

The Effect of Gross Investment on Economic Growth of Palestine

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Abstract

The influence of gross investment on economic growth has been researched by many economists throughout the world, using different research methods at different times. However, these studies empirical results are mixed. This study is an attempt to provide empirical evidence concerning the impact of investment both public and private and some other independent variables such as foreign direct investment on economic growth in Palestine. The data used in this study is time series collected from the Palestinian Central Bureau of Statistics and Palestinian Monetary Authority covering the period between 2005 and 2020. The empirical results reveal that factors such as foreign direct investment and both private and public investment have positive and significant effects on economic growth. Finally, the study provides some useful recommendations based on this study implications.

Keywords: Investment, Economic Growth, Foreign Direct Investments, Positive Effect, Palestine.

Introduction

Gross capital formation consists of expenditures on the fixed assets of the economy. Investment is a key factor that determines economic progress in both developed and developing economies. Public and private investments have a significant role in the production functions by providing the required capital for economic growth and development. In literature, investment is generally defined as spending the acquisition of new plant, equipment and machinery. Spending on hospitals, houses, roads, and bridges also represent investment spending. All of these kinds of spending are considered physical investment or capital expenditure. For decades, economists have been trying to explain the country-specific and global factors contributing to economic growth. Investment as defined by economists is the the means of producing that are used to producing other goods. The major effect of investment in economic growth and development is resulted from the fact that it leads to public capital accumulation. By providing the required capital for development, private and public investment play a critical role in the production functions. Hence, investment is the cause and result of economic growth (Bayraktar, 2003). In general,

economists have agreed upon the positive effect of investment on economic growth. Still, they have not come to conclusion whether private or public investment has a superior impact on economic. Empirical evidence from all over the globe proposes that private capital is more fruitful than public investment. In developing economies, the majority of the labor force are unskilled or semiskilled with relatively low productivity. The Palestinian investment sector is one of leading factors in the process of the Palestinian economic growth and development. The investment share of Palestinian GDP accounted for 25% in 2021 compared with a ratio of 23.5% in year 2020. This sector is a major source of employment for the Palestinian labor force and a significant share of the contributes to the Palestinian Gross Domestic Product (GDP). Between 2005-2020. Palestinian investment sector has been expanding and rising over the last 15 years. Among the factors that contributed to the increasing investment share of GDP are: liberalizing foreign trade, privatizing the public sector, opening domestic markets for foreign direct investments, eliminating price distortions, and reallocating financial resources strengthening the capacity of the financial system to mobilize domestic savings and allocate financial resources (Bayraktat, 2003). The production components of the Palestinian economy that contribute to the Gross Domestic Product (GDP) in 2020 were as follows: Construction 4.5%, Financial Services 20.2%, Mining, Manufacturing, Water and Electricity 12.1%, Agriculture and Fishing 8.7%, Transport, Storage and Communications 5%. Brokerage 5.1% and GDP shrank by 1.1% in 2020. The aim of the this study is to investigate the impact of both private and public investment on economic growth in Palestine from 2005-2020. The aim of the this study is to investigate the impact of both private and public investment on economic growth in Palestine from 2005-2020..This study contributes to the literature by shedding light on the degree to which the Palestinian sector contributes to Palestinian GDP due to the limited number of studies in terms of impact of both private and public investment on economic growth in Palestine.

Literature Review

The relationship between economic growth and investment has been researched by many economists, using different models and techniques. Results of these studies were mixed and conflicting. Aschauer authors (1989); Jwan and James (2014); Blomstrom and Persson (1983) found that private investment, public investment, and foreign direct investment (FDI) have a significant positive effect on economic growth. Meanwhile, the studies of Karikari (1992); Devarajan et al (1996); Carkovic and Levine (2002), found no relationship or a negative relationship between investment and economic growth. The investment–growth relationship has been studied extensively. Aschauer (1989) studied through series of time series data the relationship between both private and public investment and economic growth. The results showed that public investment had a positive impact on the growth through its positive effect on labor productivity a private investment. Barro (1991) found that growth is negatively related to the GDP share of government consumption, but insignificantly related to the share of public investment. Hadjimichael and Ghura (1995) studied the impact of private savings and investment on economic growth in 41 sub-Saharan African countries from 1981 to 1992. They empirically evaluated the role of public sector in promoting investment and private savings. The main findings of their study was that an increase in private investment has a relatively large positive impact economic growth. Using data from 43 developing countries over 20 years, Devarajan et al (1996) showed that an increase in the government expenditure share has a positive and statistically significant impact on economic growth. Using a sample of 95 developing countries over the period 1970–90, Khan and Kumar (1997) investigated the

contribution of private and public investment to GDP growth. Their estimated model stated that public and private investment have differential effects on growth once other determinants of growth, such as human population growth, and technical progress, and capital formation are taken into consideration. Syed et al (2007) Used different econometric methods to investigate the investment–growth relationship in Korea, Singapore, and Taiwan. The study concluded that both private and public investment consumption have a positive effect on economic growth in all countries of the sample. Kandenge (2010) studied the effect of private and public investment on economic growth in Namibia from 1970 to 2005 period. The results showed that private and public investment have a positive and significant impact on economic growth in the short and long run. Jwan and James (2014) investigated the impact of private and public investment on economic growth in Iraq, using error correction and cointegration models and times series data from 1970 to 2010. The empirical results showed that public and private investment, oil revenue, and growth in the labor force all had a positive and statistically significant impact on Iraqi GDP). Nazmi and Ramirez (1997) analyzed the impact of public and private investment on economic growth. Both variables were identical on their influence on economic growth. Using cross country data, Easterly and Rebelo (1993) found a positive impact of investment in communication transportation on economic growth. Sanchez (1998) also found significant positive effect of infrastructure improvements on economic growth. However, Holtz and Schwartz (1995) argued that there is not significant evidence of infrastructure to GDP growth effect in a panel of U.S. state level data. Using a distributed lagged autoregression (ARDL) model, Tran and Le (2014) investigated the effect of investment on economic development in Vietnam between 1988 and 2012. Their study found that the short-term impact of public investment on economic growth has a positive influence on growth but is not statistically significant in the long run. Nguyen and Trinh (2018) provided persistent evidence for private and public investment impact on economic growth and development in Vietnam. Their results concluded that public investment improves GDP over time by encouraging private investment. Ahamed (2021) argued that unforeseen circumstance such as Covid-19 can also affect the public and private investments, thereby impairing the economic growth. Zou (2006) analyzed the relationship between private and public investment and economic growth for Japan and the USA. He concluded that both private and public investment have significant contribution to economic growth in Japan. However, the private investment seems to have a much more important role than public investment for the USA. Hsieh and Lai (1994) analyzed the relationship among per capita GDP growth rate, government expenditures and the ratio of private investment to GDP for G-7 countries. The study concluded that government expenditures have significant effect on the per capita GDP growth rate for Japan, UK, and Canada. However, government expenditures has insignificant impact for USA, France, Italy Germany. The private investment to GDP ratio has a significant effect on the USA, Canada, Germany, and the UK.

Methodology

Data Source

The data set utilized in this study was obtained from the Palestinian Monetary Authority and the Palestinian Central Bureau of Statistics

Hypothesis

The following hypotheses are examined in this paper

H0₁ There is no statistically significant effect at the level of ($\alpha \leq 0.05$) of GCF on economic growth in Palestine.

H0₂ There is no statistically significant effect at the level ($\alpha \leq 0.05$) of FDI on economic growth in Palestine.

Empirical Model Specification

The special data set used in this research for the period 2005 - 2020 was collected to analyze the impact of investment and foreign direct investment on economic growth in Palestine. The following regression equation will be estimated;

$$GDP = \alpha_0 + \beta_1 GCF + \beta_2 FDI + U_t$$

Data Analysis

Descriptive Statistics

Table 4.1

Descriptive statistics for the dependent and independent variables.

Variable		Mean	df	Standard Deviation	N
1	GDP	12,479,356250.0	2	2568938698.10	16
	GCF	2,900,618750.00	13	913690356.17	16
	FDI	1,127,043750.00	15	503410683.19	16

Test of Normality

Table 4.2

Shapiro-Wilk Test of Normality

Variable	Statistics	d.f	Sig.	FDI	P
GDP	0.910	16	0.116		0.000
GCF	0.952	16	0.591		0.036
FDI	0.961	16	0.791		0.000

Table 4.2 above shows one-sample Shapiro-Wilk normality test. Test results show the variables used in this study are normally distributed. Therefore, we cannot reject the null hypothesis that data for variables used follow normal distribution.

Correlation Test

Table 4. 3

Correlation estimates between variables in the research model

Variable	GDP	Std. Error	GCF	FDI	P-
GDP	1	537.625348			0.000
GCF	.965	.361	1		0.036
FDI	.602	.199	.245	1	0.000

Table 4.3 above displays important information on how the variables used in this study relate to each other. The correlation coefficients (r) can be considered to be a measure of the quality of the prediction of the dependent variables. Table 4.3 above shows correlation estimates between variables used in the research model. As shown in Table 4.3, there is a strong positive correlation between GDP and investment (R=0.965). Likewise, there is a positive correlation between GDP and Foreign Aid (R=0.602).

Econometric Estimation Results

Table 4.4

Model Summary

Model Summary										
Model	R	R ²	Adjusted Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig.	
1	.975	.951	.943	611243849.52	.951	0.000	2	13	<.001	1.370
Predictors:(Constant), FDI, GCF										
Dependent Variable: GDP										

From Table 4.4, it can be concluded that adjusted R² value indicates that about 94.3% of the changes in GDP is explained by foreign direct investment and investment. Durbin-Watson d = 1.370, where 0.562<d<2.220 (alpha = .005). Therefore, we can say that there is no automatic correlation in the regression data.

Table 4.5

Coefficients: Results of model estimation

Variable	Coefficient	Std. Error	t-Statistic	Standardized Coeff. Beta	P-value	Collinearity Statistics
(Constant)	4330428228.	5376253481	8.055		0.000	Tolerance VIF
GCF	2.482	.199	12.485	0.883	0.000	0.755 1.325
FDI	0.842	.361	2.333	0.165	0.036	0.755 1.325

Table 4.5 above shows the results of the regression. Investment has statistically significant impact on economic growth in Palestine. Investment improves productivity which leads to an increase in the economic growth in the long run. The results also showed that there is a positive and significant effect of foreign direct investment on economic growth in Palestine. Variance Inflation factor (VIF) is used for multicollinearity existence among the independent variables. In this case VIF equals 1.325, so the problem of multicollinearity does not exist.

Table 4.6 ANOVA

Variance analysis for impact of GCF, FDI on GDP

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.413E+19	2	4.707E+19	125.977	.000 ^b
	Residual	4.857E+18	13	3.376E+17		
	Total	9.899E+19	15			
a. Dependent Variable: GDP						
b. Predictors: (Constant), FDI, GCF						

Table 4.6 above shows the overall model significance. The F-statistic (125.977) with probability value is equal to 0.000, that is significant at 5% level of significance. This implies that the overall model is statistically significant and that the sample data provides that there is enough sufficient evidence to conclude that the presented research linear regression model fits the data well and provides a better fit to a dataset.

The estimated general line has given the best results, as follows:

$$\text{GDP} = -4330(\text{million}) + 2.482 \text{ GCF} + 0.842 \text{ FDI.}$$

Conclusions and Recommendations

The impact of investment on economic growth has been researched by many economists throughout the world, using different research methods. However, the empirical results in terms of the effect of investment on economic growth are mixed. To the best of my knowledge and belief, no previous studied have explored the impact of the independent variables used in study on economic growth in Palestine between the years of 2005 and 2020. This study is an attempt to provide an empirical evidence in relation to the impact of both public and private investment and some other independent variables such as foreign direct investment on economic growth in Palestine. This study contributes to the literature on investment and economic growth by examining the impact of investment on economic growth in an emerging economy, that is the Palestinian economy. The empirical results reveal that factors such as foreign direct investment and both public and private investment have positive and significant effects on economic growth. Finally, the study provides some recommendations and policy implications for the Government of Palestine. The research findings suggest that in order to accelerate economic growth in the emerging state of Palestine, the Palestinian authority needs to encourage and promote both domestic and foreign direct investment by offering tax exemption incentives for both domestic and foreign investors. The investment policy should be competitive and more transparent to attract foreign direct investment inflow as well as its sources.

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