Government Expenditures Determinants: An Empirical Study on Palestine

Omar A. Abdelrahman

Government Expenditures Determinants: An Empirical Study on Palestine

Omar A. Abdelrahman
Finance Department, Arab American University, Jenin, West bank, Palestine.
Corresponding Author's Email: omar.rahman@aaup.edu

Abstract
This study aims at empirically evaluating the relative significance of the public spending determinants in Palestine. To do so, time series data covering the period 2005-2020 is used. To investigate the nature of the relationship between Palestinian public spending and its determinants, a specific methodology is employed and Multiple linear regression (MLR) model is used. The empirical results show that the following explanatory variables are key determinants of public spending in Palestine: government revenues, foreign aid, and unemployment, respectively. Each of these determinates has the expected sign consistent with economic theory. Additionally, the determinants are statistically significant at 5% level of significance. This study suggests that the Palestinian Authority should diversify the revenue base of the country and rationalize public consumption spending by encouraging citizens to invest and making them aware of the benefits of directing savings towards investment. A further study needs to be carried out and include some other relevant variables that may explain more variation in government spending in Palestine.
Keywords: VAT, Inflation Rate, Palestine, Growth Rate, Government Expenditures.

Introduction
The term "Public expenditures" includes all government purchases of goods and services excluding transfer payments. States provides goods and services to the public in an attempt to allocate resources and distribute income efficiently. They intervene in the markets because markets fail to *provide public goods efficiently* without government's intervention. Over the years, the structure and size of the public sector regarding its expense have grown tremendously and continue to rise in almost every country (Musgrave 1989) in many economies. Fiscal policy that *increases aggregate demand directly through an increase in government spending* is typically called expansionary. Expansionary fiscal policy is an important means for boosting up GDP and stimulating economy. Two essential economic approaches that analyze the relationship between public expenditure and economic growth include Wagner's law and Keynesian hypothesis. Wagner argues that higher public spending is the usual outcome of economic growth. On the contrary, Keynes argues that public spending is not the result of economic growth, but

rather economic growth is a result of increased public spending, claiming that government spending is an exogenous variable in economic growth. This study aims at identifying the main determinants of government spending as an effective tool of fiscal policy in Palestine. It is an attempt to investigate the extent of policy's success in achieving economic growth and identifying the obstacles that stand on the way of achieving its economic objectives.

The public expenditures in Palestine general budget are divided into the following two categories:
1) Current expenditures: amount for more than 87.8% of total expenditures, including recurring expenditures; such as, salaries, wages, operating expenses, transfer payments, regular capital expenditures and net lending as well as government daily expenses.
2) Developmental expenditures: account for 12.2% of total expenditures. They are expenditures that the government spends to expand production; such as, financial transfers for projects, physical infrastructure, transportation, healthcare and so forth. Most of Palestinian budget deficit has been structural in nature due to continuous increase in public sector employment. Palestinian public expenditures grew from about $2 billion in 2005 to almost $4 billion in 2018, with an annual average rate of 7%.

In 1994 the Palestinian Authority took over, and the first financial tables that summarize revenues and expenditures were presented to the Legislative Council in 1997. Since then the Palestinian public budget has been heavily experiencing deficit due to the increase in public expenditure. Since the implementation of the Palestinian Reform and Development Plan in 2008, the Palestinian government has focused on enhancing local revenues at the expense of external revenues (grants and aid) in financing the current budget (Ministry of Planning, 2008). There are three major resources of Palestinian government revenue: local tax revenues (mainly income tax), non-tax revenues (mainly from charges on government services), and clearing revenues (VAT). Israel subtracts 3% service charges on imports from outside and from Israel and delivers the remainder to the PNA every month. The components of the government revenues in 2021 are as follows: 31.9% came from local tax and non-tax revenues and the rest 69% came from clearing revenues (VAT). Palestinian government total revenues grew from $1370 million in 2005 to about $3526.9 million in 2020. Over the last two decades, the Palestinian economy fluctuated with an average growth rates around 10% in some years and negative growth rate of about 6-8% in some years. But in general the economy grew from **$8,740.1 billion in 2005** to $14.2 billion in 2020 at fixed 2015 prices. It grew at an average annual growth rate of 4.3%. During the same period, with population growing at a high rate of 2.7% per year. Per capita income grew at an annual rate of 1.35% from $2300 in 2005 to $2549 in 2020.

Public Expenditure Determinants in Literature
There is a good amount of studies on the determinants of government expenditures which have used different methodologies and techniques. One of the controversial issues among researchers in the field of Public Finance is estimating the determinants of government's expenditures. One of these determinants is trade openness. Trade openness is motivated by the use of the proxy by previous studies such as, (Rodrik, 1998; Garrett, 2001; Alm and Embaye, 2010). While, Kimakova (2009) found that trade openness has a positive and significant relationship with government expenditure. Turanand and Karaks (2016) examined the effect of trade openness on the size of government spending in both Turkey and South Korea. They found a negative relationship between trade openness and government expenditure for Turkey, but a positive relationship for

South Korea. Ofori-Abebrese (2012) used the co-integration technique to determine how trade openness influenced government consumption expenditure in Ghana. He found an inverse relationship among trade openness and government consumption expenditure in Ghana. Rodrik (1998) employed the Johansen-Juselius cointegration and Granger causality test concluded that there existed a positive correlation between trade openness and the size of governments expenditure in South Africa. McDonnell (1997) stated that trade openness and government expenditure have a positive relationship. Cameron (1978) found trade openness is correlated with government finance and a strong indicator of government tax revenue and so government consumption expenditure. Fölster and Henrekson (200) found that there is a negative relationship between government expenditure and economic growth.

Inflation is another studied determinant of government spending. There are different empirical studies that show the relationship between inflation and economic growth. Opler (1988) found that inflation increased public expenditure component of real GDP; on the contrary, Lin (1992) argued that inflation reduces government expenditure share of real GDP. Abu Tayeh (2004) concluded that inflation rate is strongly related to government expenditures. Using data for the period of 1977 to 2007, Ofori-Abebrese (2012) studied the impact of inflation on government spending in Ghana. The study indicated that an increase in inflation had an inverse impact on government spending .

Several studies have investigated the relation between unemployment and public expenditure. According to Aubin et al. (1988), *public spending is likely to decrease when inflation accelerates and to increase with increasing unemployment*. Hang and McDonnell (1997) studied the factors which effected the growth of government expenditure in USA during the period (1948-1990). They found that, unemployment rate has a positive significant relationship with government expenditure. Cameron (1984); Lybeck (1986) concluded unemployment influences public spending in short-run, Abu Tayeh (2012) conducted a study to investigate the relationship between public expenditures and unemployment rate in Jordan. He found a significant positive relationship between the two variables. Neck and Schneider (1988) argued that public expenditures fluctuated according to re-equilibrate the economic activity. The government uses contractionary fiscal policy to when inflation rises, while inclining to rise public spending the share of unemployment rises. Ofori-Abebrese (2012) found that a population growth had a positive influence on government expenditures. Kimakova (2009) found that Population has a negative influence on government expenditure. Lamartina and Zaghini (2010) indicated there is a positive relationship between public spending and per capita GDP. Kolluri *et al* (2000) found that national income is the main key determinant of government spending in the short run. Using data from 1994 to 2004, Nyamongo et al (2007), found close association between government revenue and government expenditure in South in the long run. Mahdavi (2004) investigated the relationship between national debt and government expenditure for 47 developing countries for the period of 1972-2001. His study revealed a strong relationship between the two vatiables.

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

H_0: There is an inverse significant relationship between each of government revenue, population, unemployment, trade openness, foreign aid and government expenditure.

H_A: There is a positive significant relationship and each of government revenue, population, unemployment, trade openness, foreign aid between government expenditure

Empirical Model Specification

This study models government expenditure as a function of government revenue, inflation rate, foreign aid, trade openness, and unemployment rate and population growth . Expressing the empirical model in in functional in the form and in a linear regression model in equation, we get: GEG= f (Govr UNEMP, INF, POP, TO, Foraid)

The function in equation above can be expressed in the form of a linear regression model in

$$GEG = \alpha_0 + \beta_1 Govrp_t + \beta_2\ Inf + \beta_4\ FORAIDP + 4\ TO_t + \beta_5\ UNEM + \beta_6\ POPG + Ut$$

Data Analysis form
Descriptive Statistics

Table 1

Descriptive statistics of the dependent and independent variables (2005-2020)

	GEG	Unemp	TradeOpp	Population	ForAid	Inflation	GOVR
Mean	0.2661	0.25075	0.0677 0.1877	4.0350	735.2		0.0221
Std. Dev.	0.0101	0.0064	0.0019 0.0102	0.1167	0250		0.0069
Maximum	0.3610	0.3082	0.0751 0.2511	4.8032	1450		0.0989
Minimum	0.1971	0.2091	0.043 0.0833	3.3203	0348		-0.0221

Econometric Estimation Results

It can be seen from the correlation analysis that the variables of foreign aid, government rev and unemployment rate are significantly related to government expenditure. There is a strong relationship between foreign aid and government expenditure and as r = 0.718. Also a positive substantial relation between government expenditure and government revenue is observed. Surprisingly enough, a negative relation between government expenditure and population

Exists (r = -0.627). This is can be explained by the fact that a significant portion of government spending goes as salaries and wages to employees, and at the same time public unemployment makes a significant portion of overall unemployment.

Table (2)

Bilateral correlation coefficients estimates between dependent and independent variables:-

	GEG	GovrP	Openness	Pop	Unemp	ForAid	Inf
GEG	1	0.55933	0.14218	0.08747	-0.20456	0.71837	.25300

Table6

Coefficients: Resultsof model estimation after eliminating non-significant variables

Coefficients^a

Model		UnstandardizedCoefficients		StandardizedCoefficients	t	Sig.
		B	Std.Error	Beta		
1	(Constant)	0.349	0.190		1.832	.1096
	GOVRP	0.393	0.089		4.405	.0005
	FORAID	0.083	0.022		3.692	.0021
	UNEMP	-0.004	0.008		-5.711	.0000
a.DependentVariable:GEG						

Table 4

Model Summary

ModelSummary^b

Model	R	R^2	Adjusted RSquare	Std.Error of the Estimate	ChangeStatistics				
					R SquareChange	FChange	df1	df2	Sig. FChange
1	.0.946	0.894	.774	0.019			8	7	<.007
Predictors:(Constant), **Govrp$t$, Inf,, Foaid , TOt , Unem ,and Pop**									
DependentVariable:GEG									

Table 5

ANOVA: Variance analysis for impact of FDI, GCF, and LF and imports on GDP

ANOVA^a

Model		SumofSquares	df	Mean Square	F	Sig.
1	Regression	0.0220	8	0.002	7.437	.007^b
	Residual	0.0026	7	0.003		
	Total	0.0246	15			
a.DependentVariable:GEG						
b.Predictors: (**Constant), Govrp$t$, Inf, Foaid, TO , Unem , and Pop.**						

The estimation result reveals an overall satisfactory model fit as as seen from the value of adjusted R-squared (0.77) and very low long-run variance (0001). As expected the most important determinant of government spending is government revenue (0.39), meaning a 1% increase in total government revenue as percentage to GDP will increase government expenditures as percentage to GDP by 0.39%. Other important determinants of government expenditures are: foreign ais and unemployment, respectively. There is a positive and statistically significant relationship between the share of government expenditure in gross domestic product (GDP) and the amount of net disbursement of foreign aid. Foreing aid represents an important source of finance and significantly positively influences the size of government expenditures in Palestine the empirical results reveal that a 1% increase in foreign aid will increase government expenditures as percentage to GDP by .08%. The estimated coefficient of unemployment is negative (0.004) meaning that as the rate of unemployment increase by 1% government spending as ratio to GDP drops by 0.004%. This is can be explained by the fact that a significant portion of government spending goes as salaries and wages to employees, and at the same time public unemployment makes a significant portion of overall unemployment.

Conclusion and Recommendations
The main objective of this study was to examine the determinants influencing public expenditure in Palestine. The determinants subjected to this investigation were the government revenue, inflation rate, trade openness, unemployment rate and population growth. To the best of my knowledge and belief, there is no single study that has examined the determinants of government expenditure in Palestine. Hence, this study has been able to explore the determinants of the public sector expenditure in Palestine, using time series data between 2005 and 2020. It was found that the government revenue is a key variable in the explanation of the size of the public sector. Also, foreign aid represents an important source of finance and significantly positively influences the size of government expenditures in Palestine. Results reveal that unemployment is another important factor that accounts for the size of the public sector spending. Given the strong positive correlation between government revenue and government size, this study suggests that the Palestinian Authority should diversify the revenue base of the country and rationalize public consumption spending by encouraging citizens to invest and making them aware of the benefits of directing savings towards investment.

References

Abu Tayeh, S. N. (2012). The determinants of public expenditure in Jordan. International Journal of Business and Social Science, 4(6), 1320-1338.

Abu Tayeh, S. N. (2004). The Determinants of Public Expenditures in Developing Countries: Evidence from Jordan (1981-2001), a paper presented in the 11th Annual Conference of American Society of Business and Behavioral Sciences, Las Vegas 19- 23/2/2004.

Alm, J., & Embaye, A. (2010). Explaining the growth of government spending in South Africa. South Africa Journal of Economics, 78(2),152-169.

Cameron, D. (1978). The Expansion of the Public Economy: A Comparative Analysis. The American Political Science Review, 72(4), 1243-1261.

Cameron, D. (1984). The Impact of Political Institutions on Public Sector Expansion, a paper presented in the Nobel Symposium on the Growth of Government in
Stockholm – August 1984.

Folster, S., & Henrekson, M. (2001). Growth Effects of Government Expenditure and Taxation in Rich Countries. *European Economic Review*,45(8), 1501- 1520.

Garrett, G. (2001). Globalization and government spending around the world. Studies in Comparative International Development, 35(4), 3-29.

Huang, W., & McDonnell, G. (1997). Growth of government expenditure: the case of USA. The Social ScienceJournal, 34(3), 311-322.

Kimakova, A. (2009). Government Size and Openness Revisited: the Case of Financial Globalization. *KYKLOS*, Vol. 62, No. 3, pp. 394-406.

Kolluri, B. R., Panik, M. J., & Wahab, M. S. (2000). Government Expenditure and Economic Growth: Evidence from G7 Countries. *Applied Economics*, 32(8)1059-1568.

Lamartina, S., & Zaghini, A. (2010). Increasing Public Expenditures: Wagner's Law in OECD Countries. German Economic Review, 12(2), 149-164.

Lin, S. (1992). The Effect of Inflation on Government Expenditure: New evidence. Atlantic Economic Journal, 20(4), 86-86.

Lybeck, J. (1986). The Growth of Government in Developed Economies, Gower Press, Alder-Shot.

Musgrave, A. R., & Musgrave, P. B. (1989). Public Finance in Theory and Practice. 5th ed. New York: McGraw-Hill

Neck, R., & Schneider, F. (1988). The Growth of the Public Sector in Austria: An Exploratory Analysis", in J.A. Lybeck and M. Henrekson (eds.), Explaining the Growth of Government. Elsevier Science Publishers (North-Holland), Amsterdam, 231–263.

Nyamongo, M. E., Sichei, M. M., & Schoeman, N. J. (2007). Government Revenue and Expenditure Nexus in South Africa. South Africa Journal of Economic and Management Sciences, 10(2), 256-268.

Ofori-Abebrese, G. (2012). A Co-integration Analysis of Growth in Government Consumption Expenditure in Ghana. Journal of African Development, 14(1), 47-61.

Opler, T. (1988). The Effect of Inflationary Pressure on Government Expenditure. Economics Letters, 28(4), 331-334.

Rodrik, D. (1998). Why Do More Open Economies Have Bigger Governments?' Journal of Political Economy, 106(5), 997-1032.

Turan, T., & Karakas, M. (2016). The Effect of Trade Openness and Income on the Size of a Government. TransylvanianReview of Administrative Sciences, 216(47), 164-178.