

A.I.D. Evaluation Occasional Paper No. 2

**MILITARY EXPENDITURE AND ECONOMIC GROWTH:  
AN OVERVIEW OF RESEARCH**

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MILITARY EXPENDITURE AND ECONOMIC GROWTH:  
AN OVERVIEW OF RESEARCH

by

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The views and interpretations expressed in this report are those of the author and should not be attributed to the Agency for International Development.

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INTRODUCTION

The objectives of section 620(s) of the Foreign Assistance Act are to "restrain arms races and proliferation of sophisticated weapons, and to ensure that resources intended for economic development are not diverted to military purposes". The intent of the 620(s) legislation indicates that a periodic analyses of military expenditure and development is a useful activity for AID policy makers. This paper reviews the major research findings in the literature.

The past two years have been a turning point in our knowledge of the relationship between military expenditure and economic growth. The old view that economic growth is not affected by defense allocations or is even positively correlated has been disproved. Work has now begun on assessing the specific areas of impact related to military expenditures and economic growth.

SUMMARY OF FINDINGS

1. Careful attention is needed to measure and assess military expenditure.
2. High military expenditure is negatively related to growth. This correlation is strengthened by controlling for the time period, resource constraints, or for countries having war economies.
3. High military expenditure hurts human resource development, modernization, technology transfer, and the industrial sector (short-term).

## DISCUSSION OF FINDINGS

Military expenditures are difficult to measure and assess.

The best source on measuring and assessing military expenditures on a world-wide basis is the Rand Corporation study Military Expenditure Limitation for Arms Control: Problems and Prospects (Becker 1977) which considered ways to define and measure military expenditure and their limitations. The study began with the position that "achieving even 'relatively' precise measurements of the military expenditure of several states is in some senses conceptually impossible" (Becker 1977:11). A standard accounting model for military expenditure was developed and could be used for international comparisons given international agreements and the resources for collection and development of the necessary data.

Other works that have investigated the problems in measuring military expenditures include the Arms Control and Disarmament Agency's World Military Expenditures and Arms Transfers series which reviews its indicators in terms of description and problems and a work by Ball which concluded that "there is growing evidence that important amounts of security expenditure may not enter the budgets or the national accounts of many developing countries" (Ball 1984:157). Ball goes on to outline five of the most common ways that military expenditures are hidden.

## The Relationship Between Military Expenditure and Economic Growth.

High military expenditure has a negative effect on economic growth. The conventional wisdom that economic growth is not affected by defense allocations (Kennedy 1974) or is even positively correlated (Benoit 1973) has been disproved (Ball 1983, 1984; Deger and Smith 1983; Lim 1983; Faini, Annez and Taylor 1984). Faini, Annez and Taylor estimate from their analysis that "an increase of 10 percentage points in the defense burden (share of defense in GDP) leads to a reduction of annual growth by 0.13%, a nontrivial loss" (1984:487). David Lim using an estimating equation derived systematically within an explicit conceptual framework obtained results that showed that defense spending is detrimental to economic growth (1983: 384). Deger and Smith used an econometric model and found:

...that military expenditure had a small positive effect on growth through modernization effects and larger negative effects through savings. Since the latter outweighed the former, the net effect on the growth rate was negative (1983: 351-352).

Frederiksen and Looney extended Benoit's original research model but came to the conclusion that for

...countries suffering from a relative lack of foreign exchange and government revenues, ...defense expenditures apparently siphon funds away from more productive domestic investments with a subsequent detrimental effect on growth (1983: 643).

The major differences between the studies of the 1970s and the recent studies is the refinement of definitions and a greater attention to controlling conditions. Every investigation of the relationship between military expenditure and economic growth has had to consider controlling conditions. The two most important conditions are the time period and the number and type of countries included in the study. Other factors that have been addressed include the effects of oil-produced currency, local conflict conditions, and a model of "resource constraints". The resource constraints model was used in a study by Frederiksen and Looney (1983) which used a series of indicators of limited resources as the basis of grouping countries before seeking to investigate the relationship between military expenditure and economic growth. Frederiksen and Looney contend that previous studies of defense spending and economic growth "failed to take into account the relative financial constraints faced by individual countries" (1983: 633).

#### Military Expenditure Shapes the Type of Economic Growth.

Work has now begun on assessing the specific areas of impact related to military expenditures and economic growth. These studies (covered below) have shown that the size of a country's military expenditure has numerous macroeconomic effects both positive and negative.

Negative effects include lower saving and investment shares in GDP, a greater tax burden, and a shift in economic activity from agriculture toward the industrial sector (Faini, Annez and Taylor 1984). It has also been suggested that the military provides "the mechanism for channelling resources from the periphery to the metropolis" (Kaldor 1976: 476).

Positive effects are in the areas of industry, human resources (the education of military personnel), and modernization and technology transfers. These positive aspects of military expenditures have been addressed in a large number of studies. A recent example of evidence of such positive relationships is Weede's 1983 study Military Participation Ratios, Human Capital Formation, and Economic Growth which found that "since armed forces teach discipline and promote the habit of obeying orders, the military participation ratio is taken as an indicator of discipline-related human capital formation".

Long-term effects are somewhat different from the effects discussed above. For example, even the industrial sector suffers in the long-term under high military expenditures. Leontief and Duchan (1977) found "on the global level, macro-economic indicators (e.g. investments, trade, manufacturing) increase as military outlays decrease, and vice versa. Of primary commodities, only nickel and petroleum would be produced in lesser amounts in a disarmament scenario" (Thorsson 1983: 407).

### Military Expenditure and Strategic Factors.

While there are contradictory arguments regarding military expenditure and the allocation of resources, Benoit's argument that the "primary economic contribution of [defense expenditures] is assuring a minimum of physical security" (Kaldor 1976: 463) still holds. A recent study by Deger and Sen found that a "formal optimising model [can be used] to show that defense burden in LDCs may be analyzed principally in terms of strategic factors such as security and threat, and is determined relatively autonomous of economic factors" (1983: 67).

The Deger and Sen model has three major features: 1) "most defense expenditure in LDCs is related to regional conflicts with geographically localized strategic targets", 2) "decision makers will be influenced by the subjective needs of security", and 3) "LDCs have exceedingly stringent resource constraints and have to be more careful about defense/civilian mix" (1983: 69-70).

A link between strategic factors and military expenditures means that the only way to reduce the negative effects of high military expenditures is to improve the strategic factors of developing countries.

## RECOMMENDATIONS

1. Increase the resources for the collection of data on military expenditures.
2. Match any increase of military assistance with a proportional increase in economic assistance to counter the negative effects of increases in military expenditures.
3. Undertake country sector analysis of military expenditures effects so that policy makers can better understand the economic conditions present in countries with differing levels of military expenditures.
4. Promote the improvement of strategic factors as an argument for improved economic growth.

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