Government Expenditure and Growth

How does the level and composition of such expenditure affect aggregate economic growth? Findings from a study of 38 countries

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In many of the developed countries following the Second World War, there existed a widespread presumption of the need to expand public spending and accommodate increases in the relative size of the government sector. This was based on the view that greater government intervention was the best, if not the only way to achieve certain economic and social goals. Since the 1970s, however, the validity of this view has been questioned. Not only has there been growing skepticism concerning the possible achievements of public spending, but also increased recognition of the consequent undesirable side effects of financing these expenditures. In particular, the recent emphasis on structural aspects of economic performance has highlighted the risks of creating disincentives to growth that can arise from the government trying to do too much. This, amongst other reasons, has resulted in deliberate policies to curtail the growth in government spending and even to reduce its level.

In the developing countries, meanwhile, the task of reorganizing the economic structure and promoting faster growth as an explicit goal of economic policy was felt too important to be left to an often nascent private sector. This led to policies of ever-rising public spending, often coupled with increased public intervention. The more stringent financial environment following the 1973 and 1979 oil shocks triggered a movement to curtail public expenditure growth in many of these countries.

Underlying the controversy that has often surrounded these policy changes in both developed and developing nations lies an interesting debate concerning the impact on economic growth of cuts in government spending. This article examines the contribution that government expenditure, and in particular the composition of expenditure, can make to the growth process. Such an empirical investigation is important both in assessing the relevance of a widely used growth model and understanding the role of government spending in the growth experience of developing countries. The results could assist policymakers in designing growth-oriented fiscal adjustment programs and setting up expenditure priorities.

Does public spending help growth?

Some would argue that all government expenditure, regardless of whether it is of a current or capital nature, would have a deleterious effect on growth performance. This is based on the view that centralized decisionmaking, lack of profit motive, and absence of competition, which typifies government operations, make government production always less efficient than private sector production. Hence, any increase in government expenditure would result in slower economic growth in the economy as a whole. Further, because of the transfer of resources from the private sector to the government, there may be a slowdown in the accumulation of human and physical capital and the pace of innovation in the private sector. This conclusion would, of course, have to be modified, insofar as the proportion of government purchases of privately produced output in total expenditure increases relative to services produced within the government sector.

Others, however, disagree with an unqualified endorsement of the efficiency of the private sector, and argue for varying degrees of public participation. They point to the ability of large noncompetitive firms in the private sector to insulate themselves from market forces. Moreover, some point out that if social returns are greater than the private returns, the market system will break down and the private sector may well reduce investment in some key areas necessary for growth. The "structuralists," in particular, go further and postulate that in most developing countries, economic growth is not possible unless the government intervenes to remove impediments to economic growth.

Given what appears to be legitimate but conflicting arguments, it would seem necessary to adopt an empirical approach and examine available evidence on the relationship between government expenditure and economic growth. Although this is an important question for policymakers, direct empirical investigation of this relationship has been minimal, with researchers often coming to

conflicting conclusions. Unfortunately, the complexity of the problems faced by empirical research in this field is compounded by our incomplete knowledge of the growth process and the determinants of economic expansion.

**Influences on growth**

A widely used growth model, associated with the work of E.F. Denison, argues that growth of output can be broken down into four sources: growth in physical capital; growth in human capital; technical improvements; and change in the efficiency of the use of resources. Recently, in reviewing the experience of developing economies, some analysts have emphasized that the degree of openness of these economies should also be taken into account, as external factors, such as the growth in exports and the terms of trade, influence growth. But, unfortunately, our knowledge of the exact causal relationships and the time lags involved is not advanced enough to allow us to specify the exact mathematical relationship between growth and these variables.

Using the Denison growth accounting framework, it is not difficult to identify government expenditures' potential to affect each element in this basic growth equation. The most obvious influence, and the one most emphasized in the literature, is the contribution of government capital spending to the country's physical capital. It must be stressed, however, that this positive effect will only occur if this capital is productively employed and if there is a net increase in physical capital. Insofar as government revenue raising measures and its efforts to finance its capital expenditure decreases the investable surplus of the private sector, an increase in government capital expenditure may actually slow down economic growth. This negative effect arises from less efficient government capital expenditure crowding out more productive private capital expenditures.

A second possible influence involves increasing human capital formation. Typical government functions, such as the provision of basic amenities, health, and education services, often considered as consumption, may enhance the labor force's productivity. In this regard, as far as the impact on economic growth is concerned, the distinction between government current and capital expenditure appears blurred. Although health and education sectors typically benefit from substantial government capital expenditure, the impact on human capital is just as likely to come from current spending, particularly in the short run. Of course, due to longer gestation periods than other types of expenditure, the impact on growth is unlikely to show up immediately.

Technological change can also influence the growth of capital expenditures. In advanced countries, the government's expenditure on research and development has often been felt to have had important spin-off effects on the rest of the economy and has led to enhanced growth in technologically advanced industries. Developing countries, too, have benefited from research and development expenditures on new agricultural techniques and seed varieties, which have often been the product of government expenditure programs.

Finally, the influence of government expenditure on the growth rate, arising from the more efficient use of resources, is even more difficult to quantify and may also be a function of expenditure on education. It should be recognized, however, that one of the traditional reasons for government intervention is that associated with the breakdown of the market system. After all, the classic case for public intervention is to counter underinvestment in public goods. Many of these public goods may be viewed as essential, though unquantifiable, inputs to the private sector production process. Even defense expenditure, insofar as it ensures the maintenance of security and public order, may be an essential precondition for a healthy investment environment.

A number of points emerge from this theoretical review: basic infrastructural investment is a requirement of economic growth; the composition, as much as the level of total government capital spending, is important for economic growth; and the influence of government recurrent expenditures on the rate of growth is somewhat ambiguous. It is possible to argue that the overall impact is likely to be negative, insofar as the government's use of resources for consumption substitutes for savings and subsequent growth in the private sector. Or simply, the government is likely to use these resources less productively than the private sector.

Conversely, however, the overall impact could be positive on at least two grounds. First, as noted, many current expenditures such as those directed to augmenting and maintaining human capital, or to law and order, could be important prerequisites for a successful deployment of growth-related private sector resources. Second, many studies have stressed the importance of the degree of capacity utilization for economic growth. Certainly, in the public sector, some have suggested that rather than increasing productive capacity through capital spending, growth in many LDCs would be promoted ensuring the better use and maintenance of existing productive capacity through increased operations and maintenance expenditures. Inevitably, much depends on the degree of state involvement, and it must be recognized that the choice between public or private provision may not be an all-or-nothing issue.

**Some evidence**

With so many competing hypotheses, it is useful to test them empirically. The study on which this article is based, reports some findings of regressions (for a sample of 38 developing countries based on data for the period 1980–85—see box) relating the real growth of GDP to their level of private investment, increase in the labor force, and various ratios of government expenditure to GDP. For this purpose, apart from aggregate magnitudes, both current and capital expenditures were broken down into various functional components: infrastructure (e.g., electricity, gas, water, roads and other communications); social services (e.g., education, health, welfare, and housing); and directly productive sectors (e.g., in agriculture, mining, manufacturing, and construction). Tests were also made for the influence of various external factors: namely, the growth of exports; the ratio of exports to GDP; and the external interest rate.

Obviously, considerable caution should be exercised in interpreting these statistical results, especially when one considers the extent to which data limitations inevitably constrain empirical tests. These cross-country results yield the following inevitably tentative results. First, for the admittedly limited sample of countries examined, public spending at the aggregate level does not appear to have exerted a major influence on the real growth of the economy. Second, although this appears also to be true for total current expenditure, it does not seem to be true of total capital expenditure. It does appear that countries with relatively high levels of government capital expenditures (as a share of GDP) on average have higher growth rates. Without using time series data, there are obvious problems in interpreting...
this result causally, since countries that grow faster may have a larger margin to devote to government investment.

Further exploration, however, shows that these conclusions may be misleading without examining the composition of expenditures. When this is done, the following tentative results emerge: Capital expenditures on health, housing, and welfare, may boost growth in the short term; capital infrastructure expenditure may have little influence on growth; and directly productive capital expenditures may even negatively influence growth. At the same time, current expenditure in directly productive sectors appears to exert a significant positive influence on growth.

**Policy implications**

In recent years, there has been a growing realization that much more work was required to gear adjustment policies more effectively towards growth. This has been occasioned by the fact that in setting targets for aggregate government spending and ignoring its composition, the quality of expenditure may deteriorate with respect to the growth objective. Indeed, in developing countries, much is made of the potential conflict between adjustment and growth. Too often this has resulted in a call for higher levels of investment, or alternatively, ways have been found to cut recurrent spending to protect the level of capital spending. At the same time, it has often been easier to mobilize the support of the donor community for capital projects than for current spending.

It is now felt that the results of this bias toward capital formation, as opposed to capital maintenance, has generally been damaging to growth. For instance, in developing countries, it is not difficult to find examples of new hospitals being constructed when the old ones cannot operate due to lack of medicines and other supplies, or new roads being constructed while old roads disintegrate through lack of maintenance.

Certainly, from the policy perspective, the emphasis on capital spending is only partly vindicated by the results reported above. Indeed, capital expenditure seems to have exerted its influence through human capital formation rather than through the traditional direct investment channel. For example, the importance of the public provision of infrastructure for growth is not conclusively demonstrated, and the poor relationship between growth and directly productive capital expenditures probably points to the need for better screening of projects to ensure their productivity. Similarly, the importance of going behind aggregate levels to examine the composition of expenditures was also evident in the case of current spending: significantly, current expenditures to maintain the operations of directly productive sectors seemed to have a positive impact on growth. Though it is not possible to draw any firm conclusions from this study, these statistical results do not rule out the possibility that there are certain types of current spending that are even more desirable than capital spending in promoting growth.

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