

THE IMPACT OF FOREIGN DIRECT INVESTMENT, REAL EFFECTIVE EXCHANGE RATE AND TOTAL LABOR FORCE ON EXPORT OF PAKISTAN (1990-2016)

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Abstract. *This paper identifies the impact of foreign direct investment (FDI), the real effective exchange rate and the total labor force on the exports of Pakistan. A double lag equation model for this investigation was developed in which FDI, exchange rate and labor force play a central role. The underlying conceptual framework of this paper reveals the positive impact of FDI and Labor force on exports of Pakistan while exchange rate shows negative impact. The distinguishing feature of this analysis is to encourage FDI and Effective Labor force which contribute to export development strategies of Pakistan. To estimate the long run and short run connection among the variables, yearly data for the period ranging from 1990-2016 have been analyzed by using Johanson Co-integration and Vector Error Correction model have been applied to determine the response of variables on each other. The result of this study shows that in the long run, FDI and Effective labor force play a vital role in the growth of Pakistan's exports while in the short run, the influence of exchange rate are very effective for the promotion of exports. It is recommended based on the study that Government should encourage FDI &TLF when developing the policy of trade.*

Keywords: Exports, foreign direct investment, exchange rate, labor force, granger causality

Introduction

International trade performs a significant role to address the economic phenomena. It enabled the nations around the world to earn foreign exchange and accomplish economic progression. The relationship within international trade and economic development is a debatable issue for contemporary economists. As outlined by classical and modern economists, trade bridges economic progress and development. The commercial and economic growth and development of the nation can be enhanced through import and export. The most important goal of any economy is to boost-up the Gross National

Product (GNP), where international trade play an extremely important role in this perspective (Levy & Chowdhury, 1993).

According to the study of Luca and Spatafora (2012) Long-term growth in export is significantly relevant to economic performance and factual international markets. Financial investment and FDI is a capability to adopt technological enhancements, work force, open trade strategies, low-level inflation and higher job opportunities are crucial for economic progress. Human capital that is skilled labor force and commercial policies are considered the leading factors of production and important elements of growth process (Hussain, 2004).

In international trade, export and import are considered as the two sides of one coin. When a country export greater than of its imports, then the economic conditions are said to healthy and it accelerate other factors like more output, more employment opportunities and positive growth rate of the economy and when imports are greater than exports, then the economy may face deficit financing and deficit balance of payment and trade, which can adversely affect the growth rate of the economy. The expansion of the economic position of any country, the distribution of wealth and income are mainly related to the development of international trade, specifically export. Export is being considered as a central part of international trade. However, it is comparatively a complex phenomenon. Goods produced in a country and shipped to other countries for further sale or trade is known as exports of the domestic country. The exports generally determine the balance of payment deficit and revenues earned which can be utilized in the formation of domestic capital. The success of a country's export may be attributed to careful attention to all aspects of trade, like trade policy, purchasing power parity (PPP), tariffs, import quotas, export duties and trade agreements between or among countries. Exports, therefore, play a crucial role in this regard. Instability in exports results doubts in the economy, which can adversely affect economic growth of a country(Jombo, Simwaka, & Chiumia, 2014).

Trade is inevitable between or among nations, because it fulfills foreign exchange and other requirements of a country. The exporting economies enjoy absolute advantages, specializing and focusing in the production and output of the product which they can made in a more efficient manner, through absolute and comparative economic advantages over other regions. Countries can increase their exports and enhance economic growth and which can be achieved, mainly, by refining and improving the quality of the products which they produced and also to reduce the cost of production. This means that

nations or countries should produce those goods which have relative economic advantages like the opportunity of low cost and comparatively better quality.

Exports of Pakistan, like other countries, have been identified as vital from two points of view. First, Pakistan has to increase demand for domestic production, which was leveling off because of the limited size of the home market. Secondly, exports can be seen as a tool for receiving dynamic foreign exchange to meet import bills. In addition to those, the amount of Pakistan's exports is low as compare to other developing countries. It is also lower than its imports in terms of value. This deficit trade is mainly due to the poor law and order conditions, war against terrorism, shortage of electricity and other energy resources, inefficient performance of the industrial sector, communication sector and also the poor agricultural nature of the economy (Sheikh, Ahmed, Shahan, & Khan, 2012).

Various studies identify that foreign direct investment play a vital role, (Chaudhry & Bukhari, 2013). Other factors, such as real effective exchange rate and total labor force, have also been found to be important, especially for developing countries like Pakistan.

Up to date a little research has been done on factors which accelerate the exports growth of Pakistan like the research study of Zada, Muhammad and Bahadar (2011) on determinants of exports of Pakistan while Yasmeen et al. (2011) studied the effect of worker remittance on private investment and the total consumption in Pakistan. To better understand, factors which influence the exports growth of Pakistan, this paper develops an empirical analysis of exports of Pakistan and its determinants which are related to the growth rate in exports, a number of variables determine the exports performance of Pakistan but this focus only on foreign direct investment, total labor force and real effective exchange rate.

The remaining parts of this paper are included: section two highlighted some background on exports trend of Pakistan over the last three decades with special responsiveness to local and foreign factors. The third part of this study provides the conceptual framework, while the fourth part provided results and summary and part five represents the conclusion of the study.

2 Pakistan's exports trends

In the global economy, the process of Pakistan's exports in last three decades has been accompanied by important and drastic changes in its structure changes. In addition, it is observed that in the initial stage, the major exports of Pakistan were mainly primary and agricultural goods later on semi-finished products were also found space in the exports pattern of Pakistan. From 2000 and onward, Pakistan mainly focused to increase the exports of certain items

like leather products, sports and textile products. It is observed that the share of these products were more than 70 percent of the total exports of Pakistan. The major exporting countries of Pakistan are USA, UK, Canada and KSA (Majeed, Ahmad & Khwaja, 2006). It is noted that exports of Pakistan influence such as balance of payments, increases in the nation exports. Over the last decade, the exports growth of Pakistan has been mostly influenced by the nature and character of Pakistan's trade schedules like trade openness, currency rate arrangement and skills development of human resources (Malik, 2010). Exports of the country are affected by both domestic and foreign factors.

2.1 Local Factors

On the internal front, it is noted that the major weakness of the Pakistan's economy is the focus of economic activity in the agricultural and its sub sector. More than 80 percent of Pakistan exports is comprised of agricultural and its related commodities. The instability and declining of the agricultural sector becomes apparent in the early 1990's and onward and space created for other goods like industrial product and leather goods. But another side the growth in exports of Pakistan is largely ups and down due to a series of natural disasters and tragedies overtime like flood and earth quick. In some instances the shortage of electricity and other energy crises disputes in this regards. In addition, uncertainty in the country law and order situation and war against terrorism are the major factors which are also negative ramification for the productivity in all sector of the economy. Other studies in this regard show that skilled labor force has an important effect on exports, especially in less developed countries like Pakistan (Malik, 2010). In addition to the traditional agricultural products, textile and its related products have also been volatile in this regard.

2.2 Foreign Factors

In world exports, the contribution of Pakistan is only 2 percent and it is considered that the economy is small as compared to other countries of the world. The economy of Pakistan is heavily dependent on other economies for demand for its products. The major partner countries of Pakistan are USA, UK, Japan, KSA and UAE. The price and quantity demanded of Pakistan exports are mostly pre-determined by world market forces. It is noted that the demand for Pakistani exports traded in the world market and it is affected by fluctuations in foreign income and Dollar price. The variability of foreign income is directly transmitted to Pakistan's exports as a result of strong trade and financial linkages. Generally, there is strong evidence of a positive relationship between foreign economic activity and exports growth of the country. Although, the direction of changes in the exports pattern were due to

changes in real effective exchange rate, when the exchange rate fluctuated. In theory, exchange rate fluctuations are negatively as well as positively related with growth in real exports of the country. An increase in exchange rate means appreciation of the domestic currency, which makes exports items were more costly in foreign market. In addition when the real exchange rate appreciated it means that demand for exports is likely to fall. Hence it is found that exchange rate is the most effective factor which influences the exports of Pakistan. Over the last few decade, it is noted that exchange rate of local currency are mainly disturbed which impact the exports of the country, stability in exchange rate boost up the economy and accelerate the exports of the country. Other factors such as capital investment accelerate exports. According to Qayum and Mahmood (2013) elaborate the long run connection between FDI and foreign trade partner countries of Pakistan. it is found two ways causality between FDI and foreign trade. FDI augmenting exports from Pakistan to its home country, but this result is not significant. It is concluded that FDI is not oriented towards exportable production but exports are attracting more FDI inflow to Pakistan and it is highly significant as well. In addition to this, Pakistan needs to apply such policies which encourage exports and reduce the imports cost on the economy which may reduce the balance of payment problem and also trade deficiency of the country. it is observed that the inflow of FDI accelerate capital investment and promote productivity of exportable goods. So the relation between FDI and exports are positively link with each other. Research made by Borensztein, De Gregorio, and Lee (1998) Foreign direct investment (FDI) is an important and fast mean for the transforming of technologies and it also contributing extra growth comparatively then local investment. Higher productivity of foreign direct investment (FDI) hold the minimum threshold stock of human capital and the accumulation of capital exists in the host country. Hence, foreign indirect investment (FDI) is beneficial for the domestic country economic development and it also accelerates the export of the country. Alfaro (2003) Examined the foreign direct investment (FDI) and Economic Growth and found that foreign direct investment (FDI) enhance economic growth in economies with positively developed financial markets.

3 Conceptual Framework

This research study can be worthwhile for systematic and empirical evaluation of the performance of exports. The analysis allows various readers to have an apparent scenario regarding exports performance. Another emphasis of the study is to evaluate that how exports (dependent variable) are influenced by FDI, ER and LF (independent variables) the study also be helpful for trade policy and policy formation.

In order to develop a valid and reliable result, the important portion of the research study is to construct an actual research intention to trim down the profitability of developing and worthless result from the collected data. Satisfactory results have been obtained in many studies that used a double log model in its basic form in both developed and under developed countries, like Hasan and Khan (1994), Balasa (1978), Iqbal and Zahid (1998) and Haque (1998) used a broader set of explanatory variables to estimate exports a double log model used here is specified with unit root test and error correction framework. The use of these approaches provides information regarding stationarity of the data and specified log run relationship among the variables. To attain the required objectives of the study, the following econometric model has been used. The general form of the model is:

$$\text{Log } X = \beta_0 + \log\beta_1\text{FDI} + \log\beta_2\text{REER} + \log\beta_3\text{TLF} + U$$

$\beta_0, \beta_1, \beta_2$ and β_3 are the unknown parameters included in the modal.

4 Results

4.1 Data

The present study is established on taken time series data from 1990 to 2016. All the variables are measured in Pakistani rupees at the, 1985-86 price level (base year). The main sources for data are, Economic Survey of Pakistan (ESP), State Bank of Pakistan (SBP), International Monetary Fund (IMF) international financial statistics (IFS), World Bank, and World Development Indicator (WDI).

The degree of stationarity or integration of the data is determined before estimating the model. The data of each variable are tested through Philips and Perron (1988) and Augmented Dickey-Fuller (ADF) Dicky and Said (1984). Each of the variables is in logs; exports (X) foreign direct investment (FDI) total labor force (TLF) and Real Effective Exchange Rate (REER) were stationary in their first difference.

Table 1 *Unit Root Test Estimation Period: 1980 to 2016*

Variable	Dickey-Fuller		Philips- Perron	
	1(1)	1(2)	1(1)	1(2)
Exports (X)	-0.613	-4.313*	-0.362	-4.996**
FDI	-3.918		-5.919**	
TLF	-1.051	-4.218**	-1.827	-4.394**
REER	-0.497	-2.056*	-1.491	-2.688

Note: (*)** shows significance level at 5 and 1 percent respectively.

4.2 Estimation

To study the long run relationship of the variables, time series data are integrated of order one. To check the number of Co-integrating vectors among these variables, the Engle-Granger or Augmented Engle-Granger (AEG) test is used for the number of co-integrating relationship. Most of the researchers like (Riedel, 1984), (Johansen, 1988), (Juselius, 1992) used co-integration test for long run relationship of the variables.

Results of Johansen Co-Integration (AEG) Test

The entire variables in order one is integrated, the hypotheses among the variables are examined by Johansen Co-Integration Test. For this purposes, checking the number of co-integrating vectors among these variables are necessary. The values of both the trace statistics and Max-Eigen are greater than the critical value at 5 % and 10% level of significant. Therefore, the null hypothesis of no co-integrating vectors ($r=0$; $r<0$) against the alternative ($r=0$; $r=1$) is rejected. It can be seen in table-4.2 below; it means that there are long run relationships among these variables. Similar views are described by Shirazi and Manap (1982), and Yaghmaian and Ghorashi (1995). The coefficient of the Johansen Co-Integration Test for this research is shown below in table 2.

Table 2 *Estimation of Long Run Relation of the Variable by Using AEG Test*

Null	Alternative	No of CE's	Trace Statistics		Max-Eigen	
			Estimated Value	CR at 5%	Estimated Value	CR at 5%
R=0	R=1	None*	112.542 0.0002*	80.80	43.342	34.331
R<1	R<2	At most 1	69.301 0.007*	65.88	34.272	30.118
R<2	R<3	At most 2	48.914 0.003*	37.03	23.821	19.358
R<3	R<4	At most 3	98.455 0.010**	80.80	43.662	37.331

Note: (*) shows significant at 5% and value of Co-integration and (**) shows 10% level of significant.

4.3 Diagnostics

The exports model which is used in this study was tested for serial correlation, normality and for multicollinearity. The results revealed that the model is reasonably will specified and there is no problem of serial correlation and multicollinearity

4.4 Results

The outcome is in line with the standard exports model used as an explanation for the impact of FDI, REER and TLF on export of Pakistan. The findings are consistent with the economic theories, the results can be shown in table 3.

Table 3 *Impact of FDI, REER and TLF on Exports of Pakistan (AEG TEST)*

Variable	Coefficient	Std. Error	t-Statistic	Probability
C	-1.488	0.534	-2.840	0.008
REER	-0.474	0.172	2.865	0.008
FDI	0.011	0.020	0.5485	0.584
TLF	0.389	0.149	2.720	0.002

Dependent Variable: Exports of Pakistan; Estimation period 1980-2016
 $R^2 = 0.4259$ DW test = 2.3363 F-Statistic = 6.6657

From the above results, it is noted that REER and TLF are statistically significant and FDI is not significant. It is also noted that the explanatory variable together have a significant impact on exports, as the F-statistic value is statistically significant.

Individually explanation of the variables shows that if other thing remaining the same a one percent decreasing or depreciating the real effective exchange rate will increase 47 percent of exports, the same perception have been from the study of (Hoekman & Djankov, 1997), (Shan, Tian, & Sun, 1999), (Majeed, Ahmad, & Khawaja, 2006).

Likewise, other thing being constant a one percent increase in FDI will cause to increase exports exactly one percent. It shows that FDI will also promote exports but will be channelized for productive purposes. The same views are given by (Kumar & Dhawan, 1991), (Shabbir, Mahmood, & Niazi, 1992), (McNab & Moore, 1998), (Chishti, Hasan, & Afridi, 1993), (Aguirre & Calderón, 2005) and (Jaffri & Ahmed, 2010).

The third variable show that other things remain the same, one percent increase in total labor force will accelerate exports by 38 percent. Similar results are elaborated by (Majeed et al., 2006)

5 Conclusion

Export is an important and essential source of foreign exchange. Export receipts cover a substantial part of needs of developing nations around the world for capital equipment, technological services and other goods for the

process of accumulation. An increase in export helps to accomplish greater capability and streamlined growth and development of the country resources. The economy of Pakistan as considered as a small economy but it is continually subjected to a range of internal and foreign factors. Over the last 30 years, exports growth has rarely moved along a smooth growth profile but it is still possible to identify the key exogenous factors which fluctuate the growth rate of exports like inflow of FDI and stability of exchange rate play vital role in this regards. It is also observed that human capital also accelerate the growth rate of exports.

Exports of Pakistan, like other countries, have been identified as vital from two points of view. First, Pakistan has to increase demand for domestic production which was leveling off because of the limited size of the home market. Secondly, exports can be seen as a tool for receiving dynamic foreign exchange to meet imports bills.

This paper has attempts to provide useful insights into the impact of FDI, REER and TLF on the exports of Pakistan. A time series data for the period 1990-2016 has been analyzed for these factors. To attain the required objectives of the study, a double log model is used. It is necessary to apply certain test on the data so as to get a good estimated value. ADF test is used for the stationarity of the variables. It is observed that all the variables are stationary. AEG test is applied to check the long run relationship. It is found that there are strong long run relationships among these variables. It is concluded that the government should stabilized the exchange rate, also focused to increase the inflow of FDI and to develop human capital which promote the exports as well as growth rate of the economy.

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