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Why Third World Disarmament Is So Difficult To Attain

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1. Introduction

> Military expenditures undoubtedly absorb resources which 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. There is no doubt that a transfer of resources from military to civil uses would provide further possibilities for an increase in the rate of economic growth.[1] (Jolly, 1978, p. 7)

This judgment is made in a 1972 UN report entitled: *Economic and Social Consequences of the Arms Race and of Military Expenditures.* "If there were no arms race" the report concludes, "trade and other exchanges would most certainly be easier. One major effect of the arms race and military expenditure has been to reduce the priority given to aid in the policies of donor countries[2] (Jolly, 1978, p. 7). This logic has characterized the United Nations (1978, 1979, 1981) approach to disarmament over the years.[3] (See also Thorisson, 1983.) The basic presumption made by the UN is that (1) military expenditures are the result of arms races; (2) these arms races are irrational; (3) the military expenditures thus have no productive role; and (4) if only rationality would prevail, arms races would be halted and the resources that would have gone into military expenditures could be utilized to increase the productive capacity of the Third World.

The attractiveness of these arguments is obvious, yet almost to a country the Third World has resisted or at least not actively participated in disarmament. Are Third World leaders irrational or are the UN's basic assumptions incorrect? By examining both the factors underlying Third

World military expenditures and the impacts these expenditures have on other facets of the economy, we attempt to understand the general unwillingness of Third World nations to disarm. Tentatively, our results indicate that the Third World is far from homogeneous and that it makes a certain amount of sense to incorporate political-security and economic variables as a means of classifying countries into two groups – those countries which have a high level of internal and/or external threat combined with a low level of governmental legitimacy and effectiveness (here classified as conflict countries) and those countries who have a relatively high level of governmental legitimacy and face relatively low internal and/or external threats (here classified as non-conflict countries). It is shown that the factors underlying economic expenditures in these groups are somewhat different, as are the impacts these expenditures have on other economic variables.

It turns out that the countries we might expect would be most receptive to movements toward disarmament, the non-conflict states, actually appear to receive a number of net economic benefits from defense expenditures. Their enthusiasm for disarmament may therefore be minimal. Of course, the conflict countries, concerned with regime survival, would also have little interest in disarmament.

2. The Security Dilemma in The Third World

Countries obviously increase expenditures because of perceived threats, whether external or internal. It is just as obvious that many Third World countries face minimal external or internal threats, but still allocate resources for defense. It is apparent that different factors motivate military expenditures and that the ability to finance military expenditures also varies considerably in the Third World. It makes little sense therefore to treat all Third World countries as a homogeneous group[4] (Looney and Frederiksen 1986a, 1986b).

Furthermore, it is increasingly apparent that the simple arms race models are incapable of accounting for the level of military expenditures in the majority of less developed countries.[5] (Jreddenick, 1985; Maizels and Nissanke, 1985).

For example, in a recent article,[6] Harris (1986) found in examining the defense expenditures of ASEAN countries that the size of GNP determines the broad order of magnitude of defense expenditures and that domestic economic conditions influence its level in any year. He notes, however, that

> "This is not to say that geo-political forces have an insignificant influence but these are difficult to incorporate into the analysis. This conclusion can be clarified by making a distinction between a

> government's ability and its willingness to allocate funds to defense. Clearly, its ability will be greater the larger the amount of resources at its disposal, and this explains why Singapore and Malaysia are relatively big spenders. However, above some minimum level of defense expenditures, unless there is a threat to security, defense is in competition with other users, many of which more obviously meet urgent social needs."[7] (Harris, 1986, p. 47).

Harris concludes that given this point, there is a tendency for defense expenditures to increase only modestly in the absence of a threat to security and to respond to fluctuations in domestic economic well-being. On the other hand:[8]

> A government's willingness to ignore spending on defense, and to justify the consequent reduction in spending elsewhere, will be influenced by geo-political factors. We have referred before to the rapid increase in ASEAN defense expenditures since 1979 in response to a perceived threat from Vietnam. Yet here, too, economic forces influenced by falling export prices have forced revisions of defense expansion plans. Early in 1984 Malaysia's defense expansion slackened because of the impact of economic recession, and the Philippines has spent far less on defense than other ASEAN countries in recent years, principally because of severe economic problems. (Harris, 1986, pp. 47-48)

One way of incorporating the security threat aspect of the need for defense expenditures with the economic means of supporting defense expenditures is to divide Third World countries into two groups, one including countries with high levels of external and internal threat, and the other group containing countries that face relatively low levels of threat.

Rothstein[9] (1986) has not only already classified countries along these lines, but also further subdivided countries based on the degree of (high, medium, and low) legitimacy of these governments.[10] (p. 30). This classification scheme yields a consolidated number of country groupings. As one might imagine, however, countries with high to medium legitimacy (and high effectiveness) tend to have low levels of threat, while countries with low legitimacy (and effectiveness) have high threats (usually internal). Dividing Third World countries on the basis of legitimacy (as of the early 1980s) therefore, two groups can be derived. One of these (conflict) is characterized as having a low level of governmental legitimacy, effectiveness, and high threats, while the other is characterized by relatively high governmental legitimacy, effectiveness, and low threat (the countries classified on this basis are listed in Appendix A). It should be noted that, in several cases when legitimacy and threat did not

coincide, i.e., medium legitimacy and high threat or low legitimacy and low threat, legitimacy was the ruling criterion in classification. As Rothstein notes:[11]

> In each case high legitimacy countries spend less on average than medium legitimacy countries and the latter spend less than low legitmacy countries . . .
>
> There is no such thing as "the" security problem of developing countries: the type of threat and its intensity make a difference. But the tables also make the more arguable point that internal conditions—how effective the government is in either meeting or containing citizen demands and to what degree it can count on voluntary citizen compliance with its policies make some difference in security decisions. (p. 33)

This latter observation is consistent with several general propositions put forward by Charles Wolf[12] (1981, pp. 76-80). In the outlines the Wolf thesis assumes that:[13]

1. Sustained economic development requires political stability (although it may also contribute to such stability).
2. Political stability reduces uncertainty or equivalently increases predictability and both opportunity and incentive for innovations. It thereby provides a useful, though certainly not infallible, mechanism for distinguishing and selecting between more and less productive use of resources.
3. Economic development typically and probably inevitably generates political, social, institutional, and psychological side effects that are profoundly destabilizing, both internally and externally.
4. These destabilizing pressures can be contained and controlled in part through the development and proper use of suitable military and paramilitary forces and capabilities.
5. Such military capabilities are thus complementary to maintaining and sustaining economic development, rather than conflicting with it.

There seem to be bits of truth in what both Rothstein and Wolf are arguing. Wolf may have overgeneralized his observations; however, they are likely to be more valid for the non-conflict countries as defined above. Put differently, a certain amount of stability and political legitimacy is likely to be required before added defense expenditures can

create further stability. Their generally lower level in the non-conflict countries would mean that defense expenditures are likely to be in less competition for resources with the civilian sector than in the conflict countries. Since defense expenditures are not as necessary as in the conflict group, presumably they could be curtailed if they began detracting from economic performance. On the other hand, the degree of instability and economic uncertainty already existing in the conflict countries is unlikely to be overcome by military expenditures (if anything, increased military expenditures may be interpreted by the private sector as a sign the government is losing control). If these generalizations are correct, it is easy to see why there is so little enthusiasm in the Third World for disarmament. The conflict countries can't afford to disarm, and the non-conflict countries may suffer a deterioration in economic performance brought about by the resulting reductions in security and political stability. The empirical analysis in the following sections tests to the extent possible the modified Wolf thesis that defense expenditures are likely to provide net economic benefits to the non-conflict countries, but none to the conflict states.

3. Results

One of the main predictions of the Wolf thesis is that under some circumstances military expenditure in developing countries can play a productive role in increasing the level of internal security, thus providing a more stable environment for economic activity. If this is the case, we should expect this effect to be particularly significant in increasing longer term economic decisions such as the share of savings and investment in gross domestic product. That is, higher levels of internal stability stemming from increased military expenditures, everything else equal, should create an atmosphere whereby savers and investors are willing to mobilize their resources for commitments to the future.

Most likely, however, investors and savers will require some minimal level of stability before seriously considering longer run commitments. However, the political regimes in the conflict countries, as defined above, may well be considered too unstable by savers and investors to step up their activities even while increased military expenditures are being undertaken. In short, there may be some threshold level of security which if not met could make the Wolf thesis a moot point. To test this hypothesis, the impact of increased military burdens (the share of GNP allocated to military expenditures) on the share of savings and investment in GDP was separately estimated for the conflict and non-conflict groups of countries.

The structural form of the regression equation with expected signs was:

$$GDIB = f(RBB, AS, SMEY)$$
$$\begin{matrix} - & + & + \\ & & - \end{matrix}$$

Where[14]

GDIB is the share of investment in gross domestic product, 1982

RBB is the resource balance (negative values indicating increased capital inflows) as a share of GDP in 1982

SMEY is the share of military expenditures in GNP 1981

AS is the average savings rate 1970 - 1981

In short, after controlling for the two main determinants of investment, net capital inflows from abroad, and the level of saving, the impact of military expenditures is evaluated. The anticipated sign of military expenditures is positive and statistically significant for the non-conflict countries, but it is either insignificant or significant and negative in the case of the conflict states. The results (Table 1) are as anticipated:

1. The conflict countries experience positive impact on investment from increases in their military burdens, with added military expenditures being highly significant.
2. Overall resource inflows, savings and military expenditures account for nearly 47% of the observed fluctuations in investment. This increases to 54% when the marginal savings rate (MS) for 1970-81 is substituted for the average savings rate(AS)

TABLE 1
Impact of Defense Expenditures and Investments and Savings:
Non Conflict, Conflict States
(Standardized Estimates)

	Independent Variables					Statistics		
Equation	RBB	AS	SMEY	MS	PDPB	r^2	F	DF
Non-Conflict								
(1) GDIB =	-0.48	0.52	0.50					
	(-3.93)	(4.18)	(4.74)			0.469	14.3	51
(2)	-0.39		0.41	0.60				
	(-3.33)		(3.96)	(5.06)		0.541	17.32	47
Conflict								
(3) GDIB =	-1.05	0.81	0.03					
	(-6.40)	(5.75)	(-0.28)			0.736	19.56	24
(4)	-0.83		0.04	0.66				
	(-4.54)		(0.22)	(4.11)		0.622	10.66	22
(Non-Conflict)								
(5) GDIB =	0.74	0.25	0.24					
	(12.43	(4.17)	(4.74)			0.876	113.29	51
(6)	0.74		0.19	0.28				
	(13.68)		(3.96)	(5.06)		0.902	135.06	47
(7)	0.74	0.27	0.23		0.06			
	(12.44)	(4.33)	(4.65)		(1.17)	0.879	85.99	51
Conflict								
(8) GDIB =	0.42	0.00	-0.03					
	(3.40)	(5.72)	(-0.33)			0.853	40.78	24
(9)	0.57		0.02	0.48				
	(4.28)		(0.17)	(4.06)		0.800	25.31	22
(10)	0.50	0.62	0.02		0.25			
	(4.88)	(7.24)	(0.36)		(3.39)	0.907	48.79	24

Notes: See text for definition of symbols; ( ) = t statistic
F = F statistic
DF = degrees of freedom
r^2 = correlation coefficient

3. The conflict countries on the other hand do not derive any stimulating effects on investment from increased military burdens. For these countries over 70% of the fluctuations in investment can be accounted for by resource inflows (RBB) and savings (AS or MS). Note that the standardized coefficients on resource inflows and savings are considerably higher for the conflict countries, indicating the relatively greater impact of these variables on investment than in the case of the non-conflict states.

There is adequate support for the Wolf thesis; i.e., in the net, added military expenditures do not compete with investment for resources in many developing countries, but in fact contribute to an environment in which more resources may in fact be mobilized for economic activity. The effect is not universal, however, with some countries so unstable (and/or inept) that added military expenditures do not provide sufficient assurance about the future to warrant increased investment.

Since in many less developed countries savings and investment are undertaken by the same groups of individuals, we should expect military expenditures to produce similar effects on savings. As with investment, the resource balance (RBB), savings (AS and MS), and the military burden (SMEY) were regressed on the share of savings in GDP in 1982 (GDSB). One additional variable, the share of public external debt in GNP in 1981 (PDPB) was also included in the regression equation; our expectation being that due to uncertainty in the conflict countries, a relatively high proportion of savings would have to be mobilized by the state from external sources.

The results (Table I) are quite similar to those obtained for investment, with the military burden again playing an important role in contributing to the mobilization of internal savings in the non-conflict countries but ineffective in this role in the case of the conflict countries. In short, the conflict countries appear to resort to external borrowing (PDPB) to augment their low levels of domestic savings, whereas the non-conflict countries appear capable of mobilizing local resources through increased internal security.

Other relationships stemming from the contrasting impact of the military burden in conflict and non-conflict states can provide insights as to the manner in which military expenditures affect resource mobilization in the Third World.

In particular, we ask, are added military expenditures undertaken at the expense of other public expenditures, or are they funded largely out of tax revenues imposed on the private sector? On *a priori* grounds, we might anticipate that non-conflict states would be in a more flexible position to allocate funds between military and non-military activities. In addition, the higher level of government legitimacy in the conflict states should enable the governments in these countries to be more effective in mobilizing resources for defense through taxing the private sector. To test these hypotheses the military burden was regressed on both the share of public consumption in GDP in 1982 (PCB), and the share of private consumption in GDP in 1982 (PRB). As with investment, the control variables were savings (AS), the net resource balance (RBB), and the public external debt (PDDB).

The results (Table 2) indicate that:

1. Public consumption expenditures are not related to the military burden in non-conflict states.
2. The military burden is directly associated with increased public consumption in the conflict states.

TABLE 2

Impact of Defense Expenditures and Investments and Savings: Non Conflict, Conflict States

(Standardized Estimates)

		Independent Variables				Statistics		
Equation		AS	RBB	SMEY	PDPB	r^2	F	DF
Non-Conflict								
(1)	PCB =	0.26	-0.52	-0.03				
		(1.67)	(3.25)	(0.22)		0.192	3.56	48
		0.44	-0.54	-0.06	0.40			
(2)		(2.78)	(-3.67)	(0.46)	(2.95)	0.326	5.31	48
Conflict	PCB =	-0.01	-0.26	0.36	0.62			
(3)		(0.01)	(-1.32)	(2.19)	(4.29)	0.714	10.65	21
Non-Conflict	PRB =	-0.36	-0.57	-0.24				
(4)		(-4.11)	(-6.61)	(-3.33)		0.738	45.16	51
Conflict	PRB =	-0.56	-0.15	-0.05				
(5)		(-2.67)	(-0.65)	(-0.25)		0.424	5.17	24

Notes: See text for definition of symbols; ( ) = t statistic
F = F statistic
DF = degrees of freedom
r^2 = correlation coefficient

3. The non-conflict countries largely finance added military expenditures, through diverting resources from private consumption, whereas no relationship of the sort is present in the conflict countries.

This second set of results appears to indicate that the relative stability of the non-conflict countries facilitates the mobilization of resources for defense through the tax system, effectively tapping potential private consumption in this environment. Added defense expenditures apparently do not have to compete with resources capable of flowing into productive investment. In addition, the state may have sufficient flexibility in its budgetary process so that the level of public consumption can be deter-

mined somewhat independently of the level of military commitments felt adequate to provide a desired level of security. In sharp contrast, public consumption expenditures in the conflict states do not appear to be funded out of potential consumption and are linked fairly closely to overall government consumption. In general, therefore, military expenditure in the conflict countries may be more of an overall economic burden in the sense that they may pre-empt resources from more productive allocations than in the case of the non-conflict countries.

While this conclusion is somewhat tentative, it not only makes intuitive sense, but more importantly it is consistent with other empirical findings.

A major area of research in recent years has attempted to determine the manner in which governments prioritize budgets, i.e., do increased shares of defense in the central government budget occur at the expense of certain social expenditures, such as education and health, or are economic allocations reduced during periods of military expansion? To the surprise of most observers, the studies to date, in large part, have failed to discern sharp defense/non-defense budgetary tradeoffs for Third World countries as a whole. To some extent, the lack of statistical verification of possible defense/non-defense tradeoffs may stem from the fact that cross-section analysis, because of its static nature, is incapable of identifying the budgetary consequences of changes in the share of government defense allocations on other budgetary shares. Put differently, cross-section data represents the composition of country budgets. Countries with high shares of their budgets allocated to defense may have varied so much in the manner in which other budgetary activities were underfunded, that no overall statistical pattern or linkages between defense and non-defense expenditures are present.

The form of the regression equation utilized for examining defense/non-defense tradeoffs is

$$X_i = a + b\,GNPER + cDEF$$

Where:

X_i refers to the share of the budget allocated to the non-defense category, GNPPER is per capita income utilized as a control variable, and DEF is the share of defense in the central government budget. The results (Table 3) indicate that several distinctive patterns occur, depending on whether a country is in the conflict or non-conflict grouping:

1. In general, the non-conflict countries show a strong positive relationship between the share of defense expenditures in the government budget and allocations to social expenditures. This is particularly true for public services, education, health, and other social expenditures.

TABLE 3

Defense Non-Defense Budgetary Tradeoffs
(Standardized coefficients)

	Conflict States					Non-Conflict States				
	Independent Variables		Statistics			Independent Variables		Statistics		
Equation	GNPPER	DEF	r^2	F	DF	GNPPER	DEF	r^2	F	DF
1. Public Services	-0.38					-0.11	0.70			
	(-1.46)	(-0.60)	0.240	2.37	17	(-0.94)	(5.77)	0.510	17.72	36
2. Education	-0.06	-0.29				-0.18	0.46			
	(-0.21)	(-1.00)	0.105	0.87	17	(-1.21)	(3.11)	0.259	5.94	36
3. Health	0.12	-0.53				-0.05	0.52			
	(0.48)	(-1.97)	0.224	2.16	17	(-0.38)	(3.55)	0.278	6.53	36
4. Social Security	0.62	-0.59				0.12	0.24			
	(2.54)	(-2.39)	0.346	3.97	17	(0.70)	(1.42)	0.065	1.19	36
5. Housing	0.05	-0.10				0.32	-0.02			
	(0.18)	(-0.33)	0.001	0.06	17	(1.95)	(-0.10)	0.102	1.92	36
6. Other Social	-0.07	0.05				-0.11	0.58			
	(-0.22)	(0.18)	0.001	0.03	17	(-0.79)	(4.26)	0.365	9.78	36
7. Agriculture	-0.33	0.02				-0.36	0.50			
	(-1.14)	(0.07)	0.101	0.85	17	(-2.60)	(-3.58)	0.346	9.03	36
8. Roads	0.04	-0.30				-0.11	0.56			
	(0.15)	(-1.03)	0.081	0.64	17	(-0.77)	(3.89)	0.332	8.19	36
9. Other Transport	-0.34	0.35				-0.14	0.53			
	(1.19)	(1.21)	0.112	0.94	17	(-0.94)	(3.81)	0.322	8.07	36
10. Other Economic	-0.19	-0.15				0.01	-0.17			
	(-0.66)	(-0.51)	0.091	0.73	17	(0.07)	(-1.01)	0.030	0.53	36

NOTES: See text for definition of symbols; ( ) = t statistic
F = F statistic
r^2 = correlation coefficient
DF = degree of freedom

2. In sharp contrast, the conflict countries have on the whole experienced only negative tradeoffs between defense and the various social allocations. (However, only social security is statistically significant at the 95% level, and health at the 90% level.)
3. What negative trade-offs occur for the non-conflict countries are largely in reductions in the economic area, particularly agriculture.
4. The positive link between defense and social allocations extends to roads and other transport in the non-conflict countries.
5. The non-conflict countries do not experience any statistically significant patterns between allocations to defense and economic services.

In general, therefore, the non-conflict countries demonstrate a number of clear budgetary patterns, whereas the conflict countries are so varied in the manner in which budgetary priorities are established that no overall conclusion can be made as to the manner in which non-defense shares are affected during periods of expanded defense expenditures. Again, the non-conflict countries appear to be able to manage their defense budgets

with relatively few adverse effects in other areas. The same cannot be said for the conflict countries.

This finding is further confirmed by examining the relative impact of military expenditures on various socio-economic indices in both the conflict and non-conflict countries. Utilizing the fourteen socio-economic measures listed by Sivard, a factor analysis was first undertaken to determine the major underlying socio-economic phenomenon characterizing both groups of countries. Interestingly enough, the four major trends (factors) were identical for both the conflict and non-conflict countries. These measures of socio-economic development can be characterized as follows:

1. Quality of life comprising: (a) percent of women in total university enrollment; (b) life expectancy; (c) literacy rate; (d) percent of population with safe water; and (e) infant mortality rate.
2. Government expenditures per capita, comprising: (a) public education expenditures per capita; (b) per capita income; and (c) public health expenditures per capita.
3. Nutrition, comprising: (a) calorie supply per capita; and (b) protein supply per capita.
4. The number of professionals per capita, comprising: (a) population per physician; and (b) school age population per teacher.

To determine the possible negative impacts increased military expense might have on socio-economic development, several measures of the military burden were regressed on the factor scores of the conflict and non-conflict country groupings. The results (Table 4) indicate that:

1. Increases in military expenditures tend to have a negative impact on the quality of life in the Third World, but relationship is not highly significant.
2. Military expenditures tend to be highly (and positively) correlated with health and education expenditures in the non-conflict countries, but occur at the expense of allocations in these areas in the non-conflict states.
3. Military expenditures are associated with improved levels of nutrition in the Third World, but this pattern is only statistically significant in the case of conflict countries.
4. There is no statistically significant relationship between military expenditures and the number of doctors and teachers per capita in the Third World (although in the non-conflict countries a weak relationship seems to hold between increased military expenditures and the number of professionals per capita).

TABLE 4

IMPACT OF MILITARY EXPENDITURES ON SOCIO-ECONOMIC DEVELOPMENT CONFLICT: NON-CONFLICT STATES

(Standardized Estimates)

Equation	Independent Variables			Statistics		
	GNPPER	SMBY	SMB	r^2	F	DF
Quality of Life						
(1) Conflict	0.80	-0.23				
	(6.12)	(-1.87)		0.642	21.50	26
(2) Non-Conflict	0.54	-0.15				
	(4.52)	(-1.24)		0.329	11.28	48
Government Expenditures Per Capita						
(3) Conflict	1.04		-0.28			
	(10.61)		(-2.80)	0.841	63.63	26
(4) Non-Conflict	0.63		0.58			
	(13.67)		(12.74)	0.906	221.49	48
Nutrition						
(5) Conflict	0.77		0.15			
	(6.31)		(1.25)	0.754	36.78	26
(6) Non-Conflict	0.69		0.20			
	(7.10)		(2.01)	0.579	31.68	48
Population Per Professional						
(7) Conflict	-0.54		-0.12			
	(-2.77)		-063)	0.379	7.43	26
(8) Non-Conflict	-0.41		-0.20			
	(-3.19)		(-1.50)	0.247	7.54	48

NOTES: See text for definition of symbols; ( ) = t statistic
F = F statistic
r^2 = correlation coefficient
DF = degree of freedom

The final area of examination concerns the composition of military expenditures. In a recent study, Weede (1986) found a strong and positive relationship in Third World countries between the military burden as measured by the armed forces per capita and overall economic growth. This main argument stresses the positive spinoffs on human capital provided by military service. He contends (but does not demonstrate) that similar amounts of money spent on weapons would most likely impact negatively on overall economic growth. If Weede's arguments are correct, and given the generally positive effect of military expenditures found for the non-conflict countries (and negative effects for

the conflict countries), we should expect to find increased military expenditures undertaken due largely to increased size of the armed forces in the non-conflict countries. In contrast, the conflict countries should experience a close association between military expenditures and weapons acquisition (proxied by arms imports). To test this thesis, military expenditures in both groups of countries were regressed on armed forces and arms imports. Gross national product (the overall economic capability of supporting military expenditures) and the balance of payments (reflecting possible foreign exchange constraints) were introduced into the regression as control variables. The sign on the balance of payments term is expected to be positive for both groups of countries, indicating the stimulating effect of balance of payments surpluses on military acquisitions in particular and defense budgetary allocations in general. The results (Table 5) demonstrate the power of economic variables in accounting for variations in Third World military expenditures, with 87.7% of the fluctations in military expenditures in non-conflict countries and 80% in the conflict countries accounted for by the gross domestic product (GDPB) and balance of payments (CAB) (all figures for 1981).

On the margin, the armed forces (AF) are statistically significant and positive in contributing to the determination of total military expenditures in the non-conflict countries, but not in the case of the conflict countries. On the other hand, arms imports make a positive and statistically significant contribution to military expenditures in the conflict states but not the non-conflict group of countries.

4. Conclusions

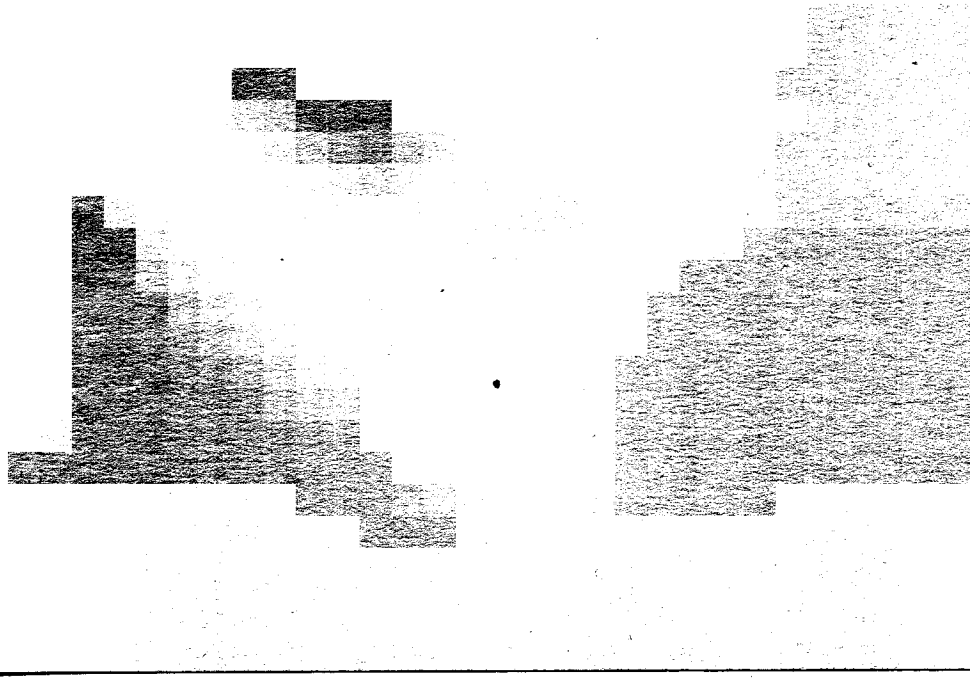
The above analysis demonstrated the significant role economic factors as opposed to arms-race explanations play in affecting military expenditures in the Third World. Economic factors are modified somewhat depending on whether the country has a relatively high degree of threat or not, but they are equally present in conflict and non-conflict states. Are Third World countries rational in their approach to military spending? In a sense, the analysis above indicates that they are. Depending on the level of perceived threat, developing countries in large part allocate resources to defense in line with their resource constraints. Would disarmament benefit the Third World? The conflict countries might well derive economic benefits through disarmament, but considering that most of the threats to Third World regimes are internal, arguments for disarmament are likely to stir little enthusiasm from the leaders of the countries. On the other hand, the effect of defense on security and political stability first noted by Charles Wolf may well provide net benefits to the non-conflict countries. Leaders of these countries are unlikely to sacrifice these benefits for the sake of disarmament *per se*.

TABLE 5
DETERMINANTS OF MILITARY EXPENDITURES: CONFLICT, NON-CONFLICT COUNTRIES

(Standardized Estimates)

Equation		Independent Variables				Statistics		
		GDPB	CAB	AF	AI	r^2	F	DF
	Non-Conflict States							
(1)	ME =	0.53						
		(4.54)				0.228	20.64	52
(2)		0.51	0.77					
		(9.70)	(14.85)			0.878	161.75	47
(3)		0.37	0.18	0.21				
		(6.16)	(16.87)	(3.46)		0.904	137.84	47
(4)		0.47	0.70		0.11			
		(8.63)	(10.48)		(1.56)	0.884	112.08	47
(5)		0.36	0.77	0.20	0.06			
		(5.92)	(11.87)	(3.15)	(0.98)	0.906	103.53	47
	Conflict States							
(6)	ME =	0.81						
		(6.65)				0.657	44.17	24
(7)		1.57	0.87					
		(7.24)	(4.04)			0.806	39.49	21
(8)		1.10	0.54	0.28				
		(3.14)	(1.19)	(1.67)		0.832	29.77	21
(9)		1.45	0.81		0.35			
		(10.42)	(5.90)		(5.43)	0.927	75.69	21
(10)		1.36	0.75	0.05	0.34			
		(5.60)	(3.79)	(0.43)	(4.72)	0.927	54.25	21

NOTES: See text for definition of symbols( ) = t statistic
F = F statistic
r^2 = correlation coefficient
DF = degree of freedom



Footnotes

[1] Quoted in Frank Barnaby "The Scale of World Military Expenditures" in Richard Jolly *Disarmament and World Development* (New York: Pergamon Press, 1978) p. 7.

[2] *Ibid.*

[3] See for example: United Nations, *Study on the Relationship Between Disarmament and Development* (New York: UN, 1981); United Nations, *Economic and Social Consequences of the Arms Race and of Military Expenditures* (New York: UN, 1978); Inga Thorisson, "Guns and Butter: Can The World Have Both?" *International Labor Review* (July-August 1983), pp. 397-410; and United Nations: *Costs of the Arms Race* (New York: UN, 1979).

[4] Cf. Robert Looney and P.C. Frederiksen "Defense Expenditures, External Public Debt and Growth in Developing Countries" *Journal of Peace Research* (1986, forthcoming), and Robert Looney and P.C. Frederiksen "Profiles of Current Latin American Arms Producers" *International Organization* (Summer 1986) pp. 745-752.

[5] Cf. John Treddenick, "The Arms Race and Military Keynesianism" *Canadian Public Policy* (1985); pp 77-92; and A. Maizels and M. Nissanke "The Determinants of Military Expenditures in Developing Countries" London: University College, Discussion Paper 85-18 (April 1985).

[6] Geoffrey Harris, "The Determinants of Defense Expenditures in the ASEAN Region "*Journal of Peace Research* (1986) pp 41-49.

[7] *Ibid*, p. 47.

[8] *Ibid* pp. 47-48.

[9] Robert L. Rothstein "The Security Dilemma' and the 'Poverty Trap' in The Third World" Paper presented at the Fletcher School-University of London Conference on Third World Military Expenditures (London, March 1986).

[10] *Ibid*, p. 30.

[11] *Ibid*, pp. 33.

[12] Cf Charles Wolf "Economic Success, Stability and the 'Old' International Order," *Internattional Security* (1981), pp. 75-92.

[13] *Ibid*, pp. 76-80.

[14] Economic data are from World Bank, *World Development Report, 1984* (New York: Oxford University Press, 1984); *World Bank, World Tables, The Third Edition, Volume I, Economic Data* (Baltimore: Johns Hopkins Press, 1983). Military data are from Ruth Leger Sivard, *World Military and Social Expenditures, 1983* (Washington, DC World Priorities, 1983).

[15] Erich Weede "Rent Seeking, Military Participation and Economic Performance in LDCs" *The Journal of Conflict Resolution* (June 1986), pp. 291-314.

Appendix A

Conflict Countries

Honduras
Nigeria
Sudan
Bolivia
Somalia
South Korea
Guatemala
Niger
El Salvador
Pakistan
Upper Volta
Philippines
Liberia
Chile
Chad
Uraguay
Madagascar
Uganda
Ethiopia
Central African Republic
Bangladesh
Burma
Zaire
Guinea
Syria
North Yemen
South Yemen

Non-Conflict Countries

Greece
Nicaragua
India
Cameroon Spain
Costa Rica
Senegal
Egypt
Tugo
Tunesia
Morocco
Rwanda
Malawi
Singapore
Benin
Saudi Arabia
Kenya
Haiti
Turkey
Yugoslavia
Paraguay
Venezuela
Mexico
Brazil
Algeria
Libya
Ecuador
Columbia
Thailand
Malaysia
Dominican Republic
Ivory Coast
Congo
Sierra Leone
Panama
Tanzania
Ghana
Portugal
Sri Lanka
Argentina
Jamaica
Trinidad
Zambia
Peru
Papua
Israel