

THE IMPACT OF TRADE LIBERALIZATION ON ECONOMIC GROWTH IN PRE AND POST FINANCIAL LIBERALIZATION ERA: A CASE STUDY OF PAKISTAN

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Abstract

The paper empirically examines the impact of trade liberalization on economic growth in Pakistan using annual time series data for the period 1974-2015. The impact of trade liberalization has been estimated under two scenarios i.e. before and after financial liberalization. ARDL approach is used for empirical analysis. The study reveals a significant positive overall effect of trade liberalization on economic growth. Trade liberalization in post financial liberalization has significant negative impact on economic growth. The outcome also highlights the role of other variables in determining the economic growth. Employed labour force affects economic growth positively but is insignificant. Gross fixed capital formation significantly positively affects economic growth while inflation has significant negative impact on economic growth. It is concluded that Pakistan's economy undergo contraction when trade liberalization is implemented in post financial liberalization era.

Keywords: *Financial Liberalization; Trade Openness; Economic Growth; Pakistan; ARDL*

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1. Introduction

Trade liberalization is often considered as a significant tool to facilitate unrestricted international movement of goods and services and usually recognized as an engine of economic growth. Over the last three decades, many developing countries introduced outward oriented trade policies as a way to enhance economic efficiency. The aim of these policies was to enhance output growth through more efficient resource allocation and greater competition. It was expected that more open economies tends to grow faster than close one. In the development literature different explanation have been given by the proponents and opponents of the unrestricted international trade to explain the costs and benefits associated with empirical support. At present there is still not a general agreement among policy makers and academics about whether or not economies have benefited directly from outward-oriented strategies. However, in the 1970s and 1980s many countries favoured outward economic reforms and abandoned the prevailing protectionist policies of the 1950s and 1960s.

Trade liberalization denotes the reduction in restrictions on free movement of goods and capitals. The argument for trade liberalization has its origin in classical economist Adam Smith (1776) theory of absolute advantage on the assumption that mutually beneficial trade between two nations is based on absolute advantage. David Ricardo (1817) a neoclassical economist based his theory of comparative advantage on the idea that countries have advantage in the production of commodities, not in absolute but in relative terms. Finally, Heckscher and Ohlin introduced a modern theory of free international trade based on Heckscher (1919) and Ohlin (1933) and asserted that countries should specialize in the production of the commodity that requires relatively more of their abundant factor of production.

Trade and growth theories argues that trade liberalization expands the market, induces an increase in the transmission of technology from developed countries, enhances production efficiency through more efficient resource allocation and greater competition and would alleviate macroeconomic problems.

Pakistan has generally liberalized its trade regime in the late 1980s to integrate its markets with the global economy. Historically, the country persuades a restricted trade regime as a means to protect infant industries since 1950s. To protect

domestic producer's high tariff and non-tariff barriers were imposed on imports. In the 1960s government took various steps to promote manufactured exports such as export bonus scheme, preferential access to foreign exchange and import liberalization. Consequently industrial sector output and exports witnessed a reasonable increase during the same period. However, industrial sector growth witnessed a sharp decline in the next decade due to nationalization of industries. In order to promote exports growth, the government took three measures of trade liberalization such as devaluation, abolition of export bonus scheme and discontinuation of restrictive licensing scheme. These steps lead to significant increase in exports of manufactured products.

In 1987 a significant change was made in the trade policy with the formulation of new trade policy. Between 1986-87 and 1994-95 the maximum tariff rate fell from 225% to 70% and further it was lowered to 25 % in 2005. The number of custom duty slabs fell from 17 to 10. The un-weighted average tariff rate reduced to 64 % in 1989-90 as compared to 68 % in 1987-88.

As a consequence of liberalized trade regime Pakistan experienced a surge in trade. In 1985 total trade as share of GDP stood at 27% that rose to 30% in 1995 and further to 36% in 2008. The trade ratio (exports plus imports as a share of GDP) was 25.61% in 2015 in which share of exports was 8.72% while the share of imports stood at 16.89%. Despite significant reduction in trade barriers the growth in exports was -7.20% in 2015 as compared to 21.50% in 2001 and 29.88% in 1991. Whereas growth of imports was 0.29% in 2015 as compared to 17.46% in 2001 and 14.9% in 1991. These exports and import growth imbalances lead to deficit in trade balance of Pakistan.

Exchange rate liberalization reforms are crucial to any trade liberalization policy. A supportive exchange rate system and stable macroeconomic environment is necessary to sustain trade policy reforms and ensure a higher level of economic growth. With openness of trade as a result of removal of trade barriers on exports and imports, exchange rate is expected to play an important role in efficient allocation of resources. Pakistan followed a fixed exchange rate policy to facilitate inward oriented trade policies during 1947 to 1982. In 1982 the State Bank of Pakistan replaced the fixed exchange rate regime by a managed floating exchange rate regime based on a basket of 16 currencies of the country's trade partners. Since 2000 Pakistan is operating on flexible exchange rate. A review of

these measures indicates that Pakistan has passed through significant changes during the last three decade. trade, exchange rate and other macro and sectoral reforms are taken over time with the aim of increasing exports, decreasing extra imports pressure and thereby improve the balance of trade and hence GDP growth in Pakistan.

This paper provides empirical evidence about how trade liberalization has affected economic growth. This paper contains five sections. After introduction, section 2 provides a brief literature review about trade liberalization and economic growth. Section 3 contains data and methodology of estimation. Section 4 presents and discusses the results of the study. Finally summary and policy implications are presented in section 5.

2 Literature Review

Most of the theoretical studies on the link between trade openness and economic growth provide support to the proposition that open trade regime affects economic growth positively. For example, Grossman and Helpman (1990), Rivera-Batiz and Romer (1991), Barro and Sala-i-Martin(1997) argue that openness will enhance economic growth through increased transmission of advanced technology, imports of higher quality intermediate inputs and from the spillover effects of FDI. They also argued that trade openness expands the market size to reap the benefits of economies of scale.

Rodriguez and Rodrik (1999) were however skeptical about the positive impact of trade openness on economic growth. They scrutinized the most influential studies of the 1990s and argued that measures of trade openness and trade policy are either correlated with other variables or have measurement errors.

In a study for 93 developed and developing countries Edwards (1998) tried to examine the robustness of the nexus between openness and total factor productivity growth and concluded that there existed a positive relationship between trade openness and productivity growth. He claimed that findings were robust to the use of method of estimation, trade openness indicators, functional form and time period.

Wacziarg (2001) applied a three stage least square model using the data of 57 countries to find an indirect linkage between trade policy and economic growth. He concluded that openness had a positive impact on economic growth and that

physical capital accumulation accounted for more than half of trade's total impact on economic growth. Using panel data of 73 developing countries Greenaway et al (2002) examined the impact of trade liberalization on economic growth and concluded that there existed J-Curve relationship between liberalization of trade and economic growth.

Yanikkaya (2003) collected data of more than 100 countries of the world to study the impact of trade liberalization on economic growth. By using two types of trade openness indicators he showed a positive significant relation between trade openness and growth. However, in case of developing countries trade restrictions were positively and significantly related with and growth. Santos Paulino and Thirwall (2004) examined the effect of trade liberalization on economic performance of 22 developing countries. Their results indicated that liberalization.

Din et al (2003) investigated the relationship between trade openness and economic growth in Pakistan using granger causality test. They found no causal relationship between trade openness and economic growth in the short run. However, the study reported bidirectional causality between both the variables in the long run. Siddiqui and Iqbal (2005) found negative long run relationship between trade growth and GDP growth. Chaudhry et al (2010) analyzed the relationship between trade liberalization, human capital and economic growth using co-integration and granger causality techniques. The results reported that education and trade openness played a key role.

Shahbaz (2012) examined the impact of trade openness on economic growth by considering four indicators of trade openness. Results of the study revealed long run positive association between trade openness and economic growth. Hye et al (2013) realized relationship between economic liberalization and economic growth. They used JJ co-integration, full modified least square and error correction model and results indicated negative impact of trade liberalization on economic growth in the long run.

3 Data and Methodology

This paper used annual time series data on real gross domestic product (*RGDP*), employed labour force (*ELF*), real gross fixed capital formation (*RGFCF*), inflation (*INF*) and trade openness (*TO*) for the span of 1974 to 2015 to examine the impact of trade liberalization on economic growth in case of Pakistan. Data

were collected from Pakistan Economic Survey (various issues) and World development Indicators (WDI).

The model applied for the investigation of impacts of trade liberalization on economic growth in Pakistan is based on aggregate production function of the form:

$$Y = f(ELF, RGFCF, INFL, TO) \dots\dots\dots (1)$$

Where, Y is the real gross domestic product as a function of ELF, RGFCF, INF and TO which represent respectively labour, real gross fixed capital formation, inflation and trade openness. Although empirical literature provides various indicators of trade liberalization but there is no general agreement on the common measure of trade liberalization. This study has used trade openness: total trade (exports plus imports) as percentage of GDP as the proxy for trade liberalization

Where:

Dependent Variable

RGDP = Real gross domestic product

Independent Variables:

1. Employed labour force (ELF)
2. Real gross fixed capital formation (RGFCF)
3. Inflation (INF)
4. Trade openness, which is the total trade as a percentage of GDP (TO)
5. Dummy variable indicating financial liberalization era. (DFL), 1 for post financial liberalization era and 0 otherwise
6. DFLTO = Shows trade openness in financial liberalization eras

The analysis has been carried out by using ARDL approach

4 Results and Discussion

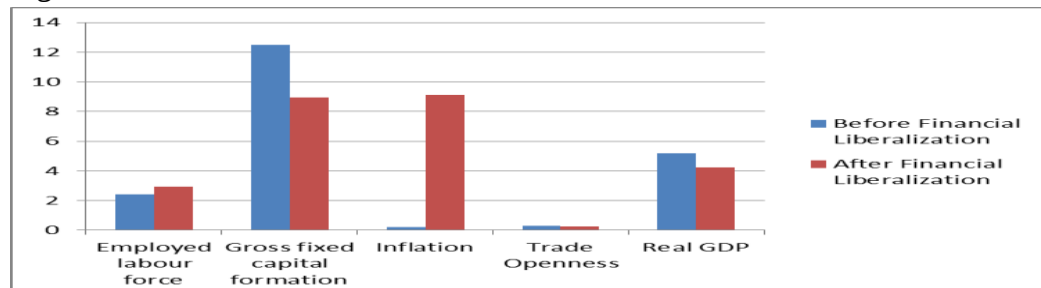
This section deals with the discussion and presentation of empirical results. Table 1 shows the average grow in major macroeconomic variables.

Table 1: Average growth rates of key macroeconomic variables

Variables	Before Financial Liberalization	After Financial Liberalization
Employed labour force	2.4	2.94
Gross fixed capital	12.49	8.94
Inflation	0.22	9.13
Trade Openness	0.32	0.27
Real GDP	5.2	4.24

Source: Authors' calculations (E-Views 7.1).

It is evident from table 1 that employed labour force increased since pre exchange rate liberalization period and continued to increase in post financial liberalization era. It seems to increase more on average in post financial liberalization era than before. Gross fixed capital formation showed higher growth rate on average in pre exchange rate liberalization period as compare to post liberalization period. Besides, inflation rate increased more on average after exchange rate liberalization than before. The average growth of trade openness measured as a ratio of exports plus imports was higher in the pre exchange rate liberalization period as compared to post. The average growth rate of GDP was lower after exchange rate liberalization than before. It implies that trade openness might has adverse impact on economic growth in the post exchange-rate liberalization period.

Figure1:

Source: Author's calculation

The results of the ADF test presented in Table 2 show that gross fixed capital formation (LNRGFCF) and inflation (LNINF) are integrated of order zero i.e. $I(0)$ whereas labour force (LNELF), trade openness (LNT0) and real gross domestic product (LNRGDP), are integrated of order one i.e. $I(1)$. These mixed results would not allow us to apply Johansen method; therefore we decided to use ARDL approach to co-integration developed by Pearson *et al.* (2001) to investigate short run and long run relationship among the variables under consideration.

Table 2: Results of ADF Unit Root Test

Variables	At level		At 1 st difference		Integration
	Intercept	Intercept & trend	Intercept	Intercept & trend	Integration
LNRGDP	-2.266132	-1.164935	- 5.611509*	- 6.539612*	$I(1)$
LNELF	-0.416130	-1.614093	- 5.112822*	- 5.045104*	$I(1)$
LNRGFCF	-1.666517	- 4.170977*	- 1.666517*	- 4.170977*	$I(0)$
LNINF	- 3.040265**	- 4.468516*	- 6.303468*	- 6.173667*	$I(0)$
LNT0	-2.273882	-2.180825	- 5.716225*	- 5.693894*	$I(1)$

Source: Author's calculations using software views 7.1. Note: * represents 1% significance level and ** indicates 5% significance level.

Table 3 provides the results of F-statistics for co-integration relation among the variables of the study. The computed value of F-statistics is 7.67. This value is greater than the upper critical value at 5% significance level and suggests long run relation among the variables.

Table3 :ARDL Bounds Test of Co-integration			
F-Statistics (P-value)	Significance Level	F-Statistics Critical Values	
		I(0)	I(1)
7.67 (0.0002)	5%	2.62	3.79
	10%	2.26	3.35

Source: Author's calculations. Note: Critical values at $k=5$ is cited from Pesaran et al. (2001) table CI(III), case III (unrestricted intercept and no trend)

The estimated long run coefficients regarding trade and growth model are reported in table 4 which shows that employed labour force has a positive and but insignificant impact on real GDP. The positive impact regarding this variable is consistent with the findings of Harrison (1996) and Siddiqui and Iqbal (2005) while the insignificant result resembles the outcomes found by Das and Paul (2011).

Table 4: Estimated Long Run Coefficients using ARDL Approach

Regressor	Coefficient	Standard Error	T-Ratio [Prob]
C	3.5867	1.1481	3.1240 [.004]
Employed Labor Force	0.55294	0.37129	1.4892 [.148]
Gross Capital Formation	0.29741	0.11216	2.6517 [.013]
Trade Openness	1.1863	0.35654	3.3272 [.003]
Inflation	-0.19524	0.048290	-4.0432 [.000]
Interaction Term (TO x DFL) DFLTO	-0.040334	0.010864	-3.7125 [.001]
Dummy for Financial Liberalization Era	1.1424	0.34818	3.2810 [.003]

Source: Author's estimation based on Microfit 4.1.

In addition, gross fixed capital formation exhibits a positive and significant impact on real GDP. The magnitude of 0.29741 suggests that a 1% increase in gross fixed capital formation increases economic growth by around 0.297%. This

outcome highlights the importance of gross fixed capital formation in output growth of Pakistan. This result is also in line with the findings of Das and Paul (2011) and Shaheen et al (2013).

Inflation has a negative and significant impact on economic growth in the long run with a coefficient of -0.195. Trade openness has positive and significant effect on real GDP. This indicates that liberalization of trade has proved to be beneficial in enhancing economic growth in the long run. This positive impact of trade openness on economic growth is due to greater access to raw materials and production inputs, transfer of advance technologies, and improved resource allocation and greater competition. These findings are in line with empirical studies including; Yanikkaya (2003), Edwards (1992, 1998), and also provide support to the views of Chaudhry et al (2010).

The coefficient of trade openness interaction term with financial liberalization dummy is of much interest. The outcome of DFLTO shows that there is negative and statistically significant impact of trade openness on economic growth in post financial liberalization era. In other words if trade liberalization is implemented in post financial liberalization era then on average it will lead to decline economic growth by -0.04%

Financial liberalization dummy DFL appear as significant contributor to economic growth in the long run. The positive sign with DFL shows that flexible exchange rate era had a beneficial impact on economic growth in the long run.

Table 5: Error Correction Model Estimates

Regressor	Coefficient	Standard Error	T-Ratio
dC	0.66531	.26165	2.5428
dLNELF	-0.14184	.15777	-
dLNRGFCF	.055166	.028366	1.9448
dLNINF	0.3621E-3	.0092920	.038971
dLNINF1	0.036168	.0087453	4.1357
dLNT0	0.14408	.065352	2.2047

dLNT01	-0.16305	.057024	-2.8593
dDFLTO	-.0093791	.0028164	-3.3301
dDFL	0.21190	.078085	2.7137
ecm(-1)	-0.18549	.048735	-3.8061

Source: Authors calculations using Microfit 4.1.

Table 5 represents the error correction model and shows the error correction term is negative and significant.

Diagnostic Tests

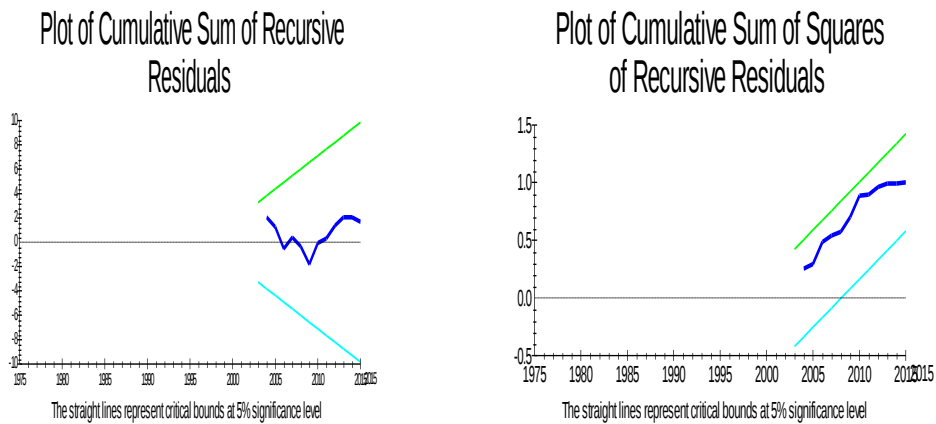
Results of various diagnostic tests reported in table 6 shows that the model investigating trade liberalization and economic growth does not suffer from basic econometric problems such as serial correlation, normality, functional form and heteroscedasticity.

Table 6: Diagnostic Tests

Tests	LM	Probability	F Statistics	Probability
Serial Correlation	3.4343	.064	2.3769	.135
Normality	.13156	.936	Not applicable	
Functional Form	.026374	.871	.016736	.898
Heteroscedasticity	.096909	.756	.092400	.763

Source: Authors calculations (Microfit 4.1).

CUSUM and CUSUMSQ plots show to tests the stability of the model. The results imply that the estimated model is stable during the study period because the plots of the two statistics lies within the critical bound values at 5% level.



Source: Result of model estimation

5 Conclusions

The study empirically analyzed the impact of trade liberalization on economic growth in Pakistan for the period 1974 – 2015 by using ARDL approach. The empirical results show that the overall impact of trade liberalization on economic growth is positive and statistically significant which indicates that trade liberalization augment (accelerate) economic growth in Pakistan. Employed labour force affects economic growth positively in the long run. However this positive impact is insignificant. Gross fixed capital formation significantly influences economic growth with consistent sign while inflation has affected economic growth negatively. The results also reveal that shifting from pre to post financial liberalization era has deteriorated the impact of trade openness on economic growth in Pakistan. The reason behind this negative impact of trade liberalization on GDP in post financial liberalization era is the depreciation of the domestic currency that lead to sharp increase in imports bill and hence decline in GDP. Although the study finds that trade liberalization after financial liberalization period affected economic growth negatively. However, if suitable trade and exchange rate policies are adopted than economic growth can be enhanced in post financial liberalization era. The government should take effective policies to improve not only exports composition and structure but also

exchange rate and foreign trade policy to stimulate economic efficiency and improve GDP growth in Pakistan.

References

- Adam, S. (1776). *An Inquiry In to The Nature And Causes Of Wealth Of Nation*, Methew & Co Ltd, London.
- Barro, R., and Sala-I-Martin, X. (1997). Technological Diffusion, Convergence, and Growth. *Journal of Economic Growth*, 2(1), 1-26.
- Chaudhry, I.S., Malik, A., and Faridi, M.Z. (2010). Exploring the causality relationship between trade liberalization, human capital and economic growth: empirical evidence from Pakistan. *Journal of Economics and International Finance*, 2(8), 175-182.
- Das, A. and Paul. B. P. (2011). Openness and growth in emerging Asian economies: Evidence from GMM estimations of a dynamic panel. *Economics Bulletin*, 31(3), 2219-2228.
- Din, M.U., Ghani, E. and Siddique, O. (2003). Openness and Economic Growth in Pakistan. *The Pakistan Development Review*, 42(4), 795-807.
- Edwards, S. (1992). Trade orientation, distortions and growth in developing countries. *Journal of Development Economics*, 39(1), 31–57.
- Edwards, S. (1998). Openness, Productivity and Growth: What do we Really Know *The Economic Journal*, 108(447), 383-398.
- Government of Pakistan, Economic Surveys Various Issues (1974-1975 to 2015-2016), *Ministry of Finance, Islamabad*.
- Grossman, G., and Helpman, E. (1990). Comparative Advantage and Long-Run Growth. *The American Economic Review*, 80 (4), 796-815.
- Greenaway, D., Morgan, W. and Wright, P. (2002). Trade liberalisation and growth in developing countries. *Journal of Development Economics*, 67(1), 229-244.
- Harrison, A. (1996). Openness and growth: A time-series, cross-country analysis for developing countries. *Journal of Development Economics*, 48(2), 419-447.

- Heckscher, E. (1919). The Effect of Foreign Trade on Distribution of Income. *Ekonomisk Tidskrift*, 21, 497-512. Translated as chapter 13 in American Economic Association.
- Hye, Q. M. A., Lau, W. Y., and Tourres, M. A. (2013). Does economic liberalization promote economic growth in Pakistan? An empirical analysis. *Quality & Quantity*, 48(4), 2097-2119.
- Ohlin, B. (1933). *Interregional and International Trade*, Harvard University Press.
- Pesaran, M. H., Smith, R. J. and Shin, Y. (2001). Bound Testing Approaches to the Analysis of Level Relationships. *Journal of Applied Econometrics*, 16(3), 289-326.
- Ricardo, D. (1817). On the Principles of Political Economy and Taxation, Johan Murray Albemarle Street Ltd, London.
- Rivera-Batiz, L. A. & Romer, P.M. (1991). International trade with endogenous technological change. *European Economic Review*, 35(4), 971-1001.
- Rodriguez, F., & Rodrik, D. (1999). Trade Policy and Economic Growth: a Skeptic's Guide to the Cross-National Evidence. *NBER Working Paper 7081*.
- Santos-Paulino, A., and Thirlwall, A. P. (2004). The Impact of Trade Liberalization on Exports, Imports and the Balance of Payments of Developing Countries. *The Economic Journal*, 114 (February), F50–F72.
- Shahbaz, M. (2012). Does trade openness affect long run growth? Cointegration, causality and forecast error variance decomposition tests for Pakistan. *Economic Modelling*, 29(6), 2325-2339.
- Shaheen, S., Ali, M. M., Kauser, A. and Ahmed, F. B. (2013). Impact of Trade Liberalization on Economic growth in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 5(5), 228-240.
- Siddiqui, A. H. and Iqbal, J. (2005). Impact of Trade Openness on Output Growth of Pakistan: An empirical investigation *Market forces*, 1(1).

- Wacziarg, R. (2001). Measuring the Dynamic Gains from Trade. *The World Bank Economic Review*, 15(3), 393-429.
- World Development Indicators available at <http://databank.worldbank.org> (accessed multiple times)
- Yanikkaya, H. (2003). Trade openness and economic growth: a cross-country empirical investigation. *Journal of Development Economics*, 72(1), 57-89.