

Arms Control

The Journal of Arms Control and Disarmament

VOLUME 9
NUMBER 2
SEPTEMBER 1988

- | | |
|--|---------------------|
| Threats to the ABM Treaty | Andrew Mack |
| The Estimation of Optimum Force Size and Force Reduction Potential in Conventional Arms Reduction Negotiations | James W. Moore |
| Current Soviet Views on Conventional Arms Control in Europe | Roy Allison |
| The Priorities of Arms Importing States Reviewed | Frederic S. Pearson |
| Defence Budgetary Processes in the Third World: Does Regime Type Make a Difference? | Robert E. Looney |
| Book Reviews | |

ISSN 0144-0381

FRANK CASS • LONDON

Defense Budgetary Processes in the Third World: Does Regime Type Make a Difference?

Robert E. Looney*

INTRODUCTION

During the last two decades, there has been a keen interest and a growing literature on the many economic dimensions of military expenditures in developing countries (LDCs).¹ Six major avenues of research in this area have been undertaken somewhat independently:

1. examinations of whether military spending helps, hinders or has no effect on economic growth;²
2. comparisons of the effects, if any, regime types (usually civilian vs. military) have on economic performances;³
3. determining if budgetary priorities vary by regime type;⁴
4. identification of the economic environments necessary for successful production of armaments in the third world;⁵
5. identification of the economic factors responsible for the international trade in arms;⁶ and finally
6. assessments of the major economic determinants of defense expenditures in third world countries.⁷

Much has been written on the first four areas. If one theme has been common to all of these issues, it is the potential role of regime type to modify, across countries, the inter-relationships between economic factors and the various facets of military related activities. Perhaps because many analysts consider military expenditures to be determined by exogenous factors,⁸ i.e., regional conflicts and arms races, super power alliances and the like, little cross-section comparative analysis has been undertaken to determine whether and to what extent civilian and military regimes differ with respect to the amount of resources they allocate to defense.

The purpose of this paper is to extend the discussion on this sixth major area of research – the determinants of defense spending by drawing on this common theme; do the patterns of defense expenditures in the third world vary significantly between military and civilian regimes, and if so, why?

* Professor, National Security Affairs, Naval Postgraduate School, Monterey.

REVIEW OF THE LITERATURE

Research to date in this area has largely focused on the identification of possible linkages between military influence over the decision-making process for allocating resources and the level of budgetary support acquired by the military. The central hypothesis of such efforts is that military regimes will be more generous in supporting the military than will their civilian counterparts:

The vested interests of the military establishment will push it towards higher security-related expenditures. This consideration is closely related to the power of the military, even in a country with a civilian government; the more powerful the military in relation to the civil authority, the greater the chance that the military can increase its share of the government budget and the national product.⁹

While these propositions seem rather self-evident, empirical research has generally failed to identify strikingly different patterns of defense expenditures between civilian and military regimes.¹⁰

In summarizing the quantitative work in this area¹¹ it is fairly safe to say that most researchers have concluded that independent variables other than regime type probably hold more explanatory power in accounting not only for resource allocations for national defense, but also for other socio-economic expenditures.

Robert Rothstein has recently summarized the work in this area by observing that

The general consensus among most analysts now seems to be that the military have some influence in all regimes, thus suggesting a continuum (not an either/or dichotomy), and that military regimes tend to act much the same as civilian regimes in economic and social matters – an unsurprising outcome since both kinds of regimes face the same internal and external constraints. There is also very little evidence that military regimes act more aggressively than civilian regimes, automatically spending much more on arms, or interpret threat situations in a unique manner.¹²

While not necessarily disagreeing with these findings, it seems that in order to resolve the regime/defense allocation issue, a clear distinction needs to be made between a government's ability and its willingness to allocate funds to defense. In fact, it is most likely that the failure explicitly to take this factor into account has been responsible for previous cross-sectional studies' inability to find sharp linkages

between third world regime types and the amount of funds allocated to defense.

The analysis below blends these two major themes – the role economic factors play in affecting military expenditures (the ability to allocate funds for defense) and the policy priorities of military regimes (the willingness to allocate funds for defense). It will be shown that these two themes, each of which has individually produced inconclusive findings, when integrated are capable of yielding highly significant and insightful results.

METHODOLOGICAL CONSIDERATIONS

A major methodological problem in any study of this sort concerns the classification of countries as military or civilian. Various attempts have been made to identify the military component in politics. Here, a logical approach is to classify countries on the basis of subjective estimates of the degree of military influence in the day-to-day decision-making of the government.¹³ A government directly controlled by the armed forces is an extreme example of militarization of the political process. But even long-established democracies where civilian control of the military is a firm tradition are not immune to military influence.¹⁴ The basis of this influence is not hard to find: within the central government structure, the military bureaucracy has the largest personnel component and administers the largest share of the public budget – factors which clearly have a bearing on the military's political influence.

For purposes of this study, countries are considered under military control¹⁵ if they meet one or more of the following criteria: key political leadership by military officers; existence of a state of martial law; extra-judicial authority exercised by security forces; lack of central political control over large sections of the country where official or unofficial security forces rule; or control by foreign military organizations.¹⁶

The countries that fall into this group,¹⁷ classified as military and civilian (in the early 1980s), share some common features. Most have long records of military rule: the average in 1982 was 16 years out of the prior 23.¹⁸ Perhaps one reason previous studies concluded that civilian and military did not differ significantly with regard to their allocations to defense lies in the fact that both regime types show a striking similarity with regard to several of the standard indices used to compare the military burden.¹⁹

1. in terms of the share of national resources allocated for military purposes, civilian regimes spent 4.5% of their gross national product on defense, compared to 5.2% for the military regimes;

2. civilian regimes allocated 15.6% of their central government's budget to defense, compared with 16.5% for military regimes; and
3. civilian regimes had 7.3 soldiers per 1000 population compared with 6.2 for the military regimes.

While the military regimes averaged a higher level of arms imports – \$315 million dollars vs. \$233 million – civilian regimes tended to have higher overall levels of military expenditures – \$1511 million, vs. \$1112 million for their military counterparts.

HYPOTHESIS CONCERNING MILITARY EXPENDITURES

Any complete explanation of third world military expenditures should incorporate three main elements. The military influence has already been addressed. In addition military expenditure will be affected by the amount of resources deemed necessary by ruling elites as sufficient for assuring their survival in power. Economic constraints represent the final element. Clearly, however, these last two considerations are often quite interrelated.

More specifically, the general absence of resources in many third world countries sharply narrows the range of elite choices and not only makes repression and higher military spending more likely, but also has an impact on the legitimacy of the state. Legitimacy relates to whether citizens are loyal and willingly support state policies – whether they accept the authority of the state and believe existing institutions are in some sense appropriate. In general, illegitimate governments must use much of the resources they control to stay in power and to secure compliance; conversely, legitimate governments can expend more available resources on public goods.

Governmental effectiveness is related to legitimacy in the sense that loyalty and support are not likely to survive the state's decreasing ability to fulfill the needs of its citizens. In contrast to democratic regimes, which rely on some degree of consent by the governed, the military regimes must rely more heavily on effectiveness.

Along these lines, Rothstein has constructed a framework whereby the relationship between effectiveness and legitimacy is an important element in explaining the level of military expenditures.²⁰

Operationally, both variables, effectiveness and legitimacy, are difficult to estimate and require some degree of subjective judgment by analysts. The same is also true for the degree of threat (external or internal) perceived by ruling elites. After consulting with various authorities, Rothstein constructed a matrix capable of classifying developing countries on the basis of government legitimacy and degree

of threat. It should be noted that judgments about country placement were made in May and June of 1984.²¹

In general, those countries which experience low legitimacy also tend to experience a high level of threat. On the other hand, those countries experiencing medium to high levels of legitimacy tend to experience low levels of threat. While there are several exceptions to this general pattern, it was felt that for the purposes of this paper, a simple two group sample was sufficient i.e., conflict countries were defined as countries of low governmental effectiveness while non-conflict countries were defined as having medium to high levels of government effectiveness and/or low threat.²²

Everything else equal, we should observe significant differences in budgetary priorities between the conflict and non-conflict states, independent of regime types. More precisely, we should expect to find the conflict states to have a much higher proportion of their central government budgets assigned to military related activities.

An examination of the budgetary patterns of the two groups tends to verify this prediction i.e., the non-conflict countries allocate 13.3 per cent of their central government budgets to defence, compared to 22.3 per cent for their conflict counterparts.

A final critical element in any empirical study of military expenditures involves operationalizing the concept of 'threat'. According to Weede, decision-makers routinely respond to perceived foreign threats by increasing their armed forces, often by introducing conscription. He concludes that serious threats to national security and the resulting high military participation ratios produce over time higher overall levels of military expenditures.²³

Here it is important to distinguish between expenditures on armaments and total allocations to the defense sector. It turns out that for most countries the highest proportion²⁴ of defense expenditure is not spent on armaments, but rather on personnel, with a substantial additional proportion allocated to operations and maintenance. While it may be true that external factors influence the amount of actual weaponry purchased, their effect is more obvious in the case of personnel.

A related factor is that expenditure on recurrent items, especially wages, is much less prone to change than 'development' expenditures.²⁵

Operationally, therefore, we assume the ratio of armed forces to the overall population in the previous year to be indicative of the degree of threat perceived by the ruling elites. Following Harris,²⁶ we assume that a perceived threat is met, over time, by purchasing more sophisticated equipment bases, etc. Operationally, we assume a one-year lag

between the increase in perceived threat and the increase in military manpower, with a further one-year lag for significant increases in arms imports to take place.²⁷

MODEL SPECIFICATION

Based on the above discussion a simple model of military expenditures was constructed and estimated with a two-stage least squares regression technique. The three elements of military expenditure: regime type, survival/threat, and economic constraint were systematically introduced into the functional equations to obtain estimates of the various facets of military expenditures: arms imports, total military expenditures, the size of the armed forces, the share of defense in the central government budget, and the military burden.

1. It is reasonable to assume that arms imports (AI) will have a direct relationship to total military expenditures (ME), and the foreign exchange available to the country. Several recent studies²⁸ have documented the role external public borrowing has played in financing military expenditures in the Third World and, beginning in the mid-1970s, this variable appears to have expanded in line with the arms build-up in the Third World. Public sector external indebtedness (PDB) was selected to depict this phenomenon. Finally, gross international reserves (GIRB) are assumed *ceteris paribus* to set a general limit on the ability of countries to import arms.
 2. Everything else equal, total military expenditures should be related to the overall economic size of the country (here depicted by gross national product, GNP, and population, POP). Allowing for continuity, military expenditures in the previous year (ME80) were also included in the regression equations.
 3. Similarly, the number of personnel in the armed forces was assumed to vary with the economic size of the country (GNP and POP) together with the overall level of military expenditures (ME).
 4. The influence of factors related to conflict (CONFLICT) outlined above are assumed to have their greatest effect on the share of the government budget allotted to defense (GEDB). Military vs. civilian defense/socioeconomic priorities were depicted by including health expenditures (GEHB) in the regression equation (a negative sign is assumed for the military regimes).²⁹
 5. Various aspects of the military burden, military expenditures per capita (MEP), and the share of defense expenditures in GNP (MEY) are assumed to be functions of the revenue base (here
-

depicted by the share of central government revenues in gross national product, (RTCRYB), and the share of defense in the government budget, GEDB.

6. To close the model, public external debt PDB³⁰ is assumed to be related to the overall level of economic activity (GNP), the value of imports (TI), and the size of the armed forces (AF). Total imports were in turn assumed to be related to foreign exchange availability (proxied by the value of exports, TE), and the level of demand placed on imports by the military (depicted by total military expenditures, ME). Here it is assumed that in foreign exchange constrained countries where foreign exchange often tends to be rationed, the military would have first claim on the available foreign resources.
7. Based on the previous section, 'threat' was proxied by the size of armed forces per capita in the previous year, AFP80.

RESULTS

The estimated equations³¹ show several distinct differences between civilian and military regimes:

[two-stage least squares estimates – standardized regression coeff]

ARMS IMPORTS (AI)

Military Regimes:

$$(1) \text{ AI} = 0.93 \text{ AI80} + 0.12 \text{ ME} - 0.14 \text{ PDB80} + 0.14 \text{ GIRB80}$$

$$(30.27) \quad (2.89) \quad (-4.13) \quad (3.68)$$

$$\text{Df} = 17; r^2 = 0.985; F = 298.38$$

Civilian Regimes:

$$(2) \text{ AI} = 1.05 \text{ AI80} - 0.26 \text{ ME} - 0.07 \text{ PDB80} + 0.10 \text{ GIRB80}$$

$$(2.71) \quad (-0.52) \quad (-0.07) \quad (0.56)$$

$$\text{Df} = 21; r^2 = 0.735; F = 16.70$$

ARMS IMPORTS - WITH THREAT

Military Regimes:

$$(1') \text{ AI} = 0.98 \text{ AI80} + 0.15 \text{ ME} - 0.15 \text{ PDB80} + 0.13 \text{ GIRB80}$$

$$(20.78) \quad (3.35) \quad (-4.45) \quad (3.38)$$

$$- 1.46 \text{ AFP80}$$

$$(-1.46)$$

$$\text{Df} = 17; r^2 = 0.988; F = 256.52$$

Civilian Regimes:

$$(2') \text{ AI} = 0.81 \text{ AI80} - 0.20 \text{ ME} + 0.01 \text{ PDB80} + 0.12 \text{ GIRB80} \\ (2.00) \quad (-0.43) \quad (0.06) \quad (0.69) \\ + 0.27 \text{ AFP80} \\ (1.74)$$

$$\text{Df} = 21; r^2 = 0.775; F = 14.65$$

MILITARY EXPENDITURES (ME)

Military Regimes:

$$(3) \text{ ME} = -0.09 \text{ GNP} + 1.01 \text{ ME80} + 0.06 \text{ POP} \\ (-3.26) \quad (44.008) \quad (2.17)$$

$$\text{Df} = 17; r^2 = 0.995; F = 904.04$$

Civilian Regimes:

$$(4) \text{ ME} = 0.08 \text{ GNP} + 0.82 \text{ ME80} + 0.20 \text{ POP} \\ (2.28) \quad (24.70) \quad (5.12)$$

$$\text{Df} = 21; r^2 = 0.987; F = 438.49$$

PUBLIC EXTERNAL DEBT (PDB)

Military Regimes:

$$(5) \text{ PDB} = 0.68 \text{ GNP} + 0.22 \text{ TI} + 0.18 \text{ AF} \\ (7.91) \quad (1.87) \quad (2.08)$$

$$\text{Df} = 17; r^2 = 0.957; F = 104.49$$

Civilian Regimes:

$$(6) \text{ PDB} = 1.07 \text{ GNP} + 0.03 \text{ TI} - 0.24 \text{ AF} \\ (9.90) \quad (0.32) \quad (-2.85)$$

$$\text{Df} = 21; r^2 = 0.917; F = 66.23$$

TOTAL IMPORTS (TI)

Military Regimes:

$$(7) \text{ TI} = 0.11 \text{ TE} + 0.09 \text{ ME} + 0.82 \text{ TI80} \\ (1.42) \quad (2.10) \quad (10.36)$$

$$\text{Df} = 17; r^2 = 0.987; F = 364.56$$

Civilian Regimes:

$$(8) \text{ TI} = 0.01 \text{ TE} - 0.07 \text{ ME} + 1.03 \text{ TI80} \\ (0.13) \quad (-3.05) \quad (17.63)$$

$$\text{Df} = 21; r^2 = 0.995; F = 1101.47$$

TI80
TI80
(8)

ARMED FORCES (AF)

Military Regimes:

$$(9) \text{ AF} = 0.24 \text{ POP} + 0.01 \text{ GNP} + 0.68 \text{ ME}$$

$$(1.19) \quad (0.01) \quad (3.84)$$

$$\text{Df} = 17; r^2 = 0.687; F = 10.22$$

Civilian Regimes:

$$(10) \text{ AF} = 0.80 \text{ POP} - 0.01 \text{ GNP} + 0.25 \text{ ME}$$

$$(33.25) \quad (-0.31) \quad (11.06)$$

$$\text{Df} = 21; r^2 = 0.996; F = 1366.38$$

SHARE OF DEFENSE IN CENTRAL GOVERNMENT BUDGET (GEDB)

Military Regimes:

$$(11) \text{ GEDB} = 0.43 \text{ CONFLICT} - 0.56 \text{ GEHB}$$

$$(2.38) \quad (-3.07)$$

$$F = 17; r^2 = 0.495; F = 7.32$$

Civilian Regimes:

$$(12) \text{ GEDB} = 0.26 \text{ CONFLICT} - 0.17 \text{ GEHB}$$

$$(1.20) \quad (-0.76)$$

$$F = 21; r^2 = 0.084; F = 0.87$$

MILITARY EXPENDITURES PER CAPITA (MEP)

Military Regimes:

$$(13) \text{ MEP} = 0.47 \text{ GEDB} + 0.45 \text{ RTCRYB}$$

$$(2.56) \quad (2.46)$$

$$\text{Df} = 17; r^2 = 0.508; F = 7.75$$

Civilian Regimes:

$$(14) \text{ MEP} = 0.61 \text{ GEDB} + 0.47 \text{ RTCRYB}$$

$$(5.26) \quad (4.08)$$

$$\text{Df} = 21; r^2 = 0.765; F = 31.02$$

MILITARY BURDEN - SHARE OF DEFENSE EXPENDITURES IN GNP (MEY)

Military Regimes:

$$(15) \text{ MEY} = 0.80 \text{ GEDB} + 0.24 \text{ RTCRYB}$$

$$(6.22) \quad (1.88)$$

$$\text{Df} = 17; r^2 = 0.763; F = 24.12$$

Civilian Regimes:

$$(16) \text{ MEY} = 0.75 \text{ GEDB} + 0.19 \text{ RTCRYB}$$

(5.56)

(1.40)

$$Df = 21; r^2 = 0.682; F = 20.40$$

IMPLICATIONS

The results suggest a number of significant differences between civilian and military regimes with regard to the manner and environment in which budgetary priorities are established. In turn, these differences are manifested in the manner in which economic/threat factors influence the amount of resources devoted to defense. In particular:

1. Military regimes appear to be relatively more committed to long-run, sustained modernization of their armed forces. This is evidenced by much more continuity on a year-to-year basis in their importation of arms (the relatively high significance of the lagged arms import term – equation 1), and the statistical significance of the gross international reserve figures i.e. added reserves are systematically earmarked for weapons acquisition. For these countries, arms imports are also more closely linked to total military expenditures. On the other hand there is evidence that by the early 1980s past borrowing for modernization was taking its toll in that external debt was placing some constraint on the ability of military regimes to import arms (the negative sign on the public external debt, 1980 – equation 1).
 2. In contrast, civilian regimes appear to have a more erratic arms import pattern, suggesting that periodic modernizations and/or changing security conditions are relatively more important in affecting these countries' importation of arms. As one might imagine, military regimes appear to have a commitment to sustained increases in modernization of the military, and in this sense, may not have to vary arms imports significantly when external threats arise. Civilian regimes may let their equipment deteriorate somewhat, forcing rapid increases in arms imports when threats arise. If this interpretation is correct, we should expect arms imports to civilian regimes to be much more responsive, relative to their military counterparts, to increased threats to security.
 3. If in fact third world countries respond to increased threats to security by initially increasing the number of men under arms, and if we proxy this effect by the number of armed forces per capita in the previous year (AFP80), and re-estimate equations 1 and 2, our
-

hypothesis is borne out: arms imports to civilian regimes have a positive sign (equation 2'). This term is negative for the military regimes (equation 1').

4. If military regimes do in fact place a higher priority, relative to their civilian counterparts, on defense on a year in year out basis, we would imagine their total military expenditures to be less influenced by economic constraints, i.e. everything else equal, countries usually devote a fairly constant share of their gross national product to the military. Military regimes usually cut social expenditures when increasing the share of resources allocated to defense. Since the ability of the military to reduce social expenditures will vary considerably from country to country, the final allocations to defense should be relatively less related to the economic base (gross national product) than in the case of civilian regimes. This pattern is borne out in terms of total military expenditures (equations 3 and 4) i.e., it appears that military regimes undertake defense allocations somewhat independently of the underlying economic/demographic base of their respective countries. In contrast to civilian regimes, these countries' gross national product and population play a rather insignificant role in setting bounds on total military expenditures. As with arms imports, military regimes exhibit relatively greater stability in military expenditures than is the case for their civilian counterparts (evidenced by the higher coefficient of lagged military expenditures, ME80).
 5. Military regimes appear to have borrowed externally³² to finance defense allocations (the positive sign on armed forces – AF, equation 5); whereas their civilian counterparts show no evidence of this pattern.
 6. Balance of payments difficulties, and external debt commitments, force many third world countries to ration foreign exchange to facilitate high priority imports. It follows that military regimes should exhibit a relatively more stable pattern between military expenditures and imports. This is borne out empirically: defense expenditures appear to have affected imports in the military regimes (equation 7), whereas civilian regimes actually show a negative relationship between defense allocations and imports (equation 8).
 7. As with military expenditures, one might expect the armed forces of civilian regimes to demonstrate a relatively more predictable relationship with the underlying demographic base. Again this pattern is borne out, with the armed forces of the civilian regimes (equation 10) bearing a close relationship to the underlying
-

demographic environment. Military regimes demonstrate no predictable pattern between population and the number of individuals in the armed forces (equation 9).

8. The share of the budget allocations to defense in military regimes bears a fairly close relationship to the need of elites to resort to increased military power to retain power (CONFLICT, equation 11), faced by the country. This pattern is not present in civilian regimes (equation 12). Military regimes apparently 'free up' resources for defense by reducing social (health) expenditures. Again civilian regimes do not have a predictable budgetary tradeoff pattern.
9. As noted earlier, military and civilian regimes tend to have a number of superficial similarities with regard to defense allocation – similar military burdens, armed forces per capita, and the share of the budget allocated to defense. These similarities extend to the determinants of military expenditures per capita and the military burden i.e. both regime types exhibit a fairly similar linkage between the share of the budget allocated to defense and the tax burden and these variables (equations 13, 14, 15, 16).

In summary, while to some these results may appear self-evident, their empirical existence has not been previously identified. Military regimes appear committed to developing the size of the defense sector to levels not warranted by economic size *per se*. They have done this through extensive use of externally borrowed funds. They have utilized increases in foreign exchange earnings to expand defense allocations and appear much more prepared to deal with perceived threats than their civilian counterparts, i.e., they do not have to resort to stepped-up arms imports during periods of increased threat because presumably they have maintained a high degree of readiness.

It is also interesting to note that well over 85 per cent of the fluctuations in both military expenditures and arms imports for military regimes can be accounted for by a limited number of economic variables. This fact holds irrespective of perceived threats, geographical location, or pressures from arms suppliers – factors often used to explain the level of military expenditures in the Third World.

CONCLUSIONS

The general stereotype of modern Third World military regimes is ultra-conservatism combined with excessive military force to suppress popular opposition and external threats. The empirical results presented here, while basically consistent with this image, still place Third

World military regimes in a somewhat different light compared with their civilian counterparts:

1. Military regimes appear to be in somewhat better control of military expenditures than their civilian counterparts in the sense that defense allocations in these regimes are not as constrained by economic factors as in the case of their civilian counterparts.
2. While still conjectural at this point, it appears that both military and civilian regimes allocate resources to defense largely on the basis of internal rather than external concerns.

In this regard, Marek Thee³³ has discussed the determinants of rapid military buildups in developing countries. He distinguishes between external factors, such as imperial rivalries and ideological/religious conflict, and internal factors such as vested interests of the military, and the adoption of a national security doctrine or a strong military. He suggests that while globally (and this is particularly true for the super-powers) internal factors are more important, armament in developing countries 'tends to be animated by external factors'.³⁴

The results obtained above tend to complement Thee's approach in that the overwhelming importance of economic variables in explaining Third World military expenditures and their marked differences by regime type suggest that internal rather than external factors dominate in affecting differences between individual countries.

NOTES

1. A systematic review of this literature is beyond the scope of the present study. Several recent studies do, however, provide comprehensive surveys and assessments of this literature. The interested reader should consult: Saadat Deger, *Military Expenditure in Third World Countries: The Economic Effects* (London: Routledge & Kegan Paul, 1986); Robert E. Looney, *The Political Economy of Latin American Military Expenditures* (Lexington, Mass: Lexington Books, 1986); Saadat Deger and Robert West, eds., *Defense, Security and Development* (London: Frances Pinter, 1987); A.F. Mullins Jr., *Born Arming: Development and Military Power in New States* (Stanford, California: Stanford University Press, 1987); and Steve Chan, 'The Impact of Defense Spending on Economic Performance: A Survey of Evidence and Problems', *Orbis* (1985), 403-34.
2. Emile Benoît, 'Defense and Economic Growth in Developing Countries', *Economic Development and Cultural Change*, (Jan. 1978), 271-80; and Robert E. Looney and P.C. Frederiksen, 'Defense Expenditures, External Public Debt, and Growth in Developing Countries', *Journal of Peace Research* (Dec. 1986), 329-38.
3. R.D. McKinlay and A.D. Cohan, 'The Economic Performance of Military Regimes: A Cross-national Aggregate Study', *British Journal of Political Science* (1976), 191-230.
4. Robert E. Looney and P.C. Frederiksen, 'Consequences of Military Rule in Argentina: An Analysis of Central Government Budgetary Trade-Offs', *Comparative Political Studies* (April 1987), 34-46.

5. Robert Looney, *Third World Military Expenditures and Arms Production* (London: Macmillan, 1988); and Robert E. Looney and P.C. Frederiksen, 'Profiles of Current Latin American Arms Producers', *International Organization* (Summer 1986), 745-52.
6. M. Brzoska and T. Ohlson, *Arms Transfers to the Third World, 1971-85* (New York: Oxford University Press, 1987); and Robert E. Looney, 'Impact of Military Expenditures on Third World Debt', *Canadian Journal of Development Studies* (1987), 7-26.
7. A. Maizels and M.K. Nissanke, 'The Determinants of Military Expenditures in Developing Countries', *World Development* (Sept. 1986), 1125-40.
8. A. Maizels and M.K. Nissanke, 'The Causes of Military Expenditure in Developing Countries', in Deger and West, *op. cit.*, pp.129-30.
9. Maizels and Nissanke, 'The Causes of Military Expenditure ...', *op. cit.*, p.131.
10. Maizels and Nissanke did find some differences between civilian and military regimes, but only by distinguishing between three types of military regimes - varying on the basis of whether their use of violence against the public was rated as none, some, or frequent. Maizels and Nissanke, *Ibid.*, p.134.
11. Merilee S. Grindle and Robert W. West, 'Civil-Military Relations and Budgetary Politics in Latin America', (Mimeo), Harvard Institute for International Development (Jan. 1986), pp.1-2.
12. Robert L. Rothstein, 'National Security, Domestic Resource Constraints and Elite Choices in the Third World', in Deger and West, *op. cit.*, p.147.
13. See, for example, Richard R. Fagen and Wayne Cornelius, eds., *Political Power in Latin America: Seven Confrontations* (Englewood Cliffs, N.J.: Prentice-Hall, 1970); Martin C. Needler, 'The Military Withdrawal from Power in South America', *Armed Forces and Society* (Summer 1980); Amos Perlmutter, 'The Comparative Analysis of Military Regimes: Formations, Aspirations and Achievement', *World Politics* (Oct. 1980); and Mark Ruhl, 'Civil-Military Relations in Columbia: A Societal Explanation', *Journal of Inter-American Studies and World Affairs* (May 1981), 123-46.
14. Merilee Grindle and Robert West, *op. cit.*
15. This is the definition adopted in Ruth Sivard, *World Military and Social Expenditures, 1983* (Washington, D.C.: World Priorities, 1983).
16. *Ibid.*, pp.11-12.
17. Fifty out of an original sample of 95 developing countries were classified as military regimes. Due to lack of comparable data, a number of these countries were not included in the final regression analysis. Those countries included were: Nicaragua, Indonesia, Sudan, South Korea, Rwanda, Niger, El Salvador, Pakistan, Turkey, Paraguay, Brazil, Philippines, Thailand, Liberia, Chile, Uruguay, Uganda, CAR, Ghana, Burma, Argentina, Peru, Syria, and North Yemen. Civilian regimes included in the regression analysis were: India, Cameroon, Costa Rica, Bolivia, Senegal, Tunisia, Morocco, Malawi, Singapore, Venezuela, Mexico, Ecuador, Malaysia, Dominican Republic, Ivory Coast, Tanzania, Sri Lanka, Trinidad, Papua New Guinea, Zimbabwe, Kuwait, Kenya, Jordan, Oman, and the UAE.
18. Sivrad, *op. cit.*, pp.11-12.
19. Figures are for 1981 and are from United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers, 1986* (Washington: USACDA, 1987).
20. Rothstein, *op. cit.* An expanded version of this framework is given in Robert Rothstein, 'The "Security Dilemma" and the "Poverty Trap" in the Third World', *The Jerusalem Journal of International Relations* (Dec. 1986), 1-38.
21. *Ibid.*, p.29.
22. The following countries in our sample were classified as conflict governments: Sudan, Bolivia, South Korea, Niger, El Salvador, Pakistan, Philippines, Liberia, Chile, Uruguay, Uganda, CAR, Burma, Syria, North Yemen, and Oman.
23. Erich Weede, 'Rent Seeking, Military Participation, and Economic Performance in LDCs', *Journal of Conflict Resolution* (June 1986), 291-314.

- 24. G. Harris, 'The Determinants of Defense Expenditures in the ASEAN Region', *Journal of Peace Research* (1986), 4.
- 25. See, for example, Robert E. Looney, 'Austerity and Military Expenditures in Developing Countries: The Case of Venezuela', *Socio-Economic Planning Sciences* (1986), pp.161-4.
- 26. *Op. cit.*.
- 27. Michael Brzoska, 'Current Trends in Arms Transfers', in Deger and West, *op. cit.*, pp.161-79.
- 28. Cf. R.E. Looney, 'Impact of Military Expenditures on Third World Debt', *Canadian Journal of Development* (1987), 7-26; Martin Shubik and Paul Bracken, 'Strategic Purpose and the International Economy', *Orbis* (Fall 1983), 567-91; and Michael Brzoska, 'The Military-Related External Debt of Third World Countries', *Journal of Peace Research* (1983), 271-7.
- 29. Cf. J. Vener, 'Budgetary Tradeoffs Between Education and Defense in Latin America: A Research Note', *Journal of Developing Areas* (Oct. 1983), 77-92; and Robert E. Looney, 'Military Expenditures in Latin America: Patterns of Budgetary Tradeoff', *Journal of Economic Development* (July 1986), 69-104.
- 30. Following Robert E. Looney, 'Impact of Military Expenditures on Third World Debt', *op. cit.*
- 31. Estimates are for 1981, with lagged variables ending in 80. Economic and debt variables were taken from World Bank, *World Development Report* (New York: Oxford University Press), various issues. Military expenditure data is from U.S. Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers* (Washington, D.C.: ACDA), various issues.
- 32. An account of this process for Argentine military regimes is given in Martin Shubik and Paul Bracken, 'Strategic Purpose and the International Economy', *Orbis* (Fall, 1983), 567-91.
- 33. Marek Thee, 'Third World Armaments: Structure and Dynamics', *Bulletin of Peace Proposals* (1982), pp.113-17.
- 34. *Ibid.*, p.114.

