University of Wah Journal of Management Sciences
Volume 7 (Issue 1), June 2023, pp. 114-127

Impact of Exchange rate on Macro-Economic Indicators: Evidence from Asian Region

[1]Saad Alam Khokhar, [2]Muhammad Yar Khan* and [3]Abdul Qayyum Khan

Article History:

Received:

24 March, 2023

Revised:

12 June, 2023

ABSTRACT

Purpose: The purpose of this study is to examine the Impact of exchange rate on Macro-Economic Indicators.

Design and Methodology: For this study data was collected from different source such as World development Indicator, International Statistic among others. Partial Least Square analysis has been used on data from 2005 to 2020 for Asian Countries.

Findings: The results indicates that trade is more significant than FDI in Asian regions. More specifically, trade has a significant relationship while FDI has no significant relationship in Asian Countries. However, both variables have a significant relationship with exchange rate in case of Pakistan.

Implications: The world is constantly facing the rapid downturn after covid-19 pandemic, this downturn has abruptly affected the investors' sentiments to invest in underdeveloped countries. The study will facilitate the policy makers in formulation of new economic policies. In order to increase inflow of FDI and international trade, it is beneficial to have lowest exchange rate fluctuations. Further, the investors and traders can design their strategies by considering the fluctuation in exchange rate of these countries.

Keywords: Foreign Direct Investment, Trade, Exchange rate, Interest Rate, Industrial Growth, Pakistan.

1. Introduction

The association of international trade and exchange rate has been previously studied but there's much more to learn from it. The prior literature can be divided into two broad groups: One group of researchers believe that there lies a positive association between trade and exchange rate while the other assume a negative association between them (Cheong, Mehari, & Williams, 2005). In theory, the positive and negative relation between international trade and volatility of exchange rate can be explained in various ways. Usually the countries try to attract maximum FDI by competing with each other. There are various factors which are considered by multinational firms

[1]MS Scholar, COMSATS University Islamabad, Wah Campus., Email: alamsaadi345@gmail.com
[2*]Tenured Associate Professor, COMSATS University Islamabad, Wah Campus., Email: muhammadyar@ciitwah.edu.pk (Correspondin Author*)
[3]Tenured Professor, COMSATS University Islamabad, Wah Campus., Email: qayuum72@ciitwah.edu.pk

to determine their host destination for investment (Piperopoulos, Wu, & Wang, 2018). The unexpected profit is generated usually by exchange rate in both trading and non-trading sectors which then ultimately influence the investment patterns of multinational firms and this investment pattern also affected by unanimous cost of imported items. In prior times, the profits of firms and investment decisions are abruptly affected by exchange rate. The production place of goods determine the nature of affect exchange rate generated on FDI. The FDI and trade can be used as substitutes if the investor intend to invest in domestic market. In this kind of domestic investment the domestic currency appreciates due to which the inflow of FDI usually increase which increase the purchasing power of the consumers of home country, while on the other hand the depreciation of exchange rate of investing country tend to increase FDI by reducing the capital cost (Chowdhury & Wheeler, 2008). The prior literature have some conflicting thoughts about the association existing between FDI and international trade with volatility of exchange rate. This study analyse the relationship existing between these variables in the context of Asian countries and then also provide a comparison between them. The panel data from 2005 to 2020 has been collected. The exchange rate fluctuation has been tested by using Partial Least Square analysis. The panel data has been collected from 2005 to 2020 in order to measure exchange rate fluctuation while the impact of this volatility on FDI and International trade can be computed by using Partial Least Square analysis. The Eviews has been used for analysis.

The main objective of this study is to analyse the effect of Exchange rate on International Trade and Foreign Direct Investment on Asian Countries. Therefore the first research question can be what is the impact of exchange rate on International Trade? The second research question can be what is the impact of exchange rate on Foreign Direct Investment?

2. Literature Review

2.1 International Trade

The international trade has become the center of attraction for the researchers. In the era of globalization, it's the most influential economic activity to boast the income. According to UNCTAD Report, the world trade hits $5.6 trillion in the third quarter of 2021 (UNCTAD, 2021). International trade not only influence the economic activities but also have some social and political influences. The trade has adverse impact but ultimately it has major contribution in development of economies. The financial development via trade has relation with inflation differences. The countries with higher inflation has positive relation between trade and financial development in long run but negative in short run. While in lower inflation countries there is ambiguous relation (Kim, Lin, & Suen, 2010).

The higher uncertainty and expectations about higher tariffs reduce the investments and lower trade across the borders as well. The fixed cost associated with trade and barriers associated

with trade influence the economic policy uncertainties. Imports tend to bring additional benefits to consumers but competition to domestic markets. Trade open various ways for foreign firms to do best practices and then demand good customers and this thing encourage the efficiency. The trade help firms in gaining good capital inputs e.g. increase productivity, raise capital and new growth avenues for the emerging economies (Schneider, 2005). According to Vijayasri (2013), the developing economies which consider the liberalization of trade policies, gained much from international trade and globalization. No one can deny the importance of international trade in order to develop the economies if it carried out in an accurate manner. The international trade tend to open the doors of international markets to domestic entrepreneurs of the developing economies. In terms of technological improvements, the international trade brings latest technologies to domestic markets. Trade always promotes the competition in both global and domestic firms (Uprety, 2017). In order to compete and extract much from competition, the local entrepreneurs strive more in order to gain maximum from international trade in an efficient manner.

2.2 Exchange Rate

Over the time new economic strategies were introduced by philosophers and researchers to measure the exchange rate (Bahmani-Oskooee & Hegerty, 2007). The normal moving average deviation of the actual or average exchange rate is used to measure the fluctuations or rate of change during the initial period. Kenen and Rodrik (1986) use the moving standard deviation to quantify change in exchange rate month-by-month, the stationary technique demonstrates advantage. Researcher's utilized moving standard deviation to compute before co-integration analysis was created. Studies have identified mixed trends in the literature when it comes to measure exchange rates and rates that aren't seen at dominant. In prior studies, the exchange rate was calculated using both real and nominal rates. The real rate will be calculated by using the actual price of imported goods and exported goods. The actual exchange rate is determined by factoring in a country's export and import prices, as well as price volatility. As a result, the nominal exchange rate normally takes precedence when it comes to exchanges (Bahmani-Oskooee & Hegerty, 2007).

2.3.1. International trade and Exchange rate

Various factors play crucial role in determining the relation between international trade and exchange rate i.e. language, culture, income variations, prices, geographical proximity and agreements of trade. There are three factors lead to exchange rate fluctuations: fluctuation in expected policy changes (e.g., money supply, output growth, inflation rate etc.), changes in main issues (e.g., purchasing power of customers), changes in fundamental features of international exchange market (Tadesse, 2009).

It is already mentioned in the literature that economic activities of countries are usually affected by fluctuation in exchange rate. Yet there are some conflicting things in prior literature

regarding the relation of international trade with exchange rate. Prior literature comprises of three areas: 1) studies with negative outcomes, 2) studies with positive outcomes, and 3) studies having diverse outcomes. The studies stating a negative relation between international trade and exchange rate include Mougoué and Aggarwal (2011), Mukherjee and Pozo (2011), Hayakawa and Kimura (2009) and Bahmani-Oskooee and Gelan (2018).

H_1: International trade and Exchange rates are significantly associated.

2.3.2. Foreign Direct Investment and Exchange Rate

The literature regarding the relation between FDI and exchange rate is not enough. There are various studies which find out how investment got affected by fluctuations in exchange rate. According to literature, the investment is negatively affected by changes in exchange rate, despite of the fact that there's also a significant impact of firm related features on investment as well (Kyereboah-Coleman & Agyire-Tettey, 2008). The studies about relation between FDI and exchange rate is divided into two broader areas: (1) studies showing mixed results and (2) studies showing negative results. Moreover, Al-Abri and Baghestani (2015) research on Asian economics for the period of 1980-2011. These countries are; Malaysia, China, South Korea Philippine, India, Indonesia and Thailand. In these countries there were greater decreased in their foreign liability through exchange rate area South Korea, India, China and Singapore. On the other hand, Thailand, Indonesia and Philippines shows opposite trend from other countries.

H_2: FDI and Exchange rates are significantly associated.

3. Methodology

3.1 Population and Sampling

The countries of Asia (Pakistan, India and Bangladesh). These nations was chose for the study because data from these countries was available to quantify or explore the association between exchange rate and FDI and international commerce. For the period 2005-2020, we utilize annual statistics from these nations on FDI, exchange rate, economic freedom, Gross Domestic Product (GDP), International Trade, and Industrial growth. I collect data from the following databases: US Heritage Foundation, International Financial Statistics, and World Development Indicator. In this study the panel data analysis is used to analyse the impact of exchange rate fluctuation on trade and FDI while real interest rate, gross domestic product, industrial growth and foreign direct investment all are control variables. The Eviews has been used for analysis.

3.2 Research Instruments

Here in this study the international trade and foreign direct investment (FDI) are acting as dependent variables. International Trade is defined as overall trade as a ratio of GDP, whereas FDI is defined as net inflows of the ratio of GDP.

Table 3.1: Description of Variables

Variables	Description	Source
FDI	Foreign direct investment net inflows (% of GDP)	http://databank.worldbank.org/
GDP	GDP growth	http://databank.worldbank.org/
RIR	Interest rate measured by the real interest rate	http://databank.worldbank.org/
IND	Industrial growth measured by value-added growth	http://databank.worldbank.org/
EXR	The real effective exchange rate	http://bruegel.org/publications/datasets/real-effective-exchange-rates-for-178-countries-a-new-database/
TR	International trade measured by Total trade (% of GDP)	http://databank.worldbank.org/

3.3 Research Model

In order to analyse the relationship between exchange rate fluctuation, Trade and FDI, this study use the equation which is also used or given by (Bleaney & Greenaway, 2001). Which is;

$$TRc,t = \beta0 + \beta1GDPc,t + \beta2RIRc,t + \beta3FDIc,t + \beta4INGc,t + \beta5REXc,t + \varepsilon c,t \quad (1)$$

$$FDIc,t = \beta0 + \beta1GDPc,t + \beta2RIRc,t + \beta3TRc,t + \beta4INGc,t + \beta5REXc,t + \varepsilon c,t + \mu c,t \quad (2)$$

In above both equations `c` shows the countries and `t` shows the time period. `TRc,t` and `FDIc,t` show or represent the trade of the countries at certain time period and FDI of the countries at certain time. GDP represent the real GDP growth of the country, RIR represents the real interest rate, ING represents the industrial growth and REX represents the real exchange rate while the other two terms `ε` and `μ` both shows error in the equation.

4. Data Analysis and Discussions

4.1. Trade

In Table 4.1, the results has been summarized from fitting model as shown in above equation. The value of R2 is equal to 0.963488 which explains that 96.3488% percent variations in log of

trade is due to total variations in selected explanatory variables. So cumulatively the independent variable which is exchange rate and other control variables (real interest rate, gross domestic product, industrial growth, foreign direct investment) are 96.34% explaining the dependent variable. Further the variables have positive autocorrelation between them as depicted by the Durbin Watson value which is 1.761418. Any value less than 2 of Durbin Watson depicts a positive autocorrelation existing between the variables. If we look at the table then we observed that irrespective of FDI rest of all control variables are insignificant in explaining the variations in trade while independent variable is also insignificant. The rest of all variables are not appropriately examining the variations in dependent variable.

Table 4.1: Partial Least Square for Asian Region (Trade)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.526848	0.642379	8.603723	0.0000
LNGDP	0.010243	0.010928	0.937305	0.3569
LNRIR	-0.003103	0.004682	-0.662586	0.5132
LNFDI	0.098819	0.022219	4.447405	0.0001
LNING	-0.006229	0.008499	-0.732833	0.4700
LNREX	-0.403932	0.135024	-2.991555	0.0059
R-squared	0.963488	Durbin-Watson stat		1.761418

The real interest rate and industrial growth is negatively and insignificantly related to trade while irrespective of FDI rest of all are statistically significant and positively related to FDI. Only FDI is statistically significant and positively associated with FDI. The trade and FDI are related with each other because this FDI promote the exports of country (Ghosh, 2007). There is a negative association between exchange rate and trade because higher exchange rate increase the price of imported goods (Ng, Har, & Tan, 2008). GDP always increase when trade is in surplus while as we know there is less international trade via these Asian countries that's why the GDP is insignificant here.

4.2 Foreign Direct Investment

In Table 4.2, the results has been summarized from fitting model as shown in above equation. The value of R2 is equal to 0.779702 which explains that 77.9702% percent variations in log of foreign direct investment is due to total variations in selected explanatory variables. So cumulatively the independent variable which is exchange rate and other control variables (real interest rate, gross domestic product, industrial growth, trade,) are 77.9702% explaining the dependent variable. Further the variables have positive autocorrelation between them as depicted by the Durbin Watson value which is 1.385257. Any value less than 2 of Durbin Watson depicts a positive autocorrelation

existing between the variables. If we look at the table then we observed that irrespective of trade rest of all independent variables are insignificant in explaining the variations in foreign direct investment and independent variable is also insignificant. The rest of all variables are not appropriately examining the variations in dependent variable. The GDP is negatively and insignificantly related to FDI while irrespective of trade rest of all are statistically significant and positively related to FDI.

Table 4.2: Partial Least Square for Asian Region (Foreign Direct Investment)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-20.91332	7.117185	-2.938426	0.0067
LNGDP	-0.112934	0.069763	1.618823	0.1171
LNRIR	0.005903	0.031040	0.190183	0.8506
LNTR	4.278765	0.962081	4.447405	0.0001
LNING	0.031327	0.056157	0.557835	0.5816
LNREX	1.196047	0.999038	1.197198	0.2416
R-squared	0.779702	Durbin-Watson stat		1.385257

Only trade is statistically significant and positively associated with FDI. The trade and FDI are positively related with each other because this FDI promote the exports of country (Ghosh, 2007). Unlike the literature which show that there lies a positive association between GDP and FDI but as the FDI is quite ambiguous in Asian region that's why the results are insignificant here.

4.3. Partial Least Square Analysis for Pakistan

4.3.1 Trade

In Table 4.3, the results has been summarized from fitting model as shown in above equation. The value of R2 is equal to 0.761716 which explains that 76.1716% percent variations in log of trade is due to total variations in selected explanatory variables. So cumulatively the independent variable which is exchange rate and other control variables (real interest rate, gross domestic product, industrial growth, foreign direct investment) are 76.1716% explaining the dependent variable trade.

Table 4.3: Partial Least Square analysis of Pakistan (Trade)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.254840	1.864029	2.282604	0.0484
LNRIR	0.005330	0.008711	0.611839	0.5558
LNGDP	-0.020193	0.033703	-0.599149	0.5638

LNFDI	-0.033533	0.045300	-0.740252	0.4780
LNING	0.010707	0.011126	0.962364	0.3610
LNREX	-0.619331	0.329137	-1.881680	0.0926
R-squared	0.761716	Durbin-Watson stat		1.774802

Further the variables have positive autocorrelation between them as depicted by the Durbin Watson value which is 1.774802. Any value less than 2 of Durbin Watson depicts a positive autocorrelation existing between the variables. If we look at the table then we observed that independent variable and control variables are statistically insignificant in explaining the variations in trade. Among them the GDP, FDI and Real exchange rate are negatively related. The exchange rate is negatively related here because higher exchange rate lead to less trade and it's in accordance with the literature that impact of trade become insignificant in the long run (Kakar & Khilji, 2011).

4.3.2 Foreign Direct Investment

In Table 4.4, the results has been summarized from fitting model as shown in above equation. The value of R2 is equal to 0.580543 which explains that 58.0543% variations in log of foreign direct investment is due to total variations in selected explanatory variables. This indicate that despite of the fact the model fit when whole region is considered in individual country model is not appropriately fit in. So cumulatively the independent variable which is exchange rate and other control variables (real interest rate, gross domestic product, industrial growth, trade) are 58.0543% explaining the dependent variable. Further the variables have positive autocorrelation between them as depicted by the Durbin Watson value which is 0.890561. Any value less than 2 of Durbin Watson depicts a positive autocorrelation existing between the variables. If we look at the table then we observed that irrespective of real exchange rate rest of all control variables are insignificant in explaining the variations in foreign direct investment. The rest of all variables are not appropriately examining the variations in dependent variable.

Table 4.4: Partial Least Square analysis of Pakistan (FDI)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	16.35254	10.73733	1.522961	0.1560
LNRIR	-0.016978	0.064650	-0.262610	0.7977
LNGDP	-0.198211	0.244944	-0.809211	0.4355
LNTR	0.631982	1.525305	0.414331	0.6866
LNING	0.048945	0.080768	0.605988	0.5568
LNREX	-3.880771	1.412315	-2.747809	0.0190
R-squared	0.580543	Durbin-Watson stat		0.890561

The real interest rate, GDP and real exchange rate are negatively associated with FDI. The exchange rate is significant because higher exchange rate lead to higher repayments as this thing is happening in Pakistan. This country is undergoing a higher repayment due to rapid fluctuation in exchange rate.

4.4. Partial Least Square Analysis for Bangladesh

4.4.1 Trade

In Table 4.5, the results has been summarized from fitting model as shown in above equation. The value of R2 is equal to 0.863583 which explains that 86.3583% percent variations in log of trade is due to total variations in selected explanatory variables. So cumulatively the independent variable which is exchange rate and other control variables (real interest rate, gross domestic product, industrial growth, foreign direct investment) are 86.3583% explaining the dependent variable trade. Further the variables have positive autocorrelation between them as depicted by the Durbin Watson value which is 1.630436. Any value less than 2 of Durbin Watson depicts a positive autocorrelation existing between the variables.

Table 4.5: Partial Least Square Analysis for Bangladesh (Trade)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.371611	0.649634	8.268667	0.0000
LNRIR	0.010878	0.006267	1.735804	0.1105
LNGDP	-0.770394	0.377138	-2.042739	0.0658
LNFDI	0.249791	0.061130	4.086217	0.0018
LNING	0.622399	0.266864	2.332274	0.0397
LNREX	-0.340053	0.119911	-2.835885	0.0162
R-squared	0.863583	Durbin-Watson stat		1.630436

If we look at the table then we observed that FDI and Real exchange rate is statistically significant while rest of all variables are statistically insignificant. Further the GDP and Real Exchange rate are negatively related. The higher FDI lead to higher production which promotes trade that's why it is significant here.

4.4.2 Foreign Direct Investment

In Table 4.6, the results has been summarized from fitting model as shown in above equation. The value of R2 is equal to 0.734279 which explains that 73.4279% variations in log of foreign direct investment is due to total variations in selected explanatory variables. So cumulatively the independent variable which is exchange rate and other control variables (real interest rate, gross

domestic product, industrial growth, trade) are 58.0543% explaining the dependent variable. Further the variables have positive autocorrelation between them as depicted by the Durbin Watson value which is 1.965417 but the intensity is far low as value is near to two. Any value less than 2 of Durbin Watson depicts a positive autocorrelation existing between the variables. If we look at the table then we observed that only trade is statistically significant while rest of all are insignificant. Further the real interest rate and industrial growth are negatively related and insignificant as well. The higher FDI lead to higher production which promotes trade that's why it is significant here.

Table 4.6: Partial Least Square Analysis for Bangladesh (FDI)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-10.96484	4.300152	-2.549873	0.0270
LNRIR	-0.027718	0.020336	-1.363007	0.2001
LNGDP	1.300581	1.319748	0.985477	0.3456
LNTR	2.413404	0.590621	4.086217	0.0018
LNING	-1.020277	0.966274	-1.055888	0.3137
LNREX	0.400809	0.475273	0.843323	0.4170
R-squared	0.734279	Durbin-Watson stat		1.965417

4.5 Partial Least Square Analysis for India

4.5.1 Trade

In Table 4.7, the results has been summarized from fitting model as shown in above equation. The value of R2 is equal to 0.704276 which explains that 70.4276% percent variations in log of trade is due to total variations in selected explanatory variables. So cumulatively the independent variable which is exchange rate and other control variables (real interest rate, gross domestic product, industrial growth, foreign direct investment) are 70.4276% explaining the dependent variable trade. Further the variables have positive autocorrelation between them as depicted by the Durbin Watson value which is 1.604688. Any value less than 2 of Durbin Watson depicts a positive autocorrelation existing between the variables.

Table 4.7: Partial Least Square for India (Trade)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.068250	0.030908	2.208180	0.0517
LNRIR	-0.066359	0.017347	-3.825510	0.0033
LNGDP	-0.000763	0.008292	-0.092006	0.9285
LNFDI	0.082240	0.053657	1.532696	0.1564
LNING	0.016769	0.015800	1.061319	0.3135

LNREX	-0.997879	0.391080	-2.551600	0.0288
R-squared	0.704276	Durbin-Watson stat		1.604688

If we look at the table then we observed that real interest rate and Real exchange rate is statistically significant and also negatively associated while rest of all variables are statistically insignificant.

4.5.2 Foreign Direct Investment

In Table 4.8, the results has been summarized from fitting model as shown in above equation. The value of R2 is equal to 0.491434 which explains that 49.1434% variations in log of foreign direct investment is due to total variations in selected explanatory variables. So cumulatively the independent variable which is exchange rate and other control variables (real interest rate, gross domestic product, industrial growth, trade) are 49.1434% explaining the dependent variable. Despite of the fact that model is well fitted when talking about whole region, in individual countries the model is not much fitted.

Table 4.8: Partial Least Square for India (FDI)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.442520	3.663094	1.485771	0.1682
LNRIR	0.208989	0.088226	2.368790	0.0394
LNGDP	-0.050910	0.074291	-0.685278	0.5087
LNTR	2.187538	1.001272	2.184760	0.0538
LNING	-0.018755	0.111967	-0.167501	0.8703
LNREX	-1.172303	0.768943	-1.524564	0.1583
R-squared	0.491434	Durbin-Watson stat		2.110238

Further the variables have negative autocorrelation between them as depicted by the Durbin Watson value which is 2.110238. Any value greater than 2 of Durbin Watson depicts a negative autocorrelation existing between the variables. If we look at the table then we observed that only real interest rate is statistically significant while rest of all are insignificant. Further the GDP, industrial growth and real exchange rate are negatively related and insignificant as well. The real interest rate promotes FDI because investors expect more return that's why it is significant and positively related.

4.6 Discussion

This study examined the Impact of Exchange rate on Macro-Economic Indicators: Evidence from Asia. . In this study, FDI and world trade considered acted as dependent variables, exchange

rate as independent variable while Real Interest rate, gross domestic product, industrial growth, trade exchange rate as the independent variables. For this study data was collected from different source e.g. World development Indicator (WDI), International Statistic etc. Data from 2005 to 2021 has been collected in order to better understand the impact of these macroeconomic indicators on developing nations. Other dynamic influences are also taken for the study.

The results indicate both trade and FDI are more in Asian regions. The Asian countries are more open and directed toward trade while there are various reasons behind less trade in African countries. The trade and FDI are related with each other because this FDI promote the exports of country (Ghosh, 2007). In most of results there is a negative association between exchange rate and trade because higher exchange rate increase the price of imported goods (Ng et al., 2008). GDP always increase when trade is in surplus while as we know there is less international trade via these Asian countries that's why the GDP is insignificant here. Unlike the literature which show that there lies a positive association between GDP and FDI but as the FDI is quite ambiguous in Asian region that's why the results are insignificant here. The study will facilitate policy makers in formulation of new economic policies. The aim of these new policies in Asian countries is to attain lowest level of volatility of exchange rate.

6. Conclusion

The international trade has become the center of attraction for the researchers. In the era of globalization, it's the most influential economic activity to boast the income. According to UNCTAD Report, the world trade hits $5.6 trillion in the third quarter of 2021 (UNCTAD, 2021). International trade not only influence the economic activities but also have some social and political influences. The China-United States trade war is an example of this. The present study contributed in the literature by analyzing the impact of macroeconomic indicators on selected countries of Asian region. The Partial Least Square analysis is used to find the impact of selected independent variable (Exchange rate) on dependent variables (Trade and FDI). If we look at the results then in both trade and FDI case then the model is more appropriately fit in Asian region. This explains that these variables more appropriately determining the dependent variables in Asian region. The FDI is quite higher in Asian countries as they are considered as hub to attract FDI. The more investment is usually in manufacturing, IT and infrastructure. Further after improvement in infrastructure, the foreign investors perceive to invest in countries with better infrastructure. So, countries which have better infrastructure and a stable exchange rate attracted higher foreign investment as compare to prior time. So it's expected that economy of these countries will improve further in future.

6.1 Recommendations

On the basis of above study following are the recommendations. First, the policy makers may make policies to lessen the impacts of exchange rate fluctuation. Second, they must strive to attract

much FDI due to this they can gain skills and knowledge, latest technologies and improved infrastructure. Finally, the investors and traders which are part of this project can design their strategies by considering the fluctuation in exchange rate.

References

Al-Abri, A., & Baghestani, H. (2015). Foreign investment and real exchange rate volatility in emerging Asian countries. *Journal of Asian Economics, 37*, 34-47.

Bahmani-Oskooee, M., & Gelan, A. (2018). Exchange-rate volatility and international trade performance: Evidence from 12 African countries. *Economic analysis and policy, 58*, 14-21.

Bahmani-Oskooee, M., & Hegerty, S. W. (2007). Exchange rate volatility and trade flows: a review article. *Journal of Economic Studies*.

Bleaney, M., & Greenaway, D. (2001). The impact of terms of trade and real exchange rate volatility on investment and growth in sub-Saharan Africa. *Journal of development Economics, 65*(2), 491-500.

Cheong, C., Mehari, T., & Williams, L. V. (2005). The effects of exchange rate volatility on price competitiveness and trade volumes in the uk: A disaggregated approach. *Journal of Policy Modeling, 27*(8), 961-970.

Chowdhury, A. R., & Wheeler, M. (2008). Does real exchange rate volatility affect foreign direct investment? Evidence from four developed economies. *The International Trade Journal, 22*(2), 218-245.

Ghosh, I. (2007). The Relation between Trade and FDI in Developing Countries--A Panel Data Approach. *Global Economy Journal, 7*(3).

Hayakawa, K., & Kimura, F. (2009). The effect of exchange rate volatility on international trade in East Asia. *Journal of the Japanese and International Economies, 23*(4), 395-406.

Kakar, Z. K., & Khilji, B. A. (2011). Impact of FDI and trade openness on economic growth: A comparative study of Pakistan and Malaysia. *Theoretical and Applied Economics, 11*(11), 53.

Kenen, P. B., & Rodrik, D. (1986). Measuring and analyzing the effects of short-term volatility in real exchange rates. *The Review of Economics and Statistics*, 311-315.

Kim, D.-H., Lin, S.-C., & Suen, Y.-B. (2010). Dynamic effects of trade openness on financial development. *Economic Modelling, 27*(1), 254-261.

Kyereboah-Coleman, A., & Agyire-Tettey, K. F. (2008). Impact of macroeconomic indicators on stock market performance: The case of the Ghana Stock Exchange. *The Journal of Risk Finance*.

Mougoué, M., & Aggarwal, R. (2011). Trading volume and exchange rate volatility: Evidence for the sequential arrival of information hypothesis. *Journal of Banking & Finance, 35*(10), 2690-2703.

Mukherjee, D., & Pozo, S. (2011). Exchange-rate volatility and trade: a semiparametric approach. *Applied Economics, 43*(13), 1617-1627.

Ng, Y.-L., Har, W.-M., & Tan, G.-M. (2008). Real exchange rate and trade balance relationship: An empirical study on Malaysia. *International Journal of Business and Management, 3*(8), 130-137.

Piperopoulos, P., Wu, J., & Wang, C. (2018). Outward FDI, location choices and innovation performance of emerging market enterprises. *Research Policy, 47*(1), 232-240.

Schneider, P. H. (2005). International trade, economic growth and intellectual property rights: A panel data study of developed and developing countries. *Journal of Development Economics, 78*(2), 529-547.

Tadesse, B. (2009). Volatility in exchange rate components and the volume of international trade. *The International Trade Journal, 23*(2), 110-141.

UNCTAD, U. N. C. o. T. a. D. (2021). International trade is back, but not for all. Retrieved from https://unctad.org/news/international-trade-back-not-all

Uprety, D. (2017). The impact of international trade on emigration in developing countries. *The Journal of International Trade & Economic Development, 26*(8), 907-923.

Vijayasri, G. (2013). The importance of international trade in the world. *International Journal of Marketing, Financial Services & Management Research, 2*(9), 111-119.