



Causes And Consequences Of Trade Deficit In Pakistan

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Abstract

This research focused upon short run as well as long run relationship among the balance of trade, real effective exchange rate, foreign direct investment, market size, average tariff rate, domestic consumption and infrastructure for the data sample 1975 to 2019. Different tests found the data as stationary at first and second differencing. The co-integration results found that the foreign direct investment, market size, average tariff rate and infrastructure impacted positively while the real effective exchange rate and domestic consumption impacted negatively on trade deficit of Pakistan.

Key words: Trade deficit, co-integration, exchange rate, tariff rate.

1. INTRODUCTION

Pakistan is developing country having continuous trade deficit problem. In the analysis of World Bank's report "Pakistan experienced the deficit in trade from 1975 to 2005 is equals to 1.20 billion to 1.10 billion dollars and after 2005 the economy faced serious problem of trade deficit till 2018". Pakistan's trade deficit reached to 1.50 billion dollars in first quarter of 2020 (SBP, 2020). This continuous deficit decreased the opportunities of investors' investments which may remove the investment from the country (Panizza et al. 2009).

The trade openness policy has worsened the economy of Pakistan because of the high ratio of imports (choudhary and Babar). The trade liberalization policies are not favourable for the developing countries like Pakistan. The exchange rate determines the dimension of trade internationally which may encourage the exports or discourage the imports for the

benefit of balance of trade for any country. The international competitiveness is also valued on the basis of real effective exchange rate for the rest of the world. Pakistan possesses many opportunities and corners to access in the leading global market to get maximum benefit for the welfare of economy by investing exports competitiveness in world market (Ishrat Hussain). The developing world cannot rely on the market forces of demand and supply but they have to work with strategy. Many economists as Smith, Ricardo, Mill and others favor the trade liberalization as they recommend that world gross domestic product (GDP) would be improved and world will work on the theory of globalization. After that the same phenomenon was also favored by neoclassical school of thought on the basis of theory of factor proportion. The World Trade Organization intervened in the wake of globalization to restrict the over protection in the shape of different duties by different countries.

The landing of the adaptable exchange rate framework in 1973 created a noteworthy instability and vulnerability in return rates. This began an open deliberation among approach producers and scientists found the effect of exchange rate instability on trade streams. Be that as it may, both the hypothetical and exact examinations yielded clashing outcomes about the connection between exchange rate changeability and global trade flows. Although most of the exchange models contend that unpredictability builds vulnerability, chance and consequently impedes the exchange flows, some different investigations recommend something else (Khan et al. 2014). Likewise, the issue is for the most part analyzed for coming researchers.

Parveen et al. (2012) broke down the elements cause exchange rate fluctuations in Pakistan. The central point of the examination was to add to exchange rate unpredictability and their relative significance. The auxiliary information was utilized to finish up the discoveries. The information was gathered or taken from financial overview of Pakistan and universal measurements. Yearly information was gathered amid the period 1975-2010. Afzal (2007) clarified the conversion standard reaction of imports demand in Pakistan. The fundamental goal of the investigation was the genuine and powerful exchange rate reaction of imports demand in Pakistan. The outcome closed devaluation of household money debilitates imports however builds the aggressiveness of the fares. An expansion in remote trade hold was normal a beneficial outcome on import demand yet don't have a pivotal significance. Ahmad et al., (2014) portrayed in his paper the effect of exchange rate on adjust of balance of payment in Pakistan and was inferred that the dependability of conversion standard may make a positive situation for support the venture and enhance the balance of payment. The results demonstrate the huge and positive relationship. As indicated by Vergil (2009) gauge the exchange rate instability and trade in euro and Mexico and discover the effect of exchange rate unpredictability on trade. The exchange rate

instability has a positive and exceptionally noteworthy impact in the exchange rate of just a single of the ten assessed item gatherings. Zweig et al. (2008) inferred that impacts of exchange rate unpredictability on exchange were under psyche. In spite of the fact that appreciation can decrease trade surplus in short run, in a more drawn out skyline, there is no steady relationship. Jalil and Feridun (2010) explained the foreign exchange rate uncertainty in Pakistan by using the micro structure approach. Impact of Euro- Dollar exchange rate on macroeconomic indicators like real output, price level, and money supply for Pakistan has been evaluated by Muhammad (2010).

In the previous literature exchange rate volatility has been captured through the standard deviation of the moving average of the logarithm of exchange rate, but in the current study exchange rate volatility is estimated by ARMA (0, 1) and ARCH/GARCH (2, 1) models. And then find out the impact of exchange rate volatility on Trade Balance and results of the study has answer the question about How Exchange Rate Volatility disturb the Trade Balance of a Country? And reject the null hypothesis that there is no association between exchange volatility and trade deficit and accept the alternative hypothesis that there is association between exchange volatility and trade deficit.

As a result of this trend of concentrated exports categories and markets, trade environment of Pakistan is extremely vulnerable to instabilities emanating from fluctuations in world prices, the socio political instabilities of the partner countries, and also the factors affecting the export promotion like poor infrastructure, out dated technology, non-tariff hurdles posed by the importer country, limited trade financing, etc. As such, this research primarily unveils the export scenario of Pakistan and export partners in an attempt to identify the factors influencing the bilateral trade of the country. Furthermore, the gravity model of trade is applied to the data and it is examined whether this model correctly explains Pakistan trade and trade partners. The results of the gravity model are then used to identify the potential trade partners of Pakistan, so as to provide policy makers with in-depth and accurate information for future policy making.

2. Research Questions

Is there any progressive effect of real effective exchange rate on trade balance?

Is there any relationship between real effective exchange rate and export competitiveness?

Is there any relationship of domestic consumption and trade balance?

3. Literature Review

Alassane and Aimen (2019) studied on agreements of free trade by distributing the four classes of specific groups for trade strategies. They elaborated that the policies of trade

having a close touch with trade balance. For this analysis, gravity model has been utilized which also incorporates the political phenomenon cannot be sidelined from trade policy. It shows that all segments of the economy play very significant role in the policy formulating for the promotion of trade.

Boston. I et al. (2018) analyzed that the international competitiveness is observed on the basis of exchange rate. This study is carried out on exports and imports performance of Romanian economy. It is concluded that exchange rate is the better measure of patterns of trade and policy making to overcome the trade deficit. It is analyzed that for different economies the exchange rates are the source of currencies' stability. It can be said that if we want to improve the balance of trade then we have to focus on exports promotion and imports rationality for the economy.

Balavac and Pugh (2016) studied the growth of different sectors of economy on basis of proper policy making. Time series data of this study covers the time period from 1996 to 2010. This research added that the different sectors as Agricultural sector, Industrial sector and service sector are needed to focus in order to promote the exports and imports behavior of economy.

Saqib and Qi xin (2017) concluded that Pakistan has ignored the quality standards in the development of industrial sector. Now Pakistani economy depends only on few bases of imports and exports internationally. Exports performance is an important side which should be focused for the development of international competitiveness and to valuate real effective exchange rate.

Lewitt (2018) examined the liberal trade policy making for the economy of China in relation to WTO countries. He emphasized on the situation of various trade policies from which he opted the liberal trade policy for development of economy of china.

Jamil et al. (2013) worked on the trade and exchange rate. The working was on openness of trade and real effective exchange rate. The data of this research was used from 1972 to 2011. The main factors were taken capital and development expenditures. The ways which were utilized for this study are ARDL and ECM. The outcomes suggested that physical capital, trade openness and expenditure of development or always positively correlated. The real effective exchange rate impacted positively and significantly in long run on balance of trade. In addition to this, the important outcome is that infrastructure in the context of human capital and transportation performed positively for economic development. The study strongly recommended that until we work on agricultural and industrial sector we cannot perform good to remove the problem of trade deficit.

Adam and Bevan (2003) examine the Fiscal Deficits and Growth in Developing Countries. The study is to observe the relation between fiscal shortage and expansion. Panel data from 1970-1999 was used in this study. ARDL method was in the study. Where dependent variable was Per capita GDP growth per year along with Non-tax revenue, development Expenditure, and Expenditure Interest on debt and Net Lending as independent variable were used in this study.

Awan (2015) analyzed the Impact of Financial Development on Trade Balance. The objective of the study was to examine the relationship between financial development, trade balance, exchange rate and inflation. Time series data for period of 1972-2014 was used. ARDL (autoregressive distributed lag) approach applied on the variables for co-integration. He found that financial development and inflation have positive significant impact on trade balance and exchange rate has negative significant impact on trade balance.

Hossain and Alauddin (2005) reviewed the process of Bangladesh's trade liberalization and its impact on the growth and structure of exports, imports, GDP and other macroeconomic variables with particular emphasis on export. By using econometric investigation based on the ARDL and the ARDL co-integration techniques they empirically found trade liberalization has had a positive impact on the growth, that is, both anti-export bias reduction and import-GDP ratio have significantly impacted on exports in the long run.

Jayachandran (2013) measured the impact of exchange rates on trade and GDP. The core function of the research was to investigate the effects of exchange rate on business in India. He uses time series data for the year 1970 to year 2011. Exports, imports, exchange rate and foreign investment are the variables used in this research. The study results verified actual export and import that are co-integrated with exchange rates instability, real exchange rates, gross domestic products and foreign economic actions. His results revealed that the exchange rates have significant negative impacts on real exports and imports, mean that higher exchange rates rise and fall have a tendency to cut real exports in India. He recommended exchange rate stay stable yearly so the overseas investment will rise. GDP can effect when exports of a country increases over imports, so a country should always try to produce their own goods for use rather than importing them.

Duasa (2007) examined the short- and long-run relationships between trade balance, RERs, income, and money supply in the case of Malaysia. Using the ARDL co-integration approach, he found a positive but statistically insignificant relationship between the trade balance and exchange rate. The money supply and domestic income had a strong negative and positive impact on the trade balance.

Aqeel & Nishat (2005) analyzed causes of increase in foreign direct investment. The aim of the study was to check the link between economic growth of a country and foreign aid by using time series data of 1960-2003. They applied co-integration and error-correction techniques for analysis. Trade, fiscal, economic liberalization and FDI in Pakistan were the variables used in this study. The relationship among these variables shows significant.

Perera (2009) examined the role of FDI, trade and employment in the financial growth of Sri Lanka. For estimation time series data was used for the period of 1965-2007. Ordinary least square (OLS) model was used to estimate the variables. Foreign debt (FD) used as a dependent variable while labor force (LF) and trade openness (TO) were used as independent. The results show that in the long-run, labor force- trade openness and foreign debt have a positive impact on economic growth of Sri Lanka.

4. DATA AND METHODOLOGY

In this study the secondary data is used, covering the sample size 1975 to 2019. The data is used in natural log form for all the variables under analysis in the study. The technique utilized for the connection of variables is Johansen co-integration. The short term analysis is traced by Vector Error Correction Model (VECM).

4.1 Data and Sources

- Trade deficit: Economic Survey of Pakistan
- REER: (IFS-IMF) various issues
- FDI: (IFS-IMF) various issues
- GDP: Economic Survey of Pakistan
- ATR: State Bank of Pakistan
- INFRA: (Authors calculations by using Principle component method)
- DC: (State Bank of Pakistan)
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4.2 Model Specification

$$BOT = \alpha_1 + \beta_1 REER + \beta_2 FDI + \beta_3 GDP + \beta_4 ATR + \beta_5 INFRA + \beta_6 DC + \sum t$$

BOT= Balance of Trade

REER= Real Effective Exchange Rate

FDI= Foreign Direct Investment

GDP= Gross Domestic Product

ATR= Average Tariff Rate

INFRA= Infrastructure

DC= Domestic Consumption

5. RESULTS

All the variables are found non stationary if regression is done it will be overestimated. Therefore, it is very necessary to make data stationary for the meaningful and rational results.

Table:01 Augmented Dicky Fuller/ Unit Root (All variables in natural Log)

Variables	Level (with intercepts & Trend)	First Difference (with intercepts & Trend)
REER (Real Effective Exchange Rate)	-3.256(0)	-4.63425* (2)
GDP (Gross Domestic Product)	-2.361(1)	-4.27541* (1)
ATR (Average Tariff Rate)	-4.468 (0)	-4.72084* (4)
INFRA (Infrastructure)	-6.69 (2)	-3.24498* (1)
FDI (Foreign Direct Investment)	-0.356 (3)	-7.0918* (2)
DC (Domestic Consumption)	-0.246	-6.0817*(2)

*Significant at 5% Level

Above table shows that the ADF/ Unit Root results are non-stationary at level but first differencing made them stationary in the analysis. Here, when we use H₀ that means non-stationary and if H_A is used that shows data is stationary. Here, the parenthesis shows the lag length of variables and all the variables are integrated at order 1.

Table 2 Johansen Co-integration Test (Maximum trace value)

Null Hypothesis	Alternative Hypothesis	Maximum trace Statistics	Critical value at 5%
r = 0	r = 1	71.162	46.231
r = 1	r = 2	52.26	40.077
r = 2	r = 3	35.039	33.87

r = 3	r = 4	25.0304	27.584
r = 4	r = 5	14.92	21.13
r = 5	r = 6	10.66	14.26

*Significant at 5% level

The Johansen co-integration tests results are shown in six vectors Model according to maximum trace value. On the criteria of akike criterion optimal too lack length parameter is used on the basis of short listing approach which clearly indicates that there is strong association of variables used in the study.

Table 3 first Vector of Normalized equation

Variables	REER	GDP	ATR	INFRA	DC	FDI
Co-efficient	-3.675*	11.535*	3.46*	8.670*	7.29	3.38*
t-value	2.50	10.531	11.58	10.45	8.32	3.69

*Significant at 5% level

The co-efficient of the variables clearly shows that there is positive impact of GDP, ATR, INFRA and FDI, while there is negative impact of REER on the trade deficit of Pakistan.

Table 4 Error Correction Model

Variables	REER	GDP	ATR	INFRA	FDI	DC	C	ECM
Co-efficient	-2.322	1.306	1.601	0.952	0.566	-1.88	-41.58	-0.394
S.E	1.33	0.591	0.4681	1.36	2.91	2.21	0.1570	-0.085
T. Statistics	1.75	2.20	3.4	0.99	0.261	0.98	0.22	-4.22
Probab.	0.0393	0.0367	0.0019	0.031	0.0462	0.02	0.829	0.0004

*Significant at 5% level

The ECM results are clearly showing that the results given in above table are desirable as suggested by co-efficient of error correction model.

6. FINDINGS AND DISCUSSIONS

We briefly discuss the findings of our study in the following:

The coefficient of foreign direct investment has positive effect on dependent variable that is trade deficit in both long and short run. It means when the foreign direct investment increases in a country the deficit in trade tends to be reduced. coefficient of trade volume shows the negative effect on dependent variable in short run while it has positive effect in

long run. The real effective exchange rate is over estimated that's why it has negative impact on balance of trade.

The coefficient of gross domestic product (GDP) indicates positive effect on dependent variable in short run and as well as in long run as when GDP growth rate is higher (which shows market size) it will reduce trade deficit. The value of R square is 0.78 which indicates that model is good. The value of Durbin Watson is 2 which show there is no auto correlation among variables.

7. CONCLUSION AND POLICY RECOMMENDATIONSs

This research was conducted to measure the effects of trade deficit on the Pakistan's economy. Trade deficit was dependent variable whereas gross domestic product (market size), foreign direct investment, real effective exchange rate, average tariff rate, and domestic consumption were independent variables. To examine the long run association between the variables the co-integration test was applied.

Our results show that co-integration exists among variables for long run. Foreign direct investment has positive and substantial impact on trade deficit in long run but in short run, it is insignificant. Similarly, trade volume and trade output both have negative sign with trade equilibrium in short run as well as in long run, respectively which clearly indicate that there is convergence in the economy. In other words, of lagged ECM has indicated negative and significant impact, which shows the velocity of adjustment from instability to stability. Pakistan's Gross domestic product (GDP) is incredibly low as government does not employ the natural resources. When Government of Pakistan has intended to exploit the natural resources it will increase GDP as well as exports. Pakistan's exports are stagnant due to in competitiveness and lack of value addition and innovations in services and goods. Similarly, the volume of foreign direct investment is very low and the government should take policy initiatives to enhance it. Continuous devaluation of Pak Rupee and wild fluctuation in exchange rate is one of the major causes of instability in the economy. The economy of Pakistan is also import dependent which increase the domestic consumption that will increase the trade deficit in Pakistan. Our domestic industrial sector should be improved to increase the opportunities of imports substitution.

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