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Government Spending Priorities in Uganda

Evidence From Panel Data

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List of Synonyms

[Defense spending-military spending](#); [Economic growth-economic progress](#); [Economic growth-fiscal growth](#); [Human capital-human resource](#); [Public spending-civic spending](#)

Definition of Key Concepts

The World Bank Group defines gross domestic product (GDP) as a monetary measure of the market value of goods and services produced in a year.

SIPRI (2014) defines military spending as all current and capital expenditure on the armed forces, including peacekeeping forces; defense ministries and other government agencies engaged in defense projects; paramilitary forces when judged to be trained, equipped, and

available for military operations; and military space activities.

Introduction

Government spending priorities and patterns in developing countries have continued to change dramatically over the past decades which makes it important to analyze the contribution of various government expenditures toward stimulating production and growth and ensuring poverty reduction (Fan and Zhang 2008). The management of the public sector as well as public expenditure plays a significant role in poverty reduction. However, this raises substantial challenges to countries with weak political commitment to pro-poor policy reforms as well as ineffective budget and planning systems (Williamson and Canagarajah 2003).

Pironi (2009) argues that various economic growth theories tend to imply that government spending plays an important role in the long-term economic growth rate. However, the impact largely depends on the size and nature of the intervention and the different sectors of public spending because different sectors usually exhibit heterogeneous impact toward economic growth. Dakurah et al. (2001) have argued that spending in sectors like defense can impact economic growth either negatively through crowding out investment or positively through expansion of aggregate demand. This article brings to light the experience

of Uganda which will be of great value to policy makers as it will illustrate how spending in certain government sectors affects economic growth.

What the Literature Says About Government Spending

The literature on government spending is generally divided into three broad perspectives. One argues that government spending can stimulate economic growth, another argues that government spending can slow growth, and the third argues that government spending can have a neutral effect on economic growth.

Determinants of Economic Growth

There has been an increase within the past 5 years in the quantity of research carried out to assess the factors driving economic growth in the OECD countries (Bessanini and Scarpetta 2001). Some of the determinants of economic growth that are connected to government spending include the following.

Physical and Human Capital

Barro (2001) argues that since the 1980s, most of the focus of macroeconomics has been toward stimulating long-term economic growth. Human capital can be determined by the educational level that the citizens of the country attain. Chen and Feng (1998) argue that human capital is important toward achieving economic growth. To add on, the government needs to build more schools, produce better quality students, and also improve on the health-care services. Physical capital can be a major factor in determining the amount of real output per capita although this may depend on the level of technological innovation (UNTCAD 2012). It is therefore imperative for governments to direct public funds in sectors that are more productive and promote the welfare of the people.

Expenditure on Research and Development

Petrakos and Arvanitidis (2008) assert that government emphasis on research and development with consistent innovation can play a very important role in increasing production, growth, and

general progress of the economy. This is because of the trend of adoption of technology which facilitates the application of efficient and effective superior ways of producing goods and services. An increase in government spending on research and development can lead to the development of new technologies as well as more effective and efficient strategies of utilizing resources and capital (Bessanini and Scarpetta 2001).

Financial Development

Better financial systems with fewer costs encourage business and economic growth, whereas bad financial systems tend to discourage investment and growth. Khan (2001) states that there are normally costs associated with provision of financial services especially as regards borrowers and lenders. When better financial policies are made, there will be an increased number of businesses which gain access to the finance sector which then reduces the original cost of intermediation and leads to an increase in the investment returns.

Negative Effects of Government Spending

Alsharani and Alsadiq (2014) argue that several studies investigate the relationship between government spending and economic growth using different empirical methodologies, and yet the results are inconclusive. Ramey (2009) notes that it is crucial for us to understand the positive and negative effect of government spending on GDP. Cullen and Fishback (2006) argue that analysis of spending on local retail sales generally shows a negative effect of government spending on private consumption. Miron (2010) reasons that other expenditures like Medicare and Social Security account for most of nonmilitary, non-interest expenditure. Much of the other expenditure, however, has negative effects that plausibly outweigh any positive effects. These programs have modest direct effects on the debt outlook and also reduce economic efficiency, which contributes to the debt indirectly by lowering economic growth. One example of wasteful federal spending is agricultural subsidies, which pay farmers to leave their fields fallow, reducing supply and raising agricultural prices which is a loss for consumers. Subsidies also change the amount

and manner of farming, distorting the use of land for farming versus other activities. Also as regards education, the argument for government subsidy holds that private demand is insufficient, because education might generate positive externalities, implying the social benefit exceeds the private benefit. In that case, individuals purchase less than is socially optimal. Also private demand might be too low because some people cannot afford education or borrow to finance it. This is less efficient than an alternative method of vouchers. Under a voucher system, governments provide students with pieces of paper that schools accept as payment because the government redeems them for money which becomes more efficient.

Factors Hindering Economic Growth in Africa

Some of the factors that hinder the progress of economic growth in Africa include the following.

High Public Spending

Chen (2006) argues that public spending tends to be either productive or consumptive in nature. Huge public spending that is productive can lead to economic growth, whereas huge consumptive public spending does not lead to economic growth. Sub-Saharan African countries have tendency to carry out excessive public spending which is bad for the economy (UNTCAD 2012).

Defense Spending and Economic Growth

Gerace (2002) argues that the nexus between defense spending and economic growth is not easy to generalize. However, there is great deal of literature published by political scientist and economists that does not depict any general consensus on whether defense spending affects economic growth positively or negatively. Aizenman and Glick (2003) have also noted that the effect of defense spending on economic growth is a non-linear function.

Yakovlev (2007) states that under the Keynesian effect, defense spending increases aggregate demand with extra capacity which increases on utilization of capital and reduces on unemployment, hence stimulating growth through infrastructure development, education, and research

and development among others. On the supply side, the defense sector strains the civilian sector for human capital, physical labor, and even natural resources.

Smaldone (2006) argues that the concept of military spending in Africa just like other regions denotes to a relationship where the defense sectors financially compete with other public sectors, which in turn affects the distribution of available goods and social economic outlook, hence the concept of guns versus butter.

Positive Impact of Defense Spending

Crespo and Reitschuler (2004) advance the argument that defense spending can stimulate growth and that defense cuts can have negative effect on economic growth of a country. This kind of argument has been very popular in the United States. This can be explained by a strong link to the multi-industrial complex of the politics.

Negative Impact of Defense Spending

Hannah (2003) argues that the single biggest obstacle to development is the worldwide expenditure on the military. This is because the military crowds-out the civilian investments that are more productive, and if the military imports are substantial, then this will even create a balance of payment problem for the country. The econometric model asserts that increased military spending discourages investments as it could signal the existence of underlying tension that contains the potential of conflict (Arunatilake et al. 2001).

Drivers of Economic Growth in Africa

Most African countries have been experiencing economic growth at a faster rate since the beginning of the millennium. Their economic growth has been experienced in the areas of trade, increase in government revenue, infrastructural development, and provision of better social services. Between 2001 and 2008, Africa was one of the fastest growing regions in the world. But despite all the progress, the current growth rate is neither sustainable nor inclusive. African countries rely heavily on natural resources as their economic drivers. However, most of these resources which include minerals and

non-minerals are being exhausted at a fast rate. Africa still experiences low per capita agriculture output compared to the global average. More so, it is estimated that about 30% of the sub-Saharan population is malnourished. This means that more effort should be made toward intensifying agricultural production in the African region [UNCTAD (2012)].

Data Sources

The article reflects panel data from the World Bank Database and Stockholm International Peace Research Institute from 1988 to 2012 because this time frame has got available data from the World Bank and Stockholm International Peace Research Institute. It was made up of GDP, GDP growth, GDP per capita and military spending, spending on health, spending on education, spending on agriculture, and spending on industry as a percentage of GDP. The regression used both the fixed effects model and dynamic panel data model. The article reflected the regression analysis which entailed

$GDP\ Growth_{it} = f(\text{Military Spending}_{it}, \text{Military Spending}^2_{it}, \text{Agricultural Spending}_{it}, \text{Industrial Spending}_{it}, \text{Spending on Research and$

$\text{Development}_{it}, \text{spending on health}_{it}, \text{spending on education}_{it}, \text{spending on exports}_{it}, \Sigma_{it})$.

Spending Priority Sectors and Their Significance

The regression results are presented using both fixed effects model and dynamic panel data model. These models were chosen because the fixed effects model provides room for diagnostic information about the extent of heterogeneity in the panel data. Furthermore, the dynamic panel data model allows for greater heterogeneity in the parameters in comparison to the fixed effects model. The dynamic panel data has also got the advantage of controlling for the effects of unobserved or missing variables.

Under the fixed effects model in Table 1, the variable of military spending is significant at 10% in model 1. In model 2, military spending is also significant at 10%. Military spending² becomes significant at 5% in model 1, and in model 2, it is not significant. Industry value added is statistically significant at 1% in model 1, while in model 2, industry value added is significant at 5%. Agriculture value added is significant at 5% in model 1 and is also significant at 5% in model

Government Spending Priorities in Uganda, Table 1 Panel data estimates with GDP as a dependent variable

Variables	Model 1: fixed effects	Model 2: dynamic panel data model
Lag GDP $L1_{it-1}$		-0.2322212 (0.70)
Military Spending, $Milex1_{it}$	-0.1832821 (1.6) ^a	0.0756912 (1.77) ^a
Military Spending, $Milex^2_{it}$	-0.032626 (2.71) ^b	
Industry Value Added _{it}	-0.6456302 (2.88) ^c	-0.4237822 (2.14) ^b
Health _{it}	-0.0576703 (0.31)	0.2151931 (1.1)
Education _{it}	-0.1335256 (0.22)	0.7122911 (1.48)
Agriculture Value Added _{it}	-0.4323112 (2.73) ^b	-0.3696432 (2.41) ^b
Export _{it}	0.1687213 (1.33)	
Constant _{it}	22.21375 (3.02) ^c	19.903123 (2.17) ^b
F	0.0021	0.0252
R ²	0.4216	
N	60	40

Notes:

^aStatistical significance at 10% significance level

^bStatistical significance at 5% significance level

^cStatistical significance at 1% significance level

2. The health, education, and export variables are not significant in both models 1 and 2

As regards the coefficient, the variable of Lag GDP_{it-1} is not significant in model 2. Regarding the interpretation of the model, an increase in military spending on model 1 by 1% lowers GDP by -0.25% as derived from $Bm1 + 2(Bm1ex^2) = -0.1832821 + 2(-0.032626) = -0.25\%$.

In model 2, an increase in military spending by 10% impacts GDP by 0.08%. As the variable of industry value added increases by 5%, it will negatively impact GDP by -0.65% and by -0.42% in model 1 and model 2, respectively. The health variable is not statistically significant in both model 1 and model 2. Also, the education variable is not statistically significant in model 1 and model 2.

Agriculture value added is significant at 5% and negatively impacts GDP by 0.43% in model 1 and model 2; agriculture value added is significant at 5% and negatively impacts GDP by 0.37%. The export variable in model 1 is not significant.

Model 1 shows the effect of military spending¹, military spending² industry value added, and agriculture value added which have a statistical significance on the GDP. Model 2 shows the effect of military spending¹, industry value added, and agriculture value added which are significant variables and affect economic growth.

Interestingly, military spending negatively affects the level of economic growth for Uganda which connects with previous studies of Ali (2012), Dunne (2010), and Eric and Hamid (2009) who have advanced arguments that military spending has a negative impact on economic growth.

Furthermore, previous studies have argued that spending in public sectors which are productive stimulates economic growth. In model 1, education and health were depicted as not significant to economic growth. Model 2 did not show the significance of the health variable, while education was also not significant. This could be attributed to explanations like corruption which is high within the government systems. Others include poor policy management and implementation which downplays the impact of resources that

are channeled to some of the public sectors like education, industry value added, health, and agricultural value added. For instance, most industries in Uganda are small-scale industries which continue to receive funds from the government, and yet they have low output. In addition, the agricultural sector receives funds which are channeled to support subsistence rural agriculture instead of supporting mechanized modern agriculture. As regards the health sector, the government has been focusing on channeling most of the funds allocated to the health sector to control infectious disease like HIV/AIDS and malaria among others. This strategy is more of a curative approach but not preventive which most times negatively affects growth as it is not sustainable. This contradicts with the arguments raised by sources like UNCTAD (2012) and The World Bank (2014) which advocates for more spending in the health and education sectors as a strategy for driving economic growth in sub-Saharan Africa.

Conclusion

This article highlights the importance of government spending priorities in Uganda. By far the biggest public spending in Uganda is directed to military programs. However, this has affected other sectors like health, education, and agriculture. Spending in civilian sectors can stimulate economic growth.

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