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IMPACT OF MILITARY EXPENDITURES ON ECONOMIC DEVELOPMENT

DESIGN FOR COUNTRY CASE STUDIES

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THE IMPACT OF MILITARY EXPENDITURES ON ECONOMIC DEVELOPMENT

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Introduction

The "Design for Country Case Studies" is submitted as the final activity under Phase I of the study project on "The Impact of Military Expenditures on Economic Development."

Phase I involved an extensive review of the significant literature developed in recent years to examine the relationship between military expenditures and economic development in the Third World. These studies have proposed hypotheses and offered empirical evidence concerning patterns of military expenditure and their consequences for economic growth. In general, it appears that higher defense expenditures, though they may have some positive "spin-off" effects, tend to reduce economic growth by reducing capital formation as resources are diverted from saving and investment.

The empirical evidence, from a number of different countries over time, has not, however, produced uniform or consistent answers to the main issues regarding military expenditures. More recent efforts have begun to differentiate among significant sub-groups of countries with different characteristics likely to influence the nature of the military-development relationship, e.g., differences in resource constraints, regime type (with particular reference to the civilian/military character thereof) and the existence of domestic defense industries.

The findings of the literature review and the cross-country statistical analysis from Phase I are summarized in a separate document entitled the "Interim Synthesis Report."

Overall, the review suggests diminishing returns to the cross-country method of research, and points to the need for and utility of field studies in individual countries, where an analysis of socio-economic data can be integrated within a specific institutional setting, some aspects of which are outlined below. What we find, in sum, is a need by AID for improved analytical tools and more reliable expenditures data to determine how, and how much, military spending impacts on economic performance, and that these can best be attained by way of the case studies.

With respect to shortcomings of data, what has been found is that the reliability of quantitative analysis is compromised by deficiencies in the public expenditure data reported by governments. This is particularly salient for analysis of military expenditures; for many reasons governments may wish to hide or distort military spending. Research therefore begins with time-consuming but rewarding longitudinal data collection on government expenditures for military purposes and military sector price indices. These spending and price data are needed for the conversion of local currency data to a numeraire which will permit comparisons to be made through time and across countries. A statistical analysis presented with the Interim Synthesis Report has shown that the method of conversion of local currencies does affect the reliability of statistical testing of relationships (e.g., the relationship of military expenditures to macro-economic performance). We have also found that disaggregated data on military expenditure (to differentiate spending for personnel, procurement, construction, R&D, etc.) are needed to determine how and how much military spending impacts on the performance of the economy. Improved military spending estimates are required for both Section 620(s) reporting and for analyses in conjunction with strategic planning for economic development.

Goals and Objectives of the Country Case Studies. The goals of the Country Case Studies are to contribute to AID's understanding of the relationship between military sector activities and economic development, and to the design of an analytical framework that can be used by AID to assess the security-development relationship in AID-recipient countries. The specific objective is to provide field level research in selected AID-recipient countries in order to assess the impact of military expenditures on economic development. The findings of the field investigations, together with other products of this project, will be used to provide methodological guidance to AID in meeting its 6. (s) reporting requirements and incorporating the military-economic development relationships in its Country Development Strategy Statements (CDSSs.)

Inputs and Outputs. The inputs for the Country Case Studies will include the Contractor's key personnel and proposed field researchers, as well as the data, analyses, and understanding of the subject from Phase I of the study project.

The outputs will include reports on approximately six country case studies and a Final Synthesis Report, which will integrate the findings of the six field investigations with the conclusions of the literature review and cross-country statistical analysis (products of Phase I of this project). The key findings of the project -- including the analytical framework for AID's assessment of the security-development relationship and suggestions for how AID might influence both the causes and consequences of military build-ups in recipient countries -- will be presented in a one-day workshop for a selected AID audience.

Framework for the Country Case Studies

Scope of Research. While the literature has suggested a wealth of areas for research at the field level, the actual case studies must necessarily focus on the five main channels of the impact on the economy of military expenditures, as discussed below, commensurate with limits of budget, time (about 50 field days), length of the country case studies (30 pages), and the need to address AID's practical, operational concerns such as inputs into the 620(s) reporting requirements and CDSSs mentioned above. The design of the country case studies accordingly reflects these considerations.

Major Hypotheses. The existing literature suggests that military expenditures have an impact on economic growth through five principal conduits:

(1) The Resource Mobilization Effect -- military expenditures reduce saving because:

- government spending on military expenditures means less for social services, more expenditure by households on these services, and correspondingly less saving
- additional taxes may reduce personal savings
- on the other hand, military expenditures--especially if financed by money creation--could create inflation, which, some argue, could lead to a greater level of saving.

(2) The Resource Allocation Effect -- military expenditures divert resources from domestic investment, lower the level of investment and thereby reduce the rate of economic growth. Military expenditures may also displace productive government spending, such as expenditures on improvements in the agricultural sector or infrastructure, which would promote growth in later periods. Military expenditures may similarly affect the productivity of investment. The expected impact on growth is negative.

(3) The Foreign Resource Effect -- military expenditures may be import-intensive, and thus lower the level of foreign exchange that would otherwise be available to the economy.

(4) The Spin-off Effects -- military expenditures have positive impacts on economic growth through spin-off effects on technology, human capital, civic action and the production of certain goods and services.

(5) The Aggregate Demand Effect -- in an economy with excess production capacity, increased aggregate demand from military expenditures could increase output, increase capacity utilization, and thereby increase profit rates. Higher profits may increase investment, which would put the economy on a faster long-term growth path.

The consensus from the literature suggests that on balance, in most country settings, the impact of the first three effects outweighs the latter two, and therefore the overall impact of military expenditure on growth is negative.

Robert Looney has advanced the analysis of the effect of military expenditures on economic growth by dividing countries into those with domestic defense industries and those without. Looney concludes that arms-producing countries often experience a number of positive macroeconomic impacts stemming from a rise in defence burdens -- higher rates of investment and savings, without increasing imports too much.

For the non-producers, however, increased defence burdens seem to reduce saving and investment and increase imports, the net effect of which should reduce growth. No positive indirect impacts of increased military expenditures were found for this group of countries.

Differences have also been demonstrated in levels of military expenditures and impact on economic growth in countries that are "resource-constrained" and those that are not.

Significant differences in certain time periods may suggest areas that warrant further investigation. Such periods may be identified with different regimes, or periods of power by political parties, or other relevant political and historical criteria which can explain variances in the patterns of military expenditures.

For reasons that will become clearer below, it will be important to understand how funds flow through the economy -- how savings are channeled through the financial system into investment, and how the government influences these flows with its own expenditures.

If the country has experienced high rates of inflation, it will probably be useful to convert the figures in local currency to a constant price basis using government and military sector price indices. Conversion to a base currency using official exchange rates must be treated with caution, especially in the presence of fixed exchange rates and domestic inflation. A preferable method is to use purchasing power parity convertors.

To the extent possible, it will be desirable to disaggregate military expenditures into different analytical categories -- for example, expenditures for operations, procurement, construction, and research and development.

Of course, such information may not be readily available, and even with the best intentions and spirit of cooperation, government officials may be unable or reluctant to provide disaggregated data. In such an event, qualitative assessments of such a breakdown gathered from knowledgeable sources may be the only method available.

Obtaining and analyzing these data should simultaneously provide the opportunity to assess the present state and adequacy of the indicators of resources allocated to national security, and suggest ways they might be improved.

Perhaps the key question these data will illuminate is the impact of military expenditures on capital formation via reductions in levels of saving and investment.

Resource Mobilization Effect. As indicated above, the hypothesis is that military expenditure affects the level of saving in four principal ways:

- government spending on military expenditure means less for social services, more expenditure by households on these services, and correspondingly less saving
- additional taxes may reduce personal saving and
- the atmosphere created by military expenditure may increase the social discount rate and thus favor more consumption over saving.
- Military expenditures--especially if financed by money creation--could create inflation, which, could reduce saving, but also, depending upon the circumstances, could lead to a greater level of saving.

The expected relationship in the typical A.I.D. recipient country (i.e. resource constrained, no domestic defense industry) is that as military expenditure increases, saving decreases. If this is the case, what are the channels through which it takes place?

Military expenditures have several impacts on public finances. If overall government expenditures remain constant, then existing government expenditures must be squeezed to accommodate

RELIABILITY OF EXPENDITURES DATA

Accuracy of observations. The scale and persistence of the international effort to assemble information on military expenditures by a large number of countries and to report the data on a comparable basis, across countries and through time, has been only partially reassuring to users of the data. Skepticism with respect to the reliability of the data is based in large part on the fact that, regardless of the efforts made by international reporting agencies, the primary source for information on defense spending is the national governments and those governments are believed to employ a number of mechanisms to disguise the level of their security expenditures. There are believed to be political and national security motives for under-reporting defense spending. Investigation of the mechanisms used by governments to obscure their security activities, and other internal evidence of inaccuracies in reporting, have nourished the attitude of skepticism among researchers in this field, but have made little headway in estimating the magnitude of the reporting errors. (For a survey of studies on this subject, see Ball 1988, 111-122; see also earlier reports by Brzoska 1981 and Ball 1984.)

Composition of security expenditures. A second source of serious concern about the reliability of available information on military expenditures by many countries, and the usefulness of this information in studies of security-development relationships, is the highly aggregated nature of the reported data. For many countries, the international reporting agencies provide no more than a single figure for defense expenditures in a given year. More detailed information on the composition of military expenditures is available for only a limited number of countries, and reporting categories frequently change from year to year.

This weakness has been the particular target of the United Nations Department of Disarmament Affairs, and of a sequence of Expert Groups which, since 1975, have guided the United Nations' efforts to induce member governments to publish a unified reporting schedule of security expenditures data in a disaggregated form. (See United Nations, Department of Disarmament Affairs, 1983; Ball 1988, 97-111). Adoption of the unified security expenditure reporting system by member governments has been very partial, but there has been a gradual increase in the reporting of disaggregated data and provision of additional information on the composition of military expenditures. (These trends are evident in a recent report on compliance with the U.N. reporting system: United Nations General Assembly document A/41/622 of 25 September 1986.) There is now a sufficient volume of reporting on military expenditures in a disaggregated form to support experimental efforts to compute military expenditure price levels and to estimate the real quantities of military inputs for a substantial cross-section of countries, as described below.

(3) The inflation effect on saving. If tax revenues are insufficient to finance government expenditure, the government could borrow from the private sector by selling bonds. However, since capital markets are typically underdeveloped in Third World countries, a more usual way to finance a deficit is for the Central Bank to extend credit to the Central Government. The impact of this transaction is to create high-powered money, which, depending on the money multiplier, has a corresponding impact on the money supply. If the government tends to finance its deficits in this way, the impact is usually inflationary.

At modest levels, inflation acts to increase the rate of saving. In the presence of a progressive tax structure, and fixed nominal levels of taxes, government saving tends to increase because of "bracket creep." At the household level, rapid increases in nominal prices tend to reduce the level of expenditure and increase saving. However, one may find that households under certain circumstances increase expenditures to avoid holding money balances that lose their purchasing power over time. Thus, the underpinnings of this hypothesis are not as strong as the first two.

This set of relationships would probably be easier to establish in countries with high levels of inflation and high levels of military expenditures. Discussions with local officials in the Central Bank and Ministry of Finance might clarify what the data suggest.

(4) The uncertainty effect of military expenditures on saving. This may be the most difficult to quantify since its impact is primarily psychological. According to Deger, high levels of military expenditure make people more anxious about the future and increases their discount rate for postponing consumption, which tends to increase present consumption and lower saving.

Perhaps one could try to relate changes in interest rates to changes in military expenditure, especially if hostilities seemed likely. The problem is that interest rates are influenced by a number of factors that could be working at the same time as heightened tensions and uncertainty about the future. Another problem is with the hypothesis itself: one can imagine there are ranges in levels of military expenditures where people feel more rather than less secure (since that is ostensibly the primary purpose of armed forces) and thus more confident about the future, which would lower the discount rate and increase saving.

Thus, this hypothesis is perhaps best approached by ascertaining in country if there is any qualitative evidence to support this view, examine the evidence as feasible, and indicate where future research might profitably explore.

The Resource Allocation Effect. A second major hypothesis related to capital formation and growth is that military expenditures tend to reduce private sector investment.

One direct way this occurs, it is proposed, is by "crowding out" private investment through an increase in interest rates. If the government finances the military expenditures by selling government bonds or borrowing money, this tends to raise the real interest rate, which lowers private investment.

As noted in the previous section, if the government does not increase its overall expenditure level, it would have to pay for military expenditures by squeezing other expenditure items. The impact of squeezing social expenditures was analyzed above. Another possibility is to squeeze economic expenditures, i.e. those expenditures which help to improve the physical infrastructure, such as roads, bridges, ports and dams. Although government expenditure, they take on the characteristics of investments in that they have multi-period lives and economic returns which benefit the public at large. (The difference between current and capital government expenditures is frequently made in national budgets, especially in developing countries.)

If military expenditures squeeze this component of public expenditures, then it will tend to reduce the absorptive capacity of the economy, which will reduce the demand for private investment.

The "absorptive capacity" argument is based on the view that savings per se will not be translated into productive investment unless the economy has sufficient potential to absorb that investment. Absorptive capacity requires co-operative inputs such as skilled labor, infrastructure, financial institutions, entrepreneurship, and other factors. In the absence of these, savings, rather than flow into investment, will be leak into unproductive channels such as the hoarding of commodities, the storing gold, holding of cash, or capital flight.

Trends in military expenditures and the components of public finance should offer evidence as to the direction and magnitude of this effect.

If the macroeconomic data indicate in the particular country that this effect is likely to be significant, the institutional setting in which the flows of saving, investment and capital formation take place should be investigated. The questions to be explored are the role played by such agents as the central bank, the commercial banking system, credit unions and the other financial actors who play a role in the generation of savings and their channeling into investment. How well developed and articulated is the system? How monetized is the economy? What are the primary vehicles for private saving? What are the primary means

by which the private sector raises financial capital for new investment? Is there evidence--such as capital flight--that domestic savings are not being channeled into capital formation?

Foreign Resource Effect. It is postulated that military expenditures are often very import intensive, and thus absorb foreign exchange which might otherwise be used for capital goods and other needed imports. This effect works directly to lower investment in the current period and to increase the absorptive capacity limits in the economy, which reduces investment indirectly.

This conduit can be analyzed in field studies by looking at the import requirements of military expenditures and comparing them with overall levels of imports. This effect is similar to the resource allocation effect, except that the resources are of foreign rather than domestic origin. The macroeconomic data and understanding of the institutional setting from examination of the previous hypotheses can be used in evaluating this conduit.

Aggregate Demand Effect. This hypothesis proposes that in an economy with excess production capacity, increased aggregate demand from military expenditures will increase output, raise the rate of capacity utilization, and thus increase profit rates. Higher profits may induce increased investment, and put the economy on a faster long-term growth path.

Existing IMF, World Bank and AID studies and reports might have information already available on trends in the business sector's capacity utilization, profits and investment. This could then be assessed to determine the probable impact of military expenditures in this scenario. If this range of information is not available, but initial indications point to this as a likely effect, then evidence to determine whether relevant excess capacity exists in the economy can be gathered from available time series on capacity utilization from government planning offices or other statistical agencies.

It must be emphasized that, in the field investigations of this project, the goal is to determine whether or not relevant excess capacity exists. The objective is to find out whether such a conduit for transmitting the impact of military expenditure exists in the case-study country, and if it does exist, whether it has changed over time.

Spin-Off Effects. The literature on spin-off effects suggests that, although they may be significant in some settings, they may not be a very important contributor to economic growth in the poorer AID-recipient countries.

In each country studied, this question could be first approached by examining the institutional setting in which the military operates. If the spin-offs appear to be significant, further investigation might be warranted. Again, the goal of the field investigation of this project will be to determine whether or not the spin-offs constitute a significant conduit for transmitting the impact of military expenditures on performance of the civilian economy in the setting of the case study country.

Analytically, spin-offs occur in three areas: technology, human capital, and goods and services. In countries that do not have a domestic defense industry, the technological spin-offs would not be expected to be significant. Even where defense industries do exist, the advanced technology may be largely imported off the shelf from developed countries.

There may be some technical change induced by military spending that is essentially organizational. Growth theorists describe this type of technical changes as "disembodied", as opposed to technical change which is "embodied" in quality improvements of capital goods. Disembodied technical change consists of such changes as improvements in the efficiency of labor due to better education and training, and improvements in the organization of enterprise that are independent of the type of capital employed. This is the technical change that military expenditures in developing countries may be found to foster.

Another type of spin-off that may be attributable to military expenditures is human capital formation, primarily from training and skills gained by servicemen in the military. It is proposed to examine this area, if it seems to be promising, by reviewing available data on the number of men in service and the types of training received, and interviewing the appropriate officials who might be able to offer assessments of its impact on the quality and skill level of the civilian labor force. Further areas for research may be delineated if they appear promising. The same type of approach may be utilized for assessing the "goods and services" spin-offs, i.e. those goods and services that have dual military-civilian uses.

Adding up the Effects. After the different primary effects have been investigated and analyzed in individual countries, the question remains whether there is an analytical framework in which their positive and negative effects can be added together to arrive at an assessment of the overall impact of military expenditure on economic growth.

In order to do this, a general macroeconomic model of the economy is needed so that the simultaneous impacts of these effects can be accounted for. One possible model is the Revised Minimum Standard Model (RMSM), discussed in the Interim Synthesis Report

Annex on "Modern Theories of Economic Growth." This model is in the Harrod-Domar tradition, and has proved to be useful as a tool employed by World Bank and AID economists for macroeconomic and policy analysis.

Information assembled in the country case study field investigations will enable the analyst to adjust parameters in the model to incorporate the impacts of military expenditure. The model can be specified to show different ratios of saving to GDP for different levels of military expenditures; variations in the savings ratio result in changes in the savings-investment gap and ultimately in the growth rate. This will enable the model to capture the Resource Mobilization effect.

The level of current year investment can be adjusted in the model to account for the Resource Allocation effect by virtue of direct "crowding out" from military expenditure. The analysts can also adjust the ICORs for the industrial and agricultural sectors to capture some of the limits on absorptive capacity effect -- in cases where the field research indicates that military spending squeezes government economic expenditures.

In similar fashion, the external sector in the model can be adjusted to account for the Foreign Resource effect of military expenditures according to different scenarios.

To the extent that Spin-offs and the Aggregate Demand effect are considered significant, the ICORs can be adjusted to capture each effect.

This effort is directed not to precision, which is not obtainable in any event because of data limitations, but to capture the cumulative effects working through the different channels in order to ascertain the direction and order of magnitude of the net impact of military expenditures on macroeconomic performance.

Using the RMSM for this analytical purpose is consistent with the macroeconomic analysis framework which many missions already employ for purposes of ESF approval documents (PAADs) and CDSSs. If a particular mission does not employ the RMSM, the field researchers will work with the mission economist and program officers to determine how military expenditures fit into the particular model or approach that is utilized by the mission.

Other Hypotheses. While the list of hypothesized impacts derived from the literature appears to be quite large, the country case studies will allow field researchers to develop new hypotheses as they come into direct contact with the nexus between the military and the economy. In fact, one of the advantages of the field studies will be the opportunity to gain

combined with rigorous hypothesis testing of the signs of the resulting coefficients.

Two other consequences of poor specification seen in the literature include the omission of relevant variables and inclusion of irrelevant variables. The former causes bias in the estimated coefficients of other independent variables correlated with the omitted variable. The latter lowers the significance of the other independent variables.

The choice of functional form for the regression equation must also be based on available theory on an a priori expectation presented before the actual estimation. Most econometric work reviewed in this Report is linear in the variables. Deviations without explanation must be scrutinized carefully.

OLS assumptions. Violations of the Classical Assumptions prevent the (OLS) regression method from producing the minimum variance, linear, unbiased estimates for the coefficients of the independent variables. Problems of multicollinearity and heteroskedasticity crop up in individual studies reviewed below, but problems of simultaneity are far more pervasive and have proved to be a major hurdle to the attainment of econometric reliability in this field of application.

Simultaneity bias occurs in specifications that fail to account for feedback effects and dual causality between independent variables and the dependent variable. An independent variable that is jointly determined with the dependent variable is an endogenous variable. If the other half of the causal relationship (i.e., the effect of the dependent variable on the independent variable) is excluded from the structural model specified by the researcher, the coefficients of all variables in the equation are subject to potential bias. A similar result is obtained when the interaction is included in the model, but then essentially eliminated by the specification of a reduced form for actual estimation purposes.

In order to allow estimation of multi-equation simultaneous models, regression techniques such as Two- and Three-Stage Least Squares (2SLS and 3SLS) are used. Unfortunately these techniques do not provide results which are as readily interpretable as OLS for a number of reasons, including the continued bias of the coefficients for smaller samples.

Two contentious issues involving simultaneity are raised in the literature: (1) the existence of multiple channels through which military expenditures influence economic growth rates, and (2) the endogeneity of military expenditure with respect to economic growth. Most researchers have agreed that defense spending has a direct and significant impact on economic growth. Only a few have undertaken research acknowledging that military

We are essentially concerned here with the nature of the policy trade-offs on both the political and budgetary level and the extent to which they are considered and dealt with. What, in effect, is the national compact, and thence the elite consensus, among competing elites (including, preeminently, the armed forces), on the role of the military? This can range from a formal pact among civilian elites, as in Venezuela and Colombia, one imposed by the military, as in countries run for extended periods by military juntas, or it may be in the process of emerging -- while being fought out -- as currently in the Philippines.

Our basic field research "checklist" consists of the following variables:

Power and authority: We are aware of the fact that institutions differ formally and informally, in concept and reality. Our purpose is to identify the source and nature of power and authority with respect military spending, as it relates to (and trades off with) critical social and economic questions. In pursuit of this, we examine the authority of the executive power, the extent to which a system of checks and balances exists at each level, and we identify the constitutional/legal bases of authority. We also consider relevant international accords and constraints (IMF, etc.) which have a bearing on power and authority, and even, incipiently, on military budgets.

This variable examines the true nature of power in society. We feel that institutions differ in concept and reality and it is thus vital to identify the source and nature of power with respect to critical social and economic questions.

Institutional structure. Here we are looking at the basic organizations of government and administration, at relevant sectoral institutions, and at interest and pressure groups. We are concerned with linkages between institutions, i.e. with the manner in which they communicate among themselves, and how they resolve conflicts relative to budgetary and jurisdictional questions. We are concerned with center periphery and regional distinctions, as well as relations with questions of centralized vs. decentralized control of budgeting. These, we feel, will bear on the coherence of national policy as well as aiding in the definition of the range of options within which trade-offs are considered and implemented.

Political culture. We are examining the cultural determinants of the political and administrative systems so as to understand the basic characteristics of legitimacy in making budgetary decisions as to the size of military budgets. We are concerned with the forces which affect the culture in such a way as to reinforce or change the existing pattern of decision-making and modalities of bargaining.

Changes in the political culture are seen sometimes to reinforce and sometimes to alter the pattern of decision-making and control in society. Broadly speaking, some societies can be thought of as being predominantly vertically integrated in the social sense, while other societies are predominantly horizontally integrated. Functionally, this affects the degree to which power is diffused in the society and this, in turn, concerns us in the context of budgetary planning. Furthermore, the patterns of social integration are reinforced by social institutions and their workings such as private property, and religious or ethnic considerations. When such institutions are challenged or change autonomously, the legitimacy of power and institutional relations is also challenged or altered. Thus political culture always defines the limits of law or power in the sense that no government can hope to accomplish any acts (barring the use of coercion) which are not acceptable in terms of broadly based customs and institutions.

Conceptually, our aim is to simulate the probable effects of budgetary planning on the other considerations of our analysis. In the first instance, our question is "what are the general trends?" Here we rely on current wisdom to discern the likely impact on the other variables of a strategy aimed at "narrowing the gap," i.e., identifying the discrepancies of open and clandestine budgeting processes. We are also concerned with: How will budgetary planning affect the institutional structure? What are the secular trends with respect to the nature of power? What are the likely management problems in such fields as taxation, labor, agriculture, international trade, etc., which will result from budget implementation? In other words, we are interested in the "feedback" effect of the budgetary process on the bureaucracy itself.

Data Gathering and Analysis.

The nature of the hypothesized impacts of military expenditures on economic growth requires that trends in the major categories of public finance and the national accounts, and their relationship with military expenditures, be examined in some detail.

Data Analysis Schedule. Each country study should begin with an economic and political overview of the country. Such an overview will address in summary fashion the following areas:

- Economic performance over time and recent trends.

- Structure of the economy (especially, the importance of agriculture vis-a-vis industry and services.)
- Trends in balance of payments, fiscal policy, monetary policy, and employment.
- The government's development strategy and policies to effect this strategy.
- Demographic characteristics.

Much of this data should be available before arrival in country through publications such as the IMF's International Financial Statistics, World Bank publications such as the annual World Development Report and country reports, and AID's Country Development Strategy Statements (CDSSs) and other documents.

A political profile of the country will also be appropriate. It will briefly address areas such as the characteristics of the political system, the nature of executive leadership, and leading government institutions. A description of decision making for public finances, from whatever available sources, will be useful.

From this starting point, the data gathering effort will next focus on the relation of military expenditures to government revenue, government expenditures, and GNP (or GDP) and other macroeconomic variables such as investment, private consumption and net exports for as many years as data are available. With the possible exception of military expenditures, these data should be available before arrival in country.

Relevant questions to be pursued by field researchers regarding policy formulation include the following:

1. Who--which ministry or agency--initiates the budgetary process and how; who makes the proposals and how; who judges which proposals will go forward and how; who carries out reviews, evaluations, consolidations and how?
2. If special industrial/economic sectoral interests are represented, then in what form?
 - Are they actually represented in budgetary hearings/deliberations?
 - Are various ministries responsible for inputs in terms of options/preferences?

3. Who draws up the final budget draft, and who has the administrative control over the annual capital budget?

- If the two are different, then what is relationship between the two?

4. To what extent is secrecy practiced and an evaluation of its functionality/efficacy?

On the question of implementation, the field investigation should trace the way a budgetary policy, once authorized, is conveyed from the locus of formulation to a specific recipient.

The contract for the country case studies calls for approximately six countries to be studied in detail. It is envisaged that approximately 50 days will be required in country to complete the field investigation.

The first step for the contractor will be to select the six countries in consultation with the AID technical project managers. At the same time, the contractor will be involved in the selection and briefing of the researchers who will undertake the field investigations.

Selection of Field Researchers. To the extent possible, the Fletcher School has attempted to involve in Phase I those people who will be strong candidates for field research in the second phase of the project. Thus, most of the field researchers will be familiar with the body of research that has been conducted in this area, and the hypothesis that have been developed.

Prior to departure to conduct the country case studies, it is recommended that the field researchers assemble at the contractor's site for a workshop on research goals, objectives, methodology, and final product. While it is expected that much of this can be communicated through close reading of the Phase I materials, it will undoubtedly prove helpful to convene the principal researchers in order to provide a common base of understanding, and try to resolve any remaining questions and issues. The participation of the AID project manager will contribute importantly to the value of this exercise.

The second step involves preparation for the actual conduct of the field investigations. For each country field study, the Fletcher School will prepare a short country work plan for approval by the AID project manager before travel begins. The work plan will indicate why the country was selected, and stress its importance to the overall study. It will also identify any special country-specific issues or problems, the researcher(s) involved and the schedule of work.

It is very likely that the time availabilities of the field researchers to undertake the country studies will vary. This will actually be helpful for the purposes of implementation. It will be particularly useful if one country study were to be undertaken in advance of a cluster of others in order to benefit from the experiences of this particular study, and make any necessary modifications to the research framework.

The data collection, analysis and the preliminary draft report on the country case studies should be completed in the field. Upon return from the field, these drafts will be reviewed by the AID project manager, and then will be revised as necessary by the Fletcher School into a final report. Each country study will be 30 pages or less, including statistical and other annexes, and should have an executive summary of 2-4 pages, as specified in the project contract.

Typology for Selection of Case Study Countries. A preliminary framework for investigation of possible sub-groupings to be used in the selection of countries for the case studies is outlined below. The typology consists of up to eight different country classifications derived from work establishing significant sub-groupings of LDCs with respect to the security and development relationship.

The literature reviewed in Section IV.b) and the findings reported in Annex 4. of the Interim Synthesis Report indicate that in the last four decades the impact of defense expenditures on economic growth has largely been conditioned by the economic environment in which these allocations are undertaken. Beyond the broad classification of countries into resource-constrained or unconstrained categories, a number of additional sub-groupings are likely to exist in which the general impact of defense expenditures is somewhat modified.

In particular, it appears that even relatively resource abundant countries may experience declines in potential growth if defense expenditures pass some threshold levels (particularly during a given period of time). Here two thresholds appear to be particularly relevant: (1) the rate of expansion in the share of defense in the central government's budget and (b) the acceleration of defense expenditures during a given time period.

For the relatively resource-constrained countries the impact of defense spending on economic growth may be mitigated by two underlying environmental factors. The share of arms imports in total imports and the degree to which this share is accelerating adds to the negative impact such spending has on resource-constrained countries.

Therefore, to define a typology of countries, we might expect overall economic growth to be affected differently depending on whether the country was characterized as having:

I. Relatively Resource Constrained

A. High proportion of and/or acceleration in arms imports in total imports.

B. Low proportion of and/or acceleration in arms imports in total imports.

II. Relatively Resource Unconstrained

A. Rapid acceleration in military expenditures and/or share of the government budget over a medium term interval.

B. Modest or no acceleration in military expenditures and/or share of the government budget over a medium-term interval.

As an initial working hypothesis we expect the most severe impact on growth to be associated with I.A., with descending adverse and (eventually) increasing positive impacts moving from I.B. through II.B. In addition to these four different classifications, we expect economic performance to be further modified (positively) with the existence of an indigenous arms industry as was discussed in Section IV.a) of the Interim Synthesis Report.

In short, cross-sectional analysis of data from 1950 through the latter part of the 1980s indicates that a typology of at least eight unique country environments may exist, each one of which is likely to produce significantly different economic impacts stemming from defense expenditures. Since group membership fluctuates over time, it will be most productive if follow-on individual case studies are focussed on a fairly typical (and stable) country in categories reflecting economic environments towards the end of the 1980s.

In each case it will also be desirable (if possible) to compare the impacts of defense expenditures with those of another "benchmark" country which has a correspondingly similar pattern of non-defense expenditures. This cross-country comparison addresses the question: are the effects on growth uniquely attributable to government allocations to defense or are they reflective of a general pattern of public sector interaction with the economy?

These eight sub-groupings provide criteria to guide the selection of countries for field study. Within this framework,

matrices of AID-recipient countries can be identified with the final selection of the countries for field investigation to be made in accordance with practical research considerations.

Practical considerations include a diversity of geographical regions. At least one country from Latin America, Africa and Asia-Near East will, ideally, be included in the case studies. In addition to ensuring diversity in the countries studied, the selection of at least one country from each geographic region will ensure that officers from each of AID's regional bureaus will be familiar with the study project and will contribute guidance and advice on the conduct of the field investigations.

Another selection criteria might give more weight to those recipient countries where AID plays a particularly important role in terms of resource transfer. In making its final selection, the Fletcher School anticipates working closely with the members of the AID Working Group to determine what will be most useful from AID's perspective, within the framework of the research effort.

Conclusions

Work in Phase I has provided us with the tools for moving ahead with case studies to examine the impact of military expenditure on economic development. In this final document of the report, we have attempted to articulate both the objectives of the country case studies and the means of carrying them out. We have specified the procedures to be used in choosing countries, and we have discussed the cultural context of the investigations to ensue.

As noted in the project contract, the Final Synthesis Report will include a chapter providing methodological guidance to AID on how to carry out or improve analyses of military-development issues in:

- meeting AID's requirement under 620 (s) of the Foreign Assistance Act to report to Congress on the economic development impacts of military spending in the AID recipient countries.

- assessing the relationships between military expenditures and economic development relationships in the context of preparing AID's Country Development Strategy Statements (CDSS).

Thus, it will be helpful for the field researchers to spend time in the field with AID Mission program officers, economists and others to address these special concerns.

A final word is in order as to the feasibility of the research in question. Research into the area of military plans and programs in developing countries has usually been considered sensitive, indeed often prohibited, territory. Data are hidden because military plans are often hidden. Using the guidelines outlined above, we have confidence in the practicability of the research plan. We are not interested in (for example) defense or war plans, in-service program/weapons system planning, national security assumptions or any of the 'red flags' of research. Our interest, from the point of view of data collection, rather, is in main line economic research questions concerning budgetary allocations, implementation of fiscal policy, macro-economic performance, and so forth. Thus our experience in a wide variety of countries, from Uruguay to the Philippines, is that the data on defense spending can be obtained and refined, and that the budgeting process can be discerned. Defense ministries are often the most orderly of government agencies in their layout of data, even if (or especially if) secret accounts distort the public presentation of the budget itself. Budgeting/procurement officers of defense ministries have routinely cooperated in our endeavors. Cooperation from national budget and other economic planning offices is equally central to our investigation and complements research in defense agencies.

It may be pertinent to add that we are not alone in seeing a certain urgency associated with research into the questions raised in this study, as country directors in traditional AID-recipient countries face increasing demands for resources from a diminishing supply, given (inter alia) the new competition from Eastern Europe. Such a perception (especially on the part of developing country government officials) will, we believe, facilitate our work in the field.

It should be noted anew that we conclude Phase I of this study project with personnel ready for Phase II who have combined experience in all the major areas of the developing world and country familiarity over a period of decades with AID-recipient countries. Their work on topics relevant to AID in the past, the conclusions of the Interim Synthesis Report and the design for case studies give them realistic optimism not only that Phase II can be carried out successfully in operational terms, but that it can lead to policy-relevant conclusions of substantial import to AID.