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BOOK REVIEW ARTICLE

Council for Social and Economic Studies

SOCIO-ECONOMIC BUDGETARY CONTRASTS IN DEVELOPING COUNTRIES: THE EFFECT OF ALTERNATIVE POLITICAL REGIMES

By Robert E. Looney

One area that has received scant attention in the literature is the effect of alternative political systems on the setting of budgetary priorities in developing countries. While there has been a considerable anecdotal discussion of this issue, little or no empirical work has been undertaken. Using the simple dichotomy between civilian and military regimes, it appears that significant differences in budgetary allocations exist. Interestingly enough it appears that military regimes are less likely to reduce economic allocations during periods of budgetary stringency. In contrast, civilian regimes in similar situations are more inclined to preserve social allocations.

Despite the explosion of studies on the impact of defense expenditures on developing country growth, no clear and simple answer has emerged to the question: does defense spending have an impact on economic performance? Depending on the researcher, the answer could be yes, maybe, or no, with different degrees of confidence. There is also considerable disagreement about the nature of such impact, as may exist. Suggesting a reciprocal relationship between military outlay and economic performance, some analysts feel that as current defense spending can affect future economic performance, current or expected economic conditions can influence governmental decisions about how much to spend on defense.(1)

As Chan(2) noted, we need to redress the research problems in this area into separate questions and ask: 1) what kind of impact? 2) how does this impact occur? 3) what are the relevant measures of defense burden and the relevant measures of economic performance? 4) when is this impact more likely to be felt? 5) which countries are more likely to experience this impact? 6) what are the opportunity costs of this impact? 7) which domestic groups and areas are more likely to benefit or to be hurt by this impact? and 8) what are the policy implications of this impact?

The purpose of this paper is to make a first attempt at answering several of these questions by integrating two major areas of research — the defense growth debate and the defense budgetary trade-offs debate — that despite their rather obvious

connection have been undertaken quite independently from one another. More specifically, the analysis below shows that:

1. When examining Third World countries as subsets — those governed by military regimes or those having civilian governments — one finds sharply diverging results as to the impact of the military burden on growth.
2. The budgetary trade-off between defense and non-defense expenditures differs considerably depending on whether a country has a civilian government or military regime;
3. Differences in the budgetary process in military and civilian regimes are likely to account in part for the contrasting impact that increased military burdens have with respect to each group of countries.

The main contribution of the analysis below to the ongoing defense/growth debate is the identification of a clear and unambiguous mechanism leading from changes in the military burden to variations in budgetary allocations to growth inducing categories and hence growth. Several of these linkages have been alluded to by various researchers, but none have been quantitatively identified.

The Defense-Growth Debate

There are many hypotheses one can develop about the manner in which increased defense spending may affect growth favorably or unfavorably. Rothchild,(3) Benoit,(4) Deger and Sen,(5) Frederiksen and Looney,(6) Looney,(7) Faini, Annez and Taylor,(8) Leontief and Duchin.(9) and Lim,(10) Deger and Smith,(11) Biswas and Ram,(12), have advanced a variety of arguments.

Despite the diversity in their approaches and arguments, most researchers probably recognize two important mechanisms through which military expenditures may affect economic growth:(13)

1. the military sector may for a variety of reasons generate positive or negative externalities for the rest of the economy; and
2. there may be important factor productivity differences between the two sectors.

In his seminal work Benoit,(14) after controlling for the effects of investment and bilateral economic assistance, found

(for the period 1960-65) a positive and significant relationship between the defense burden (defense expenditures share in gross national product) and the growth in civilian GNP. On the other hand, over the 1950-65 period he did not find a statistically significant relationship between the defense burden and growth.

In Benoit's view, the positive correlation in the shorter time period indicated that military expenditures were more likely to be the cause rather than the effect of faster economic growth. His actual conclusions, however were stated in rather cautious and tentative terms: (15)

We have been unable to establish whether the net growth effects of defense expenditures have been positive or not. On the basis of all the evidence we suspect that they have been positive . . . but we have not been able to prove this. Heavy defense expenditure does not, however, appear to have been associated with lower growth rates, even after adjusting for differences in foreign aid receipts and investment rates and this in itself is surprising.

The positive relationship found by Benoit between the defense burden and economic growth could however be spurious because economic growth could be caused by the inflow of other types of foreign resources not just aid. There has also been considerable skepticism regarding Benoit's explanation that rising military expenditures stimulate private demand and encourage fuller utilization of production facilities. Several critics have argued that the main problem facing developing countries is not inadequate demand and underutilized capacity, but severe production bottlenecks in precisely those industrial sectors that are likely to be further strained to cope with additional defense demands. Finally, several analysts have objected to Benoit's structural specification of the analytic model linking defense expenditures to growth and his measure of the defense burden used in his model. (16)

Although the studies that attempt to verify Benoit's results do not always agree among themselves, they have not, on the whole, supported his conclusion. Some failed to find any strong and systematic relationship between defense spending and economic growth in the Third World. Others actually discovered a significant negative relationship between these variables, either for developing countries as a whole, or at least for some subsets of countries. While some analysts found a positive

relationship for several countries, such as the OPEC countries, or a somewhat even larger group of unconstrained countries,(17) this phenomenon appears more the exception than the rule. None of the validating studies would support Benoit's observation that the positive impact of military expenditures on growth is a widespread phenomenon among developing countries. On the other hand, the evidence in support of a negative relationship between defense spending and economic growth has usually produced modest (albeit statistically significant trade-off) and sometimes is derived from very small samples of subsets of the developing countries.(18)

As noted above, the major deficiency common to most of these studies is their omission, except in a very general sort of way of the specification of a mechanism through which military burdens impact on growth. Benoit's resort to Keynesian demand creation effects for net positive impacts and Frederiksen and Looney's assertion of the net negative impacts on overall growth stemming from the appropriation of scarce foreign exchange by the military, remain as the standard explanations for the observed impacts of defense expenditures on growth in the Third World.(19)

Completely isolated from the defense growth debate, a number of researchers have been simultaneously attempting to determine whether increases in defense expenditures in Third World public sector budgets systematically displace various socio-economic allocations.

To date analyses of budgetary trade-off:(20)

1. have concentrated almost exclusively on the developed countries;
2. have proceeded from a variety of theoretical perspectives;
3. have employed an array of methodological approaches; and
4. have produced conflicting and mixed results.

Peroff and Warren(21) conclude that "the number of studies which indicates the existence of a tradeoff approximates the number that shows that none exists."(22)

While the bulk of the research on budgetary trade-offs between defense and social program expenditures has focussed on the industrial countries of North America and Western Europe, Hayes,(23) has suggested that the problem of trade-offs between defense spending and social investment "is perhaps

even more serious in the developing countries.”(24)

In a major United Nations report the Secretary General argued that when the needs of economic development are so pressing in the developing countries, it is

. . . a disturbing thought that these countries have found it necessary to increase military spending so speedily, particularly when their per capita income is so low.”

The study concluded that military expenditures undoubtedly absorb resources that are:

. . . substantial enough to make a considerable difference, both in the level of investment for civil purposes, and in the volume of resources which can be devoted to improving man's lot through social and other services.(25)

The clear implication of this United Nations report is that increased defense spending may have negative consequences for socio-economic development programs such as health, education, and economic services.

Clearly, the basic criticism leveled against defense expenditures is that they reduce the total resources available for economic development programs such as health, education, and economic services.

Therefore, the basic and rather obvious criticism leveled against defense expenditures is the usual guns vs. butter dichotomy i.e., that increases expenditures reduce the total resources available for economic and social development. The growing need on the part of developing countries for both domestic and foreign resources could be met, it is argued, by freeing some of the current allocations for defense, especially where economic difficulties demand major structural adjustments. Critics of defense expenditures argue that allocations in this area complicate the task of adjustment, since they escape analysis and scrutiny while using up high opportunity resources.(26)

While this argument appears sound in a zero-sum world, in actuality these fears are somewhat surprisingly not always borne out. For example, in her analysis of budgetary allocations to defense and a variety of socio-economic programs in Brazil between 1950 and 1967, Hayes(27) concluded that military spending did not necessarily yield negative consequences for social and economic investment. She found that substitutions between military allocations and allocations to other sectors do occur frequently, but that the burden of these

substitutions is distributed across all categories at one time or another. Further she judged that when they do occur, these substitutions are not severe. Finally she determined that (at least in the Brazilian case) a zero-sum situation did not always occur between defense and non-defense allocations in the sense that defense spending was often accompanied by substantial increases in spending for infrastructure and other development related activities as the central government expanded its overall level of expenditures.

She did find on the other hand that increased defense spending has some negative effects on social spending, but that this "was mild because social investment was not a major priority of any of the regimes examined." (28) Nevertheless, Hayes reported a correlation of -0.23 between defense and social development (education, health, welfare) expenditures measured as percentages of the total public budget. In addition, she found a -0.28 correlation between spending on military personnel and social development expenditures. Although "theoretical generalizations cannot be made and hypotheses cannot be accepted or rejected on the basis of evidence from a single case," (29) Hayes research seems to indicate at most some potential competition between military expenditures and socio-economic budgetary allocations.

Even more surprising (and counter-intuitive) was the finding of Ames and Goff (30) (using a pooled cross-section series data for 18 Latin American countries for the period 1940-1968) that education and defense spending tend to increase and decrease simultaneously. Correlating defense and education spending in absolute terms, as percentage changes from year to year and relative total budget and gross domestic product for individual years (and regimes), Ames and Goff found rather high positive correlations between defense and education expenditures measured relative to the total budget. Mindful of serious auto-correlation problems in their analysis, Ames and Goff concluded that although other (presumably unidentifiable) policy areas may lose out in the budgetary process, neither education nor defense "gains at the expense of the other." (31)

In summary, as in the defense/growth debate, there is conflicting evidence about the interaction of defense with other growth inducing variables. (32) While the studies cited above are suggestive as to the potential budgetary trade-offs between defense and socio-economic allocations, they are somewhat

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unsatisfactory in that the manner in which the overall composition of the budget is determined is never explicitly dealt with. Can we go one step further and delineate the types of regimes that are likely to systematically reduce certain growth inducing allocations for the sake of increased defense expenditures? The literature on Third World civilian and military regimes seems to suggest that this dichotomy may be a useful starting point for examining the manner in which defense allocations affect the composition of socio-economic expenditures in the public sector budget.

Budgetary Priorities in Military and Civilian Regimes

A frequently stated and widely believed maxim of economic development holds that strong central planning under an authoritarian regime is necessary for an underdeveloped country to achieve rapid economic growth. Hielbroner for example states that "only political leadership of the most forceful kind can . . . carry the Great Ascent along." (33) He goes on to say that:

. . . in most of the underdeveloped nations the choice for the command post of development is apt to lie between a military dictatorship and a left wing civilian dictatorship . . . the logic of events points to the formation of economic systems and political regimes which will seek to impose development on their peoples. (34)

Interestingly while this theme is so pervasive in the literature the assertion is rarely supported by definitive data of any kind. (35) In fact existing empirical studies of regime type, public policy and policy outcomes conducted so far tend to support the conclusion that regime differences have little or no impact on public policy.

The first of these studies, conducted by Eric Nordlinger (36) was based on a population of seventy-four countries. Nordlinger attempted to test the relationship between military strength and seven indicators of economic and social change. These indicators included relatively standard measures of economic change such as the rate of growth of per capita GNP, as well as somewhat more unusual subjective indices such as leadership commitment to economic development.

Finding relatively weak correlations between military strength and the various indicators of socio-economic develop-

ment (except for the least developed countries of his sample), Nordlinger concluded(37) that within a particular social and political context (when there is hardly a middle class to speak of and when workers and peasants have not been politically mobilized) military regimes sometimes allow or even encourage economic modernization. However he felt his results indicated that in other contexts (i.e., outside sub-Saharan Africa) officer politicians were apparently unconcerned with the realization of economic change and reform. It should be noted that Nordlinger explicitly ruled out the claim that civilian regimes are necessarily more successful in carrying out modernizing changes.(38)

Nordlinger's conclusions were reconsidered by Jackman(39) who applied a covariance analysis method to Nordlinger's data base (as well as a new set of data covering the decade 1960-1970 for seventy seven Third World countries). The use of a more sophisticated statistical approach led Jackman to conclude in contrast to Nordlinger that: "military intervention in the policies of the Third World has no unique effects on social change, regardless of either the level of economic development or geographical region."(40)

Based on an identical sample of 115 countries McKinlay and Cohan-reached conclusions that were very similar to Jackman's. In the first of these studies, McKinlay and Cohan(41) compared the performance of military and civilian regimes over the 1951-70 period, using indicators of annual change in percapita GNP, cost of living, food production, exports, primary education, military spending and military size. Like Nordlinger, they found that military regimes performed significantly better than civilian regimes in the poorest countries although the evidence also suggests that in Latin America military regimes perform somewhat better than civilian ones. However, McKinlay and Cohan concluded that "military regimes do not in aggregate form a distinctive regime type in terms of performance."(42) They found that the rate of growth of primary education was the only overall significant performance difference between military and civilian governments.

In their second(43) study McKinlay and Cohan covering 1961-70 used different data and statistical techniques to arrive at the same basic conclusion. In this study, McKinlay and Cohan found evidence that military regimes tended to occupy a weaker international trading position than their civilian

counterparts, but that their economic performance rates, measured in terms of the rate of growth of per capita GNP, cost of living and exports, compared favorably with non-military regimes.(44) Military regimes were clearly distinguished from their civilian counterparts only by their lower levels of political activity and higher levels of political change. In short the general conclusion reached by Nordlinger and McKinlay-Cohan were that the military regimes were not socially reformist for the most part while being highly repressive politically. Although Nordlinger found some evidence for higher economic growth by African military regimes, this was not attributed to inherent regime capabilities. The latter authors discerned in the socio-economic area that "the military regimes systems do score consistently lower than the non-military regime systems." (45) And while noting that the variations were not of sufficient magnitude to warrant statistical confidence, they reiterated that "what differences do exist place the military regimes in the weaker position." (46)

Sarkesian reports(47) on analogous, yet more striking findings by Park and Abolfathi who:

. . . analyze military involvement in domestic politics and its consequences for foreign and defense policies. Five indicators of military influence were operationalized and correlated with approximately sixty variables across 150 countries (ca. 1970). Among other things, Park and Abolfathi found that 'countries with a strong political rating of the military tend to spend a higher proportion of their governmental revenues for defense'. They also found that health and education expenditures tend to decrease as military influence increases.

Using the 1960-73 time frame, Ravenhill(48) was unable to find statistically significant performances for African military and civilian governments. Yet he adds the caveat that:

. . . this type of research design by aggregating the performance data for all 'military' regimes, obscures the substantial differences in performance between regimes classified within either the civilian or military groupings.(49)

Along these same lines Philippe Schmitter,(50) using both cross section and longitudinal data, concluded that no regime type was exclusively linked with developmental success (as measured by such indicators of performance as average annual

percentage increases in inflation, exports, industrial production, and per capita GNP). Military and civilian regimes were slightly more successful in curtailing inflation, increasing foreign exchange earnings, and promoting economic growth, especially in industry; however she felt her results indicated that environmental factors, particularly dependence on foreign capital, aid and trade, were more important in understanding performance variations than regime type. Regime type only appeared relevant for understanding variations in government allocations (outputs) as distinct from system performance (outcomes). In particular Schmitter found that, as opposed to their civilian counterparts, military regimes in Latin America tended to spend less of social welfare, relied more heavily on indirect taxation as a source of government revenue, and extracted fewer resources for the pursuit of public polities. It should be noted however that most of her correlations between regime type and policy outputs were weak, supporting the view that regime differences are relatively unimportant for understanding policy differences in Latin America.

Margaret Daly Hayes(51) detailed work on longitudinal changes in Brazilian national expenditures also cast doubt on the relevance of regime differences for explaining variations in economic goals and policy outputs. Compared to their military counterparts, civilian governments in the 1950-67 period were more likely to spend money on social development and the civilian bureaucracy and less likely to spend funds on military equipment; but all regimes in this period gave priority to national development with an emphasis on infrastructure development. In short, her analysis indicated that ecological considerations, particularly GNP, political conflict, primary export earnings, inflation and debt service rather than regime type explained most of the variation in expenditure patterns over time.

In summary, recent empirical research tends to suggest that underlying socio-economic conditions impose such basic constraints on political actors that it makes little difference whether they are civilian or military. Similar conclusions have been reached by studies employing very different units of analysis and research strategies. However, before concluding that the effort by researchers to explain the causes of regime variations has been a total waste of time, it is of interest to look at those studies that have concentrated more on differences

between regime type, budgetary priorities and socio-economic trade-offs associated with increased levels of military expenditures.

In the first of these studies, Kennedy(52) found that in the 1960s military regimes devoted a larger share of their budgets (twenty one percent) on the average to the armed forces than civilian governments (fourteen percent): (53)

Military governments in Asia, sub-Saharan Africa, and Latin America allocated about double the percentage allocated by non-military governments on defense out of state budgets.

Except in Latin America, Kennedy found military spending to be uncompetitive with health and educational expenditures. Only in Asia and to a lesser degree Latin America did civilian governments spend more on education and health than military regimes. It was about the same in Africa while in the Middle East the largely traditional monarchic civilian autocracies spent even less upon such welfare activities than did the military.

Even more pronounced negative relationships with welfare were reported by Morrison and Stevenson(54) for military expenditures. In Asian and Latin American countries there was a moderate inverse correlation with economic growth and a strong positive one with political instability. Weaker relationships were reported for Africa, where many of the countries had only recently gained formal independence.

Tannahill's policy analysis(55) of ten South American countries between 1948 and 1967 revealed that the military did slightly better in such areas as economic growth, manufacturing production, exports and inflation, while civilians were marginally superior with respect to indirect taxation. His overall conclusion was that: (56)

The major difference in the performance of military and civilian governments, however, is a political one. On every indicator of political responsiveness to demands for reform — government sanctions, social welfare spending and direct taxes — the military as rulers opt for more conservative or more repressive policies than do their civilian counterparts. We must conclude with Nordlinger, then, that military rulers are commonly unconcerned with the realization of reform and where there are civilian organizations pressing for such change, the military purposefully oppose them.

Even more than Kennedy, Tannahill discovered a salient distinction in the vital area of social welfare spending where approximately 23 percent of civilian budgets fell into this category, while for the military regimes, it was slightly in excess of 17 percent. Furthermore, this was the only policy differentiation that was statistically significant.

The validity of Tannahill's findings is underscored by Dickson's(57) cross-national and longitudinal assessment of trade-offs for the same countries during the 1961-70 period. He concludes that:(58)

1. military regimes appear to have been more fiscally conservative than civilian ones;
2. civilian regimes appear to have been more developmentally oriented than military ones;
3. military regimes were inclined to spend less and run lower deficits, even though they spent more on the military;
4. military regimes showed a lower rate of increase in the cost of living and maintained a stronger international liquidity position for the central bank; and
5. civilian regimes for their part, spent more, did more for education and effected higher savings and investment rates, although the military had an edge in electrical production.

Unfortunately the only direct welfare or reform indicator employed by Dickson was public education expenditures. Yet using an earlier 1950-67 time frame Schmitter(59) found that military rule in Latin America was associated with higher regressiveness in tax structures, although frequent military intervention was associated with higher economic growth rates. Schmitter entered the caveat that:

We have shown rather convincingly that in some penetrated societies such as those in Latin America, exogenous variables — especially the level of commercial and financial dependence on the United States — do explain a wide range of outcomes, including the rate of GNP increase.(60)

Much of the empirical work to date is less in agreement with the expectations of those who imputed a modernizing role to the military in nation-building than it is with Heeger's(61) conclusion that:

The military decade (1965-75) that has just ended in Africa and Asia has been highly disillusioning. Contrary to

most scholars' earlier image of the military as a highly modern force, able to transfer its organizational and technical skills to the art of governing, most military regimes have hindered the development of their countries. Explanations for their incapacity abound. Military organization is now seen as incapable of dealing with the more elusive problems of development, the military is seen as preoccupied with its own class interests; military rulers are described as so anti-political as to frustrate their efforts to gain popular support.

A similar conclusion for most developing countries is articulated by Ball(62) who notes "It is increasingly accepted that for these countries high rates of economic growth, investment and employment are inversely related to high levels of military expenditure." She assesses the effects of militarization upon economic development as being more negative than positive.(63)

Along the lines Debelko and McCormick(64) examined budgetary substitution effects between military, health and educational expenditures reported by 75 countries in various parts of the world between 1950 and 1972. Their regression analysis was consistent with the opportunity cost theses although the coefficients tended to be weak — yet this was less the case for education and health.

When they controlled for regime type, the most pronounced substitution effects were obtained in the case of military regimes: "it is safe to conclude that military spending in personalist regimes has had the harshest impact on spending for education and health."(65)

Opportunity costs were only marginally affected by economic development levels, although these tended to increase for education among the more developed countries, while they declined for the least developed which may have been impacted more by foreign aid programs.

Analyzing coups and military expenditures between 1963 and 1971, Whynes(66) finds that in every case there was a post-coup rise in military expenditures.

An earlier and longer term association between military intervention and enlarged budgetary shares was also reported by Thompson(67) who discerned for the 1946-66 period "that years in which military coups occurred were more likely to coincide with years in which relative defense expenditures increased, not decreased."(68) While this may well have reflect-

ed abortive attempts by incumbent governments to buy off military support for conspirators, Thompson warns against casual assumptions. Nevertheless, he stressed that "more generally it would appear that there is a tendency for relative defense expenditures to rise in the years after a coup, especially after successful coups." (69) The same holds for subsequent increases in arms imports and weapons stocks.

In general therefore, the empirical literature has been somewhat more successful in identifying differences by regime type with regard to budgetary priorities and socio-economic trade-offs associated with increased defense expenditures than with detecting major differences in the macro-economic performance of civilian and military regimes. However the literature to date remains unsatisfactory in that if in fact there are major differences in budgetary priorities between military and civilian regimes, the consequences should be clearly reflected in some sort of economic performances measure. Yet this does not appear to be the case.

As noted above, the purpose of the empirical analysis that follows is to shed new insights into the controversy surrounding the policy impact of regime type, by examining the impact military expenditures have on over-all economic growth in both military and civilian regimes. In order to account for the results obtained from this exercise, additional tests are performed to determine whether civilian or military regimes have different defense-socio-economic budgetary trade-offs.

In short the analysis below attempts to integrate three main themes in the literature: the impact of defense expenditures on economic growth, the manner in which Third World budgetary trade-offs between defense and socio-economic allocations are resolved and the differing economic performance of military and civilian regimes.

Definitional Considerations

The definition of militarism is fraught with difficulties and controversy. The usual approach is to define militarism as implying a dominance of the military over the civilian, an undue preponderance of military demands, and emphasis on military considerations, spirit, ideals and values. This definition is conceptually broad in scope and it is probably difficult to compare nations on this basis. (70) More specific is the description provided by M. Thee: (71)

. . . under the term 'militarism' I assume such symptoms as a rush to armaments, the growing role of the military . . . in national and international affairs, the use of force as an instrument of prevalent and political power, and the increasing influence of the military in civilian affairs.

There are clearly a number of operational problems in using this definition to categorize countries as either military or civilian.

Using a different line of approach Sivard,(72) claims that for a sample of 104 developing countries, 56 have some form of explicit or implicit military control. Militarism is identified by one or more of the following criteria:

1. key political leadership by military officers;
2. existence of a state of martial law;
3. extrajudicial authority exercised by security forces;
4. lack of central political control over large sections of the country where official or unofficial security forces rule; and
5. control by foreign military forces(73)

Clearly these attributes are empirical in that they can be confirmed for a particular society.

Because it was operational, Sivard's approach to regime classification was adopted for the analysis that follows.(74)

Empirical Results

Starting with a simple Benoit type framework, the impact of the military burden (here defined as the average level of military expenditures per capita over the 1970-81 period) on over-all economic growth,(75) (GDPG) for the period 1970-82 was first examined.

Benoit's basic equation was modified somewhat to take into account factors identified in subsequent studies as having an impact on overall economic growth. These variables included:

1. The share of public consumption (PCB) in GDP was included — presumably reflecting potential "crowding out" private sector investment and hence reduced over all rates of investment.(76) The expected sign on this variable is negative.

2. The growth of investment (GDIGB) over the 1970-82 period was used for the investment term. Empirically this variable gave results superior to Benoit's measure — the share of investment in GDP.

3. The rate of growth of exports over the 1970-82 period was included to control for the relaxation of the foreign exchange constraint in economies such as the OPEC countries i.e. higher rates of growth in these countries may simply stem from increased export earnings which in turn make an increased volume of funds available for modernization and expansion of the military. (77)

4. The average level of military expenditures over the 1970-82 period were used to capture the impact of the military burden on overall economic growth. (78)

For the military regimes:

$$\begin{aligned} \text{GDPG} = & 0.65 \text{ GDIGB} - 0.27 \text{ PCB} + 0.22 \text{ ME} + 0.05 \text{ EGB} \\ & (6.94) \quad (-2.84) \quad (2.20) \quad (0.48) \\ & r^2 = 0.765; \quad F = 23.60; \quad \text{DF} = 33 \\ & (1.65) \quad (-2.34) \\ & r^2 = 0.621; \quad F = 15.13; \quad \text{DF} = 51 \end{aligned}$$

For the civilian regimes:

$$\begin{aligned} \text{GDPG} = & 0.78 \text{ GDIGB} - 0.25 \text{ PCB} - 0.61 \text{ ME} + 0.42 \text{ EGB} \\ & (5.25) \quad (-0.36) \quad (-4.09) \quad (3.25) \\ & r^2 = 0.666; \quad F = 11.45; \quad \text{DF} = 27 \end{aligned}$$

For military regimes, real GDP growth over the 1970-82 period was found to be largely a function of the rate of real growth in investment over the same time period (the regression coefficients are standardized estimates), with military expenditures impacting positively on over-all growth. Civilian regimes, in contrast, experienced strong negative effects on growth resulting from increased levels of military expenditures.

Clearly, military regimes — everything else being equal — undoubtedly have greater budgetary flexibility i.e. they can determine expenditure priorities without the degree of popular support associated with the budgetary process in most civilian regimes. Whether or not there is any systematic bias in the way military and civilian regimes determine their defense non-defense budgetary trade-offs, may ultimately account for the impact defense expenditures have on overall growth in their respective economies. More specifically, do military or civilian regimes significantly and systematically reduce growth inducing budgetary allocations to accommodate increased military burdens?

Budgetary trade-offs were examined by constructing a simple model of the form: share [x] - share [defense] + control variable. Where share [x (79)] is the share of a non-defense category in the government's budget. Control variables were used to improve the specification of the regressive model, thus obtaining less biased estimates. The control variable selected was the share of public expenditure in GNP in 1981.(80) For the results for the military regimes see Chart One.

For the military regimes increased defense expenditures tend to be associated with somewhat higher levels of public sector services, health and education expenditures and allocations for the transport sector. Over-all, defense expenditures do not appear to significantly reduce the share of the budget for economic development, social expenditures, expenditures for welfare, and agricultural development.

Most of the budgetary trade-offs with defense are not particularly strong, however, perhaps indicative of the fact that military regimes spread the needed non-defense reductions over a variety of sectors to accommodate increased allocations to the military.

From the results above we can conclude that increased allocations to defense in military regimes do not come at the expense of allocations that would be making a major contribution to economic growth — the economic services are not significantly contracted nor is agriculture while transport appears to be a beneficiary of increased shares of the budget allocated to defense.

Civilian regimes show a somewhat different pattern of defense/non-defense budgetary trade-offs. Civilian regimes appear much less likely to reduce social programs during periods of expanded defense expenditures than is the case with their military counterparts. In fact civilian regimes tend to increase a number of social programs in line with defense allocations — total social expenditures, and welfare expenditures are both expanded in line with defense. These expanded budgetary shares appear to come at the expense of economic services, particularly funds allocated for agricultural development. In contrast to military regimes the transport sector does not appear to have a statistically significant increase in its budgetary share during periods of expanded defense expenditures. In short regimes tend to protect social, particularly welfare expenditures during periods of expanded defense expenditures. These budge-

CHART ONE

(1) public services = 1.25 defense - 0.58 public sector expenditures
 (3.36) (-1.13)

$r^2 = 0.386$; $F = 5.72$; $DF = 20$

(2) total social = 0.42 defense - 0.03 public sector expenditures
 (1.22) (-0.06)

$r^2 = 0.08$; $F = 0.78$ $DF = 20$

(3) health- = 0.47 defense - 0.17 public sector expenditures
 education (2.36) (-0.61)

$r^2 = 0.236$; $F = 2.77$; $DF = 20$

(4) welfare = - 0.05 defense - 0.15 public sector expenditures
 expenditures (-0.19) (0.38)

$r^2 = 0.008$; $F = 0.08$; $DF = 20$;

(5) total economic = -0.39 defense - 0.05 public sector expenditures
 expenditures (-1.88) (-0.17)

$r^2 = 0.181$; $F = 1.99$; $DF = 20$

(6) agricultural = -0.10 defense - 0.06 public sector expenditures
 development (-1.44) (-0.63)

$r^2 = 0.146$; $F = 1.55$; $DF = 20$

(7) transportation = 0.56 defense - 0.10 public sector expenditures
 (4.17) (-0.53)

$r^2 = 0.495$; $F = 8.81$; $Df = 20$

For the civilian regimes the same tests yielded:

CHART ONE (Continued)

(1') public service = 0.66 defense - 0.38 public sector expenditures
 expenditures (3.80) (-1.63)
 $r^2 = 0.430$; $F = 8.68$; $DF = 26$;

(2') total social = 0.56 defense - 0.29 public sector expenditures
 expenditures (2.75) (-1.06)
 $r^2 = 0.269$; $F = 4.42$; $DF = 26$;

(3') health- = 0.25 defense - 0.20 public sector expenditures
 education (1.77) (-1.04)
 $r^2 = 0.151$; $F = 2.14$; $DF = 26$;

(4') welfare = 0.32 defense - 0.10 public sector expenditures
 expenditures (2.94) (-0.66)
 $r^2 = 0.276$; $F = 4.58$; $DF = 26$;

(5') economic = -0.23 defense - 0.25 public sector expenditures
 expenditures (-2.24) (-1.74)
 $r^2 = 0.247$; $F = 3.94$; $DF = 26$;

(6') agricultural = -0.13 defense - 0.06 public sector expenditures
 development (-2.87) (-0.94)
 $r^2 = 0.273$; $F = 4.51$; $DF = 26$;

(7') transport = 0.13 defense - 0.87 public sector expenditure
 development (1.86) (-0.87)
 $r^2 = 0.152$; $F = 2.15$; $DF = 26$;

tary shares come largely at the expense of economic expenditures, that presumably would contribute to overall economic growth. However, overall welfare of the civilian population may not decline appreciably during periods of increased defense expenditures.

In contrast military regimes are less inclined to protect social expenditures during periods of military expansion — health and education expenditures may in fact be increased, but this is not the case for welfare and social programs. On the other hand, military regimes appear unwilling to sacrifice economic allocations for the sake of increased defense budgets. In fact there appears to be a marked increase in allocations for transport development during these periods. The net effect of this budgetary pattern is undoubtedly little sacrifice of overall growth, but a decline in welfare during periods of defense build up.

Conclusions

As noted at the beginning of this paper, little integration has taken place between the body of analysis focused on the defense/growth issue and that dealing with defense/non-defense budgetary trade-offs. Starting from the assumption that civilian and military regimes are likely to have somewhat different budgetary priorities, the analysis above has shown that these two bodies of literature can be fruitfully merged to provide useful insights into the manner in which defense expenditures impact on Third World economies.

Military expenditures tend to reduce economic growth in civilian regimes. The fact is however that civilian governments, perhaps due to voter resistance, tend to maintain and even expand a number of social programs during periods of military buildup. Economic allocations bear the brunt of expanded military budgets. The net impact is one of increased military spending impacting negatively on growth.

In contrast the military regimes, perhaps not as constrained by civilian opinion and preferences, tend to be less inclined to maintain social programs during periods of military buildup. This in turn allows military regimes the luxury of avoiding major cuts in economic allocation (and perhaps even an expansion in some economic areas). The net effect is that military regimes have not experienced reduced growth with higher

levels of military expenditures.

Clearly there appears to be some constraint which the mere possession of a domestic arms industry places on the budgetary process in arms producing countries that is not present in non-arms producing countries. The nature of this constraint will, however, most likely not be understood with any degree of certainty until a number of detailed country studies are completed.

FOOTNOTES

(1) These studies, their assumptions, results, and limitations are all excellently surveyed by Steve Chan in his "The Impact of Defense Spending on Economic Performance: A Survey of Evidence and Problems," *Orbis* (Summer 1985), pp. 403-434.

(2) *Ibid.*, p. 410.

(3) Kurt W. Rothchild, "Military Expenditures, Exports and Growth," *Kyklos*, (December 1977), Op. 804-13.

(4) Emile Benoit, "Growth and Defense in Developing Countries," *Economic Development and Cultural Change* (January 1978), pp. 271-80.

(5) Saadet Deger and S. Sen, "Military Expenditure, Spin-Off and Economic Development," *Journal of Development Economics* (August-October 1983), pp. 67-83.

(6) R. C. Frederiksen and R. E. Looney, "Defense Expenditures and Economic Growth in Developing Countries: Some Further Empirical Evidence," *Journal of Economic Development* (July 1982), pp. 113-26; P. C. Frederiksen and R. E. Looney, "Defense Expenditures and Economic Growth in Developing Countries," *Armed Forces and Society* (Summer 1983), pp. 633-45; P. C. Frederiksen and R. E. Looney, "Another Look at the Defense Spending and Development Hypothesis," *Defense Analysis* (September 1985), pp. 205-210; and Robert E. Looney and P. E. Frederiksen, "Defense Expenditures, External Public Debt, and Growth in Developing Countries," *Journal of Peace Research* (December 1986), pp. 329-338; Robert E. Looney and P. C. Frederiksen, "The Impact of Public Enterprise on Economic Growth in Latin America: The Case of Defense Industries," in Edgar Ortiz ed., *Proceedings of the International Symposium on the Public Enterprise* (Mexico City: CIDE, 1987).

(7) Robert E. Looney, "The Economic Impact of Rent Seeking and Military Expenditures in Third World and Civilian Regimes," *American Journal of Economics and Sociology* (1988 forthcoming).

(8) R. Faini, P. Annex and L. Taylor, "Defense Spending, Economic Structure and Growth," Evidence Among Countries and Over Time," *Economic Development and Cultural Change* (April 1984), pp. 487-98.

(9) W. Leotief and Fay Duchin, *Military Spending: Facts and Figures, World Wide Implications and Future Outlook* (New York: Oxford University Press, 1983).

(10) David Lim, "Another Look at Growth and Defense in Less Developed Countries," *Economic Development and Cultural Change* (January 1983), pp. 377-84.

(11) Saadet Deger and Ron Smith, "Military Expenditures and Development: The Economic Linkages," *IDS Bulletin* (October 1985), pp. 49-54.

- (12) Basudeb Biswas and Rati Ram, "Military Expenditures and Economic Growth in Less Developed Countries: An Augmented Model and Further Evidence," *Economic Development and Cultural Change* (January 1986), pp. 361-372.
- (13) Ibid., p. 362.
- (14) E. Benoit, *Defense and Economic Growth in Developing Countries* (Lexington, Massachusetts: Lexington Books, 1983), p. 3.
- (15) Ibid.
- (16) Chan, op. cit., p. 412.
- (17) See the work of Frederiksen and Looney cited above.
- (18) Ibid., pp. 412-413.
- (19) See also the spin-off linkages argument developed by Deger and Sen op. cit.
- (20) Joel Vener, "Budgetary Trade-Offs Between Education and Defense in Latin America: A Research Note" *The Journal of Developing Areas* (October 1983), p. 78.
- (21) Kathleen Peroff and Margaret Podolak-Warren, "Does Spending on Defense Cut Spending on Health? A Time Series Analysis of the U.S. Economy, 1929-74," *British Journal of Political Science* (January 1979), p. 22.
- (22) Ibid., p. 49.
- (23) Margaret D. Hayes, "Policy Consequences of Military Participation in Politics: An analysis of Tradeoffs in Brazilian Federal Expenditures," in Craig Liske, William Loehr and J. McCamatt, eds., *Comparative Public Policy* (New York: John Wiley, 1976), 0. 21-52.
- (24) Ibid., p. 23.
- (25) United Nations, Secretary General, *Economic and Social Consequences of the Arms Race and Military Expenditures* (United Nations Document No. A/8469/Rev, 1971), pp. 19-29.
- (26) Shuja Nawaz, "Economic Impact of Defense Expenditures," *Finance and Development* (March 1983), pp. 34-35.
- (27) Op. cit.
- (28) Ibid., p. 50.
- (29) Ibid.
- (30) Berry Ames and Ed Godd, "Education and Defense Expenditures in Latin America: 1948-1965," in Craig Liske et.al., op. cit., pp. 175-198.
- (31) Ibid., pp. 179-80.
- (32) For a recent, detailed survey of the other major studies in this area Cf. Joel Verner, op. cit., pp. 77-91.
- (33) Robert Heilbroner, *The Great Ascent* (New York: Harper and Row, 1963), p. 132.
- (34) Ibid., p. 135.
- (35) One exception is G. William Dick. "Authoritarian versus Non-authoritarian Approaches to Economic Development," *Journal of Political Economy* (1974), pp. 817-827. In summarizing his empirical results, Dick concludes that his analysis does not support and in fact tends to refute the view that authoritarian countries are universally capable of achieving faster economic growth in the early stages of development than countries having competitive political systems.
- (36) Eric Nordlinger, "Soldiers in Mufti: The Impact of Military Rule Upon Economic and Social Change in Non-Western States," *American Political Science Review* (December 1970), 0p. 1131-48.
- (37) Ibid., p. 1134.
- (38) Ibid.
- (39) Robert W. Jackman, "Politicians in Uniform: Military Governments and Social Change in the Third World," *American Political Science Review* (December 1976), pp. 1078-97.
- (40) Ibid., p. 1096.
- (41) R. D. McKinlay and A. S. Cohan, "A Comparative Analysis of the Political

and Economic Performance of Military and Civilian Regimes," *Comparative Politics* (October 1975), pp. 1-30.

(42) Ibid., p. 23.

(43) R. D. McKinlay and A. S. Cohan, "Performance and Instability in Military and Non-Military Regime Systems," *American Political Science Review* (September 1976), pp. 850-64.

(44) Ibid., p. 863.

(45) Ibid.

(46) Ibid.

(47) Sam C. Sarkesian "A Political Perspective on Military Power in Developing Areas" in S. Simon ed., *The Military and Security in the Third World: Domestic and International Impacts* (Boulder Colorado: Westview Press, 1978), p. 9.

(48) John Ravenhill, "Comparing Regime Performance in Africa: The Limitations of Cross-National Aggregate Analysis," *Journal of Modern African Studies* (March 1980), pp. 99-126.

(49) Ibid., p. 125.

(50) P. Schmitter, "Military Intervention, Political Competitiveness and Public Policy in Latin America 1950-67" in M. Janowitz and J. van Doorn eds., *On Military Intervention* (Rotterdam: Rotterdam University Press, 1971), pp. 425-506.

(51) Margaret Daly Hayes "Ecological Constraints and Policy Outputs in Brazil: An Examination of Federal Spending Patterns." Paper presented at the annual meeting of the American Political Science Association, 1973; and Margaret Daly Hayes, "Policy Consequences of Military Participation in Politics: An Analysis of Tradeoffs in Brazilian Federal Expenditures," in Craig Liske et al., *Comparative Policy Policy* (New York: John Wiley, 1975), pp. 21-52.

(52) Gavin Kennedy, *The Military in the Third World* (New York: Scribners, 1974), pp. 158-74.

(53) Ibid., p. 73.

(54) D. G. Morrison and H. M. Stevenson, "Social Complexity Economic Development and Military Coups d'Etat: Convergence and Divergence of Empirical Tests of Theory in Latin America, Asia, and Africa," *Journal of Peace Research* (1974), pp. 345-47.

(55) R. Neal Tannahill, "The Performance of Military Governments in South America," *Journal of Political and Military Sociology* (Fall 1976), pp. 233-44.

(56) Ibid., p. 242.

(57) Thomas Dickson, "An Economic Output and Impact Analysis of Civilian and Military Regimes in Latin America," *Development and Change* (1977), pp. 325-45.

(58) Ibid., p. 341.

(59) P. Schmitter, ed., *Military Rule in Latin America: Functions, Consequences and Perspectives* (Beverly Hills: Sage Publishers, 1973), pp. 117-87.

(60) Ibid., p. 185.

(61) G. Heeger, "Politics in the Post-Military State: Some Reflections on the Pakistan Experience," *World Politics* (January 1977), pp. 247-48.

(62) Nicole Ball, "Defense and Development: A Critique of the Benoit Study," *Economic Development and Cultural Change* (April 1983), p. 81.

(63) N. Ball, "Defense Expenditures and Economic Growth: A Comment," *Armed Forces and Society* (Winter 1985), pp. 291-97. See however P. C. Frederiksen and Robert Looney, "Defense Expenditures and Economic Growth in Developing Countries: A Reply," *Armed Forces and Society* (Winter 1985), p. 298-302. For a contrary view.

(64) David Dabelko and James McCormick, "Opportunity Costs of Defense: Some Cross-National Evidence," *Journal of Peace Research* (1977), pp. 145-54.

(65) Ibid., p. 152.

(66) David Whynes, *The Economics of Third World Military Expenditures* (Austin: University of Texas Press, 1979).

(67) William R. Thompson, *The Grievances of Military Coup-Makers* (Beverly-Hills: Sage Publishers, 1973).

(68) Ibid., p. 20.

(69) Ibid., p. 24. See also W. Thompson, "Corporate Coup-Maker Grievances and Types of Regime Targets," *Comparative Political Studies* (January 1980), pp. 485-96.

(70) S. Deger, *Military Expenditures in Third World Countries* op. cit., p. 15.

(71) M. Thee, "Militarism and Militarization in Contemporary International Relations," *Bulletin of Peace Proposals* (1977), p. 26.

(72) Ruth Leger Sivard, *World Military and Social Expenditures, 1983* (Washington, D.C.: World Priorities, 1983).

(73) Ibid., p. 10.

(74) The classification of military regimes and civilian is the same as that listed by Sivard. Ibid.

(75) Economic data is from the World Bank, *World Development Report*, (New York: Oxford University Press, various issues). Military expenditure data is from United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers*, (Washington, D.C.: ACDA, various issues).

(76) Cf. David Morawetz, "Economic Lessons from Some Small Socialist Developing Countries," *World Development* (1980), pp. 337-369.

(77) Cf. Robert E. Looney and P. C. Frederiksen, "Defense Expenditures, External Public Debt and Growth in Developing Countries," *Journal of Peace Research*, (December 1986), pp. 329-338.

(78) Economic data were taken from the World Bank, *World Development Report* (New York: Oxford University Press, various issues). Military expenditures were computed from United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers* (Washington, D.C.: USACDA, various issues).

(79) Budgetary data were taken from the International Monetary Fund, *Government Finance Statistics Yearbook* (Washington, D.C.: International Monetary Fund) and are for the year 1981.

(80) See the discussion in Verner, op. cit., for rationale of the use of control variables in this situation.