

Received : 11 August 2023, Accepted: 15 December 2023

DOI: <https://doi.org/10.33282/rr.vx9i2.325>

Analyzing the Impact of Trade Openness and Foreign Direct Investment on Economic Growth of Pakistan

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Abstract

This study examines how different macroeconomic factors affect Pakistan's economic growth. A nation's ability to expand economically depends on foreign direct investment (FDI) and trade openness (TO). Using annual data from 1980 to 2022, this article investigates the relationship between FDI, inflation, trade openness, real effective exchange rate (REER) and GDP in Pakistan. The findings indicate that trade openness, FDI, REER, and GDP have a substantial and positive relationship. The foreign direct investment (FDI) affects economic growth positively and significantly with a coefficient value of 0.9927 ($P=0.0006<0.01$). There is a significant and positive relationship between trade openness and economic growth having coefficient value of 0.1205 ($P=0.0036<0.01$). The real effective exchange rate also affect Pakistan's economic growth significantly with a coefficient value of 0.0356 ($P=0.0000<0.01$) and positively. However, inflation has indicated the impact on economic growth of Pakistan which is negative but insignificantly. The value of R^2 is 0.68 indicating that 68 percent variation in Pakistan's economic growth is explicated by FDI, inflation, trade openness, along with real effective exchange rate. The value of F-statistics is 20.27 ($P=0.0000<0.01$) indication overall significance of the model. The real income growth and employment are expected to increase as a result of improved potential output growth, thereby, providing a stable exchange rate environment and increase the capacity to substitute imports and exports.

Keywords: FDI, Trade Openness, Inflation, REER, Economic Growth.

1. Introduction

Economic growth is the cornerstone of economic progress. Trade plays a significant role in economic growth. Two crucial instruments that can be employed to support development are import and export. Examining the potential link between global trade and economic expansion has piqued the curiosity of scholars and policy officials. There are numerous approaches to achieving growth and development in the economy. Transferring goods and services from one person or entity to another in return for money is known as trade. Trade in commodities and

services between citizens of various countries makes up imports/exports. Buying goods or services from another nation or market is known as importing. The economy benefits from imports because they enable a nation to purchase items that are either unavailable or far more expensive domestically than they would be if they were produced elsewhere (Lequiller and Blades, 2006). Trade openness is the extent to which a nation lowers tariffs, quotas, and other trade obstacles to permit the free exchange of products and services with other countries.

The integration of national economies via international trade as well as capital flows, which has happened with the emergence of globalization, has increased economic growth globally. The topic of how developing economies could accelerate the economic growth has received a lot of attention from academics and policy circles. It should be evident that export-oriented initiatives and foreign direct investment (FDI) are major forces behind economic growth. FDI promotes domestic investment, fosters the transfer of innovation, and builds human capital. Nonetheless, an increase in export activity achieves economies of scale, lowers costs by exposing exporting companies to international competition, and stimulates greater output due to comparative cost advantages across nations. Even while previous studies show that trade along with foreign direct investment (FDI) have a favourable effect on economic growth, the degree to which this benefit varies among countries depends on factors including infrastructure, human capital, trade openness, capital investments, and macroeconomic stability. Previous studies have not stopped discussing the significance that trade along with foreign direct investment (FDI) play in GDP growth, as well as the function that capital formation and economic development play in fostering trade and FDI.

Global FDI rebounded strongly in 2021, rising by 77% to reach US\$ 1.65 trillion. The largest increase was seen in developed economies, where FDI is expected to reach US\$777 billion in 2021. FDI flows into developing nations surged by 30% to around \$870 billion, with East and Southeast Asia experiencing a 20% growth acceleration. Recovery growth was modest in developing economies, particularly in the least developed countries (LDCs). Comparably, till February 2022, net foreign direct investment inflows into Pakistan increased by 6.1% to US\$ 1.25 billion (PES, 2021-22). Pakistan's export competitiveness has not decreased in 2022, which has led to a 26.6 percent increase in exports from July to March of that year. Both the real and nominal exchange rates have declined. In particular, the Real Effective Exchange Rate (REER), a crucial factor in sustaining export quantities, declined by almost 1.9 percent between July and February of 2022. Volumes have increased, which indicates that this has improved competitiveness (PES, 2021-22).

According to State Bank of Pakistan, the inflation gap is anticipated to close in the future because inflation is rising in Pakistan's trading partners as well. In the medium run, maintaining REER's competitiveness and export-friendly environment would also require a balanced production gap that matches the economy's total supply and demand as well as a budget deficit near Pakistan's trading partners' average (PES, 2021-22). The real GDP growth rate stayed at 5.97 percent in 2022. However, Pakistan's economy has always been like this, this rapid

expansion is also accompanied by internal and external imbalances. On the other hand, outside factors were also significant this time. Pakistan's economy has rebounded strongly from its lockdown-induced depression brought on by the pandemic. The real GDP increased by 5.97 percent in 2022, with the agricultural sector growing by 4.40 percent, the industrial sector by 7.19%, and the services sector by 6.19% (PES, 2021-22).

Numerous scholars have conducted extensive research on the relationship between foreign direct investment (FDI) and economic growth; nevertheless, their conclusions do not offer a clear picture of the relative contributions of FDI and exports to economic growth (Lucas, 1988; Barro, 1990, 1991; Li and Liu, 2005). Economic growth has been found to benefit from trade openness by Balassa (1982), Romer (1986), and Lucas (1988). This is so that a nation with greater trade openness to the rest of the world might benefit from greater technological advancements made by wealthier nations. Helpman and Krugman (1985), well-known economists, proposed that exports boost economic growth primarily through the transfer of technological competence through foreign direct investment, economies of scale, and industrial specialization. Bhagwati (1988) asserted that The neoclassical trade theory was validated by the growth-led hypothesis., which holds that supply and demand are increased by economic expansion.

In the gift economy, products and services were traded without any thought of compensation in the near or far future. In a gift economy, goods are exchanged without the need for money. Usually, traders will bargain using a medium of exchange, such cash. Purchasing can be done without earning money because selling and buying are two different actions. Trade became increasingly simpler and more prevalent after the creation of money and other trade-facilitating technology. Multilateral trade involves more than two partners, whereas bilateral trade is exchanged between just two. According to contemporary theory, trade arises when individuals with specialized knowledge in various fields of production collaborate to exchange goods. People engage in this common type of economic activity, using their outputs to purchase products and services from other people (Dollar and Kraay, 2004).

This study's research question is to look into how trade openness along with foreign direct investment affect Pakistan's economic growth. This present study significant to weigh the influence of trade openness as well as FDI on Pakistan's economic growth along with inflation and real effective exchange rate for the period of 1980-2022. Also, researchers investigating on macroeconomics related topics will find this study to be a helpful reference. The aim of the present study is to examine the effect of trade openness along with FDI on economic growth of Pakistan. The results show that trade openness (TO), FDI, REER, and GDP are significantly and positively related. Inflation affects economic growth negatively but insignificantly. The paper is organized in the following way: the second section is related to the review of the literature, the third section highlights the data source and methodology used in the study. The fourth section consists of data analysis and result discussion. The fifth section contains conclusion.

2. Literature Review

Scholars and decision-makers have undertaken a number of studies to investigate relationship of TO (Trade Openness), import and export with economic growth. TO (Trade Openness) has a favorable impact on investment and economic growth in Kenya, according to Musila & Yiheyis' (2015) analysis of the country's growth from 1982 to 2009. According to a study by Kong et al. (2021), trade openness may help China's economy expand over the long and short terms. According to Maiti & Prasad (2012), trade openness had a marginally beneficial effect on Fiji's economic growth from 1970 to 2009.

Majumder et al. (2020) explored the relationship between the oil curse, economic growth, and trade openness in 95 countries between 1980 and 2017. They discovered that trade openness helps reduce the resource curse because it gives these nations access to cutting-edge technologies for resource extraction and competitive prices for their resources on the global market. According to Oloyede et al. (2021), trade openness and economic growth in different West African States between 2006 and 2017 had a positive but negligible association.

However, Belloumi (2014) assessed the relationship of trade, and foreign direct investment with economic growth in Tunisia from 1970 to 2008. The findings addressed the lack of strong causation in the short run between trade and economic growth, FDI and economic growth, and economic growth and trade. Furthermore, no proof that FDI had a beneficial impact on this nation's economic progress could be uncovered. Similarly, Dutta et al. (2017) found the connection between trade openness, foreign direct investment (FDI), local investment, and economic growth in Bangladesh between 1976 and 2014.

Omisakin et al. (2009) assessed the relation of foreign direct investment (FDI), and trade openness with economic growth in Nigeria from 1970 to 2006 and came to the conclusion that these factors significantly and favorably affect Nigeria's economic growth. Furthermore, Keho (2017) asserts that between 1965 and 2014, trade openness positively impacted Cote d'Ivoire's economic growth. However, Hye and Lau (2015) discovered that while India's economic growth is supported by both physical and human capital, trade openness eventually has a detrimental impact on this nation's economic expansion.

Zaman et al. (2021) investigated the relationship between 64 BRI nations' economic development, trade openness, foreign direct investment (FDI), capital formation, and information technology (IT) exports between 2013 and 2018. The findings demonstrated that while trade openness and IT exports inhibit economic growth in these nations, FDI (foreign direct investment) and gross capital formation had a beneficial impact on it. The Granger causality test results showed that there was bidirectional causation between domestic investment and economic growth and FDI and domestic investment, as well as unidirectional causality between FDI and economic growth, domestic investment and trade openness, and economic growth to trade openness. Feeny et al. (2014) assessed how growth and foreign direct investment were related in seven Pacific nations. The findings showed that FDI encourages economic growth in these nations.

The relation of FDI, and trade openness with India's economic growth from 1985 through 2018 was investigated by Kumari et al. in 2021. They discovered that the three variables had no lasting association. Moreover, FDI and economic growth were causally related in both directions. Yusoff & Nuh (2015) examined the relation of foreign direct investment (FDI) and trade openness with Thailand's economic growth from 1970 to 2008. They discovered that both factors significantly influenced Thailand's economic growth. Nepal et al. (2021) found that during the years 1978–2016, India's energy consumption and carbon emissions might be decreased by FDI.

Since FDI is frequently viewed as a growth engine, especially in developing and emerging economies, economic growth and FDI are closely related. Donnay (2017) attested to the fact that importation of imposts and export promotion were fostered by foreign direct investment. In the presence of skilled workers, FDI inflows promote economic growth. Inflows of foreign direct investment (FDI) have the potential to support economic development through the introduction of novel technologies, the creation of new jobs, increased productivity, and improved competitiveness in regional markets (Wijeweera et al., 2010).

Alaya (2006) discovered that economic growth was adversely impacted by foreign direct investment (FDI). Iamsiraroj (2016) discovered that FDI has a statistically significant and favourable impact on economic growth in 124 different countries. Moreover, Tiwari and Mutascu (2011) found that exports along with foreign direct investment (FDI) stimulate economic growth in Asian economies. Similar kinds of results have been reported by various researchers for different economies including China, South American countries, Kosovo and Indonesia (Mehmood & Hassan, 2015; Gunby, Jin, & Reed, 2017; Owusu-Nantwi & Erickson, 2019; Qabrati, 2021; and Tanaya & Suyanto, 2022).

Johnson (2006) found that the impact of FDI on economic growth was not entirely consistent. After examining the association between economic growth and FDI in Malaysia, Karimi and Yusop (2009) claim that there is no proof that FDI and economic growth are causal relationship bidirectional in the long run. However, FDI indirectly affect economic growth. However, some studies have shown that FDI affects economic growth endogenously (Hsiao & Shen, 2003; Durham, 2004). According to LE et al. (2021), there is no connection between economic growth and FDI. According to Alfaro (2003), it is unclear how foreign direct investment (FDI) affects the host country's economic growth. Meanwhile, some studies claimed that decapitalization and dependency processes are the reasons why foreign direct investment (FDI) impedes economic progress.

Balasubramanyam, et al. (1996) looked into how economic growth affected the amount of FDI in emerging nations. The results showed that in emerging nations, economic growth and FDI have a positive relation. Szkorupova (2014) looked into the relation between exports, economic development, and foreign direct investment in Slovakia from 2001 to 2010. The long-term link between these variables was supported by the results. The GDP of this nation benefits from both exports and foreign direct investment. FDI (Foreign direct investment) has a negative as well a

positive or impact on economic growth depending on the level of human capital in the receiving country, according to studies on the endogenous growth model by Borensztein, De Gregorio, & Lee (1998). Sub-Saharan African nations' economic development and foreign direct investment (FDI) were analyzed by Asafo-Agyei & Kodongo (2022) between 1993 and 2015. They maintained that there is a nonlinear link between FDI and economic growth and that FDI promotes economic growth in these nations.

Additionally, Saidi et al. (2020) evaluated the relation of logistics, transportation, foreign direct investment with economic growth in 46 developing nations from 2000 to 2016. The findings indicated that infrastructure related to transportation and logistics supports FDI and spurs economic expansion. Makun (2018) looked at how FDI, imports, and remittances affected the Republic of the Fiji Islands' economic growth between 1980 and 2015 and finding that while FDI and remittances had a favorable impact on Fiji Islands' economic growth in the short run as well as long run, imports have a negatively associated with economic growth. Similarly, Matsumoto (2022) examined the relationship between the development of foreign reserves, foreign direct investment, and economic growth in 20 emerging nations. Accordingly, foreign direct investment (FDI) is a key factor in promoting welfare and growth, even while a rise in reserve accumulation temporarily reduces consumption. For the years 1990–2012, Demir & Lee (2022) looked into the connections between FDI and economic growth in the North, the Emerging South, and the South. They discovered that while foreign direct investment (FDI) has no long-term effects on the GDP per capita of the host nation, it significantly and favorably affects the GDP per capita of the North-North, Emerging-North, and South-Emerging sub-country groups.

3. Data and Methodology

This paper investigates the relationship between FDI, trade openness, inflation, real effective exchange rate and the economic growth of Pakistan from 1980 to 2022. The data has been extracted from the website: www.worldbank.org.

Table 1: Variable Description

Acronym	Variables	Data Source
GDPG	Gross domestic product (GDP) Growth	WDI
FDI	Foreign Direct Investment	WDI
TO	Trade Openness	WDI
INF	Inflation	WDI
REER	Real Effective Exchange Rate	WDI

To explore the relation of GDP with FDI and trade openness, a time series multiple regression model is constructed. The regression is as follows:

$$GDPG_t = \beta_0 + \beta_1 FDI_t + \beta_2 TO_t + \beta_3 INF_t + \beta_4 REER_t + \mu_t$$

Where, $GDPG_t$ shows Gross Domestic Product annual growth at time t. FDI_t represents foreign direct investment at time t. TO_t stands for trade openness at time t. INF_t represents inflation at time t. $REER_t$ indicates real effective exchange rate at time t. β_0 represents the intercept and β_1 , β_2 , β_3 & β_4 are the slopes of their respective variable. μ_t represents the estimated error.

4. Result Discussion

This section contains data analysis and discussion of results. The findings, which have been arranged in tabular form, give an overall view of how several macroeconomic factors affect Pakistan's economic growth. Multiple regression model has been used to estimate the impact of macroeconomic variables.

However, it is crucial to verify the variables' stationarity before moving on to estimation. The unit root test has been employed to verify the variables' stationarity. The most widely used test in unit root is the ADF, which Dickey and Fuller (1981) introduced. The ADF test yielded the following results in order to measure the unit root hypothesis. If we choose a 5% level of significance, the findings show that not all the variables are integrated in the same order. According to the ADF test results, GDPG and INF are stationary at first difference, while variables like FDI, TO, and REER are stationary at level.

Table 3 contains descriptive statistics of different variables including GDP growth (GDPG), FDI (Foreign Direct Investment), TO (Trade Openness), inflation and REER (Real Effective Exchange Rate). Minimum value of GDPG is 2.365 and maximum value has been remained 8.225 from 1980 to 2022. The average per annum growth rate of GDP has been remained 4.766 percent from 1980 to 2022. The mean values of FDI, TO, INF and REER are 0.796, 10.50, 8.467 and 126.64 respectively.

Table 2: Unit Root Analysis (ADF Test)

Variables	Level	Prob.	I st Diff.	Prob.	Remarks
GDPG	-1.3219	0.1694	-2.6872	0.0849*	I(1)
INF	-0.6509	0.4293	-5.1913	0.0001***	I(1)
REER	-2.4173	0.0168**	--	--	I(0)
FDI	-1.7629	0.0741*	--	--	I(0)
TO	-4.5253	0.0000***	--	--	I(0)

Notes Three asterisks (***) denote rejection of the null hypothesis (the variable has unit root) at the 1% level, two asterisks (**) denote rejection at the 5% level, and one asterisk (*) denotes rejection at the 10% level. Every variable has a log format.

Table 3: Descriptive Statistics

Variables	Mean	SD	Min.	Max.
GDPG	4.7656	1.6246	2.3649	8.2246
FDI	0.7957	06398	0.1026	3.0357
TO	10.503	16.355	-19.006	52.640
INF	8.4665	4.0865	2.5293	20.286
REER	126.64	39.074	96.4870	237.537

Table 4: Multiple Regression Analysis

Variables	Coefficients	P-value
Intercept	-0.260060	0.7236
FDI	0.992713	0.0006
TO	0.120517	0.0036
INF	-0.059355	0.1319
REER	0.035611	0.0000
R-Squared	0.680910	
Adj. R-Squared	0.647322	
F-Statistics	20.27217	0.0000

Table 4 indicates the impact of different macroeconomic variables including FDI (Foreign Direct Investment), TO (Trade Openness), INF (inflation) and REER (Real Effective Exchange Rate) on economic growth of Pakistan. The foreign direct investment (FDI) affects economic growth positively and significantly with a coefficient value of 0.9927 ($P=0.0006<0.01$). As investors look for stable, expanding markets, economies with consistent economic growth typically draw more foreign direct investment. On the other hand, because of the influx of money, technology, and experience, economies that receive large amounts of foreign direct investment typically experience faster rates of economic growth. This produces an upward virtuous cycle in which economic growth and foreign direct investment support one another.

There is a significant and positive having coefficient value of 0.1205 ($P=0.0036<0.01$) relationship of trade openness with Pakistan's economic growth. Trade openness generally stimulates GDP growth by offering advantages such improved competition, more market access, technology transfer, and increased efficiency. The real effective exchange rate also affect

Pakistan's economic growth significantly with a coefficient value of 0.0356 ($P=0.0000<0.01$) and positively. Because it affects investment flows, inflation, import prices, and export competitiveness, the Real Effective Exchange Rate (REER) is a key factor in determining a nation's economic growth. However, inflation has indicated the impact on economic growth of Pakistan which is negative but insignificantly. Therefore, maintaining price stability is essential to maintaining robust economic growth. The value of R^2 is 0.68 indicating that 68 percent variation in Pakistan's economic growth is explained by FDI, inflation, trade openness, along with real effective exchange rate. The value of F-statistics is 20.27 ($P=0.0000<0.01$) indication overall significance of the model.

5. Conclusion

The aim of the present study is to look into the relationship of Pakistan's economic growth with trade openness as well as foreign direct investment. The annual data has been extracted from WDI from 1980 to 2022. The multiple regression model has been used for estimation. The findings indicate that the foreign direct investment (FDI), trade openness (TO) and real effective exchange rate (REER) affect Pakistan's economic growth positively and significantly. The foreign direct investment (FDI) affects Pakistan's economic growth positively and significantly with a coefficient value of 0.9927 ($P=0.0006<0.01$). There is a significant and positive relationship of trade openness with economic growth having coefficient value of 0.1205 ($P=0.0036<0.01$). The real effective exchange rate also affect GDP growth of Pakistan significantly with a coefficient value of 0.0356 ($P=0.0000<0.01$) and positively. However, inflation has negative impact on Pakistan's economic growth of Pakistan but insignificantly. The value of R^2 indicates 68 percent variation in economic growth is explained by FDI, trade openness, inflation and real effective exchange rate. The value of F-statistics indicates overall significance of the model.

5.1. Limitations and Way Forward

Pakistan's economy has a number of serious challenges. Too much inflation is occurring, and there are doubtful possibilities for potential output to expand in the future. The extent of the fiscal imbalance makes funding it increasingly difficult. Furthermore, external imbalances brought on by a large trade deficit are placing additional strain on foreign reserves and the exchange rate. The upcoming year(s) appear to be seeing a slowdown in economic growth. Furthermore, a significant level of uncertainty is limiting market confidence. Pakistan faces a short-term issue in funding its external finance requirements due to current account deficits and servicing foreign debt. The government is steadfastly dedicated to maintaining economic stability and trust. It will be necessary to have a stable fiscal policy with a higher, growth-promoting PSDP (Public Sector Development Programme) route built on the development of people and physical capital. Subsidies aimed at promoting the growth of creative sectors and services will also be crucial. Growth-oriented revenue policies will be beneficial in terms of revenue.

The need to establish an atmosphere that encourages investment is critical. Investors as well as consumers must be persuaded of a long-run, inclusive, sustainable growth project that encourages them to take personal and national initiative while also instilling confidence in Pakistan's economic future. Thus, competitive marketplaces that operate well are necessary. Additionally, policies that have improved associated areas must be maintained. Policies pertaining to energy mix and efficient energy sources are also relevant. Stable political and legislative cultures are also necessary. It is anticipated that these will improve potential output growth, which will raise employment and real income growth. In addition, it will produce more export and import substitution capacity as well as a stable exchange rate environment. Therefore, in order to regulate demand, fiscal and monetary policies should generally be neutral and act as cyclical stabilizers when short-term shocks cause growth to deviate from the long-term trend.

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