

## **CONTRIBUTION OF EXPORTS IN ECONOMIC GROWTH: A CASE OF PAKISTAN**

**Prof Dr Abdul GhafoorAwan<sup>1</sup>, Saima Bibi<sup>2</sup>**

*ABSTRACT-The objective of this research paper is to analyze the contribution of exports in Economic growth in Pakistan. For this purpose, we used time series data for the period of 1980-2015. We checked the impact of three independent variables; exports, imports and FDI on dependent variable GDP by using ARDL and VECM approaches. We applied ADFs Unit Root test to check stationarity. Our results show that Export and FDI have positive and significant impact on GDP while import has negative significant impact on GDP in the long run and short run.*

**Key words:** Exports, Imports, FDI, GDP growth rate.

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1. Dean, Faculty of Management Sciences, Institute of Southern Punjab.

[ghafoor70@yahoo.com](mailto:ghafoor70@yahoo.com). Cell # +0923136015051.

2. M.Phil Scholar, Department of Economics, Institute of Southern Punjab

[softkainat501@gmail.com](mailto:softkainat501@gmail.com).

## **1. INTRODUCTION:**

In this era of globalization every country whether it is developed or developing wants to maximize its level of growth. Countries applied different strategies to uplift its level of economic growth. Export is one of the varieties through which a country tries to achieve its desired level of GDP. It is a point of debate between economists whether export really helpful for those countries which want to achieve target level of GDP growth. Neo-classical growth theories are in favor of export-oriented economic growth. According to them export shows significant and positive impact on economic growth. In contrast, some economists say that export shows long run relationship with economic growth of the country and in short run, it has no significant effect on the economy.

One can also find much historical evidence of the countries that got their desired level of economic progress through export promotion. We have very first examples of Germany that initiated its exports led growth in 1950 and the second country was Japan that started this policy in 1960. While import substitution policy started in 1970. IMF and World Bank are also two important institutions that supported this idea. Asian tigers are also another example in the favour of export led growth. China started following this policy in 2000 and made tremendous growth in its economic growth since then. It is now prevailing concept that export not only contribute in earning foreign exchange but also equally beneficial for the creation of more jobs inside the country.

### **1.2 Objectives of the study:**

The study consists of following objectives:-

- To check relationship between export and Gross Domestic Product (GDP) in Pakistan.
- To examine the relationship between economic growths, exports and imports.
- To measure the impact of exports and imports on economic growth of Pakistan.
- To analyze the impact of FDI on economic growth in Pakistan.

### **1.3 Scope of study:**

Different Economic policies show the positive impact of export on economic growth. Different countries are formulating different strategies to increase economic growth through exports. Thus, there is a dire need to conduct a study on exports to measure its impact on economic growth. The results of this study will be beneficial for researchers, academicians and policy makers equally.

## **2. REVIEW OF LITERATURE:**

Different studies on the relationship between exports and GDP growth have shown different results and we briefly discussed them in the following: -

Fatimah and Qayyum (2018) conducted research on the role of export in economic growth in Pakistan. In this research they check whether export can boost the economy of Pakistan. They take 46-year time series data from 1971- 2016 and their empirical results show that increase in exports had significant impact on Pakistan's economy. Which means it shows positive direction to economy.

Ekanayake (1999) also conducted the study on export and shows the growth of economy in Asian countries. In his research, he selected eight Asian

countries including Pakistan. He uses data of 37 years from 1960 to 1997. His study showed various results for various countries. In view of Pakistan he found bidirectional causal relationship between export and GDP growth.

Shirazi, Manap conducted study in 2004 to ascertain relationship between export and economic growth in Pakistan. They check whether or not exports lead to boost the economy of Pakistan. They used 43-year data from 1960 to 2003. They concluded that export had positive relationship with GDP in the long run.

Raza (2017) study pointed out the causality between exports and economic growth in Pakistan. He used econometric techniques Toda and Yama moto Granger causality and co integration test. He used 48-year data from 1967 to 2015 and source of data was world development indicators. The empirical effects of Granger causality show that there is unidirectional relationship between export and GDP growth rate in Pakistan.

Najid, Arslan and Katarina (2002) worked for the Pakistan and Europe economy to show the contribution of export and growth of economy. In their work they used data of 35 years from 1977 to 2012. They take value of GDP as dependent variable and export as independent variable. Different econometric techniques were used and at the end they concluded that export is beneficial both Pakistan and Europe countries.

Anwar and Sampath (1997) took a sample of 96 countries to study the relationship between export and GDP growth. They used time series data from 1960-1992. Their results show that there is one-way causation between exports and GDP in eight sampling countries. While the causation regarding GDP to exports is found only in nine countries which shows the positive relationship between these variables.

Iqbal, Hameed and Devi (2012) study the same topic by taking 50 years' data from 1960 to 2009. Their study uses different econometric techniques to check relationship between export and growth in Pakistan. The outcomes of their investigation show the one-way causation from GDP to exports.

Awan (2014) studied the causes of US economic slowdown. He revealed that growing imports and declining exports were the two reasons for US economic growth. The US focused on the growth of service sector and ignored manufacturing sector to reduce environmental hazards and the result was that the GDP growth was slow, causing huge deficit in international trade.

Awan (2015) also investigated economic growth of China. He argued that China opened economy for foreign investment and focused on expansion of manufacturing sector. It caused transfer of technology and capital from the United States and European Union. In this way, China did not only produce surplus goods and services but also was able to reduce unemployment rate to historically low. It was proved from the results of this study that exports are the engine of economic growth and countries particularly developing countries should focus on its promotion through fiscal incentives and developing infrastructure.

Mujahid and Noman (2016) conducted research on trade to show its effect on Pakistan economy. They take 44-year data from 1971 to 2013. In their study they selected variables like GDP, export, import and FDI. They applied ARDL approach and co integration technique. Their results show equilibrium adjustment in long and short run. They viewed Pakistan exports can be increased by getting removed trade barriers, export quotas market

access. Moreover, favorable exchange rate also helped in improving the exports of the country, the concluded.

### **3. RESEARCH METHODOLOGY:**

#### **3.1 Nature of Study:**

This study is quantitative in nature and we will use quantitative method to analyze the data.

#### **3.2 Type of Data:**

Time series data is used in this study.

#### **3.3 sample of Study:**

This research work consists of 35 years' data ranging from 1980 to 2015.

#### **3.4 Selected Variables:**

We have used four variables like Export, FDI, GDP and Import. GDP is taken as dependent variable while export, import and FDI are used as explanatory variables.

#### **3.5 Econometric Model:**

In this study we used multiple regression analysis to analyze relationship between independent and dependent variables, which have shown in the following equation: -

$$GDP_i = \beta_0 + \beta_1 (EXP)_i + \beta_2 (IMP)_i + \beta_3 (FDI)_i + \epsilon_i$$

Where GDP is the dependent variable,  $\beta_0$  is the intercept,  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are the slopes of EXP, imports and FDI. and  $e$  is an error or residual term used in this model.

#### **3.6 Hypothesis of study:**

The hypothesis of this study are given as under:-

- H0: Export does not have impact on GDP growth rate in Pakistan.

- H1: Export does have impact on GDP growth rate in Pakistan.

### 3.7 Analytical Techniques:

We have applied the following statistical techniques to analyze data:

- 3.6.1. Descriptive statistics.
- 3.6.2. ADF’s Unit Root Test.
- 3.6.3. ARDL Model.
- 3.6.4. Error Correction Model.
- 3.6.5 E-View Software.

## 4. DATA ANALYSIS:

### 4.1 Descriptive statistics:

The results of descriptive statistics are given in Table 1:

Table 1: Results of Descriptive statistics

	LNGDP	LNEXPORT	LNIMPORT	LNFDI
Mean	1.40479	1.82131	1.517185	-0.43632
Median	1.576825	1.862378	1.578071	-0.48305
Maximum	2.323926	3.510507	3.701112	1.299735
Minimum	-0.57264	-1.02157	-2.12619	-2.27627
Std. Dev.	0.651998	1.100077	1.239475	0.821175
Skewness	-1.29319	-0.45097	-0.87746	0.054225
Kurtosis	4.282613	2.546878	4.118318	3.099986
Jarque-Bera	12.5017	1.528227	6.495514	0.032638
Probability	0.001929	0.465747	0.038861	0.983813
Sum	50.57243	65.56716	54.61867	-15.7077
Sum Sq. Dev.	14.87855	42.3559	53.77042	23.60149
Observations	36	36	36	36

Table 1 shows descriptive stat of selected variables. The results show that mean value of Export (1.82) is greater than mean value of GDP (1.40) and the mean value of Import (1.51). while FDI shows negative impact on GDP. The

higher value of Export shows that GDP of country increases when Export increases.

#### 4.2 ADF' Unit Root Test:

The results of Unit Root test are shown in Table 2:

Table 2: Results of Unit Root Test of selected variables

Variables	At level p values	At 1 <sup>st</sup> difference p value	Order of integration
GDP	0.0056		I(0)
EXPORT	0.0000		I(0)
IMPORT	0.0000		I(0)
FDI	0.1226	0.0002	I(1)

Table 2 shows the results of unit root test. The results reflect that GDP, Export, and Import got stationary at level but FDI is stationer at 1<sup>st</sup> difference. Thus we can use the ARDL and ECM model for analysis because the variables of the study are stationary at different levels.

#### 4.3 ARDL Approach:

The results of ARDL model is shown in table 3:

**Table 3: Results of ARDL Model**

Dependent Variable: LNGDP				
Method: ARDL				
Date: 06/22/19 Time: 12:53				
Sample (adjusted): 1984 2015				
Included observations: 32 after adjustments				
Maximum dependent lags: 4 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (4 lags, automatic): LEXPORT LNIMPORT LNFDI				
Fixed regressors: C				
Number of models evaluated: 500				
Selected Model: ARDL(4, 0, 1, 3)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNGDP(-1)	-0.05449	0.187241	-0.291	0.774
LNGDP(-2)	-0.18244	0.173595	-1.05095	0.3058
LNGDP(-3)	-0.1705	0.17036	-1.00083	0.3289
LNGDP(-4)	0.286081	0.163779	1.746746	0.096
LNEXPORT	0.024594	0.096125	0.25586	0.8007
LNIMPORT	0.160496	0.097955	1.638464	0.117
LNIMPORT	-0.18224	0.104064	-1.75125	0.0952
LNFDI	0.192733	0.1886	1.021915	0.319
LNFDI(-1)	-0.16838	0.194402	-0.86616	0.3967
LNFDI(-2)	-0.13161	0.18998	-0.69274	0.4964
LNFDI(-3)	-0.38573	0.180093	-2.14183	0.0447
C	1.266922	0.422	3.002188	0.007
R-squared	0.554048	Mean dependent variable		1.324616
Adjusted R-squared	0.308775	S.D. dependent variable		0.645173
S.E. of regression	0.536397	Akaike info criterion		1.87211
Sum squared residuals	5.754425	Schwarz criterion		2.421761
Log likelihood	-17.9538	Hannan-Quinn criterion		2.054304
F-statistic	2.258901	Durbin-Watson statistic		1.9536
Prob(F-statistic)	0.054604			
*Note: p-values and any subsequent tests do not account for model selection.				

The results in table 3 shows that Export value is (0.024) that has significant positive relationship with GDP. It means if one-unit increase in the exports it will likely to increase GP by 28 percent. The value of import is (-0.18) which shows if one unit increases in import it will cause decrease in GDP by 18 percent in the long run. Similarly, the value of FDI is minus (-0.16), shows negative relationship with GDP. It means if one unit increases in GDP it will likely to cause decrease in GDP by 16 percent in the long run. The cause of

negative effect of FDI is that most of foreign direct investment is made in speculative activities due political instability. The  $R^2$  value is 55 which means that 55 percent variations in the dependent variable is due to independent variables in the long run. However, its adjusted value is 30, which low dependency of dependent variable on independent variables in the long run.

#### 4.4 Optimal Lags:

**Table 4: Optimal Lags**

Variables	Optimal lag
Gross domestic product	4
Export	0
Import	1
FDI	3

Table 4 shows optimal lags of different variables. It shows GDP has 4 lags in the model, Export shows zero lag in the model, Import shows one lag while the FDI shows 3 lags in the model.

#### 4.5.: Error Correction Model:

The results of Error Correction Model are shown in Table 5:

**Table 5: Results of ECM**

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.20437	0.111648	-1.83049	0.0838
C(2)	-0.39806	0.204009	-1.95118	0.0668
C(3)	-0.33107	0.201145	-1.64594	0.1171
C(4)	-0.28168	0.18435	-1.52795	0.1439
C(5)	-0.54287	0.284528	-1.90797	0.0725
C(6)	-0.44919	0.211065	-2.12822	0.0474
C(7)	-0.14323	0.129254	-1.10815	0.2824
C(8)	-0.32101	0.13361	-2.40261	0.0273
C(9)	-0.20073	0.14118	-1.42183	0.1722
C(10)	-0.12423	0.118963	-1.04425	0.3102
C(11)	-0.02522	0.209078	-0.12064	0.9053
C(12)	-0.0565	0.194582	-0.29038	0.7748
C(13)	-0.25095	0.198687	-1.26303	0.2227
C(14)	-0.07387	0.120983	-0.61057	0.5491
R-squared	0.590684	Mean dependent variable	-0.01124	
Adjusted R-squared	0.295067	S.D. dependent variable	0.792897	
S.E. of regression	0.665718	Akaike info criterion	2.323735	
Sum squared resid	7.977254	Schwarz criterion	2.964995	
Log likelihood	-23.1798	Hannan-Quinn criterion	2.536295	
F-statistic	1.99814	Durbin-Watson statistic	2.052898	
Prob(F-statistic)	0.086496			

Table 5 shows ECM model results. The ECM model results shows 59% variation in dependent variable is due to independent variables in the short run because the value of  $R^2$  is (0.59). However, adjusted  $R^2$  value is 0.29 which is low. Similarly, Durbin Watson ECM result is (2.052), which also shows positive relationship between Export and GDP.

**5.FINDINGS OF STUDY:**

According to results of this study, the Export has positive and significant effect on GDP in Pakistan, so the Economic growth increases over time. This increase in GDP is due to increase in exports of primary goods like

yarn, cotton, cloth and rice, etc. Whereas the foreign direct investment and import shows negative impact on DGP of Pakistan. This is because of the following reasons:-

- Political instability
- Small size of local market
- Exports of primary goods
- High Tax rate.
- High inflation rates

However, our findings show that there is a positive relationship between export and GDP growth rate in Pakistan.in the long run and short run.

## **6. CONCLUSION:**

The aim for this study was to find out relationship between exports can economic growth in Pakistan. We used time series data of 35-year data from 1980 to 2015 to study long run and short run relationship between these two variables. The results drawn by using ARDL and ECM model. We can conclude that exports have positive impact on economic growth in the short run and long run. However, imports and FDI have negative relationship with GDP in Pakistan. But the low value of adjusted R<sup>2</sup> shows that exports has about 30 percent positive impact on economic growth. The reason is that Pakistan is exporting primary goods which fetches low prices in international markets. So Pakistan should produce high tech product to earn high amount of foreign exchange. However, it is exporting luxury goods which are costly and involve heavy foreign exchange. This is the reason imports always exert significant pressure on Pakistan foreign exchange researve. FDI also has negative effect on Pakistan's economy due to its short duration its use in speculative and non-productive activities.

## **7. RECOMMENDATION:**

The recommendation of this study are given below: -

- ▶ Pakistan must boost export to increase GDP growth rate. Those commodities should be produced which have export potential. The market size for exports can be increased by improving long term relationship with other countries. The improved human capital can also boost the exports of domestic goods.
- ▶ Government should make such policies which have positive impact on productivity like education sector in which primary, secondary and technical education are more important. As human capital has direct connection with productivity so we Pakistan must focus on its development. Government should allocate sufficient budget for development of human capital.

**REFERENCES:**

- Ahmed, J., and Harnhirun (1996) Co-integration and causality between export and economic growth: Evidence from ASEAN countries. *Canadian journal of Economics* 24, special issue(April), 413-416
- Ahmed, Q.M, Ms and S. Alam(2000) Economic Growth, Export and External debt causality: The case of Asian countries. *The Pakistan development review* 39:(4):591-608
- Akbar , M., and Z.F Naqvi(2000) Export diversification and structural dynamic growth process: The case of Pakistan. *The Pakistan development review* 39 (4): 573-589.
- Ali, sheikh, shah and sheik (2017). Relationship between export and economic growth in Pakistan, case studies journal, Vol 6 (4): 22017.
- Al-yousaf, y.k, (1997) Exports and Economic growth: Some empirical evidence from the Arab and gulf countries. *Applied Economics* 29:(6): 693-697
- Anwar,Muhammad S.,and R.K.Sampath (2000) Exports and Economic growth. *Indian Economic Journal* 47: (3): 79-88
- Anwar.S.M, sampath.R. K (1997) Export and economic growth, presented at western agricultural economics association, *annual meeting July 13-16*.
- Ali, and Khan (2016) Evaluating the importance of exports and its determinants in economic growth of Pakistan: An empirical analysis from ARDL approach, *Global business and Management Research*: 4.
- Awan, A. G. (2013). Relationship between environment and sustainable economic development: A theoretical approach to environmental problems. *International Journal of Asian Social Science*, 3(3), 741-761.

- Awan, A. G., & Anum, V. (2014). Impact of infrastructure development on economic growth: A case study of Pakistan. *International Journal of Economics and Sustainable Development*, 2(5), 1-15.
- Awan, A. G., & Khan, R. E. A. (2014). The Enigma of US Productivity Slowdown: A Theoretical Analysis. *American Journal of Trade and Policy*, 1(1), 7-15.
- Awan, Abdul Ghafoor (2014). Environmental challenges to South Asian Countries, *Asian Accounting and Auditing Advancement*, Vol 3 (1):84-103.
- Awan, Abdul Ghafoor (2015). Analysis of the impact of 2008 financial crisis on the economic, political and health systems and societies of advanced countries. *Global Journal of Management and Social Sciences*, Vol 1(1):1-16.
- Awan, Abdul Ghafoor (2016). Wave of Anti-Globalization and Capitalism and its impact on world economy, *Global Journal of Management and Social Sciences*, Volume 2 (4): 1-21
- Awan, Abdul Ghafoor (2015). State versus Free Market capitalism: A comparative Analysis, *Journal of Economics and Sustainable Development Vol 6 (1):166-176*
- Awan, Abdul Ghafoor (2014). Brazil's innovative Anti-poverty & inequality Model, *International Journal of Development and Economic Sustainability*, Vol 2 (5): 45-55.
- Awan, Abdul Ghafoor (2012). Human capital: Driving Force of Economic growth in selected Emerging Economies, *Global Disclosure of Economic and Business*, Vol 1(1): 09-30

- Awan, Abdul Ghafoor (2013). China's Economic Growth-21<sup>st</sup> Century Puzzle, *Global Disclosure of Economics and Business, Vol 2 (2):9-20*
- Awan, Abdul Ghafoor, Afroz Umair (2019) Impact of Globalization on Poverty in Pakistan, *Global Journal of Management, Social Sciences and Humanities Vol 5 (4):624-664.*
- Awan, Abdul Ghafoor (2012) Emerging versus Aging Economies: A Comparative study of Advanced and Emerging Economies, *International Journal of Management Research and Emerging Sciences, Vol.2 (1):45-65.*
- Awan, Abdul Ghafoor (2015). Comparative analysis of the literature on Economic growth in the perspective of Advanced and Emerging economies, *Science International Lahore, Vol 27 (3).*
- Awan, Abdul Ghafoor (2011). Changing World Economic and Financial Scenario, *Asian Accounting and Auditing Advancement, Vol 1 (1):146-175.*
- Awan, Abdul Ghafoor (2014) Shifting Global Economic Paradigm, *Asian Business Review, Vol 4 (3):113-118*
- Bahamani-Oskooee, M., and J. Alse (1993) Export growth and economic growth; An application of co-integration and error Correction modelling, *Journal of developing areas 24(4):535-542.*
- Balassa, B. (1978) Exports and economic growth: further evidence. *Journal of development economics 5, 181-189.*
- Balassa, B. (1980) The process of industrial development and alternative development strategies. *Princeton essays in international finance 141.*

- Princeton, Nj: Department of economics, Princeton University.
- Bosupeng.M (2015) The export led growth hypothesis: new evidence and implications. *University of Botswana*.
- Dickey, D.A, and W.A.Fuller (1979) Distribution of the estimation for autoregressive time series with a unit root. *Journal of American Statistical Association* 79 355-367.
- Ekanayake.E.M (1999) Export and economic growth in Asian developing countries, *Journal of Economic Development*, Vol 24(2).
- Fatemah and Qayyum (2018) Modeling the impact of exports on the economic growth of Pakistan; *Pakistan institute of development economics*.
- Faridi (2012) Contribution of agricultural exports to economic growth in Pakistan, *Pak.j. comer, social science* Vol 6 (1) 133-146
- Gharthey, E. E. (1993) Causal relationship between Exports and Economic growth: some empirical evidence in Taiwan, Japan and U.S. *Applied economics* 25,1145-1152.
- Granger, C.W.J(1969) Investigating causal relationship between economic models and cross spectral models. *Econometrics* 37, 424-438.
- Hassan, Jahanze, Shahid (2014). Factors affecting foreign direct investment in Pakistan, *International Journal of Business and Management Review*, Vol 2 (4):21-35.
- Hussain (2014) Economic growth, Exports and Imports in Pakistan: Granger causality analysis, *American university in the Emirates*, Vol 13.
- Iqbal. A, Hameed. I and Devi.K (2012) Relationship between export and economic growth of Pakistan, *European journal of social sciences*, Vol.32 (3): 453-460.

- Kauser Kiren, Awan, Abdul Ghafoor (2018). The Role of Globalization in employment generation: Evidence from Pakistan, *Global Journal of Management, Social Sciences and Humanities, Volume 4(1)*.
- M (2002) Export and economic growth in Pakistan an empirical analysis *Journal of managerial sciences Vol 5 (2)*.
- Mueen-ud-Din, Muhammad,. Awan, Abdul Ghafoor (2015). The impact of Foreign Aid on Pakistan's Economy. *Science International Lahore, Vol 27 (4):3455-3459*
- Ramsden,I.(1989) Asia's next giant: South Korea and late industrialization. New York: *Oxford university press*.
- Sallahuddin, Noor Ul Ann, Awan, Abdul Ghafoor (2017). Impact of political instability on Pakistan's Economic growth, *Global Journal of Management, Social Sciences and Humanities, Vol 3 (4)*.

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## CONTRIBUTION OF AUTHORS AND CONFLICT OF INTEREST

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This research work was carried out in collaboration between two authors.

**Author 1: Prof. Dr. Abdul Ghafoor Awan** did his first Ph.D in Economics from Islamia University of Bahawalpur-Pakistan and second in Business Administration from University of Sunderland, U.K. He contributed in this research paper by way of guiding author first about title selection, data analysis and statistical techniques. He also edited and gave final shape to the manuscript. In order to know about his other fields of research please look at his Web of Science Researcher ID  $\square$  [M-9196 2015](#) or his [profile at Google scholar](#).

**Author 2: Saima Bibi** has completed her M.Phil in Economics from Department of Economics, Institute of Southern Punjab. She designed this study, collected required data and analyzed it. She wrote first draft of this manuscript under the supervision of author 1. She can be reached at her Email ID: [softkainat501@gmail.com](mailto:softkainat501@gmail.com).

Both authors read the manuscript carefully and declared no conflict of interest with any person or institution.

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