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Analyzing the Influence of Exchange Rate Dynamics on Foreign Direct Investment in Pakistan: A 13-Year Analysis

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Abstract

Background: *In the economic development of Pakistan, Foreign Direct Investment (FDI) plays a crucial role while the exchange rate has been determined as an important factor influencing the FDI inflows.*

Research Aim: *This research paper explores the multifaceted relationship between changes in exchange rate and Foreign Direct Investment (FDI) in Pakistan aiming to shed the light on complex dynamics at play.*

Methodology: *Through the data analysis from 2010 to 2022 and empirical studies this study identifies a significant relationship between the change in exchange rate and FDI. The test of Linear Regression and Pearson's Correlation were applied to test the data through SPSS software.*

Results: *The results of the correlation*

exhibited that there is a positive relationship between change in Exchange rate and FDI, while the R-square in the regression analysis showed about 58.1% impact of the independent variable on the dependent variable. It is apparent from the study that the depreciation and appreciation of the Pakistani currency relative to major international currencies affects the decision of the investors.

Conclusion: *This paper concludes with a set of*

recommendations for the Government of Pakistan with the aim of creating a conducive environment for Foreign Direct Investment (FDI) by considering stabilizing the exchange rate as a key factor. Further, this research will help provide valuable insight and pathways for the policymakers and investors in forming the decision-making and policy for the development and sustainable growth of the economy of Pakistan.

Keywords: *Exchange Rate, Foreign Direct Investment, Pakistan, Economic Growth.*

Introduction

Foreign Direct Investment is a component of the national financial account of the country. It is considered as an investment of the foreign assets in the domestic organizations and structures. FDI is considered as an inflow of assets from one country to the other country. According to trade theories, a country's investment in another country occurs when there has been a competitive advantage in the host country over local companies (Nayak & Choudhury, 2014). While the internationalization theory argues with the trade theory it states that a country's investment in terms of FDI in another country is due to economies of scale that benefit in the reduction of the cost of production (Rugman, 1980). FDI is considered a vital indicator that can help in the betterment of the economic condition of the country. According to the previous literature, FDI only accelerates the growth of developing countries and does not affect the economy of underdeveloped countries (Faruk, 2013), due to the variety of factors that include unstable economic and political conditions, lack of law-and-order situations and security issues. According to the study of Bibi et al. (2014), the exchange rate has been considered as an important factor because it has been impacting directly on the factors of structures like FDI and GDP. It also affects the decisions of investors and policymakers because the exchange rate helps them to make investments their money in those particular focused countries. This is because it is believed by the investors that a rise in the exchange rate helps in creating a competitive advantage in international trade (Misala, 2013). An increase in the Exchange rate results in the low pricing of domestic export goods, this will increase the demand for the export and decrease the import in the country (Ilmas et al., 2022).

The increase and decrease of the exchange rate have been found to have an impact on FDI which ultimately affects the GDP of the country. It was examined by Javed and Farooq (2009) that the meaning of the exchange rate is how one unit of the domestic currency can be changed with the other country’s currency unit. The factors that can result in the instability of the exchange rate are the currency’s demand and supply because the instability in the exchange rate directly influences the decision of the policymakers to decide how much of the import and export are in their favor, how many things should be manufactured, the money reserves and Balance of Payment (BoP). The exchange rate in the country acts as an opportunity for investors to earn a high degree of profit when capitalizing in foreign currency (Bilawal et al., 2014). The system where there is a minor discrepancy difference between the value of actual and probable exchange rate is liked by the investors and traders to invest their money.

In Pakistan, the change and volatility of the exchange rate were detected to a higher degree (Siddiqui & Erum, 2016), which was the main concern of the researchers and the policymakers to find the impact of these changes on the trade and FDI of Pakistan. It was suggested that an increase in the exchange rate decreases trade by creating ambiguity in the profit of the future from exports (Auboin & Ruta, 2013). So, the immediate coverage of these uncertainties benefits the investment decision in the long run. During the last few years, Pakistan has tried and taken initiatives to attract foreign investors to invest in their country (Mahmood et al., 2011). It is tough to overlook the role of FDI in the developing countries of East Asia because there has been observed the vibrant role of exchange rates and FDI in the development of the country's economy when assessed by proper domestic policies. The relationship between exchange rate and FDI has been bi-directional (Adhikary, 2012). Since 2019, an increase in the FDI has been observed in Pakistan by 28%, while the growth decreased in 2020 due to the pandemic situation, further, the growth was again observed to increase by 4.3% in 2021 as compared to 2020 (Arain et al., 2021). This increase in the FDI has resulted in an increase in wages and salaries in the production sector and an increase in the literacy rate (Jadhav & Arora, 2022). This research provides a study on the change in the exchange rate and inflow of FDI in Pakistan where the Exchange Rate is the independent variable and FDI is a dependent variable, the exchange rate fluctuation and change were observed on the FDI because the investors restrict themselves to capitalize in the economies where the foundation is weak. This study will analyze if the depreciation or appreciation of the local rupee has a positive or negative impact on the FDI of Pakistan. Since the FDI defines the movement of capital in that case the key drivers of the FDI are globalization, infrastructure and technology, economic stability, geo-political conditions and market competitiveness. Through studying the above-stated literature, it was suggested that the effect of exchange on the FDI varies from country to country. FDI has been found to have a positive impact on the economy of developed or developing countries (Melnyk et al., 2014), while in underdeveloped economies, the exchange rate has been found to have a negative impact (Saqib et al., 2013). The main focus of our study is the region of Pakistan because the results of the study regarding the impact of the exchange rate on the FDI of the country are different than the other studies.

Research Aim

This study was carried out with the aim of inspecting the impact of the exchange rate on the FDI in Pakistan. By gathering the data from 2010 to 2020 for both variables, we want to discuss how these variables affect each other. This research is practically implementable because it is related to the economy of Pakistan. This study can be useful for foreign investors and financers to know the economy of Pakistan well, in a way that can increase the worth of their assets from the exchange rate. This research will help in maximizing the profit of the organization and to compete with the competitors.

Research Objectives

To examine the relationship between the exchange rate and FDI in Pakistan from 2010 to 2022.

To examine the impact of FDI on the growth of the economy of Pakistan.

To provide a pathway in enhancing the FDI in Pakistan.

Research Hypothesis

There is a significant positive impact of the change in the Exchange rate on the FDI in Pakistan.

Research Methodology

Data Collection

This paper utilizes the secondary source of data for its quantitative analysis. Annual time series data of the variables including the Exchange rate on Foreign Direct Investments of Pakistan, for the period from 2010 to 2022 the data for the Exchange Rate and FDI are selected for the econometric analysis. The sources of data include the websites of Macrotrends, State Bank of Pakistan and Business Recorder.

Study Design

This study has been carried out with the purpose of analyzing the descriptive statistics for the data from 2010 to 2022 to examine how the exchange rate has impacted the FDI previously. The study would be correlational study because only the important variables that were linked to the problem had been discussed.

Statistical Tool

The data has been examined using the statistical tool IBM SPSS Statistics 23, since based on the quantitative approach, the research will be concluded.

Data Analysis

For the quantitative analysis of time series econometric analysis Linear Regression Analysis, Correlation Analysis and ANOVA tests are utilized to examine the impact of variables.

Results

Pearson Correlation

Pearson Correlation analysis indicates the strength and relationship between the variables. According to Healy (2003), correlation analysis identifies the relationship between two or more factors. The correlation value ranges from -1 to +1, when there is a significant positive relationship, the p-value >0.05 specifies the insignificant connection between the variables. In this result, Table 1 indicates the correlation value 0.056 indicates a significant relation between exchange rate and foreign direct investment. It further shows that the value of correlation value for the exchange rate is found to be 0.056 at p=0.05 indicating a positive relation between the independent and dependent variables.

Table 1. Analysis of Pearson Correlation Statistics

		Exchange Rate	**FDI (Inflow in Dollar millions)**
Exchange Rate	Pearson Correlation	1	.056
	Sig. (2-tailed)		.059
	N	13	13
FDI (Inflow in Dollar millions)	Pearson Correlation	.051	1
	Sig. (2-tailed)	.059	
	N	13	13

H1: The impact of change in the Exchange rate has a positive impact on Foreign Direct Investments. The above results found in this research were in support of this hypothesis. The above correlation of FDI shows that value 0.051 with $p<0.05$ proved the above-stated hypothesis.

Regression Analysis

Model Summary

The model summary for the change in the exchange rate and FDI is shown in Table 2, the R-square value that is closer to 1 is considered a better-fit model, and the value of R represents that there is a simple correlation between the variables with 0.051, the R-square value specifies the total distinction in the dependent variables in this case there is 58.1% variation, which is considered to be a normal variation. If the value for the R square is greater than 50%, it shows that the model is fit and significant.

Table 2. Model Summary

Model	R	R Square
1	.051[a]	.581

a. Predictors: (Constant), Exchange Rate
b. Dependent Variable: Foreign Direct Investments (Inflow in Dollar millions)

Analysis of Variance

ANOVA stats show the regression analysis of the variables. In ANOVA the value of F shows the significant level if the value lies between 0.01 to 0.05, then the model is said to be fit which indicates that the independent variable has the ability to predict the dependent variable. Here in Table 3, the value of significance is 0.75 and the value of F is 0.28 which suggests that the overall regression model is positively valid and fit, this shows that the Exchange rate variable is used to reliably predict the FDI.

Table 3. Analysis of Variance (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	73.069	1	73.069	.028	.075[b]
Residual	28233.700	11	2566.700		
Total	28306.769	12			

a. Dependent Variable: Foreign Direct Investments (Inflow in Dollar millions)
b. Predictors: (Constant), Exchange Rate

Coefficient Statistics

Coefficient statistics determines the constant change which is the impact of the Exchange Rate variable on the FDI variable. Table 4 shows the significance value of 0.033 and the value of B is 0.59 which indicates a slope between the change in exchange rate and FDI and the positive sign indicates that when the exchange rate increases the FDI will also increase.

Table 4. Coefficient Table of Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	173.193	46.614		3.715	.003
Exchange Rate	.059	.350	.051	.169	.033

a. Dependent Variable: Foreign Direct Investments (Inflow in Dollar millions)

Discussion

The results of this study on the economic variables like Exchange rate and Foreign Direct Investment were analyzed. The results showed an association between the exchange rate and FDI in Pakistan. The robustness of these findings was examined using Linear Regression and Pearson's Correlation analysis and found that there exists a substantial association between the change in exchange rate and FDI inflows in Pakistan. These findings were inconsistent with the study of Zahra et al. (2023) which also states a positive relationship between the change in exchange rate and foreign direct investments. However, according to the study carried out by Sari and Amar (2023) state that there was no effect found of the change in exchange rate on FDI of the country.

According to Falki (2009), economic growth in Pakistan was not affected by FDI. In this study, we have found that FDI has been affecting positively the growth of Pakistan. The findings of our study claimed that the FDI had been a factor that accelerated the GDP in the long run for Pakistan. This finding was in line with the study of Khan and Khan (2011), who stated that FDI is a driving factor in the growth of GDP for Pakistan in terms of long run. This study presented the occurrence of a significant relationship between the exchange rate and FDI inflows. This finding was inconsistent with the work conducted by Jeon and Rhee (2008), which stated that a significant positive relationship exists between the FDI inflows with the change in exchange rates. While conferring to the study of Lee and Min (2011), there have been observed mixed results for the association between the exchange rate and Foreign Direct Investments.

Pakistan is a developing country which has benefited from nature through natural resources and it also has low labor costs, the significant relationship between the change in the exchange rate and foreign direct investments can be explained that whenever a company wants to invest in Pakistan, the country exchange rate has always been considered. So, when there is an increase in the exchange rate of Pakistan, this indicates that the companies will receive more currency to invest in Pakistan. This has proved that fluctuation in the exchange rate influences foreign direct investments positively, while the R2 value in Regression analysis is found to be more than 50% indicating the appropriateness of the research model, while the p-value in the ANOVA model shows a significant value 0.07, this result interprets that the change in exchange rate has a positive impact on dependent variable FDI.

Conclusion and Recommendations

To sum up, the impact of the change in the exchange rate on foreign direct investment has been studied and it showed a significant relationship. Pakistan is among developing countries and is rich in natural as well as human resources. Since the years 2010-2022, Foreign Direct Investments have shown a low pattern of inflow, the objective of this study was also to investigate the impact of the volatility of the Exchange rate on Foreign Direct Investment in Pakistan. Finally, the data was put into the SPSS software and the analysis of Linear Regression and Pearson’s correlation was applied the results suggested the evidences of the increase and decrease of the Exchange rate have a substantial impact on the

FDI inflows in Pakistan for the tested period, and showed a positive correlation with Foreign direct investment. Furthermore, the government and policymakers should take into consideration maintaining both the exchange rate and controlling the instability of the country so that inflows of FDI increase. This will ultimately result in the growth of the economy of Pakistan. Some of the recommendations are given below;

- The Government should analyze Pakistan's exchange rate and its impact on FDI with other countries and identify best practices for the improvement of the economy.
- The Government should investigate the hedging strategies by the foreign investors so that the exchange rate risk could be minimized.
- The Government should perform a sensitivity analysis so that a timely examination can be done on how different change in the exchange rate influences the FDI.
- The Government must regulate the law and order situation of the country and always try to ensure a politically stable environment that is favorable for foreign companies to establish their businesses in Pakistan.

Reference

[1] Adhikary, B. K. (2012). Impact of foreign direct investment, trade openness, domestic demand, and exchange rate on the export performance of Bangladesh: A VEC approach. *Economics Research International*, *2012*.

[2] Arain, K., Qureshi, N. A., Suthar, V., Pirzado, A. A., Khanzada, A. H., Baloch, A. B., Ahmed, I., & Memon, A. K. (2021). Impact of foreign direct investment on economic growth in Pakistan. *International Journal of Management (IJM)*, *12*(4), 41–55. https://doi.org/10.34218/IJM.12.4.2021.006

[3] Auboin, M., & Ruta, M. (2013). The relationship between

exchange rates and international trade: a literature review. *World Trade Review*, *12*(3), 577–605.

[4] Bibi, S., Ahmad, S. T., & Rashid, H. (2014). Impact of trade openness, FDI, exchange rate and inflation on economic growth: A case study of Pakistan. *International Journal of Accounting and Financial Reporting*, *4*(2), 236.

[5] Bilawal, M., Ibrahim, M., Abbas, A., Shuaib, M., Ahmed, M., Hussain, I., & Fatima, T. (2014). Impact of exchange rate on foreign direct investment in Pakistan. *Advances in Economics and Business*, *2*(6), 223–231.

[6] Falki, N. (2009). Impact of foreign direct investment on economic growth in Pakistan. *International Review of Business Research Papers*, *5*(5), 110–120.

[7] Faruk, M. O. (2013). The effect of FDI to accelerate the economic growth of Bangladesh and some problems & prospects of FDI. *Asian Business Review*, *2*(4), 37–43.

[8] Healy, J. D. (2003). Excess winter mortality in Europe: a cross country analysis identifying key risk factors. *Journal of Epidemiology & Community Health*, *57*(10), 784–789.

[9] Ilmas, N., Amelia, M., & Risandi, R. (2022). Analysis of the Effect of Inflation and Exchange Rate on Exports in 5-Year ASEAN Countries (Years 2010–2020). *Jurnal Ekonomi Trisakti*, *2*(1), 121–132.

[10] Jadhav, K., & Arora, K. (2022). How Do Trade and Foreign Investment Affect Wage Patterns: An Empirical Analysis of Indian Organised Manufacturing. *Global Business Review*, 09721509221135940.

[11] Javed, Z., & Farooq, M. (2009). Economic growth and exchange rate volatility in the case of Pakistan. *Pakistan Journal of Life and Social Sciences*, *7*(2), 112–118.

[12] Jeon, B. N., & Rhee, S. S. (2008). The determinants of

Korea's foreign direct investment from the United States, 1980–2001: an empirical investigation of firm-level data. *Contemporary Economic Policy*, *26*(1), 118–131.

[13]Khan, M. A., & Khan, S. A. (2011). *Foreign direct investment and economic growth in Pakistan: A sectoral analysis*.

[14]Lee, B.-S., & Min, B. S. (2011). Exchange rates and FDI strategies of multinational enterprises. *Pacific-Basin Finance Journal*, *19*(5), 586–603.

[15]Mahmood, I., Ehsanullah, M., & Habib, A. (2011). Exchange rate volatility & macroeconomic variables in Pakistan. *Business Management Dynamics*, *1*(2), 11.

[16]Melnyk, L., Kubatko, O., & Pysarenko, S. (2014). The impact of foreign direct investment on economic growth: case of post communism transition economies. *Problems and Perspectives in Management*, *12*, *Iss. 1*, 17–24.

[17]Misala, J. (2013). Theoretical grounds of the development of long-term competitive advantages in international trade. In *Innovation, Human Capital and Trade Competitiveness: How Are They Connected and Why Do They Matter?* (pp. 3–51). Springer.

[18]Nayak, D., & Choudhury, R. N. (2014). *A selective review of foreign direct investment theories*.

[19]Rugman, A. M. (1980). Internalization as a general theory of foreign direct investment: A re-appraisal of the literature. *Weltwirtschaftliches Archiv*, *H. 2*, 365–379.

[20]Saqib, N., Masnoon, M., & Rafique, N. (2013). Impact of foreign direct investment on economic growth of Pakistan. *Advances in Management & Applied Economics*, *3*(1), 35–45.

[21]Sari, R. N., & Amar, S. (2023).

The Effect of International Economic Variables on Singapore Foreign Direct Investment in Indonesia. *Ninth Padang International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA 2022)*, 103–116.

[22] Siddiqui, M. A., & Erum, N. (2016). Modeling effect of exchange rate volatility on growth of trade volume in Pakistan. *The Journal of Asian Finance, Economics and Business (JAFEB)*, *3*(2), 33–39.

[23] Zahra, A., Nasir, N., Rahman, S. U., & Idress, S. (2023). Impact of Exchange Rate, and Foreign Direct Investment on External Debt: Evidence from Pakistan Using ARDL Cointegration Approach. *IRASD Journal of Economics*, *5*(1), 52–62.