

Review

Impact of Foreign Direct Investment, Imports and Exports of Goods and Services on GDP of Pakistan: An Empirical Evidence with Particular reference to CPEC

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Abstract

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In this paper we tried to explore the impacts of different factors made under China Pakistan Economic Corridor (CPEC). We have used different variables and have to estimate the impact of these variables upon the GDP of Pakistan. Economic growth measured in GDP by using time series data over the period 1976-2015 for thirty nine years. The purpose of the research is to identify the impact of different factors on gross domestic product (GDP) whether these selected independent factors impacts of Gross domestic product or not. The research is conducted to construct an enhanced description of dependent and independent variables and to interpret the relationship between them. Multiple regression models is used to investigate the effect of five selected independent variables on the GDP of Pakistan. We conclude that the impact of Foreign direct investment on GDP of Pakistan is statistically insignificant which shows that on average foreign direct investment has been not a significant contributor in Pakistan's economic growth during long run period under study.

Keyword: GDP, Pakistan, FDI, CPEC, MNCs

INTRODUCTION

A country's economic growth is measured by increase in the number of goods and services in each successive time period (Hafiz Sohail Younus, 2014). The increase in the economic productivity of a country with regards production of goods and services reflects its economic growth while a reverse of this process refers to economic decline of any country. It was in view of this that foreign direct investment (FDI) has been seen as being influence for growth (RC Feenstra, 1994). Pakistan has had mixed experience with regards FDI. It has never been a darling of foreign investors due to several factors which include poor policies, crumbling infrastructures and lengthy processes. However, despite these factors it has a long history of FDI. Siemens, ICI, Unilever, Shell and Imperial Tobacco Company were some of the early foreign investors in Pakistan (Javaid 2016). The 50s and 60s saw growth of in Pakistan's economy however, during this period the focus was on domestic development and

the early FDI policies focused upon keeping majority of stakes with the domestic concerns (Sahoo 2006). During the initial decades, the gap between the saving rate in Pakistan, which has gone below 15 percent and the investment encouraged Pakistan to go for its reliance upon foreign investment (Mughal, 2012).

In the era of 1960s a more liberal approach was adopted by the government for industrial development, which later paved way for the famous industrial revolution in the country. This approach saw liberalization of 24 key industries for private investment (Ashfaq H. Khan 1999). On one hand investment was being attracted in the industrial sectors but at the same time very little foreign investment was finding its way into services sectors like finance and banking (Zakaria, 2008). However, this policy of liberalization of economy was greatly discouraged by the policy of nationalization in 1970's. This policy which had been undertaken under the

slogan of socialism proved to be a great barrier for the development and growth of the economy and almost reversed the progress which had been made in the previous years (Ashfaq H. Khan 1999). However, this counterproductive policy was subsequently reversed in 1980's against the backdrop of the unsatisfactory performance of nationalized units and other institutions. And this decade saw the introduction of the concept of public-private partnership, where government of Pakistan resorted to the part auction of the already nationalized institutions. This decade also saw liberalization of control over exchange rates and special export processing zones with tax concessions were also introduced (Zakaria, 2008). The next decade saw further liberalization of the regulatory measures on FDI. The limitations over the capital mobility were eased and innovative concessions were offered to foreign investors (Javaid 2016). During this span, significant foreign investment was attracted in the sectors of infrastructure development and electricity generation. Lahore – Islamabad Motorway and IPPs are few examples of such endeavours. The advent of the 21st century saw introduction of charms to the foreign investors in the shape of privatization and de-regulation of economy (Zakaria, 2008). The IT and telecom sectors were opened up which attracted maximum foreign investments. The government further relaxed the procedural requirements for opening up of business by foreign companies and the entire country was opened up for establishment of new businesses.

Despite these bold steps there have been factors which have always discouraged FDI. The biggest one in this respect has been the law and order situation prevalent in the country since 2001. The other ones include malpractices, political instability, weak and crumbling infrastructure and poor provision of support services. However, the recent phenomenon in this sector is China-Pakistan Economic Corridor (CPEC), also termed as a game changer in the region. It is an economic corridor which consists of a combination of projects with an estimated cost of \$54 billion (Kiani 2016). This project aims at development of a trade link between Kashgar in China and Gawadar in Pakistan. The projects which will be undertaken under this project include development of a network of highways, railways, optical fiber along side power plants. The main funding for all the projects which are being undertaken under this corridor has been promised by the Government of China. The commitment of China for the same can be gauged from the fact that this corridor is part of China's vision of one belt, one road initiative and the same is the part of China's 13th five-year development plan.

Objectives of study

The objective of this study is to identify the impacts of different factors made under China Pakistan Economic

Corridor (CPEC) on GDP whether these selected independent factors impact on Gross Domestic Product (GDP) or not in Pakistan. Purpose is to conduct comparative study and analyze that which independent factor (FDI, exports of goods and services, imports of goods and services) influence most on GDP. To explore the factors which play an important role in GDP of Pakistan?

Hypotheses to be tested

The study focuses on testing the following hypotheses for Pakistan.

- H1= GDP depends on Gross National Expenditure.
- H2= GDP depends on Final Consumption Expenditure.
- H3= GDP depends on Exports of Goods and services.
- H4= GDP depends on Imports of Goods and services.
- H5= GDP depends on FDI.

MATERIALS AND METHODS

To identify the impact of five selected independent variables on the GDP in Pakistan, the data were taken from the World Bank Development Indicators 2015. Annual time series data covering the period 1976-2015 for past 39 years. The figures of the GDP were taken in millions of US dollar.

Methodology and models

In the study following empirical Multiple Regression Model is used to investigate the impact of five selected independent variables on the GDP in Pakistan. The analysis tool used for data analysis is SPSS 21 (Statistical Package for Social Sciences). Multiple regression was applied on data in order to check the impact of independent variables on dependent variable GDP. Results of all models are present in table 3.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

The study obtains the following best fit model:

$$GDP = 6.703 + 0.450 GNE + 0.583 FC Exp + 0.495 EGS - 0.610 IGS - 0.0000000000067 FDI$$

GNE = Gross National Expenditure

FC Exp = Final consumption expenditure

EGS = Export of goods and services

IGS = Import of goods and services

FDI = Foreign Direct Investment

From the analysis of this study, the value of F means the p value tell about the overall fitting of model that the model about the case of Pakistan is appropriate the best fit model because the value of the "F" have value, less than the 0.05. And the value of coefficient of determination R Square tell that in this study the about

Table 1. Summary of Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000 ^a	1.000	1.000	1.1040082

Table 2. Values of Coefficients of Regression

Model	Sum of Squares	df	Mean Square	F	P-Value
Regression	205543.596	5	41108.719	3.373E4	.000 ^a
Residual	41.440	34	1.219		
Total	205585.037	39			

Table 3. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	P-Value	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	6.705	2.057		3.260	.003		
FDI	-6.578E-13	.000	-.001	-.414	.682	.963	1.038
GNE	.450	.098	.480	4.605	.000	.001	1.835E3
Final consumption	.583	.114	.534	5.110	.000	.001	1.845E3
Exports	.495	.088	.016	5.642	.000	.743	1.346
Imports	-.611	.068	-.028	-8.969	.000	.598	1.673

100% of the variation in the GDP is explained by the Coefficient of regressions such as foreign direct investment (FDI), gross national expenditure, final consumption expenditure, export of goods and services, imports of goods and services.

Further the analysis results of this study also suggests that the value of Coefficient of Correlation R about 1.000 which means that GDP is highly positive with the gross national expenditure, final consumption expenditure, export of goods and services because the value of these Coefficient Regressions have positive sign such as β_1 equal to 0.481, β_2 equal to 0.584, β_3 have value of 0.016, but the GDP is highly negatively with the β_4 equal to -0.028 imports of goods and services and β_5 equal to -0.001 foreign direct investment (FDI).

The value of the Coefficient of regression of Gross National Expenditures $\beta_1 = 0.481$ which measure the slope of the line show that if the value of Gross National Expenditures increases by one unit, the estimated value of GDP increases as 48 percent. Further, the value of the Coefficient of regression of Final consumption expenditures $\beta_2 = 0.583$ which measure the slope of the line show that if the value of Final consumption expenditures increases by one unit, the estimated value of GDP increases as 58 percent. The value of the Coefficient of regression of Exports of goods and services $\beta_3 = 0.495$ which measure the slope of the line show that as the value of Exports of goods and services increases by the one unit, the estimated value of GDP increases as 49 percent. Further, the value of Coefficient of regression of Imports of goods and services $\beta_4 = -$

0.610 which is an intercept of the line indicate the average level of Imports of goods and services decreases by one unit, the estimated value of GDP decrease as 61 percent.

Comparative Discussion with respect to analysis of Pakistan

According to the results of this study with respect to GDP of Pakistan, this research indicates that the Gross National Expenditures, Final Consumption Expenditures, Exports of Goods and services depend on Gross Domestic Product of Pakistan. But Imports of Goods and services and FDI does not depend on it. Further, the study shows that in last decade the GDP of Pakistan increase due to increasing the investment in to the country and this inflow investment became the reason for increase in the exports of goods and services. But due to import of goods and services the GDP of the Pakistan decrease and due to increase the export of goods and services the GDP increase. Gross National Expenditure had a positive effect on the GDP. Further, the factor such as the Final consumption Expenditure had also a positive effect on the GDP in the Pakistan.

As the factors FDI not show any effect on the GDP of Pakistan, its means that due to the same factors such as booms blasts, uncontrollable system of the country, politics parties and instability in the prices of different goods, products, and services. The Foreign countries have not any interest in the country of Pakistan for

investment, so due to these reasons the intercept of the Pakistan Model shows the negative value.

RECOMMENDATIONS AND CONCLUSION

In the model, we have used different variables and have tried to gauge the impact of these variables upon the GDP of Pakistan. The coefficients of all the others statistical significant coefficient are positive as they were expected, however, the impact of foreign direct investment on GDP of Pakistan is less or not statistically significant which shows that on average foreign direct investment has been not a significant contributor in Pakistan's economic growth during long run period under study. Positive and significant impact of exports growth on GDP suggests that Pakistan should focus on growth of its export sector. At the same time the results suggest that absence of significant amounts of FDI during the period under study has also been one of the main reasons for the economic stagnancy of Pakistan, and measures for attraction of FDI in Pakistan should be taken immediately to improve Pakistan's economic strength. The model has further explored the impacts of FDI made under China Pakistan Economic Corridor (CPEC).

CPEC is an ambitious effort and offers a unique opportunity for Pakistan to become economically strong. Although our model hasn't presented revolutionary results due to the fact that investments under this corridor have just started pouring in and investments made in first year of CPEC i.e. 2015 are part of the data under examination; yet one can safely conclude that the promised injection of the investments under CPEC will be the energy booster for Pakistan's economy. It will truly prove to be a game changer for the people of Pakistan in terms of new opportunities leading to higher incomes and significant improvements in their living standards. At the same time Pakistan needs to look into the options of re-investment of FDI into Pakistan's economy so that the cycle continues to work for betterment of Pakistan's economy.

REFERENCES

- Ahamad MG, Tanin F, Ahmed ZU (2010). Does FDI intensify Economic Growth? Empirics from Bangladesh.
- Asghar N, Nasreen S, Rehman H (2011). Relationship between FDI and economic growth in selected Asian countries: A panel data analysis. *Review of Economics & Finance*, 84-96.
- Awe AA (2013). The impact of foreign direct investment on economic growth in Nigeria. *Journal of Economics and Sustainable Development*, 4(2), 112-132.
- Feenstra RC, Markusen JR (1992). *Accounting for Growth with New Inputs* (No. w4114). National bureau of economic research.
- Feenstra RC, Markusen JR (1994). Accounting for growth with new inputs. *International Economic Review*, 429-447.
- Javaid W (2016). Impact of Foreign Direct Investment On Economic Growth of Pakistan-An ARDL-ECM Approach.
- Jayakumar A, Kannan L, Anbalagan G (2014). Impact of foreign direct investment, imports and exports. *International Review of Research in Emerging Markets and the Global Economy (IRREM)*, 1.
- Jyun-Yi W, Chih-Chiang H (2008). Does foreign direct investment promote economic growth? Evidence from a threshold regression analysis. *Economics Bulletin*, 15(12), 1-10.
- Khan MA, Khan SA (2011). Foreign direct investment and economic growth in Pakistan: A sectoral analysis. *Working Papers & Research Reports*, 2011.
- Kim JU (2008). Economic growth and technology diffusion in developing countries. *The Korean Economic Review*, 24(2), 413-424.
- Kurtishi-Kastrati S (2013, April). The Economic Impact of Foreign Direct Investments in Macedonia. In *Proceedings of 20th International Business Research Conference, Dubai, UAE* (pp. 4-5).
- Mahate A (2018). Reforming the IMF to Increase FDI Led Economic Growth: The Case of Latin American and Caribbean Countries. *Management and Economics Research Journal*, 4(1), 3379.
- Mughal MY (2013). Remittances as development strategy: Stepping stones or slippery slope?. *Journal of International Development*, 25(4), 583-595.
- Mukhtar T, Zakaria M (2008). Budget deficits and interest rates: an empirical analysis for Pakistan. *J. economic cooperation*, 29(2), 1-14.
- Nguyena TQ, Tob NK (2017). Threshold effect in the relationship between foreign direct investment and economic growth: Evidence from ASEAN countries. *Asia Pacific J. Adv. Bus. Soc. Studies, Australia. ISBN, 978(0), 993656*.
- Qaiser Abbas SA, Nasir AS, Ullah HA, Muhammad AN (2011). Impact of Foreign Direct Investment on Gross Domestic Product (A Case of SAARC Countries). *Glo. J. Manag. Bus. Res.* 11(8).
- Qaiser Abbas SA, Nasir AS, Ullah HA, Muhammad AN (2011). Impact of Foreign Direct Investment on Gross Domestic Product (A Case of SAARC Countries). *Glo. J. Manag. Bus. Res.* 11(8).
- Sapienza E (2009). The interaction between Export and FDI: Central-Eastern Europe and EU15. *UniversitàdegliStudi di Foggia Quaderni DSEMS*, (13).
- Sweeney M (2010). Foreign direct investment in India and China: the creation of a balanced regime in a globalized economy. *Cornell Int'l LJ*, 43, 207.
- Tanin F, Ahmed ZU, Ahamad MG (2010). Does FDI intensify Economic Growth? Empirics from Bangladesh.
- Thilakaweera BHPK (2012). Economic Impact of Foreign Direct Investment in Sri Lanka. *Staff Studies*, 41(1).
- Younus HS, Sohail A, Azeem M (2014). Impact of foreign direct investment on economic growth in Pakistan. *World J. Fin. Econ.* 1(1), 2-5.
- Younus HS, Sohail A, Azeem M (2014). Impact of foreign direct investment on economic growth in Pakistan. *World J. Fin. Econ.* 1(1), 2-5.