

# Impact of Exchange Rate on FDI in Pakistan

Qurat-ul-Ain  
Imran Naseem

Department of Management Science, Comsats Abbottabad, Pakistan

Irfan Ullah

School of Accounting, Dongbei University of Finance and Economics, China

## Abstract

The main objective of this study is to investigate the relationship of Foreign Direct Investment (FDI) with exchange rate. The set of the determinants of FDI can be very large but exchange rate is one of the intense determinants. On the other hand, exchange rates have become extremely volatile due to its weakness to adapt to the changes in domestic and international financial markets. In this study, time series data have been used for foreign direct investment, exchange rate, GDP, imports, exports and inflation from 2003-2013 for Pakistan. After collection of data on above stated variables, several tests (multiple regression, descriptive statistics, and correlation) have been applied for the purpose of analysis in SPSS 20. The results squeezed from the study express that FDI is most probably associated with Rupee depreciation (ER). This research will help the managers, related organizations and future researchers to make or revise the further economic decisions.

**Keywords:** China insurance industry, Foreign fund, Challenge

## 1. Introduction

Currency Exchange of one country for another country is called Exchange rate as it is most important variable in an unclosed economy which affects the macroeconomic parameters like trade, inflation, money inflow and FDI. The Economists believed that by increasing the ER increase the international trade competitive advantage. Investors or corporations of one country of non-financial assets in another country purchase the FDI.

(M. Nishat et al; 2005) they have conducted a study over the period of 1961-2003 that the determinants of growth identify the FDI in Pakistan. They were Interested to investigate how different variables attract FDI in Pakistan.

(M. Bilawal et al; 2014) they have studied that exchange rates (ER) have affected the macroeconomics performance of any top country and that research was to investigate whether exchange rate fluctuations affects the macroeconomic in Pakistan. So it was based on time series and secondary data. And for that purpose 32 years' old data of Exchange rate and FDI for the period of 1982 to 2013 and was collected from the website of State Bank of Pakistan.

(M.Yasir et al; 2012) They have tried to study and made a relationship among the large macro-variables such as foreign direct investment (FDI), Foreign exchange reserves, and nominal exchange rate in Pakistan and have tested annual data set of period of 1980 - 2010 and sample size of so that to investigate the inactive at 1st difference, so for that purpose unit root test has been used and test gave a results that FDI, ER and FER are static. Human and capital return, terms of trade, infrastructure development, physical capitals, and Urbanization promote FDI in Pakistan. Economic theory suggested that Foreign Direct Investment (FDI) is a main factor of economic growth in developing countries.

(M. Zakaria, et al; 2014) According to his study Foreign direct investment has been known as an important resource for economic development. Foreign direct investment (FDI) of Pakistan is the major external source of funding. Foreign direct investment is considered as a growth attractive component and referred as for the International free trade.

(M.Kashif Rasheed et al; (1975-2011) the gross domestic product, transport, storage, exchange rates, indirect taxes, foreign direct investment in Pakistan communication and trade openness as determinants found in the last 37 years from the time series data (1975-2011) examined collected from WDI.

(Samran Yousuf et al; 2013) Pakistan exchange rate and the CPI for 1980-2011 and the volatility in the exchange rate relations with foreign investment analysis. There are a number of determinants of foreign investment, but the exchange rate is one of the reflective elements. As weakness of the domestic and international investment is highly volatile due to changes in exchange rates. Study found the foreign investment, government consumption volatility in exchange rates, as time series data was used for it.

## Research Gap:

Impact of exchange rate on FDI still required studying more, how they both affect each other and what are the other variables which stimulate them. A lot of study had already been done on this topic it needs to understand more in the context of Pakistan.

### **Scope:**

The scope of the study is to find the impact of ER on FDI of specific time period for Pakistan.

### **Objective of the study:**

To learn how to conduct research and learn the relationship as well as the impact of exchange rate on FDI in Pakistani context and how Exchange Rate fluctuates and affects FDI in Pakistan. And to suggest the policy makers how to measure the growth in the foreign direct investment through real exchange rate.

### **Significance of the Study:**

This research will help other students to work on impact of exchange rate on FDI in Pakistan. This research will contribute in literature review related to this topic and also the impact on the related ones.

## **2. Literature Review**

### **Exchange Rate and FDI in Developed Countries:**

A lot of literature review had done on the fluctuation of ER on the FDI in other countries like in Pakistan. Prior studies show that exchange rate can influence stock market (Jebran 2018; 2014; Jebran and Iqbal 2016). However less research on ER and FDI in markets like Pakistan is conducted.

Aba et al; (2009) they focused on the facts of affect of ER on the average rate of FDI inflows during the period of 1982-1994 conducted a study in the United States in order to examine the effect on US wholesale industries of FDI interdependences. It has been found a positive effect of ER on the average rate of FDI and that are different from the previous rule that FDI increases due to depreciation in USD.

Tomlin (2008) have examined the relationship between FDI in the USA and changes in ER in the 207 service sector firms. And it's concluded that a negative relation exists between FDI and exchange rate due to weak USD but that it's also gave a positive association between FDI and exchange rate in the US service industry and FDI inflows increased due to the appreciation in USD. That was because of the special services provided to the US service market by Japanese firms.

Georgopoulos (2008) found that there exist's a negative relationship between these two main variables which means that foreign mergers and acquisitions. Real USD depreciation affects by the FDI increase due to the home currency but only in those industries which have high R & D level. Zhang (2008) have tried to reveal a positive relationship between these two main variables into the European Union from both inside and outside the EU.

Galgau and Sekkat (2004) have given a positive link for FDI between the European Union nations; they reported that increases in joint exchange rates variance discourage inflows originating outside of the European Union.

Chakrabarti and Scholnick (2002) have carried out research on 20 OECD countries and concluded a negative relationship between FDI and exchange rate volatility from the United States by using panel data technique, also found the positive impact of devaluations on FDI flows while exchange rate volatility and average devaluation do have not of skewness.

Amuedo\_Dorantes & Pozo (2001) they have conducted a study for the US for time period of 1976-1998 and have examined the effect of exchange rate volatility and exchange rate. Results of 2001 showed no significant relationship exists between exchange rate volatility and FDI in short run which means that FDI increases due to depreciation in currency.

Goliath et al; (1998) they have conducted a study on 10 developed in order to explore the relationship of affect of ER on trade and FDI in the US food processing industry. Study concluded that exchange rate has a positive impact on the FDI of Australia, Belgium, Canada, Germany and Japan whereas it has a negative impact on the FDI of France, Italy, the Netherlands, Spain and UK.

Boliden (1997) He had studied that FDI can be affected by the exchange rate activities because firm's specific assets were included in the FDI acquisitions and have earned revenues in currency purchased. Study was on the acquisitions of Japanese in the US during 1975-1992 and a strong correlation depicts that the level of FDI acquisitions of Japanese was higher due to the weak dollar for those firms which had firm specific assets.

Kaput & Chang (1996) they have examined the relation and impact of exchange rate and policy investments by Japanese firms in the United States in electronics companies. It has been also a negative relation because FDI in the US increases when yen appreciates or USD depreciates.

Goldberg and Karlstad (1995) they studied that exchange rate volatility has a major impact on the decision of the United States MNEs to found facilities abroad.

Foot & Stein (1991) they have studied and gave a experimental proof of using simple regressions in the existence of imperfect capital market due to boost up in inward foreign FDI in the US in 1970s and 1980s due to weak USD or depreciation in USD.

### **Summary:**

Exchange rate and FDI in developed countries found a positive effect of ER on the average rate of FDI and that are different from the previous rule that FDI increases due to depreciation in USD and another found that there

exit's a negative relationship between these two main variables which means that foreign mergers and acquisitions. Real USD depreciation affects by the FDI increase due to the home currency but only in those industries which have high R & D level. research on 20 OECD countries and concluded a negative relationship between FDI and exchange rate volatility from the United States by using panel data technique, also found the positive impact of devaluations on FDI flows while exchange rate volatility and average devaluation do have not of skewness. A study on 10 developed in order to explore the relationship of affect of ER on trade and FDI in the US food processing industry. Study concluded that exchange rate has a positive impact on the FDI of Australia, Belgium, Canada, Germany and Japan whereas it has a negative impact on the FDI of France, Italy, the Netherlands, Spain and UK

#### **Exchange Rate and FDI in Developing Countries:**

Kyereboah\_Coleman & Agyire\_Tettey (2006) used a co-integration and ECM model and conducted a study by using time series data during the period of 1970-2002 and to find the effect of ER on the FDI of Ghana. That study found that ER has a negative impact on FDI inflows and it can be revealed that FDI inflows increased and it is discouraged by exchange rate volatility as the Ghana currency depreciated.

Tsen (2005) have conducted a study during the period of 1980-2002 to find the long run relationship between FDI and locations related determinants in Malaysian manufacturing industry and there he found a negative connection between ER and FDI which means that FDI increases due to decreases in exchange rate.

(Dunning, (1981, 1986); Narula, 1996; Ozawa, 1992; Tolentino, 1993; Dunning & Narula, 1996). Commercial Banks are a prompt source for getting financial assistance. However vast range of economists does assert that FDI is more steadfast source of financial inflows, possibly for the developing economies of the world.

It was found by Riedel (1975) that less Developed countries played unreceptive role in determining the direction and volume of FDI. The situations like that of existence of hyper unemployment, enticement of voluntary/early retirement, retrenchment and probably descend in the labor's bargaining power were some of the famous determinants of FDI.

Parletum (2008) found that market size of host country and an access to European Markets have positive and significant impact on FDI. However trade openness and corruption brought up insignificant impact over FDI.

Barrel and Pain (1996) FDI and GNP are positively related and also unit labor cost and relative capital cost had a positive relationship with outward direct investment.

Johanson and Vahlne (1977) conceived in their analysis that Multinational Enterprises are to complement FDI but in gradual and incremental way of persuasions. It has got longitudinal element materialization.

#### **Summary:**

Exchange rate and FDI in developing countries found that ER has a negative impact on FDI inflows and it can be revealed that FDI inflows increased and it is discouraged by exchange rate volatility as the Ghana currency depreciated. And also that the existence of hyper unemployment, enticement of voluntary/early retirement, retrenchment and probably descend in the labor's bargaining power were some of the famous determinants of FDI. However in case of trade openness and corruption in developing countries brought up insignificant impact over FDI.

#### **Exchange rate and FDI of Pakistan:**

(Clegg & Scott\_Green, 1999; O'Sullivan, 1993; Froot and Stein, 1991; & Cushman, 1988) They studied and identified the variables of FDI in Pakistan by using co-integration and error correction technique. By considering credit to private sector, the tariff rate, exchange rate, tax rate, and index of general share price variables.

Hakro & Ghumro (2011) during time period of 1970-2007 they found no relationship between ER and FDI in Pakistan and in 1990 non variation was due to the fixed exchange rate controlled by the government, while investigating the effects of determinants on FDI flows.

Mughal& Akram (2011) they have conducted a study on Pakistan and examined the impact of ER on FDI inflows during the period of 1984-2008 by using the time series data, and concluded that ER as a determinant of FDI has a positive impact on the FDI inflows both in short and long run.

Aqeel & Nishat (2004) conducted a study and examined that how many different variables attract FDI for Pakistan in order to find the growth determinants in FDI in 1961-2003. It showed a positive relationship between exchange rate and FDI of Pakistan and this positive relationship considered a good sign for economy that FDI increases due to the appreciation in rupee and investors expect high returns.

Akhtar (2000) he has took time period of 1972-1996 in order to find the impact of FDI determinants on stock of FDI in the perspective of Pakistan and found a negative relationship between ER and FDI which means that FDI increases due to the devaluation of ER.

(M. Nishat et al; 2005) He said that Pakistan using time series data in the literature to be studied and addressed by standard econometric techniques Significant positive long-term co-integration tests that confirmed the existence of the relationship.

(Abdul waheed et al; 2010) The duration of the procedure need 1975-2010.Pre for Pakistan Autoregressive Distributed Lag (ARDL) model studied by using the Dickey Fuller test for unit root (ADF) unit root test

augmented to meet this goal is applied. (Nazima Ellahi et al; 2011) They have unproductive nationalized ventures or enterprises which account for a reasonable proportion of government expenditures should to be commercialized of privatized.

(Ahmad Nawaz Hakro; 2008) He found that exchange rate exhibited high volatility. Foreign investors risk factors increased by ER volatility increase. As in Pakistan exchange rate volatility and inflation gave negative impression about FDI in Pakistan. So it's suggested that policy makers in Pakistan should follow macroeconomic control and exchange rate in the country.

(Samran yousaf; 2013) The Adjustment coefficient for Import, FDI and GDP are negative means that these coefficients/ variables answer to approved the disequilibrium errors of the earlier period.

(Arshad Muhammad; 2012) He studied the Impact of exchange rate volatility on macroeconomic variables has been analyzed through use of regression techniques, GARCH model was used. Positive sign of ER volatility on GDP have been found and negative between FDI and exchange rate.

(Iqbal Mehmood et al; 2011) The aim of the work empirically surge in foreign investment in Pakistan market was to examine the effect of size. The market size of the increase in foreign investment as an important factor is measured by the fact that it was forced.

(Muhammad Akram et al; 2011) He said that Pakistan's economic performance depends on foreign investment attraction studied. Pakistan's external growth strategy seeking to develop strategies to export as an important part of the foreign investment should include.

(Muhammad Luqman et al; 2012) they studied that FDI has a positive and important impact on investment and investment is a function of saving. On domestic investment the coefficient of GR is positive and FDI growth has a positive and important impact on the domestic investment in Pakistan.

(Haider Mehmood et al; 2012) they have measured the statement of political stability in the country. Assets from changing government policies that secured foreign investor's interest that can be influenced by the quality standard FDI inflows. Savings policy from the government should be encouraged in the country.

(Tanvir Ahmad et al; 2012) they found that after the beginning of flexible exchange rate system in Pakistan the effect of trade openness on FDI has been increased. However, this result is not strong to different equation specification.

(Muhammad Zakaria et al; 2014) They have the results of statistics that indicate that most of the variables are in normal trends and had equally distributed series with low variances. Only to others because during that period when Pakistan's economic environment has seen lot of slashes based on political transitions and FDI has high variance as compare to others.

(Hafiz Sohail et al; 2014) He studied the level of employment in Pakistan FDI to the observed effect and four variables, foreign direct investment, exchange rates, employment levels and GDP per capita is also included.

(Malik Danish Habib et al; 2013) The study results raise FDI with positive currency ER depreciation and volatility associated with the links that are revealed. It is immaterial as held for claims inflation while trade openness, foreign investment increased substantially.

(Samilullah et al; 2012) they studied that Pakistan is a developing country of the world with rich natural resources and low labor cost could not achieve to attract FDI inflows to the country for years.. The goal of the research was to investigate the impact of exchange rate volatility on FDI into Pakistan focused on annually data for the period b/w 1982-2013. Foreign Direct Investment inflows for Pakistan have shown very low growing model.

(Muhammad Bilawal et al; 2014) Foreign investment in Pakistan to identify the variables involved in defining integration and error correction techniques to use to study. This tariff rates, exchange rates, tax rates, the private sector and the general price index of the variable to be credit.

As investigated by Adam (2009) modern theories also suggested the same results and further add up requirement of capital for the bringing up of growth. Past trends on account of the flow of FDI into Pakistan shows that Greenfield investment has been prevailing in the range that exceeds \$ one thousand million, in the year 2004-05 to 2010-2011.

(Shabbir et al., 1992; Khan et al., 1993) However, Aslam (1987) concluded in his research that FDI from public side was not as advantageous as it was from private sector side that helped the recipient to cover up Breached gaps between saving and investment. FDI contributed to boosting up exports.

Ahmad et al; (2009) he analyzed determinants of FDI in Developing countries like Pakistan and examined why some countries like Pakistan had been relatively unsuccessful in attracting FDI.

Mughal et al; (2009) studied the effects of FDI flows on the Pakistani economy over the Period 1961-2005 and have used the Johansen co-integration method and Vector Error Correction Model. And found that FDI does include a positive effect on growth rate and economic variables primarily in the short term. Local investments are appreciates more as compare to foreign investments.

### **Summary**

Exchange rate and FDI of Pakistan during time period of 1970-2007 found that there is no relationship between

ER and FDI in Pakistan and in 1990 non variation was due to the fixed exchange rate controlled by the government, while investigating the effects of determinants on FDI flows. Many different variables attract FDI for Pakistan in order to find the growth determinants in FDI in 1961-2003. It showed a positive relationship between exchange rate and FDI of Pakistan and this positive relationship considered a good sign for economy that FDI increases due to the appreciation in rupee and investors expect high returns. Results of statistics that indicate that most of the variables are in normal trends and had equally distributed series with low variances. Only to others because during that period when Pakistan's economic environment has seen lot of slashes based on political transitions and FDI has high variance as compare to others.

### 3. METHODOLOGY

The main purpose of this study is to find out the impact of ER on FDI in the context of Pakistan. Most of the research has been already done on the impact of ER on FDI and its results in positive and negative grounds. Data which chose for this purpose is secondary source data and it was collected from the site of state bank of Pakistan also from world development indicator data collected from these sites are reliable and authentic which were used in my study.

#### Approach of research study:

As we know that there are two types of approaches which are commonly used in research quantitative and qualitative approaches. Here in this article my data nature is quantitative.

#### Sources of data and types:

The secondary time series data and other reliable information are from the website of state bank of Pakistan and also from international organizations sites for this research paper.

#### Variables used in this study:

This research used different variables and their impact on each other. Dependent variable is our foreign direct investment and independent variable is our Exchange rate. And also some other independent variables such as inflation, imports, exports and gross national income.

$$FDI = f(INF, IMP, EXP, E.R)$$

Data was collected for the period of 2003-2013 means for the last 11 years. Why because after earth quick a lot of pressure was on the whole economy of Pakistan. So there is up's and down's in the ER and FDI of Pakistan. For that purpose tried to find out the impacts of one on another as it was already been done here different statistical tools were used for collection of data to interpret the results for this purpose used Regression model.

#### Regression Model

Regression Analysis is concerned with the study of dependence of one variable, the dependent variable, on one or more other variables which are explanatory variables with a view to estimating and or predicting the (population) mean or average value of the former in terms of the known or fixed (in repeated sampling).

The following is the main linear regression model which will be used for analysis:

$$Y = \alpha + \beta_1(E.R) + \beta_2(INF) + \beta_3(IMP) + \beta_4(EXP) + \mu$$

Where Y is FDI, E.R is Exchange rate, INF is Inflation Rate, IMP is Import, EXP is export and  $\mu$  is the residual term.

Techniques used for the analysis are the descriptive statistics which is used to analyze the patterns and distribution of data; multiple regressions have been used to quantify the impact of independent variables on dependent variables, and then correlation for identifying degree of association among variables.

#### HYPOTHESIS:

Ho: Exchange rate has impact on FDI.

Hi: Exchange rate does not impact on FDI.

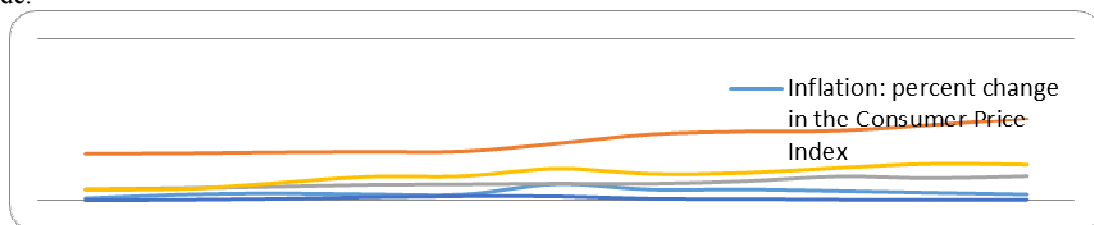
#### DATA COLLECTION AND ANALYSIS:

The table below depicts the time-series data of consumer price index (CPI), foreign direct investment (FDI), exchange rate, exports and imports of goods and services.

| year | Inflation: percent change in the Consumer Price Index | Exchange rate: local currency units per USD | Exports of goods and services, billion USD | Imports of goods and services, billion USD | Foreign Direct Investment, billion USD |
|------|---|---|--|--|--|
| 2003 | 2.9   | 57.75                                       | 13.92                                      | 13.42                                      | 0.53                                   |
| 2004 | 7.4   | 58.26                                       | 15.35                                      | 14.34                                      | 1.12                                   |
| 2005 | 9.1   | 59.51                                       | 17.18                                      | 21.42                                      | 2.2                                    |
| 2006 | 7.9   | 60.27                                       | 19.4                                       | 29.58                                      | 4.27                                   |
| 2007 | 7.6   | 60.74                                       | 20.14                                      | 30.14                                      | 5.59                                   |
| 2008 | 20.3  | 70.41                                       | 21.06                                      | 39.48                                      | 5.44                                   |
| 2009 | 13.6  | 81.71                                       | 20.81                                      | 33.03                                      | 2.34                                   |
| 2010 | 13.9  | 85.19                                       | 23.95                                      | 34.29                                      | 2.02                                   |
| 2011 | 11.9  | 86.34                                       | 29.83                                      | 40.52                                      | 1.31                                   |
| 2012 | 9.7   | 93.4  | 27.73                                      | 45.56                                      | 0.86                                   |
| 2013 | 7.7   | 101.63                                      | 30.16                                      | 44.54                                      | 1.31                                   |

Source: <http://www.theglobaleconomy.com/>

The graph below shows that as compared to exports, goods and services have been imported more during the last decade. The increase in foreign currency exchange rate is linked with rise in inflation. Also, the increase in foreign currency exchange rate is linked with higher number of imports of goods and services during the last decade.



Source: <http://www.theglobaleconomy.com/>

The GDP of Pakistan for the last decade is given below:



SOURCE: WWW.TRADINGECONOMICS.COM | WORLD BANK GROUP

By converting the initial values in table to percentage values, we get:

| Year | Inflation | Exc. Rate | Exports | Imports | Investment |
|------|-----------|-----------|---------|---------|------------|
| 2003 | .029      | .577      | .192    | .185    | .829       |
| 2004 | .074      | .582      | .184    | .172    | 1.113      |
| 2005 | .091      | .595      | .175    | .218    | .964       |
| 2006 | .079      | .602      | .177    | .270    | .940       |
| 2007 | .076      | .607      | .146    | .219    | .309       |
| 2008 | .203      | .704      | .138    | .259    | -.026      |
| 2009 | .136      | .817      | .122    | .194    | -.569      |
| 2010 | .139      | .851      | .142    | .204    | -.136      |
| 2011 | .119      | .863      | .168    | .228    | -.351      |
| 2012 | .097      | .934      | .129    | .213    | -.343      |
| 2013 | .077      | 1.016     | .134    | .198    | .523       |

**TESTING/ANALYSIS:**

The test of correlation on the above table in SPSS 20 yielded the following results:

**Inter-Item Correlation Matrix**

|  | % change in CPI | %age of local currency units per US \$ | %age of exports in billion US \$ | %age of imports in billion US \$ | %age of investment in billion US \$ |
|--|-----------------|--|----------------------------------|----------------------------------|-------------------------------------|
| % change in CPI                        | 1.000           | .296                                   | .573                             | .439                             | .626                                |
| %age of local currency units per US \$ | .296            | 1.000                                  | .711                             | .100                             | .660                                |
| %age of exports in billion US \$       | .573            | .711                                   | 1.000                            | .063                             | .761                                |
| %age of imports in billion US \$       | .439            | .100                                   | .063                             | 1.000                            | .088                                |
| %age of investment in billion US \$    | .626            | .660                                   | .761                             | .088                             | 1.000                               |

The above table indicates that correlation exists well within the specified limits, ranging from 0.088 to 0.761, which means that the data fetched is reliable for analysis. Usually, correlation above the range of 0.8 is not desirable.

The test of descriptive statistics in SPSS-20 yielded the following results:

**Descriptive Statistics**

|  | N  | Minimum | Maximum | Mean    | Std. Deviation |
|--|----|---------|---------|---------|----------------|
| 2003 - 2013                            | 11 | 2003    | 2013    | 2008.00 | 3.317          |
| % change in CPI                        | 11 | .029    | .203    | .10182  | .045939        |
| %age of local currency units per US \$ | 11 | .577    | 1.016   | .74073  | .160553        |
| %age of exports in billion US \$       | 11 | .122    | .192    | .15518  | .024510        |
| %age of imports in billion US \$       | 11 | .172    | .270    | .21455  | .029592        |
| %age of investment in billion US \$    | 11 | -.569   | 1.113   | .29573  | .610713        |
| Valid N (listwise)                     | 11 |         |         |         |                |

Descriptive statistics show that percent change in CPI during the last decade was at lowest of 2.9% and at highest of 20.3%, whereas the average inflation during the past decade was 10.18%.

The percent change in ER during the last decade was at lowest of 57.7% and at highest of 101.6%, whereas the average ER during the past decade was 74.07%.

The percent change in exports during the last decade was at lowest of 12.2% and at highest of 19.2%, whereas the average exports during the past decade were 15.5%.

The percent change in imports during the last decade was at lowest of 17.2% and at highest of 27%, whereas the average imports during the past decade were 21.4%.

The percent change in FDI during the last decade was at lowest of -56.9% and at highest of 111.3%, whereas the average FDI during the past decade was 29.57%. Negative percentage indicates that outflows of investment exceed inflows.

Regression Model Analysis yielded the following summary:

**Model Summary and Parameter Estimates**

Dependent Variable: % change in CPI

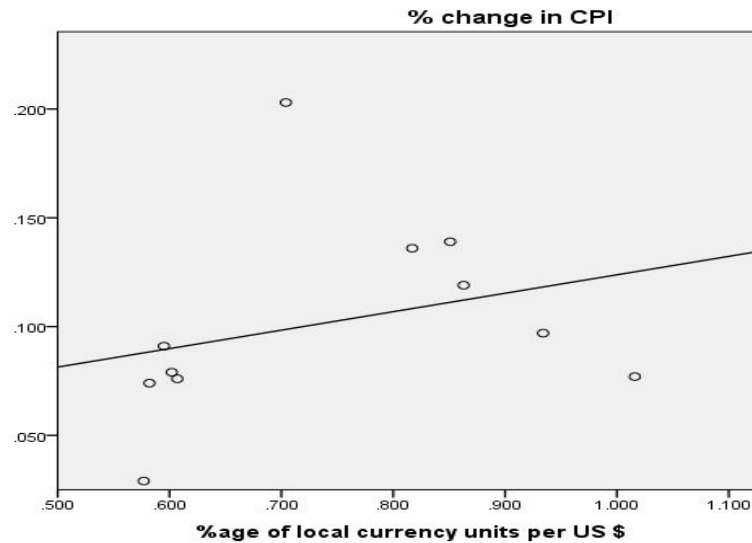
| Equation | Model Summary |      |     |     |      | Parameter Estimates |      |
|----------|---------------|------|-----|-----|------|---------------------|------|
|          | R Square      | F    | df1 | df2 | Sig. | Constant            | b1   |
| Linear   | .088          | .867 | 1   | 9   | .376 | .039                | .085 |

The independent variable is %age of local currency units per US \$.

$R^2$  is co-efficient of determination, which is 8.8%. This means that there is 8.8% variation in goodness of fit, while the remaining variation is caused by the error term. In other words, it means that ER has 8.8% impact on

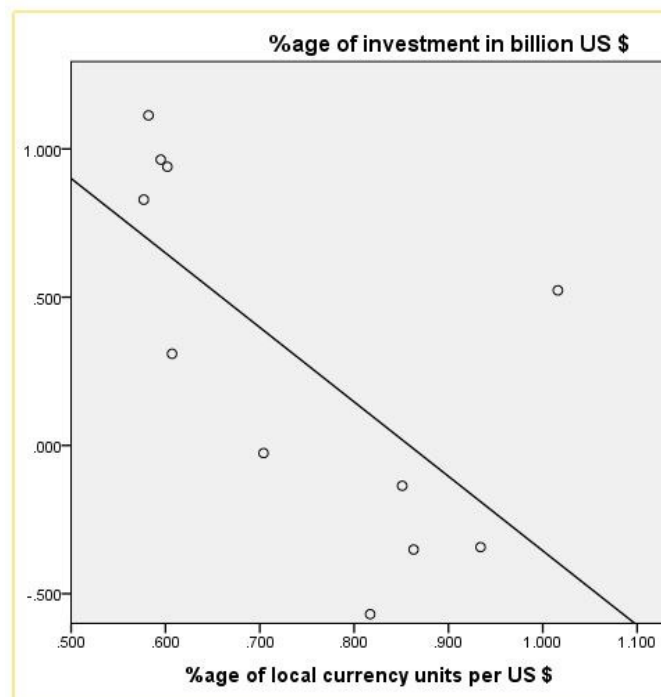
CPI.

The following graph shows the regression analysis of CPI & ER:



From the graph, it is clear that there isn't any direct relation between ER & CPI. Sometimes, with the increase in ER, CPI increases, while sometimes not.

The following graph shows the regression analysis of FDI & ER:



From the graph, it is clear that ER have an impact on FDI. With the increase in ER, FDI shows a declining trend, but it's not always the case, as both aren't directly proportional, which gives the indication that there may be some other factors involved, which influence FDI.

## CONCLUSION

As Pakistan is a developing country of the world with rich natural resources and low labor cost could not achieve to attract FDI inflows to the country for years. Foreign Direct Investment inflows for Pakistan have shown very low growing pattern. The goal of the research was to investigate the impact of exchange rate volatility on FDI into Pakistan with very specific focus on annually data for the period between 2003-2013.

Finally, put the data into SPSS software and applied correlation and regression analysis tests the results suggested the strong evidence that exchange rate and its instability have significant effect on annually FDI inflows into Pakistan for the tested period of time. The results also indicated that exchange rate has strong



positive correlation with FDI. Regression analysis showed that exchange rate has effect on FDI in Pakistan. So it is concluded that the search model is appropriate the independent variable Exchange Rate can predict the dependent variable Foreign Direct Investment.

Depreciation of Rupee is taken as an incentive by the foreign investors and they are attracted to invest in Pakistan because of their relative increase in worth of their assets. Pakistan is following freely floating exchange rate system since 2000 which makes country more sensitive to the slight variations in the foreign exchange market. Exchange rate volatility acts like a market friction for FDI in Pakistan as evident by our results. Future prone to risk and uncertainty provoked by exchange rate volatility hampers FDI in Pakistan. But its effect is quite small as compared to effect of exchange rate appreciation. Though, inflation is insignificant in our model to explain FDI.

Pakistan is a developing country which is in dire need of foreign investment to stimulate domestic economy, seek new technology, modern managerial skills and employment generation for ever increasing population. Foreign Direct Investment in this regard can play a decisive role not only to manage difficult economic conditions but it also promotes competition in the economy which brings efficiency leading to the beauty of capitalism; innovation. Our policy recommendation is to minimize the exchange rate volatility and to keep exchange rates in a compatible mode. Any such movement in the exchange rates that leads to the loss of competitiveness should be avoided by proper planning and well regulated foreign exchange market. Economic liberalization with stable exchange rate should be promoted in order to bring fresh FDI by revising the exchange controls and developing modern financial markets.

As the results mentioned earlier suggest that the policy makers in Pakistan must take into consideration both the instability in degree of exchange rate and existence. The policy makers must take the notice of the likely impact of the exchange stability on each macroeconomic variable in implementation of trade policies in Pakistan, so it is very clear that higher foreign direct investment and higher volumes of trades can be attracted. The future researchers and related organizations may use these results in order to make managerial decisions which support their business requirements as well as the research requirements of the researchers.

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