



Determinants of Domestic Investment: An Evidence from Pakistan

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ARTICLE DETAILS	ABSTRACT
History Revised format: May, 2019 Available Online: Jun, 2019 Keywords Domestic Investment, Gross Domestic Product, Ordinary Least Square (OLS) and Pakistan	The study's main objective is to examine the determinants of Domestic Investment in Pakistan using the time series data for the era of 1985 to 2018 for the analysis. The Ordinary Least Square (OLS) Method outcomes show that the Gross Domestic Product (GDP) has positive and significant impact on Domestic Investment (DI). Furthermore, Consumer Price Index (CPI) and Financial Development (FD) have insignificant impact on Domestic Investment (DI) in Pakistan. The study suggests that when the increase in inflation the policy makers should also increase the Domestic investment and increase the performance of Financial Development institutions in Pakistan.

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1 Introduction:

Review of the literature has reported the association between total fixed capital investment and economic development. Gross Fixed Capital Investment (GFCF) is a factor of domestic investment. One of the study's significant goals is to include a theoretical context for the Gross Fixed Capital Investment determinants. Three methods can be calculated to: commodity flow, expenditure and financing approach. The gross fixed capital development comprises four forms of capital assets, viz. Equipment and machinery, furniture & fittings, construction and land renovation, and properties cultivated in the livestock and orchard business. Capital formation, along with consumption and net export and service, is a part of Gross Domestic product by revenue as a measurement of the rate of investment in the country. The definition suggests that society does not devote the entire of its existing development effort to the requirements and immediate demand for sale, but instead channels part of it towards the construction of capital goods (Jhingan, 2005). Capital formation stimulates production and promotes economic growth and development. This plays a significant role in improving the economy's development capacity and

regulates the growth of various economic sectors resulting in technological advancement (Pathania, 2013).

2 Literature Review

Salma et al attempted to analyze the determinants of investment in Pakistan by using co integration technique to check the long run relationship between domestic saving and domestic investment. There was no long run relationship because of capital mobility. If capital mobility is evaluated as an indicator of domestic investment it has demonstrated negative relation to economic investment. There are more possibilities of capital flow out of the country until trade is free. Gilal et al examined structural changes and economic growth in Pakistan. Time-varying methodology focused on Kalman Filter has been used to determine determinants of economic growth for Pakistan. It found that the development of gross fixed capital and remittances have a positive effect on economic growth, whereas inflation and gross national expenditure have a negative impact on productivity. Chand and Kumar (2004) investigated determinants of capital formation and its impact on agriculture growth and for this purpose an instantaneous equation model is employed for private and public investment and GDP agriculture variables. The rate of return on private investment and new farm holdings, Institutional credit supplied to agriculture and subsidies are significant determinants of private capital formation. Private investment increases with the increase in public investment but does not decrease with the fall in public investment. Danish and Akram investigated empirical analysis of the Factors of FDI in Pakistan and found that Gross domestic foreign investment has positive effect of Electric power consumption, Total external debt, Total debt service and Domestic gross fixed capital formation. Albiman and Suleiman (2016) examined that in Malaysia no long run connection presents among economic growth, export and import and causality affiliation of export ratio and economic development cause domestic investment. The impulse response of Economic Growth on depending time period is both positive and negative owing to the domestic investment, import and export shocks. Solarin and Shahbaz (2014) investigated the Natural gas consumption and economic growth: The part of foreign direct investment, capital formation and trade openness in Malaysia. ARDL bounds testing method, and combined co-integration technique is used to analyses the data. The consequence presented positive effect of foreign direct investment, Natural gas consumption, capital formation and trade openness on economy in Malaysia. Akkina and Celebi (2002) examined association of fixed investment in private and public sector in Turkey for the time period 1970-1996. A reformulation of neoclassical investment model had been tested. The findings were supporting the crowding out hypothesis and accelerator principle. Private investment was found as substitute of public investment. The lending rate had negative but insignificant effect on private fixed investment. Ajmair et al used an ARDL Bound Testing with General to Specific Approach to govern factors of economic growth in Pakistan. The factors which affect economic growth positively are Gross fixed capital formation and remittances while Consumer price index, gross national expenditures and domestic credit extended to private sector obstruct the long-run development procedure. Ahmad and Ahmad (2014) conducted a study of agricultural export on economic growth. Economics growth in Pakistan influence of agricultural and nonagricultural export. Labor force and exchange rate still at 1st modification while all other variables are fixed at level. Positive affect economic growth in agriculture exports, non-agriculture exports and gross fix capital formation and Labor force negatively affects economic growth

outstanding to low productivity of labor. Chani et al (2012) showed an empirical analysis of human capital formation and Pakistan's economic development. The variable investigated to check the openness of economic development in case of Pakistan are investment in human capital, investment in physical capital and labor force. The data used for analysis is from 1972-2009. ARDL model displays that there is a optimistic relationship of economic development with investment in physical and human capital and labor force. This paper suggest that government can increase output by investing in education and health of people and can also increase output by provide training to the labor. Lucky and Kingsley (2016) determined the factors of capital formation for Nigeria. Time series data was taken to find the propositions of capital formation determinants. Nigerian Gross Fixed Capital Formation (GFCG/GDP) was dependent variable while Broad Supply (M2/GDP), Credit to Private Sector (CPS/GDP), Gross National Savings (GNS/GDP), Commercial Banks Lending Rate, Exchange Rate (EXR), Inflation Rate (INFR), External Debt (EXTD/GDP), Public Expenditure (PEX/GDP), Government Revenue (GR/GDP), Terms of trade(TT/GDP) and Operating Surplus (OPS/GDP) were taken as independent variables. M2/GDP, GNS/GDP, EXR, EXTD/GDP, TT/GDP were affecting capital formation negatively and had insignificant impact while CPS/GDP, LR, INFR, PEX/GDP, GR/GDP and OPS/GDP affecting positively but insignificantly too. Stirboeck (2002) conducted a study for European regions to analyze the level of gross fixed capital formation. The consistent econometric results were found to get control over heteroscedasticity and potential endogeneity problems. The relative investment was as much lower as to diminish in accordance to size of area. A higher rate of unemployment, population growth, being a core zone, distance to the industrial hub, and trade liberalization raised the amount of expenditure. Yalez and Bokana (2018) investigated the effect of different macroeconomic indicators on gross fixed capital formation in eastern cape province of South Africa. The results show that there is positive and significant effect of different sectors like primary sector and secondary sector except lag of tertiary in short run and long run of Eastern Cape, South Africa. Ullah et al (2014) inspected the relationship among domestic investment, foreign direct investment and economic growth in Pakistan. The consequences display that there is a relationship between direct investment, foreign direct investment & economic growth and bidirectional causality between direct investment & foreign direct investment.

3 Data and Methodology

Time series data during 1985-2018 is used to get the required results of the study in the context of Pakistan. The econometric technique Ordinary Least Square (OLS) is applied to check the impact of independent variables such

CPI, FD, GDP on the dependent variable DI in this study. The mathematical model of the study is

$$DI = f(CPI, FD, GDP)$$

The econometric model is:

$$DI_t = \beta_0 + \beta_1 CPI_t + \beta_2 FD_t + \beta_3 GDP_t + \mu \text{ Whereas:}$$

DI= Domestic Investment

CPI= consumer price index

FD= Financial development GDP= gross domestic product

t = Time series

4 Results and Discussion Variance Inflation Factor (VIF)

Variance Inflation Factor (VIF) applied to check the multicollinearity in the data. If the values all the variables are less than 10 (according the rule of thumb) that predict multicollinearity not exit in this data.

Table:1 VIF results	
Variable	Centered VIF
CPI	1.118973
FD	3.80818
GDP	3.706145

Source: Software E-View 9

Outcomes of the VIF predict that values of all variables are less than 10. Findings show, multicollinearity not present in the data of the study.

Table 2: Auto-correlation			
Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	16.51958	P.Value	0.0000

Source: Software E-View 9

Serial correlation exists in the data and tackled by taking the lag of dependent variable. Consequences of the Breusch-Godfrey Serial Correlation LM Test reveal that auto exist in the data since the p-value is less than 5%.

Table 3: Heteroskedasticity			
Heteroskedasticity Test: White			
F-statistic	1.156137	Prob.value	0.3649
Obs*R-squared	10.28268	Prob. Chi Square(9)	0.3281

Scaled explained SS	5.526563	Prob. Chi- Square(9)	0.7862
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Source: Software E-View 9

Similarly, results of the White Test confirm that heteroskedasticity does not exist in the data because the p-value is also greater than 5%. **Regression Analysis**

Impact of independent variables on dependent variables is checked by the Ordinary Least Square (OLS). Coefficients tell about the strength and directions of the variables. Criteria of the decision making is taken on the behalf of the values of the R-square, adjusted R-square, P- value and Durbin-Watson statistics are used to check the overall fitness of the model, significance level, auto correlation in the data. Model is using the P- value to test the statistical hypotheses for accepting or rejecting in this study.

Table 4: Ordinary Least Square

Variable	Coefficient	Std. Error	t- Statistic	Prob.
CPI	0.00386	0.037967	0.101675	0.9197
FD	0.069407	0.246184	0.281933	0.7801
GDP	0.563561	0.134306	4.19611	0.0002
R-squared	0.987275	F- statistic	543.0801	
Adjusted R squared	0.985457	Prob(F- statistic)		0.0000
Durbin- Watson stat			1.036111	

Source: Software E-View 9 Note: Level of significance is 5%.

The outcomes of Ordinary Least Square (OLS) method show that there is no impact of Consumer Price Index on domestic investment because CPI is insignificant and also Financial Development have no effect on domestic investment in Pakistan. Gross Domestic Investment have positively and significantly impact on Domestic Investment, if 1 percent change in GDP means (0.563561) percent change in Domestic Investment in Pakistan.

5 Conclusion

The study's key aim is to explore Domestic Investment determinants in Pakistan. This study used the data from the period of 1985 to 2018 for the analysis. The study applies the Ordinary Least Square (OLS) Method for analysis. The findings show that the Gross Domestic Product (GDP) of the country has positive and significant impact on Domestic Investment (DI). Consumer Price Index (CPI) and Financial Development (FD) have insignificant and no contribution in Domestic Investment (DI) in Pakistan. The study suggests that when the increase in inflation the policy makers should also increase the Domestic investment and increase the performance of Financial Development institutions in Pakistan.

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