.

Mishra & Yadav (2012) tried to identify the facts about the Rupee-Dollar exchange rates (ER) based on Hooper-Morton model by relating it with five very important macroeconomic variables namely; money supply, real inflation rate, real output, inflation rate and trade balance for both domestic and foreign economy. The findings based on Vector Autoregressive (VAR) model confirm that the real inflation rate and money supply have significant effect on exchange rate.

Krishna Murari and Rajesh Sharma (2013) made an attempt to understand the dynamics of Indian Rupee fluctuations against US Dollar using annual observations over the period of 13 years from 2001 to September 2013. In this paper, evolution of exchange rate mechanism from fixed to hybrid exchange rate system in context of India along with its journey since independence has been explored. Further, an attempt has been made to identify the key variables that influence the Indian rupee fluctuations against US Dollar using Ordinary Least Square (OLS) modelling.

Anitha.M (2013) exposes that the foreign exchange market in India has undergone substantial changes over last decade and caused to the depreciation of Indian rupee in major currencies of the world. This study made an attempt to identify the probable macroeconomic variables that are responsible for the depreciation of Indian rupee against the leading countries of the world.

Islam MUZ and Raza (2014) made an attempt to analyse various dimensions of foreign exchange markets in Pakistan. This study describes how the foreign exchange market of Pakistan has been influenced by the internal factors like discount rate and interest rates in terms of five major currencies like US Dollar, Great British Pound (GBP), Japanese Yen (JPY), Canadian Dollar (CAD) and Euro. Descriptive statistics, regression and correlation techniques have been used to analyse the data. The results conclude that the discount rate and interest rate have positive impact on the foreign exchange market of Pakistan in terms of five selected currencies.

Wan Mohd Yaseer Mohd et al (2016) in their study tried to estimate the impact of all macroeconomic variables on the exchange rate fluctuations of selected countries of the Association of Southeast Asian Nations (ASEAN) during the period 2005-2014. Findings of this study conclude that only export has shown significant relationship with exchange rate movement, but other two variables such as interest rate and inflation rate have shown insignificant impact on the exchange rate of the selected countries. Therefore policy makers must be aware of control

mechanism so that movement of any determinants will not run adverse to the market mechanisms.

Mounica and Santhiyavalli (2017) in their study exposed that the foreign exchange rate will be affected by several macroeconomic variables. This study focuses on the variables like BoP-Current and capital account, foreign exchange reserves, foreign investment inflows, inflation rate, interest rate, net purchases and sales of USD, GDP etc. affecting the exchange rate of Indian rupee against USD during 2008-09 to 2014-15. Augmented Dickey Fuller test was conducted and identified Balance of Payments, foreign exchange reserves and Gross Domestic Product (GDP) as the significant variables which have significant impact against USD.

From the above review, it is clear that so far many studies have been made on the factors that are influencing the exchange rate of Indian rupee against the leading countries' currencies.

India is doing lot of trade dealings and financial transactions with US, Euro Zone and Great Britain since the advent of globalization.

Against this backdrop, this study is mainly aimed to study the following objectives:

- To analyse the descriptive statistics of the exchange rate of Indian Rupee against United States Dollar, Euro (official currency of the European Zone) and Pound Sterling (currency of United Kingdom) and the variables that are influencing it
- To estimate the impact of different independent variables on the Exchange Rate of Indian Rupee (ER of INR) against US Dollar, Euro and Pound Sterling

Research Methodology

This study aims to identify the macroeconomic variables that are influencing the exchange rate of Indian rupee against three selected foreign currencies (US Dollar, Euro and Pound Sterling). Several factors are affecting the exchange rate like the inflation, interest rates, trade balance, Foreign Institutional Investment (FII), money supply (M3) in the economy, foreign exchange reserves, political factors etc. Out of these variables, this study has selected six independent variables that are influencing the exchange rate of Indian Rupee viz. Trade Balance, Inflation, Interest Rates, Gross Domestic Product (GDP) at Factor Cost, Foreign Exchange Reserves and Foreign Institutional Investments. This study is made for a period of 12 calendar years i.e. from 2005-2017 and it is mainly based on secondary data. The Annual Average exchange rate of the Indian Rupee vis-a-vis the US Dollar, Pound Sterling and Euro are taken as the dependent variables from the same source. The basic data for this study is drawn from RBI Handbook of Statistics on Indian Economy (www.rbi.org.in).

Tools and Techniques;

The data for the study period has been processed through excel by taking variable for converting the data in normal distribution and descriptive statistics at primary level and ANOVA test and Multiple regression analysis are done with the help of SPSS (Statistical Package for the Social Sciences). Contribution of each independent variable individually and their collective impact on the dependant variable have been analysed.

Analysts use the analysis of the variance test to determine the result that independent variables have on the dependent variable in a regression study. F values in the regression result of a test where the real hypothesis is that of the regression coefficient are equal to zero. If the P values are less than 0.05, the real hypothesis is accepted.

Multiple Regression Analysis has been applied to estimate the relationship between a dependent variable and more independent variables. A model of the relationship is hypothesized and estimates of the parameter values are used to develop an estimated regression equation. If the model is deemed satisfactory, the estimated regression equation can be used to predict the value of the dependent variable with the given values of selected independent variables.

By using descriptive statistics and regression analysis, the regression equation becomes as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 \text{ ----- } 1$$

b_1X_1 - Coefficient of Trade Balance (TB)

b_2X_2 - Coefficient of Inflation (INF)

b_3X_3 - Coefficient of Interest Rate (INT)

b_4X_4 - Coefficient of Gross Domestic Product at Factor Cost (GDP@FC)

b_5X_5 - Coefficient of Foreign Exchange Reserves (FR)

b_6X_6 - Coefficient of Foreign Institutional Investments (FII)

Data Analysis

The results of descriptive statistics relating to three dependent and independent variables are discussed initially. Further it also deals with the interpretations of results of ANOVA and the multiple regression. The impact of six independent variables on three major currencies viz., exchange rate of Indian Rupee against US Dollar, Euro and Britain’s Pound Sterling are discussed in detail in this context.

A. Indian Rupee Vs US Dollar:

Table 1 -Descriptive Statistics							
	ER of INR / USD	Trade Balance	Inflation	Interest Rate	GDP	Forex Reserves	FII
Mean	51.622	-6228.04	4.73	8.29	29109.76	694.25	59541.3
Standard Error	2.57	752.07	0.25	0.14	3188.71	13.178	5025.15
Median	47.53	-6266.34	4.57	8.26	30210.45	698.5	50569.5
Standard Deviation	8.93	2605.27	0.89	0.50	11046.01	45.65	17407.6
Sample Variance	79.76	6787444.81	0.80	0.25	12201.44	2084.02	3E+08
Kurtosis	-1.16	-0.98	-0.93	-0.46	-1.37	-0.19	-0.7319
Skewness	0.65	0.19	0.56	0.08	-0.03	-0.67	1.00202
Range	25.84	8308.53	2.62	1.7	32795.64	146	45424
Minimum	41.34	-10348.44	3.77	7.48	12797.54	605	45259
Maximum	67.19	-2039.91	6.39	9.18	45593.18	751	90683
Sum	619.47	-74736.49	56.87	99.5	349317.21	8331	714495
Count	12	12	12	12	12	12	12

The results of the descriptive statistics and regression analysis of Indian Rupee Vs US Dollar are summarized in Tables 1 and 2. Table 1 shows the descriptive statistics of the factors affecting exchange rate of INR/USD. The Mean, Standard deviation, Covariation, Skewness, Kurtosis, Number of observation etc. for the sample period 2005-2017 are presented in Table 1. It reveals

that the mean value of exchange rate of INR/ US\$ is 51.62 during the study period. However, the mean value of India’s trade balance reveals an alarming picture (-6228.04) during the same period. The mean value of inflation rate (4.74), interest rate (8.29) also have shown significant values during the study period. The mean value of GDP at Factor cost (29109.77) and foreign exchange reserves (694.25) and foreign institutional investment (59541.30) are exposed in Table.1 during the study period.

Further to examine the relationship between the variables that are influencing the exchange rate of Indian Rupee against US Dollar, the multiple regression analysis has been carried out and the results are presented in Table 2.

Table 2 - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.979	.959	.909	2.69408	.959	19.315	6

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	841.118	6	140.186	19.315	.003
Residual	36.290	5	7.258		
Total	877.409	11			

Dependent Variable: ER of INR/USD

Predictors: (Constant), FII, INT, INF, FR, TD, GDP

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	43.682	28.922		1.510	.191
TD	-5.049E-005	.001	-.015	-.061	.954
INF	-1.557	1.541	-.157	-1.010	.359
INT	-1.200	2.783	-.068	-.431	.684
GDP	.000	.000	.158	.405	.702
FR	-.010	.030	-.049	-.318	.763
FII	.000	.000	.915	2.991	.030

Dependent Variable: Exchange Rate of INR/USD

Table 2 represents the summary output of the regression analysis. From the R Square value, it is clear that all these independent variables have shown almost 95.9% impact on the dependent

variable. Thus, the model seems to be a good fit for the exchange rate of Indian rupee against US dollar.

Table 2 depicts the analysis of variance of predicting variables where the p-value is 0.03 which is significant at 5% level of significance. From the ANOVA results, it is evident that the F-values are significant. Therefore, the hypothesis is accepted in case of dependent variable i.e., exchange rate of INR/USD.

Thus, the regression equation becomes as follows:

$$\text{ER of INR/USD} = 43.68 - 5.049E-005TD - 1.56INF - 1.20INT + .000GDP - .010FR + .000FII \text{ ---- } 2$$

Table 2 and equation 2 show the coefficients of the independent variables in regression analysis. It is clear that the coefficient of the independent variables like trade balance (.954), inflation (.359), GDP at FC (.684), foreign exchange reserves (.763) have shown insignificant impact on dependent variable (INR/USD) since the probability value of these variables are greater than 0.05. However, it is remarkable to note that the coefficient of foreign institutional investments (.030) only has shown significant impact on the exchange rate of INR/USD.

B. Indian Rupee Vs Euro:

	ER of IR/EURO	TB	Inf R	IR	GDP@FC	FR	FII
Mean	64.16	-6228.04	4.73	8.29	29109.8	694.25	59541.3
SE	2.15	752.07	0.25	0.14	3188.71	13.17	5025.14
Median	63.13	-6266.34	4.57	8.26	30210.5	698.5	50569.5
SD	7.45	2605.27	0.89	0.5	11046	45.65	17407.6
SV	55.56	6787444.81	0.8	0.25	12201.4	2084.02	30302.5
Kurtosis	-1.08	-0.98	-0.93	-0.46	-1.37	-0.19	-0.73
Skewness	0.27	0.19	0.56	0.08	-0.03	-0.67	1
Range	22.89	8308.53	2.62	1.7	32795.6	146	45424
Minimum	52.8	-10348.44	3.77	7.48	12797.5	605	45259
Maximum	75.69	-2039.91	6.39	9.18	45593.2	751	90683
Sum	770.01	-74736.49	56.87	99.5	349317	8331	714495
Count	12	12	12	12	12	12	12

The results of the descriptive statistics and regression analysis are summarized in Tables 3 and Table 4. Table 3 shows the descriptive statistics of the factors affecting exchange rate of INR/Euro like Mean, Standard deviation, Covariation, Skewness, Kurtosis, Number of observations etc., during the study period (2005-2017) are presented.

Table 3 reveals that the mean value of ER of INR/Euro is 64.16 during the study period. However, the mean value of trade balance is -6228.04 during the same period. The mean value of inflation rate (4.74), interest rate (8.29) also have shown significant values during the study period. The mean value of GDP at Factor cost is 29109.77 and the mean value of foreign exchange reserves are 694.25 during the study period. It is also clear that the mean value of foreign institutional investment is 59541.3 is also high as shown in Table 3.

To identify the relationship between the selected variables influencing the exchange rate of INR/Euro, the Multiple Regression has been carried out and the results are presented in Table 4.

Table 4 - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.997	.993	.985	.90263	.993	124.192	6

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	607.107	6	101.184	124.192	.000
Residual	4.074	5	.815		
Total	611.180	11			

Dependent Variable: ER of INR/Euro

Predictors: (Constant), FII, INT, INF, FR, TD, GDP

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	92.442	9.690		9.540	.000
TD	.001	.000	.247	2.530	.053
INF	-2.407	.516	-.290	-4.661	.006
1 INT	-1.237	.932	-.083	-1.327	.242
GDP	.001	.000	.747	4.775	.005
FR	-.052	.010	-.317	-5.093	.004
FII	.000	.000	.748	6.094	.002

Dependent Variable : ER of INR/ Euro

All the six independent variables have shown almost 99.3% impact on the dependent variable (ER of INR/ Euro) . Thus, the model is a good fit for the exchange rate of rupee against Euro.

Table 4 depicts the analysis of variance of predicting variables where the p-value is 0.00 which is significant at 5% level of significance. By looking at the ANOVA results, it is stated that the F-values are significant. Therefore, it is clear that hypothesis is accepted, in case of dependent variable (ER of INR/Euro).

Thus, the regression Equation can be written as follows:

$$ER \text{ of INR/Euro} = 92.44 + .001TD - 2.41INF - 1.24INT + .001GDP - .052FR + .000FII \text{ -----3}$$

Table 4 and equation 3 represent the coefficients of the independent variables in regression analysis. It is clear that the coefficient of the independent variables like trade balance (.053),

inflation (.006) and interest rate (.242) have shown the insignificant impact on dependent variable (ER of INR/Euro) since the probability value is greater than 0.05. However, it is interesting to note that the coefficient of GDP at FC (.005), foreign exchange reserves (.004) and foreign institutional investments (.002) have shown significant impact on the exchange rate of INR/Euro.

C. Indian Rupee VS Pound Sterling:

Table 5 -Descriptive Statistics							
	ER of INR/GBP	Trade Balance	Inflation	Interest Rate	GDP	Forex Reserves	FII
Mean	83.00	-6228.04	4.73	8.29	29109.76	694.25	59541.25
Standard Error	2.62	752.07	0.25	0.14	3188.71	13.17	5025.14
Median	81.33	-6266.34	4.57	8.26	30210.45	698.5	50569.5
Standard Deviation	9.09	2605.27	0.89	0.50	11046.01	45.65	17407.62
Sample Variance	82.59	6787444.81	0.80	0.25	12201.44	2084.02	30302.54
Kurtosis	-0.06	-0.98	-0.93	-0.46	-1.37	-0.19	-0.73
Skewness	0.40	0.19	0.56	0.08	-0.03	-0.67	1.00
Range	31.83	8308.53	2.62	1.7	32795.64	146	45424
Minimum	68.01	-10348.44	3.77	7.48	12797.54	605	45259
Maximum	99.84	-2039.91	6.39	9.18	45593.18	751	90683
Sum	996.01	-74736.49	56.87	99.5	349317.21	8331	714495
Count	12	12	12	12	12	12	12

The results of the descriptive statistics and regression analysis are summarized in Table 5 and 6. Table 5 shows the descriptive statistics of the factors affecting exchange rate of INR/GBP. The Mean, Standard deviation, Covariation, Skewness, Kurtosis, Number of observation etc. for the sample period 2005-2017 are presented in Table 5. From Table 5, shows the mean value of ER of INR/GBP is 83.00 during the study period. However, the mean value of trade deficit is -6228.04 during the same period which represents the unfavourable trade balance to India with UK. The mean value of inflation rate (4.74), interest rate (8.29) also have shown significant values during the study period. The mean value of GDP at Factor cost is 29109.77 and foreign exchange reserves are 694.25 during the study period. But the mean value of foreign institutional investment is 59541.3 as shown in Table 5.

To estimate the dependence of the exchange rate of Indian rupee against Britain's Pound Sterling on the selected variables, the regression analysis has been made and the results are shown in Table 6. However it is important to note that only three variables out of six variables considered for this particular model in order to avoid the multicollinearity problem.

Table 6 -Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.888	.789	.709	4.90073	.789	9.943	3

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	716.444	3	238.815	9.943	.004
Residual	192.137	8	24.017		
Total	908.581	11			

Dependent Variable: ER of INR/GBP

Predictors: (Constant), FII, INT, GDP

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-13.430	160.458		-.084	.935
INT	92.436	25.540	.617	3.619	.007
GDP	-71.556	34.572	-.529	-2.070	.072
FII	33.679	8.377	1.000	4.020	.004

Dependent Variable: ER of INR/GBP

From Table 6, it is clear that all the selected independent variables have shown almost 78.9 % of impact on the dependent variable. Thus, the model seems to be a good fit for the exchange rate of Indian rupee against GBP.

Table 6 depicts the analysis of variance of predicting variables where the p-value is 0.04 which is significant at 5% level of significance. By looking at the ANOVA results, it is stated that the F-value is significant. Thus, it is clear that hypothesis is accepted, in case of dependent variable (Pound Sterling).

Thus, the regression equation becomes as follows:

$$\text{ER of INF/GBP} = -13.43 + 92.44\text{INT} - 71.56 \text{GDP} + 33.68\text{FII} \text{-----4}$$

Table 6 and equation 4 show the coefficients of the independent variables in regression analysis. It is clear that the coefficient of the independent variables like GDP at FC (.072), and interest rate (.007) have shown insignificant impact on dependent variable (GBP) since the probability value is more than 0.05. However, it is interesting to note that the coefficient of foreign institutional investments (.004) only has shown significant impact on the exchange rate of Pound Sterling.

Summary Conclusions

The study makes an attempt to identify the macroeconomic determinants affecting exchange rate of Rupee against three foreign currencies (US Dollar, Euro and Pound Sterling). The results of the multiple regression to estimate the impact of selected six independent variables on three

dependent variables (Exchange rate of Indian rupee against US Dollar, Euro, Pound sterling) are summarized as follows:

From the regression results, it is clear that all the independent variables have shown almost 95.9% impact on the Exchange rate of Indian Rupee against US Dollar. Thus, the model seems to be a good fit for the exchange rate of Rupee against US dollar. It is evident that the coefficient of Foreign Institutional Investments (.030) only has shown significant impact on the exchange rate of Indian rupee against US \$ among the six variables considered for this study. Thus it is concluded that three independent variables out of six selected variables of the study have shown significant impact on the exchange rate of INR/Euro.

The findings of the regression summary also conclude that all the independent variables have shown almost 99.3% impact on the dependent variable i.e., exchange rate of Indian Rupee against Euro. Thus, the model seems to be a good fit for the exchange rate of Rupee against Euro.

It is interesting to note that the coefficient of GDP at factor cost(.005),foreign exchange reserves(.004) and Foreign Institutional Investments (.002) have shown significant impact on the dependent variable i.e., exchange rate of Indian Rupee against Euro.

Further in case of exchange rate of INR/GBP, it is clear from the study that the three independent variables that are considered for this model have shown almost 78.9 % of impact on the dependent variable i.e., exchange rate of Rupee against GBP.

It is also evident from the regression results that the coefficient of Foreign Institutional Investments (.004) only has shown significant impact on the exchange rate of Indian rupee against the of Pound Sterling.

From the entire analysis, it can be summed up the coefficient of Foreign Institutional Investments (FII)is the only common independent variable ,which has shown significant impact out of six independent variables on the exchange rate of Indian rupee against three currencies namely US Dollar, Euro and Pound Sterling during the study period.

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