Spending on Security and Defense and Growth

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Abstract

This paper is about a dynamic macroeconomic model that links the composition of public expenditures, especially public security spending, to economic growth. Public expenditures are disaggregated into current spending and capital spending on education, health, infrastructure, and health. One of the public expenditure items under the current spending component is spending on security. The model considers the importance of improved economic and political stability and reduced violence. The quality and efficiency of public and private capital are tied to the level of security. The logic of this modeling approach is that advances in national and economic security can lead to the increase in private capital investment by securing property rights and limiting uncertainties on the returns to capital investment. Additionally, higher national and economic security may increase the efficiency of resource allocation and, as a result, growth. The model is for open economies. It is assumed that the economy has a flexible exchange rate regime, and the balance of payments is cleared through adjustments in the nominal exchange rate. The model also presents the possible impacts of chancing real exchange rates and the level of private and public foreign debt. In the paper, different sets of policy experiments are presented, including reallocation of public spending to support public capital investment and security spending, and implications of improved fiscal management and a more efficient tax collection process. The applications of the model can derive policy implications useful for policymakers.

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Extended Abstract

This paper is about the possible theoretical link between increasing military expenditures and impacts on the private sector and economic growth as a whole. In recent years, many governments have been spending more resources on defense. Therefore, it is important to understand the effectiveness of larger military spending. If military expenditures are effective, a high level of spending on security can be justified more easily.

In the literature, there are many empirical papers on this subject. The results of these studies are mostly in conflict with each other. One of the pioneer studies was completed by Benoit (1978). In this paper, the author finds a positive link between growth and defense spending in developing countries. Lim (1983) challenges the findings of Benoit (1978) and states that we observe many regional differences in results. Another important paper on the topic was written by Riccardo, Annez, and Taylor (1984). They show that the link between economic growth and defense spending is actually negative. In additional to the studies involving cross-country analyses, there are many country specific papers as well. For example, Heo (1999) investigates the effect of military spending in South Korea. He finds that the overall impact of defense spending on economic performance is not harmful. Some recent examples of studies are: Karadam, Yildirim, and Öcal (2016) conclude that the link between military expenditure and growth is positive when nonlinear empirical models are considered. Heo and Yen (2016) find that military spending crowds out the private sector and lowers private investment.

In many countries the share of defense spending is large, but as can be seen in the short literature review, the findings on the impact of such spending on economic and private-sector growth are not consistent. One reason for these conflicting results is the absence of adequate theoretical works on the topic. In the literature, almost all studies investigating the link between military spending and economic growth is empirical. The theoretical background is rarely explored.[1] We need to construct a

[1] For example, Biswas and Ram (1986) adapted Feder's (1983 and 1986) model of the effect of exports on growth in developing countries for a study of the effect of defense spending and economic growth. A model used by Aizenman and Glick (2006) was the reformulation of Barro's growth model (1990) to allow for security effects on output.

dynamic structural model involving the different aspects of the economy to better understand the complex, endogenous link between military spending and growth.

In the literature, Joerding (1986) was the first author questioning whether military spending relative to economic growth can be assumed exogenous as the case in many empirical studies on the topic. Indeed, he shows that the link between defense spending and economic growth is endogenous. Not only can the size of military spending affect growth, but also the growth performance of countries determines the size of military spending. Therefore, his findings indicate that the conflicting results in the literature can be due to the assumption of exogenous military spending. He points out that the link between military spending and growth can be better explored with the help of an endogenous structural model. This is what this paper will try to accomplish.

The new structural model presented in this paper involves the importance of improved economic and political stability and reduced violence, thanks to higher security spending. As the society gets more stable, it is expected that the quality and efficiency of public and private capital will also improve. The logic behind this expectation is that advances in national and economic security can lead to an increase in private capital investment by securing property rights and limiting uncertainties on the future returns on capital investment. Additionally, higher national and economic security may increase the efficiency of resource allocation and, as a result, growth. After constructing the model, the next step of the paper is the simulation of the model by using data from Haiti.

The model presented in the paper is the extension of the model presented in Bayraktar and Pinto Moreira (2007). In this paper, the authors introduced a dynamic macroeconomic model to understand the effects of different allocations of government spending on growth and poverty in low-income countries. This model is modified to link the composition of public expenditures, especially public security spending, to economic growth. The interesting feature of the new model is the consideration of the endogeneity of defense spending in a model which investigates extensively the links between the possible allocation of government spending and growth.

The endogeneity of public spending items is essential to understand the net effects on growth. The link between the composition of public expenditure and growth in developing countries has been the subject of attention in many years. In recent

years, with increasing budget deficits the attention has been shifted on which government spending items are more effective in promoting growth so that the spending cuts may focus on less efficient items. A number of studies have documented that episodes of fiscal adjustment have often been associated with large cuts in public investment; such cuts have translated into adverse effects on growth. In this process, many countries also adjust the level of their military and security spending. The allocation of resources towards security and defense spending requires deep cuts in other spending items or increases in taxes to finance higher spending. Thus, a dynamic model is important to fully understand the impact of higher spending on defense.

In the literature, it had been pointed out that the investigation of the outcomes of changes in budget allocations involves dynamic trade-offs.[2] In order to evaluate these trade-offs a dynamic framework that accounts explicitly for the various channels through which the composition of government expenditure and public capital affects the economy is required.

The key feature of the model presented in this paper is that government spending is disaggregated into various components, including security, maintenance, and investment in education, health, and core infrastructure. In addition, it also accounts for the positive externalities associated some spending items. For example, infrastructure spending has impacts on education and health (see Agénor and Moreno-Dodson (2007)). Thus, cutting infrastructure spending to finance higher defense spending may lead to dramatic negative effects on growth. Such features of the model allow us to investigate the possible negative effects of higher defense spending on growth due to the reallocation of limited resources towards defense spending.

Another important feature of the model is that it accounts for improved political stability and reduction in violence. Political instability affects confidence of the private sector.[3] Improvements in economic security can lead to the rise of private investment by lowering uncertainty and risk on the return to investment and also securing property rights. Another positive effect of higher security spending is that enhanced security

[2] See, for example, Agenor, Bayraktar, and El Aynaoui (2008).

[3] For example, Poirson (1998) shows that, using data on economic security ratings for selected developing countries, economic security has a positive and significant impact on private investment and growth. The paper's outcomes indicate that lower expropriation risks and political terrorism are the most significant security related factors that lead to higher economic growth.

conditions can improve the efficiency of resource allocation and thus growth. In the model presented in this paper, higher defense spending lowers violence and, as a result, increases private sector confidence for future. Higher confidence may reduce the rate of time preference and increase savings of the private sector, which can lead to higher investment and growth.

The results show that the impact of increasing security spending on growth will depend on several factors, especially the way it is financed.

a) If taxes rise to finance it, the positive effect will be limited. An increase in direct or indirect taxes can make a difference.
b) If higher foreign aid is used, the positive effect will be more dominant.
c) Cheap borrowing to finance higher defense spending can again improve growth
d) If higher defense spending is financed through reallocation of public spending items, the net effect of higher defense spending on growth can end up negative. This observation is true especially for allocation of funds from infrastructure spending.

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