An Empirical Analysis of Determinants of Exchange Rate for Economy of Pakistan (2000 – 2023)

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This study will work on some core variables including exchange rate that is considered as an important variable for different nations and size of level of development. In economics different functions are impacted here by exchange rate changes and it is very important to analyze that the macroeconomic factors including interest rate, inflation rate may impact on exchange rate positively or negatively. For the economy of Pakistan covering the period 2000 to 2023 it is analyzed that the multiple regression model by using exchange rate, inflation rate, interest rate, the value of exports and the value of imports in Pakistan having some important results for country. This study has used unit root test co-integration test and ARDL for evaluation of short run and long run effect of some core variables. This research found and concluded that all the right-side variables in multiple regression model having some important impact on relationship for the determination of exchange rate and it is explored that the inflation rate interest rate import and export are captured to regressive exchange rate in the economy of Pakistan.
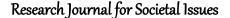
1. Introduction

It is analyzed for the economy of Pakistan that the basic determinants and economic growth are closely related to exchange rate and other core economics factors by using ARDL model for long term integration between basic variables (Ahmed & Salman, 2024). It was investigated that the impact of foreign direct investment in employment in Pakistan has worked for the interest rate and other basic parameters for the development of relationship with interest rate and other basic economic factors of foreign direct investment grass capital formation and industrialization with employment opportunities in Pakistan (Khan et al., 2023). It is worked on the basis of trade liberalization and trade performance by considering the positive regulation of human capital and economic growth for different economies of the world (Wu, 2022). It is analyzed that the economic growth and trade volatility are closely related to the development and economic growth it was analyzed for economy of Philippines. The working was done on the basis of analyzing basic core factors on statistical and economic tools and it was analyzed that there should be positive trend for different economy of the world (Gonzalez, 2022). The impact was analyzed for the economy of Pakistan is in education system and different other economic factors that decreased the ratio of a students and economic performance by analyzing different core factors for economy (Haider et al., 2022). The comparative analysis was done on the basis of human Capital and physical capital for building a sustainable economic growth at different stages of economic development which told that if there is a proper strategy for different economic decisions than it can impact slowly and gradually but it is basic factor which in different parameters for economy of the world (Ding et al., 2021). There was a prepper working on bank sector credit and growth performance for empirical evidence of credit to households and different other enterprises are economy of Pakistan that can believe that if there is proper working and exchange of goods and services it can be managed for economic decision making positively (Majeed et al., 2019).

There were different factors for trade accumulation and economic growth in Pakistan that incorporated human capital is a physical base or working days that concluded for the proper decision making in long term as well as in short term (Munir et al., 2018). The foreign exchange market is very structured market of different countries of currencies that is exchange for a individual rate or collective rate for banking authority in determination of invisible forces for aggregate demand and aggregate supply for financial market. There are certain strategies on the basis of speculation and hedging system that may impact on buying and selling of currencies. It is also analyzed that the foreign exchange market is largest financial market as well as it is most liquid market for global sale of goods and services in operation of different spot prices future prices and other threats to the performance of foreign exchange market which may declare the opportunities and losses of certain unpredictable nature of financial system (Raksong & Sombatira, 2021).

Exchange rate is macroeconomic variable that having some important effect on the microeconomic variation of daily life activities the concept of exchange rate was classified by
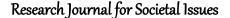
different economist on the basis of floating and fixed exchange rate system but it is work of Central Bank system of any country that may manage for the determination of demand and supply in the economy (Hassan & Dantama, 2017). It is also analyzed that the foreign exchange market arrangement for two or more countries may having some unique behavior on the basis of countries currency in relationship to other currencies but it is very important to notice that there is a certain best on international borders on the physical movement of goods and services (Raksong & Sombathira, 2021). There is a proper relevance of certain economy is which may impact on determination of economic health of an economy and it is determined on the basis of rate of inflation that is coupled with interested that may jointly impact on the exchange rate in economy by directing the quantity of exports and imports of any country in association to others countries of the world but it is analyzed that if there is a price of one currency in terms of another currency it may impact another country but it should be analyzed for the promotion of exports and import substitution policies (Nguyen et al., 2021). More interestingly the rate of exchange may determine the supply of money in economy in it may impact on the capacity of determination for finance during the transactions of business across the borders globally and nationally that may improve the first state of balance of trade and balance of payments (He et al., 2021). Following are the research questions of the research.

1. What determines the Pakistan's rupee in foreign exchange market?
2. What is relationship of exchange rate and interest rate for economy of Pakistan?
3. What is Impact of inflation on economy of Pakistan?

2. Literature Review

It is analyzed for economy of Pakistan that the basic determinants and economic growth are closely related to exchange rate and other core economics factors by using ARDL model for long term integration between basic variables (Ahmed & Salman, 2024). It was investigated that the impact of foreign direct investment in employment in Pakistan has worked for the interest rate and other basic parameters for the development of relationship with interest rate and other basic economic factors of foreign direct investment grass capital formation and industrialization with employment opportunities in Pakistan (Khan et al., 2023). It is worked on the basis of trade liberalization and trade performance by considering the positive regulation of human capital and economic growth for different economies of the world (Wu, 2022). It is analyzed that the economic growth and trade volatility are closely related to the development and economic growth it was analyzed for economy of Philippines. The working was done on the basis of analyzing basic core factors on statistical and economic tools and it was analyzed that there should be positive trend for different economy of the world (Gonzalez, 2022). The impact was analyzed for the economy of Pakistan is in education system and different other economic factors that decreased the ratio of a students and economic performance by analyzing different core factors for economy (Haider et al., 2022). The comparative analysis was done on the basis of human Capital and physical capital for building a sustainable economic growth at different stages of economic

development which told that if there is a proper strategy for different economic decisions than it can impact slowly and gradually but it is basic factor which in different parameters for economy of the world (Ding et al. 2021).

There was a prepper working on bank sector credit and growth performance for empirical evidence of credit to households and different other enterprises are economy of Pakistan that can believe that if there is proper working and exchange of goods and services it can be managed for economic decision making positively (Majeed et al., 2019). There were different factors for trade accumulation and economic growth in Pakistan that incorporated human capital is a physical base or working days that concluded for the proper decision making in long term as well as in short term (Munir et al., 2018). Foreign exchange market in developing economy like Pakistan is evolution of process but it is away from reality because of lake of proper infrastructure and in terms of electricity poor communication network and fluctuations in internet service. The foreign exchange market is primarily initiated for modern globalization which may impact on changing trends in international trade for improvement of macroeconomic structure and to make proper institutions for the development of economy (Dung & Okereke 2022). The most important feature for modern foreign exchange market is that it is based on the centralization and organization of market where different currencies of the world may be bought and sold for international foreign exchange dealers for smooth running of economy (Beckmann & Czudaj, 2022).

There is no specific market physically where there exchange of currencies but it is a foreign exchange market where there is proper organization of markets in trading currency is that may use online electron platforms for inter-banking system with dealers and global dimensions (Dung & Okereke, 2022). The concept of exchange rate is different from rate of other things because it cannot be omitted from any activity of economic base in the nation is one currency must be changed for another before trade cannot is state that there is a strong base of trade by water trade where different goods and services are being exchanged directly or indirectly (Rashid & Basit, 2021). It is concerned with more interest that the rate of exchange may be determined for supply of money in any economy for the capacity of determination of finance which can be done on the basis of different transactions for global borders in inferred for improvement of a state of balance of payments in the economy (He et al., 2021). It is said that the rate of exchange is done for different policies for strategies it may be done for different societies which is couple with making a policy for regulation of affairs of system (Fathia et al., 2021). It is argued that there is no guarantee for a strategy of operation for foreign exchange market in normal losses are abnormal losses for best traders wear sometimes it is encountered for the situations of trading for different profits which are maximized into trade with large volume but it is felt that the fact between trade of two Nations is trading in a policy for losing of volume without any form of speculation (Dantama, 2017).

It is global recognized that the electronic marketplace for the different types of currencies may be traded with rate of exchange on the basis of degree of liquidity in foreign exchange market

which is normal with high voltage due to large number of dealers in financial market because it is compromised on the basis of sellers and buyers of financial security (Ali et al., 2022). It is analyzed that there is big challenge for dealers DLF a strategy for profit in financial market which is served as the inability of exchange rate and current prices for different countries (Casula & Masala, 2021). It is explained for fixed exchange rate system and on the basis of prevention of policies of different strategy makers for currency prices which is either over valued or under root on the basis of fixed exchange system are flexible exchange rate system but it is done on the basis of different banking bases (Razi et al., 2012). The trade volatility in foreign exchange market has become common in financial markets because imposing of favorable markets in unfair markets has discrete the market traders are fear of losing investment (Benth, 2021). It is one of the basic cars that market is last on the basis of different in accurate data prediction and price movements for foreign exchange market due to spread of market volatility in different countries but in respect that the foreign exchange market is not known for blessing any market restrictions are it is traded for volume of money which is invested for trading foreign exchange (Davi & Valdes, 2022).

The negative impact of red volatility is revealed for statistical economic data which is for international trade but it is impacted on negative balance of payment but it is unbeneficial for balance after it with rise of inflation and increasing of rate of interest but it is impacted on endorse implications for growth and development plans for rising youth unemployment and general caste of living joint contribution for poverty reduction in different economies of the world (Ali et al., 2022). It is generally explained for the consumer retail prices that is called inflation but it is exchange rate of official market that help on the basis of buying and selling which is correlated to exchange rate for volatility (He et al., 2021). It is fact that there is a relationship between exchange of currency and international business that is study on the basis of research in exchange and volatility but it is currency rate that is reduced for interest and interest rate but it is based on different factors of transaction cost so there is a relationship of two criteria that has impacted the policy making of credit with larger time periods and the current conditions but it is impacted for financial instruments that is available today but it is currency and exchange rate (Broda & Romalis, 2010). It is work done the foreign exchange market of Nigeria for short term and long term exchange rate which is impacted on development of exports and inputs by using correction model for time series data (Odili, 2015).

3. Methodology

For the determination of existence of long run relationship among the variables in the study there is use of unit root tests by taking name Philips-Perron (PP) and Augmented Dicky Fuller (ADF).

$$EXR = INT+INF+EXP+\mu$$

Where,

EXR = Exchange rate

INT = Interest rate

INF = Inflation

EXP=Exports

$\boldsymbol{\mu}$ = Error Term

All the data sets used in this study from 2000 to 2023 are taken from various issues of Pakistan economic survey, government of Pakistan and handbook of statistics on Pakistan economy, State bank of Pakistan.

4. Estimation and Results

For the determination of existence of long run relationship among the variables in the study there is use of unit root tests by taking name Philips-Perron (PP) and Augmented Dicky Fuller (ADF).

Table No 1: Stationarity of Results

Variables	ADF test statistics				PP test statistics			
	I(0)		I(1)		I(0)		I(1)	
	C	C & T	C	C&T	C	C&T	C	C&T
EXR	-1.22	-3.31	-2.31	-3.13	-1.60	-2.12	-3.21	-3.29
INT	-0.12	-3.71	-2.26	-3.51	-0.17	-1.71	-3.31	-2.91
INF	-0.04	-3.31	-2.02	-3.91	-0.05	-1.51	-3.01	-3.10
EXP	-1.93	-3.21	-2.12	-5.12	-1.91	-2.31	-5.05	-4.13

Source: Authors Calculations.

Table No 2: Long run ER and other determinants:

Variables	Coefficient	t-statistics	Prob.
Constant	4.780	78.68	0.00
INT	0.350	2.56	0.00
INF	0.102	2.90	0.06
EXP	-1.90	0.72	0.48
Adj.R^2	0.97	F-statistics	512.26
D.W	1.30	Prob.	0.00

Source: Authors estimations

In above analysis it is concluded that all the results are consistent with previous analysis as interest rate exports imports and rate of inflation or directly linked to exchange rate of economy of Pakistan.

5. Discussion and Conclusion

The outcome of results was shown that there are consistent results used in this study there is a positive in long run relationship between inflation, interest rate and exchange rate for economy

of Pakistan. This analysis adopted a time series data period 2000 to 2023. There was multiple integration model developed for achieving statistical and economic situation for the economy of Pakistan, where it was statistically positive direction behind the trends of microeconomic variables identified in this research study 4 variables captured in multi-regression model that was exchange rate inflation rate interest rate export and import for economy of Pakistan, but the four exogenous variable which were used for explanation of changes coupled to the factors that brought the changes in exchange rate but critical evaluation told that several structure of Pakistan but the inflation rate interest rate coupled with value of export and import with other nations in international trade and agreement to our multiple purpose that graced the model for explanation of volatility in economy of Pakistan.

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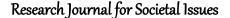
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