Government Spending as a Tool for Economic Growth in the Economy of Jordan

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Abstract:- This paper shows the impact of government spending on Jordan's economy for the period (2010 – 2019), where government spending and tax revenues as percentages of GDP are explanatory variables and economic growth is the affected variable. This research concentrates on analyzing theoretical and empirica literature reviews of to show the effects of government spending on economic growth and explaining this effec in Jordan for this period using the Autoregressive distributed lag (ARDL) method in Eviews program. This research reports insignificant effects of government spending and tax revenues as percentages of GDP on Jordan's economy for the period (2010 – 2019). The research concludes with a recommendation that other variables affect the economy apart from government spending and tax revenues as percentages of GDP.

Keywords:- Government Spending, Tax Revenues, Economy of Jordan, Economic Growth, Autoregressive Distributed Lag (ARDL)

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1 Introduction

The effect of government spending on economic growth has been an issue of sustained interest for a lot of decades. There are a lot of studies that analyze the effect of government spending on economic growth. Wagner's law is one of the most important attempts that analyze the effect of government spending on economic growth [1]. A lot of empirical studies that analyze the effect of government spending on economic growth have reached different results that vary from one country to another and from one method of analysis to another [1]. The impact of government spending on the economy is explained by a lot of economists. According to Keynesians, there is a positive effect of government spending on the economy, while classical researchers see that there is a negative effect of government spending on the economy and Ricardian researchers believe that there is no relationship between government spending and the economy.This research explains the effect of government spending on the Jordanian economy for the period (2010 – 2019), by determining literature reviews of the effects of government spending on the economy, and estimating government spending effect on Jordan's economy for the period (2010 – 2019) by using the Autoregressive distributive lag (ARDL) technique in Eviews program as follows:

2 Research questions

The basic question of the research is: what is the effect of government spending on the economy of Jordan for the period(2010 – 2019)?

The following research questions may also arise from the basic question:

1. What are theoretical and empirical literature reviews that explain the impact of government spending on the economy?
2. What is the slope of the curve of government spending impact for Jordan for the period (2010 – 2019)?
3. What is the slope of the curve for the Jordanian economy for the period (2010 – 2019)?

3 Research aims

The basic aim of the research is to test the effect of government spending on the Jordanian economy for the period (2010 – 2019). Other aims that may also arise include:

1. Explaining theoretical and empirical literature reviews that describe the impact of government spending on the economy.
2. Knowing the slope of the curve of government spending impact for Jordan for the period (2010 – 2019).
3. Determining the slope of the curve for Jordan's economy for the period (2010 – 2019).

4 Research hypothesis

The basic hypothesis of the research is there is a negative impact of government spending on the economy of Jordan for the period (2010 – 2019).

5 Literature reviews

Government spending impact on the economy is as follows:

There are a lot of functions of government that can enhance economic efficiency and growth. The two major functions of government are the provision of protection and public goods. Protective functions include provisions of rule of law and private rights of property. Public goods or commodities provided by the government include roads, defense, public affairs, and education [5].

Some economists show that there is a positive effect of government spending on economic growth as it will lead to a stable world. However, some economists show that there is a negative effect of government spending on economic growth because, in the case of increasing government spending, the law of diminishing returns comes into play [5]. There are a lot of reasons concerned with the negative effect of government spending on economic growth like increasing taxes or borrowing that is needed to fund government spending will lead to a depressing impact on economic growth, increasing the potential earnings from activities that are concerned with rent-seeking which leads to resources being moved to unproductive activities, increasing government expansions towards spending on less productive activities and making the market process more dynamic than a political process [5] &[6]. Some economists show a U-shaped effect of government size on economic growth. They reflect a positive relationship between government size and economic growth until a specific point. After this point, there is a negative effect of government size on economic growth as the increasing role of government will lead to a decrease in economic growth [7]. Two theories explain the relationship between government spending and economic growth which are the Neo-classical theory of Solow and endogenous growth model. The Neo-classical theory of Solow begins with the function of productions where production factors show the national output. According to this theory, economic growth comes from enhancing the supply of labor, increasing capital stock and increasing productivity [7], [8]&[9]. The theory of endogenous growth shows that in the case of enhancing productivity, the labor force will be given more resources. Resources can be human capital, physical, capital, and technology. So, growth is enhanced by accumulating production factors as a result of enhancing private investment. This shows that the only process that government spending can have an impact on economic growth, in the long run, is by its effect on investments in the fields of research development, education and capital [10].At the end of the theoretical and empirical literature, the researcher can refer to the negative or insignificant impact of government spending on the economy because it leads to a decrease or no effect on the economic growth of any economy [5].

6 Impact of government spending on the economy of Jordan for the period (2009-2019)

6.1 Method

The study covers the period (2010 – 2019), where government spending and economic growth are the variables. The next equation represents government spending effect on the Jordanian economy.

$$\boldsymbol{Economic\ growth} = \boldsymbol{f}(\textbf{government spending}, \boldsymbol{tax\ revenues})$$

6.2 Results

This part explains Jordanian government spending and the economic growth variables for the period (2010 – 2019)

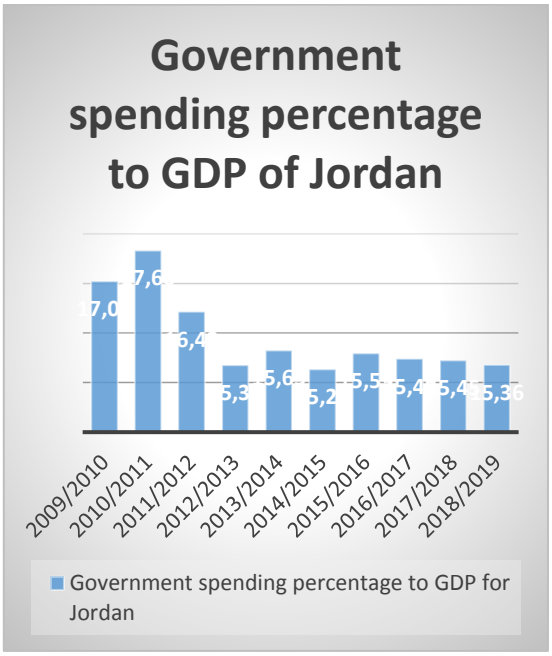
6.2.1 Government spending

Table 1: Government spending as a percentage of GDP of Jordan for the period (2010 – 2019)

Year	Government spending percentage of GDP of Jordan
2009/2010	17.04
2010/2011	17.66
2011/2012	16.43
2012/2013	15.35
2013/2014	15.65
2014/2015	15.27
2015/2016	15.59
2016/2017	15.48
2017/2018	15.45
2018/2019	15.36

Source: prepared by a researcher using Trading Economics Statistics

Fig.1 Government spending as a percentage of GDP for the period (2010 – 2019)



Source: prepared by a researcher using Trading Economics Statistics

Table 1 and Fig.1 show a change in government spending as a percentage of GDP of Jordan for the period (2010 – 2019). Government spending as a percentage of GDP increased in the first two months and reached 17.66 % in 2010-2011. After that, government spending as a percentage of GDP decreased to 15.45 % and 15.36 % in 2017- 2018 and 2018- 2019, respectively.

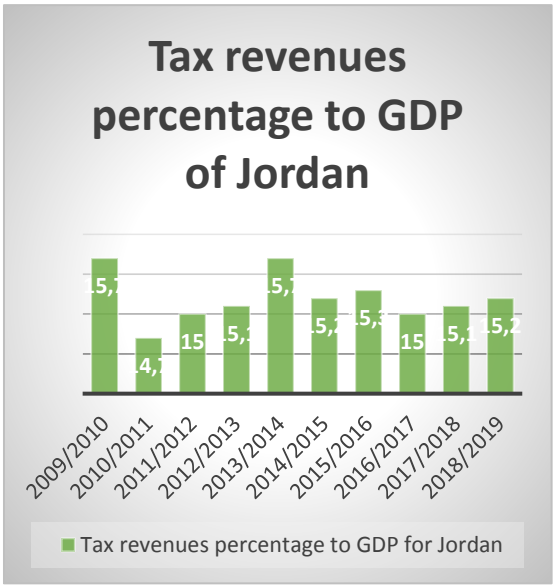
6.2.2 Government tax revenues

Table 2 Government tax revenues as percentages of GDP for the period (2010 – 2019)

Year	Tax revenues as percentages of GDP for Jordan
2009/2010	15.7
2010/2011	14.7
2011/2012	15
2012/2013	15.1
2013/2014	15.7
2014/2015	15.2
2015/2016	15.3
2016/2017	15
2017/2018	15.1
2018/2019	15.2

Source: prepared by a researcher using World Bank Statistics

Fig.2 Government tax revenues as percentages of GDP for the period (2010 – 2019)



Source: prepared by a researcher using World Bank Statistics

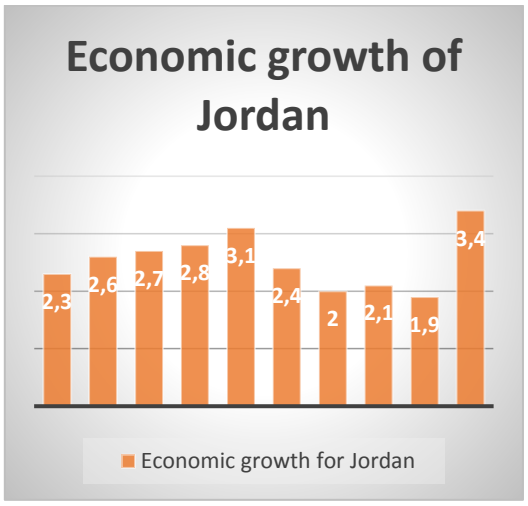
Table 2 and Fig.2 show a change in tax revenues as percentages of GDP for Jordan for the period (2010 – 2019). Tax revenues as percentages of GDP decreased in the first two months and reached 14.7 % in 2010- 2011. After that, tax revenues as percentages of GDP increased to 15.7 % in 2013-2014. Then increased to 15.2 % in 2018- 2019.

Table 3 Economic growth of Jordan for the period (2010 – 2019)

Year	Economic growth of Jordan
2009-2010	2.3
2010-2011	2.6
2011-2012	2.7
2012-2013	2.8
2013-2014	3.1
2014-2015	2.4
2015-2016	2
2016-2017	2.1
2017-2018	1.9
2018-2019	3.4

Source: prepared by a researcher using World Banks Statistics

Fig.3 Economic growth of Jordan for the period (2010 – 2019)



Source: prepared by a researcher using World Banks Statistics

The above table and figure show a fluctuation in the economic growth of Jordan for the period 2010 – 2019). There was an increase that reached 3.1 % in 2013-2014, then decreased to 1.9 % in 2017-2019. There was an increase in it at the end of the year 2018-2019 to 3.4 %.

7 Discussion

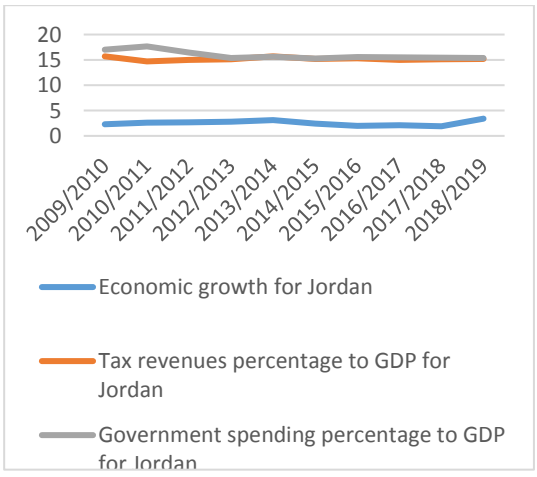
The following table and figure show the effect of government spending on Jordan's economy for the period (2010 – 2019)

Table 4 Government spending as a percentage of GDP, tax revenues as percentages of GDP, and economic growth for the period (2010-2019)

Year	Government spending as a percentage of GDP for Jordan	Tax revenues as percentages of GDP for Jordan	Economic growth for Jordan
2009-2010	17.04	15.7	2.3
2010-2011	17.66	14.7	2.6
2011-2012	16.43	15	2.7
2012-2013	15.35	15.1	2.8
2013-2014	15.65	15.7	3.1
2014-2015	15.27	15.2	2.4
2015-2016	15.59	15.3	2
2016-2017	15.48	15	2.1
2017-2018	15.45	15.1	1.9
2018-2019	15.36	15.2	3.4

Source: prepared by a researcher using World Bank and Trading Economics Data

Fig.4 Government spending as a percentage of GDP, tax revenues as percentages of GDP, and economic growth for the period (2010 – 2019)



Source: Prepared by a researcher using World Bank and Trading Economics Data

Table 4 and Fig.4 show an effect of government spending on the Jordanian economy for the period (2010 – 2019), and an insignificant effect of government spending on the Jordanian economy.

For verification of this effect, the research uses the Autoregressive distributed lag (ARDL) method to test the effect of government spending on the economic growth of Jordan for the period (2010 – 2019)

Dependent Variable: GROWTH
Method: ARDL
Date: 07/13/20 Time: 17:25
Sample (adjusted): 2011 2019
Included observations: 9 after adjustments
Dependent lags: 1 (Fixed)
Dy Dynamic regressors (0 lag, fixed): SPENDING TAXES
Fixed regressors:

Prob.*	t-Statistic	Std. Error	Coefficient	Variable
0.8974	0.134541	0.525392	0.070687	GROWTH(-1)
0.9212	0.103201	0.209056	0.021575	SPENDING
0.5945	0.561935	0.240204	0.134979	TAXES

2.555556	Mean dependent var	0.044960	R-squared
0.507718	S.D. dependent var	-0.273387	Adjusted R-squared
1.985102	Akaike info criterion	0.572932	S.E. of regression
2.050843	Schwarz criterion	1.969505	Sum squared resid
1.843232	Hannan-Quinn criter.	-5.932957	Log likelihood
		1.496141	Durbin-Watson stat

*Note : p-values and any subsequent tests do not account for model selection.

The above table shows insignificant effects of government spending and tax revenues as percentages of GDP on the Jordanian economy for the period (2010 – 2019) at the level of significance 5%.

8 Conclusion and recommendations

The research estimates the effect of government spending on economic growth in the theoretical and empirical literature reviews and describes the impact of government spending on the Jordanian economy by employing the Autoregressive distributed lag (ARDL) technique for the period (2010 – 2019). This research reports insignificant effects of government spending and tax revenues as percentages of GDP on Jordan's economy for the period (2010 – 2019) at the level of significance 5%. The paper concludes with a recommendation that apart from government spending and tax revenues as percentages of GDP, other variables

affect the economy More studies should be conducted in this regards.

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