

The Determinants of Public Expenditures in Jordan

Professor Sultan N. Abu Tayeh

College of Business Administration, Management Department
Taibah University

P.O. Box 2898 al-Madina al-Munawwarah, Saudi Arabia
E-mail: sultanabutayeh@yahoo.com, Phone: 00966-48460008

Dr. Mairna H. Mustafa (Corresponding author)

Queen Rania Institute of Tourism and Heritage
Department of Sustainable Tourism, The Hashemite University
P.O. Box 2 Postal Code 13115 Zarqa, Jordan,
Email: mairna@hu.edu.jo, Phone: 00962-3903333-5103

Abstract

This paper aims at analysing the factors that affect the Jordanian total government expenditures. This study also employs a specific methodology to assess the nature of the relationship between Jordanian public spending and its determinants. A main result of this research is that population, unemployment and inflation rates are significantly related to the public expenditures.

Keywords: Government expenditure, Determinants of public spending, Inflation rate, Unemployment rate, Jordan.

Introduction

Most of developing countries are facing severe disfunctionality and decline in their economies; therefore, many of them focused on increasing investment in public productive expenditures. Such expenditures may invest in human capital and in physical infrastructure which may, in turn, stimulate investment in the private sector and encourage foreign direct investment. For Jordan, the country witnessed some serious economic problems during the 1980's; a low rate of economic growth, a high rate of inflation, as well as Balance of Payments problems. Consequently, the real per capita income was falling by more than 1.5% annually during the (1983-1988) period; according to a report by United Nations Public Administration Network (2011), the government was unable to fulfil its financial obligations concerning foreign debt as it ran out of foreign exchange deposit. Therefore, Jordan was adopting an economic adjustment programs by a blessing of the International Monetary Fund (IMF) in 1989, the IMF program was the backbone of the readjustment package agreed upon. It was stated in this report that:

“Following a large negative growth rate of 13.5% in 1989, GDP resumed positive growth, meager growth rates in 1990 and in 1991 but a large and impressive rate in 1992. The budget deficit stepped down from its highest level, -21.0% in 1989 to -16.0% in 1990, and though it stepped up to -19.2% in 1991, it remained below its 1989 level and stepped down to -10.7% in 1992”. Such indicators mean that a new policy was followed, it was based on new taxes and increased yield from income tax to increase domestic revenues and cuts in some categories of expenditures, the main aim was increasing domestic revenues and allowing expenditures to rise within limits. As mentioned in Economy Watch formal website, since finalising IMF program in 2002, the country perpetuated to follow International Monetary Fund (IMF) guidelines; these are: careful monetary policy, a substantial focus on privatisation policy, and freeing the trade (imports and exports) regime. In 2006 and 2008, Jordan benefited from privatisation to reduce public debt-to-Gross Domestic Product (GDP) ratio, which made Jordan more attractive for Foreign Direct Investment (FDI).

Jordan has now to keep focusing on how to decrease dependence on foreign grants, reducing the expanding budget deficit, attracting investments, and creating jobs (<http://www.economywatch.com/economic-statistics/country/Jordan/>; retrieved on: 20.3.2011). Although of the active economic reform Jordan has been conducting in the last decade; there are some several challenges facing the country; these are: vulnerability to fluctuations in the international oil market, due to the country's high energy import dependency; high unemployment and dependency on remittances from Gulf economies; and increasing pressure on natural resources, especially water (World Bank 2010). The global financial and economic crisis has affected the performance of the general budget in 2009, as well as on the pace of economic growth in the Kingdom; consequently, domestic revenues and foreign grants experienced a notable decline, although government expenditures aiming at stimulating the economy have increased, there was a burden on the general budget and public indebtedness in 2009.

The fiscal deficit (including grants) expanded to a record high, standing at 8.9 percent of GDP compared to 2.2 percent of GDP in the preceding year to total JD 1,449.8 million. This deficit was influenced by the drop in public revenues by 11.1 percent coupled with the growth in public expenditures by 10.0 percent compared to their 2008 levels. Public expenditures stood at JD 5,976.0 million in 2009, expanding by JD 544.1 million, or 10.0 percent, compared to their level in 2008. This expansion was driven by the increase in both capital and current expenditures by 50.2 percent and 1.4 percent, respectively (Central Bank of Jordan 2010). This paper aims at identifying the main determinants of public expenditures in Jordan, also suggesting implications for improving public spending performance.

Public Expenditure Determinants in Literature

One of the controversial issues among researchers in the field of Public Finance is estimating the determinants of Government's expenditures. Martin and Lewis (1975) believe that the nation's expenditures are not driven by its income, but more by the conception of the role of the state. Musgrave (1961) see that demonstration effect of other countries influences the expenditure pattern of a country; Pryov (1987) argued that public expenditure is determined by income as well as economic, demographic, social and institutional variables. The urban sector growth was also considered as a main determinant (Thorn 1977). There were different classifications of determinants of public spending in developed economies that were presented in different studies; Lybeck (1986 & 1988) and Henrekson (1988) adopted the "Demand-Supply" model. Cusack (1988) suggested the budgetary process as a two-step process; the first step deals with the development of independently generated aspiration level for major spending components and for total spending, in the second step of the process, conflicts between the different components are resolved (a bargaining process between fiscal authorities and groups concerned by each component of expenditures leads to the resolution of any conflict existing between the independently generated aspirations).

In Neck and Schneider (1988); public expenditures fluctuate when any intervention of the government is needed to re-equilibrate the economic activity. The government uses fiscal policy to fight inflation, it would respond by reducing public spending when inflation increases; also, when the share of unemployment rises, the government is inclined to rise public spending. Cameron (1984) and Lybeck (1986) stipulate that unemployment influences public spending in short-run, but since unemployment does not rise trend wise, it is difficult then to see what it has to do in a long-run study. Counter-cyclical policies would also make governments reduce public spending in periods where the budget deficit is significant. According to Aubin et al (1988), the relation between unemployment and public expenditure may reflect some mechanical link between social transfers and the number of unemployed or some Keynesian economic policy, which is designed to restore full employment. In any case, an increase in the rate of unemployment leads to a higher public spending. Another factor is the growth of population since it indicates more need of health care and education commodities, and leads then to an increase of public spending.

Political factors were also considered to affect public spending; such topic was particularly discussed in the case of developing economies when studying the concept of rent-seeking. In measuring the cost of rent-seeking in LCD's, Eliakimet al (1989) hypothesized that each fluctuation of a particular component in the government budget is induced by the influence of a strong interest group. This hypothesis supposes that the public expenditures are driven by the government's personal interest rather than a selfless answer to the needs of the collectively. Governments try to maximize their chance to be re-elected at the time of elections and acts consequently during the period that precedes them. Therefore, the optimal politics depend on the degree of voter myopia. In this case, the political decision-makers are facing two kinds of voters; if voters reason short-term; their voting will especially take account of what was achieved by the government in the period that immediately precedes elections. In this case, the government attempt to prepare during the first years of its mandate situations that, the year of elections allows him to institute some attractive measures for voters.

On the contrary, if voters forget more easily, the government is obligated to offer some favourable measures to voters during one longer time before the date of elections (Frey, 1978). Richard (1981) emphasized the impact of interest groups and government growth. Demsetz (1982) explains government growth as a reaction to increased demands for redistribution. An interest group particularly relevant for the growth of government is the public bureaucracy; Niskanen (1971) has shown that if public bureaucrats aim at higher budgets, if they have a monopoly over the supply of their outputs, and if they are confronted with a "passive" parliament and government, then the government budget will be larger than according to the voters' preferences.

Analysing Determinants of Jordanian Public Expenditure

One of the main studies that analysed the determinants of Jordanian Public Expenditure was the one by Abu Tayeh (2004); in this study, an equation based on co-integration tests was applied to model the relationship between government expenditure and its determinants.

This equation was as follows: $GEG = F(\text{UNEM}, \text{IN}, \text{GEMLF}, \text{POP}, \text{GE}(-1), \text{BDGDP}, \text{EX}, \text{IM}, \text{IMF})$; where:

GEG= Government Expenditure growth

UNEM= Unemployment

IN= Inflation rate

GEMLF= Government employees to labour force

POP = Population

GE (-1) = Government Expenditure lag one year

BDGDP = Budget deficit to Gross Domestic Product

EX= Export

IM= Import

IMF= Dummy variable indicating International Monetary Fund intervention.

The determinants of public expenditures were classified in three groups. The first group, counter-cyclical policies include variables as inflation, unemployment and budget deficit. The second group takes into account demographic factors, namely here population growth. The last group is composed of political factors (political stability, interest groups and past real spending of the government). The equation was estimated for the period (1979-2000). The results have shown that the unemployment rate is positively related to the government expenditure growth; when the unemployment rate is higher, the government have to spend more money as a support for projects development to solve such problem. Another significant variable is the inflation rate, which is negatively related to government expenditure growth, so that if the inflation rate increases the government expenditure growth decreases. The above mentioned two results are consistent with the results that have been found by Neck and Schneider (1988), which indicate that government use fiscal policy to fight inflation; as in the case of unemployment, the government is inclined to rise public spending. The independent variables were to explain the changes in the dependent variable throughout the value of ($R^2 = 0.82$) and the adjusted ($R^2 = 0.65$). The effect of the population growth on the public expenditure was not measured because there is no censuses in Jordan after 1994, while the literature shows that the public expenditure is positively related to the population.

For this study; a new approach was applied to test if the inflation and unemployment rates' (as determinants) effect on the government expenditure was to continue; since only the unemployment and inflation rates were to be the variables to have a significant relation with the government expenditure growth in the above study; a correlation analysis was conducted to test the relation between these variables. A complete data was available for the variables: unemployment rate (% of labour force), inflation (average consumer price change %) and general government total expenditure (% of GDP) for the period (1990-2010), the population of Jordan was also included in the analysis. Table 1 shows the values of these variables for this period, while Table 2 gives the results of correlation analyses.

Table 1: The unemployment rate, inflation rate and general government total expenditure of Jordanian economy for the period (1990-2010)

Year	Unemployment rate (% of labour force) (1)	Inflation (Average consumer price change %) (2)	General government total expenditure (% of GDP) (3)	Population for Jordan (millions) (4)
2010	13	5.506	29.329	6.117
2009	13.033	-0.672	33.177	5.98
2008	12.65	13.944	33.254	5.85
2007	13.1	4.655	35.608	5.723
2006	14.058	6.255	34.993	5.6
2005	14.844	3.491	38.846	5.473
2004	14.7	3.365	37.719	5.35
2003	14.439	1.627	36.764	5.23
2002	15.325	1.835	33.634	5.098
2001	14.691	1.768	33.259	4.978
2000	13.706	0.674	33.814	4.857
1999	14.38	0.598	33.721	4.738
1998	13.5	3.079	35.958	4.623
1997	14.4	3.038	34.566	4.506
1996	13.1	6.501	36.904	4.383
1995	15.4	2.353	36.119	4.264
1994	15.8	3.524	34.972	4.139
1993	19.6	3.304	36.972	3.993
1992	17.6	4.017	35.689	3.844
1991	18.8	8.155	45.179	3.701
1990	16.8	16.192	44.243	3.468

- (1) From: http://www.economywatch.com/economic-statistics/Jordan/Unemployment_Rate_Percentage_of_Labour_Force; retrieved on: 26.3.2011.
- (2) From: http://www.economywatch.com/economic-statistics/Jordan/Inflation_Average_Consumer_Price_Change_Percentage/; retrieved on: 26.3.2011.
- (3) From: http://www.economywatch.com/economic-statistics/Jordan/General_Government_Total_Expenditure-Percentage_GDP/; retrieved on: 26.3.2011.
- (4) From: <http://www.economywatch.com/economic-statistics/Jordan/Population/>; retrieved on: 27.3.2011.

Results and Conclusions

The correlation analysis results show that government expenditure is significantly related to the variables of inflation rate, unemployment rate and population. There is a typical relationship between government expenditure and inflation rate ($r = 0.467$), a substantial relation between government expenditure and unemployment expenditure ($r = 0.601$), and surprisingly a negative substantial relation between government expenditure and population ($r = -0.627$), indicating then some economic problems and deficit. The same can be said for the significant negative substantial relation between population and unemployment ($r = -0.755$).

Table 2: The correlations among the variables: government expenditure, inflation, population and unemployment rates

Variables	GE	IN	UNEM	POP
GE	1.00			
IN	0.467*	1.00		
UNEM	0.601**	0.114	1.00	
POP	-0.627**	-0.200	-0.755**	1.00

Notes:

1. GE refers to Governmental Expenditure
2. IN refers to Inflation Rate
3. UNEM refers to Unemployment Rate
4. POP refers to the Population of Jordan
5. **Correlation is significant at the 0.01 level (2-tailed).
6. *Correlation is significant at the 0.05 level (2-tailed).

These results signify the need to develop more different economic sectors and make them capable of utilizing their competitive aspects by improving both infrastructure facilities and superstructure services; this should be enforced by expanding the role of the Private Sector investment and capital attraction, this process must be within a framework of mutual cooperation between different stakeholders (mainly public and private sectors). Another focal aspect is developing awareness among different social groups concerning economic sectors and activities to encourage their involvement through job opportunities. There is also a need to strengthen and support the institutional framework of the economic sectors by upgrading legislation, by-laws regulations and human resources' development. The results also support what was stated in the World Bank Report for the year 2010; the report states that a main challenge and a great opportunity at the same time is creating a suitable environment and adequate condition for more private investment; such policy would increase job opportunities and assist in alleviating poverty. A policy to be considered is the implementation of the fiscal consolidation program. Another basic implementation is improving human capital; thus to transform Jordan from a lower-middle income country into a modern knowledge-based economy with higher value added, increased productivity and employment, and improved quality of life for Jordanians.

References

- Abu Tayeh, S. 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.
- Aubin, C. BerdotJ. &LafayJ. 1988.The Growth of Public Expenditure in France. In J.A. Lybeck and M. Henrekson (eds): Explaining the Growth of Government, North Holland, Contributions to Economic Analysis.
- Aschauer, D.1989. Does Public Capital Crowd out Private Capital, Journal of Monetary Economics; 24(2),171-88.
- Borooah V. 1988.The Growth of Public Expenditure in the United Kingdom, 1960- 1986. InExplainingthe Growth of Government, Elsevier Science Publishers,Amsterdam.

- Cameron, D. 1978. The Expansion of the Public Economy: A Comparative Analysis, *American Political Science Review*, 72, 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.
- Central Bank of Jordan. 2010. Annual Report of 2010: Public Finance Sector; available at: <http://www.cbj.gov.jo/uploads/chapter3.pdf>; retrieved on: 26/3/2011.
- Demsetz, H. 1982. The Growth of Government. In H. Demsetz (ed): *Economic, Legal, and Political Dimensions of Competition*, Elsevier Science Publishers, Amsterdam.
- Economy Watch. 2011. Jordan Summary Report on the Formal Website; available at: <http://www.economywatch.com/economic-statistics/country/Jordan/>; retrieved on: 20/3/2011.
- Frey, B. 1978. *Modern Political Economy*, Martin Robertson, Oxford.
- Henrekson, M. 1988. Swedish Government Growth: A Disequilibrium Analysis. In: *Explaining the Growth of Government*, Elsevier Science Publishers, Amsterdam.
- Hicks, N. 1991. Expenditure Reductions in Developing Countries Revisited, *Journal of International Development*, 3(1), 29 - 37.
- IMF. *Government Finance Statistics Yearbook*, Washington, DC, 1994.
- IMF. *Government Finance Statistics Yearbook*, Washington, DC, 1998.
- IMF. *Government Finance Statistics Yearbook*, Washington, DC, 2000.
- Jonakin, J. & Stephens, M. 1999. The Impact of Adjustment and Stabilization Policies on Infrastructure Spending in Central America, *North American Journal of Economics and Finance*, 10, 293-308.
- Katz, E. & Rosenberg, J. 1989. Rent Seeking for Budgetary Allocation: Preliminary Results for 20 Countries”, *Public Choice*, 60 (2), 133-144.
- Khan, M. 1990. The Macroeconomic Effects of Fund-Supported Programs”, *IMF Staff Papers*, Vol. 37 (2), 195 – 231.
- Killick, T. 1984. *The Quest for Economic Stabilisation: The IMF and the Third World*, St. Martins, New York.
- Lindbeck, A. 1976. Stabilization Policy in Open Economies with Endogenous Politicians, *American Economic Review*, 66(2), 1-19.
- Lybeck, J. 1986. *The Growth of Government in Developed Economies*, Gower Press, Alder-Shot.
- Meltzer, A. & Richard S. 1981. A Rational Theory of the Size of Government, *Journal of Political Economy*, 89(5), 914-927.
- Neck, R. and Schneider, F. 1988. The Growth of the Public Sector in Austria. In: *Explaining the Growth of Government*, Elsevier Science Publishers, Amsterdam, 231-263.
- Niskanen, W. 1971. *Bureaucracy and Representative Government*, Aldine, Chicago.
- Pastor, M. 1987. The Effects of IMF Programs in the Third World: Debate and Evidence from Latin America, *World Development*, 15, 249-262.
- Sturm, J. 1998. *Public Capital Expenditure in OECD Countries: The Causes and Impact of the Decline in Public Capital Spending*, Edward Elgar Editions.
- Michas, N. 1975. Wagner’s Law of Public Expenditure: What is the Appropriate Measurement for a Valid Test?, *Public Finance*, 30, 77-85.
- Peacock, A. & Wiseman, J. 1961. *The Growth of Expenditure in the United Kingdom*, George Allen and Unwin, London.
- Ram, R. 1987. Wagner’s Hypothesis in Time-Series and Cross-Section Perspectives: Evidence from ‘Real’ Data for 115 Countries, *Review of Economics and Statistics*, 194-204.
- United Nations Public Administration Network. 2011. Jordan Report; available at: <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan000218.html>; retrieved on: 26/3/2011.
- Wagner, R. & Weber, W. 1977. Wagner’s Law, Fiscal Institutions, and the Growth of Government, *National Tax Journal*, 30, 59-68.
- World Bank. 2010. Jordan Country Brief; available at: http://siteresources.worldbank.org/INTJORDAN/Resources/Jordan_Country_Brief_AM2010.pdf; retrieved on: 27/3/2011.