

MILITARY EXPENDITURE, ECONOMIC GROWTH AND SOCIO-ECONOMIC DEVELOPMENT IN THE THIRD WORLD

by Nicole Ball

It is only relatively recently that analysts have concluded that military expenditure does not promote economic growth in the industrialized countries. It is now increasingly accepted that for these countries high rates of economic growth, investment and employment are inversely related to high levels of military expenditure.¹ A country such as *Japan* which has devoted a very low share of its national resources to military purposes and where the government has subsidized civilian industry has, over the last decade or more, had higher rates of economic growth and investment and less unemployment than a country such as the United States which has chosen to devote a much larger share of its resources to military purposes. In terms of social development, the most recent budget proposals of the Reagan administration in the US have demonstrated that even in the wealthy countries there can be a clear trade-off between military and social expenditure in a period of declining resource availability.

Developing countries, on the other hand, have been thought to experience a different relationship between military expenditure and economic growth and development, precisely because of the relatively less developed state of their economies. Whereas military spending in industrialized countries is seen as competing with other forms of public expenditure, it has been theorized that the funds earmarked for the military (or some portion of them) in third-world countries would not have been used at all, or not used productively, and that therefore military expenditure in all likeli-

¹ Ron P. Smith, "Military Expenditure and Capitalism", *Cambridge Journal of Economics*, March 1977, pp. 61—76; Kurt W. Rothschild, "Military Expenditures, Exports and Growth", *Kyklos* vol. 26 (1973): 804—815; Michael Boretsky, "Trends in US Technology: A Political Economist's View", *American Scientist* 63 (January—February 1975): 70—82; Ruth L. Sivard, *World Military and Social Expenditure*, 1977, Leesburg, Va.: WMSE Publications, 1977, p. 13; and Seymour Melman, *The Permanent War Economy*, New York: Touchstone, Simon & Schuster, 1974. One line of (predominantly Marxist) thought has argued that military expenditure is vital to the well-being of advanced capitalist economies. In general, articles of this nature fail to prove their contentions. Examples of this literature (as it pertains to the US) are: M. Reich, "Does the US Economy Require Military Spending?", *American Economic Review* 62 (May 1972): 296—303, and R.B. DuBoff, "Converting Military Spending to Social Welfare: The Real Obstacles", *The Quarterly Review of Economic and Business* 12 (Spring 1972): 7—22.

hood stimulates economic activity. It is not clear to what extent this theory is grounded in reality. A recent econometric study of Morocco and France, for example, has concluded that the gross economic consequences of military expenditure are much the same in both countries.²

An understanding of the real relationship between military expenditure, on the one hand, and economic growth and socio-economic development, on the other hand, is important for third-world countries not only because of the enormous development problems confronting them, but also because third-world defense expenditure has been rising considerably over the last two decades. Particular developing countries have raised their security expenditure at a rapid rate. SIPRI figures indicate that 31 of the 71 third-world countries (44 percent) for which data were available increased the share of gross domestic product (GDP) devoted to defense by 25 percent or more between 1965 and 1975. Of these fifteen (21 percent) more than doubled the percent of GDP devoted to military purposes. Only eleven of the 71 countries (15 percent) decreased their military expenditure by 25 percent or more.³

This paper will discuss some of the ways in which military expenditure might be expected to interact with economic growth and socio-economic development in the third world. One important objective of this discussion will be to demonstrate the care with which generalizations concerning military expenditure, growth and development must be phrased. Relationships which are valid for one country at a particular period of time may not be valid for another country or even for the same country at a different period in time. One result of the research exercise conducted under the auspices of the UN Special Expert Group on the Relationship between Disarmament and Development was to underline the

"...individual character of the experience of different developing countries in calculating the opportunity costs of military spending and identifying any causal linkages or definitive relationships between their military expenditures on the one hand and socio-economic problems on the other."⁴

² The economic stimulation argument is made in Emile Benoit, with Max F. Millikan and Everett E. Hagen, *Effect of Defense on Developing Economies, Vol. 2: Main Report*, ACDA/E-136, Cambridge, Mass.: MIT, June 1971, p. 27. The similarities between the economic effects of military spending in an industrialized and a third-world country are discussed in Jacques Fontanel, "Formalized Studies and Econometric Analyses of the Relationship between Military Expenditure and Economic Development: The Examples of a Developed Country, France, and an Underdeveloped Country, Morocco", Study prepared for the UN Special Expert Group on Disarmament and Development, Grenoble: Grenoble Centre for Security and Defence Studies, University of Social Sciences, mimeo, 1980.

³ Stockholm International Peace Research Institute, *World Armaments and Disarmament: SIPRI Yearbook 1980*, London: Taylor & Francis, 1980, pp. 8—11, and Table 1A.4, pp. 29—32. The countries which raised their military spending as a percent of GDP by 100 percent or more were: Chile, Egypt, Iran, Kuwait, Syria, Philippines, Libya, Malawi, Mauritania, Mauritius, Nigeria, Tanzania, Uganda, Zambia, Zimbabwe. Those which experienced rises of between 25—100 percent were: Jordan, Lebanon, Saudi Arabia, Pakistan Iraq, Honduras, Jamaica, Peru, Uruguay, Indonesia, Chad, Ethiopia, Kenya, Morocco, Upper Volta, El Salvador. Those which reduced their military expenditure as a percent of GDP by 25 percent or more were: Burma, Brazil, Algeria, Bénin, Colombia, Gabon, Liberia, Rwanda, Dominican Republic, Haiti, Trinidad & Tobago.

A word of caution must be added about the quality of international military expenditure statistics. Different sources often give very different expenditure estimates for the same country at the same period in time. An excellent summary of this problem, and one which should be read by all researchers interested in "militarization", is found in Michael Brzoska, "The Reporting of Military Expenditures", *Journal of Peace Research* 18:3 (1981): 261—275. This summarizes a longer report prepared for the UN Special Expert Group on Disarmament and Development.

⁴ United Nations, General Assembly, "Study on the Relationship between Disarmament and Development, Report of the Secretary-General", A/36/356, New York: 5 October 1981, p. 91.

1. Military Expenditure and Economic Growth: The Macrostatistical Approach

One way of approaching the question of whether military expenditure has positive or negative effects on economic growth is to attempt to determine whether there is any significant statistical relationship between these two variables for a large group of countries. For the last decade, a study undertaken by Emile Benoit for the US Arms Control and Disarmament Agency (ACDA) has provided the statistics to bolster the arguments of those who find a positive relationship between military expenditure and economic growth. Using simple regression analysis, Benoit believed that he had discovered a positive correlation between defense burden (military expenditure as a percent of civilian GDP) carried by 44 developing countries between 1950 and 1965 and their rate of economic growth.⁵

A study recently carried out at MIT as part of the UN research project on disarmament and development sampled 69 developing countries using data for some or all of the 1952–1970 period. The MIT group found that high rates of military expenditure were associated with *low* rates of economic growth.⁶ Two other recent studies which have explored the military expenditure—economic growth link for the post-1965 period were unable to find any clear-cut, uniform relationship for all the countries in their samples (90 in one case, 50 in the other).⁷ The authors of one of these reports concluded that,

“Given large differences in socio-economic structures among LDCs in our sample and the large important role of influences specific to individual countries, it pays to treat cross-section results with great caution.”⁸

This approach is clearly unlikely to predict the relationship between military expenditure and economic growth and therefore can hardly be expected to predict the effect of military expenditure on socio-economic development.

2. Military Expenditure as a form of Public Expenditure

Not all public expenditure has the same economic effect. Expenditure which is capital- or foreign-exchange intensive in nature will have a different effect than expenditure which is labor intensive or which has a low foreign exchange component.

⁵ Benoit, with Millikan and Hagen, *op. cit.* The word “believed” is used here both because of the findings of later macrostatistical analyses and because of an apparently little noticed review of the book version of Benoit’s study by Kenneth Boulding, “Defense Spending: Burden or Boon?”, *War/Peace Report* 13 (8 November 1974): 19–21. Boulding argues that because Benoit has only examined linear relationships he may well have overlooked very important non-linear relationships and thus drawn inaccurate conclusions from the data. See pages 20–21 of Boulding’s review. For an overall critique of the Benoit study, see Nicole Ball, “Defense and Development: A Critique of the Benoit Study”, *Economic Development and Cultural Change*, forthcoming. A slightly shortened version of this article will appear in *Militarization and Arms Production — For or Against Development?*, eds. Helena Tuomi and Raimo Väyrynen, London: Croom Helm, forthcoming 1982.

⁶ Riccardo Faini, Patricia Arnez and Lance Taylor, “Defense Spending, Economic Structure & Growth: Evidence Among Countries and Over Time”, Study prepared for the UN Special Expert Group on the Relationship between Disarmament and Development, Cambridge, Mass.: MIT, mimeo, October 1980.

⁷ Michael Brzoska and Herbert Wulf, “Rejoinder to Benoit’s ‘Growth and Defense in Developing Countries’ — Misleading Results and Questionable Methods”, Hamburg: IFSH-Study Group on Armament and Underdevelopment, University of Hamburg, mimeo, c. 1979, and Dan Smith and Ron Smith, “Military Expenditure, Resources and Development”, Study prepared for the UN Special Expert Group on the Relationship between Disarmament and Development, London: Department of Economics, Birkbeck College, University of London, mimeo, April 1980.

⁸ *Ibid.*, p. 18.

Whether these effects are "bad" or "good" for a nation's economy will in turn depend on the economic situation of the specific country and a broad range of policies followed by its government. The development strategy which dominated the 1950s and 1960s (and in reality remains dominant even today) anticipated that third-world countries of the post-World War II era would develop according to the path that the industrialized countries were believed to have followed. Capital-intensive investment, particularly (indeed almost exclusively) in the urban-industrial sector, would raise the productivity of third-world labor, thus spurring economic growth. The availability of foreign exchange would be of importance to the success of this strategy because so many of the capital goods required would, of necessity, have to be purchased from the industrialized countries. Foreign aid inflows were to provide much of the foreign exchange deemed necessary to attain an adequate level of investment.

Development analysts have increasingly questioned the viability of this strategy since the late 1960s and early 1970s. For one thing,

"...empirical studies show that capital formation could account for only a fraction of the rise in labour productivity ... that the effectiveness of investment (as measured by the incremental output-capital ratio) varied enormously from one country to another."⁹

For another thing, foreign aid supplied by the major donor countries has never reached the level sought by the United Nations or hoped for by the developing countries. Since, with the exception of the oil-exporting third-world countries, the terms of trade have tended to favor the industrialized countries since the mid-1950s, many developing countries have had to obtain their foreign capital requirements from private banks.¹⁰

By some indicators, a number of the major third-world borrowers have been successful in implementing this externally oriented development strategy. For instance, Brazil's public debt (long- and short-terms) is currently some 60 billion dollars. According to the World Bank, Brazil's gross domestic product (measured in 1970 dollars) increased 170 percent between 1965 and 1977. Between 1970 and 1977, Brazil ranked fifth, according to World Bank data, in terms of GDP growth rates, averaging 9.9 percent per year. This success, however, has been bought at a high price. The World Bank also shows that while the poorest 20 percent of Brazil's population controlled 3.8 percent of Brazil's national income in 1960, by 1970 that figure was 3.2 percent, and estimates for the end of the 1970s give the poorest 20 percent only 2.8 percent of the national income.¹¹

As a result of the unsatisfactory economic situation in most third-world countries,¹²

⁹ Keith Griffin, "Economic Development in a Changing World", *World Development* 9 (March 1982): 224.

¹⁰ See, for example, several of the numerous press reports on aid and third-world lending: William Hall, "Cost of Money Too High for Comfort", *Financial Times*, 4 May 1982; Stephany Griffith-Jones, "How Private Money Makes the World Go Round", *The Guardian*, 30 March 1980; Melvyn Westlake, "More Poverty, Less Bounty", *The Times*, 2 October 1981; and Ann Crittenden, "As Foreign Aid Dwindles, Poor Nations Grow Poorer", *International Herald Tribune*, 2 July 1981. But just as some countries have increased their rate of expenditure faster than others, a few developing countries account for a large portion of the third world's public debt. Brazil, for example, accounts for somewhere between 40 and 50 percent of total Latin American public debt.

¹¹ World Bank data from World Bank, *World Tables*, 2nd ed., Baltimore, Md. and London: John's Hopkins University Press, 1980, pp. 48-49, 426 and 463. A useful article summarizing the effects of the "Brazilian miracle" at its height is found in Albert Fishlow, "Brazil's Economic Miracle", *The World Today* 29 (November 1973): 474-479.

¹² This situation is summarized excellently in Griffin, *op. cit.*

some development analysts and third-world officials have been arguing that developing countries need to build up more labor-intensive production systems, depend more on their own resources and reduce their dependence on imported capital. This does not mean, however, that all capital-intensive expenditure is "bad" or that the decision to purchase a domestically produced item rather than foreign exchange by buying abroad is always "good". The point simply is that considerable care and discrimination must be exercised when evaluating the effects of any item of public expenditure on a nation's economy.

When it comes to evaluating the effect of military-related public expenditure on an economy, it is necessary to know what the military is buying with its money. The economic effects of paying wages and salaries and buying desks, food and office supplies will be different from purchasing motor vehicles or battleships or constructing barracks or air bases. In addition, the procurement of motor vehicles or battleships will probably have different economic effects depending on whether these items are produced domestically or must be imported. It therefore becomes necessary to weigh up the positive and negative effects to determine the overall impact of military expenditure on economic growth. It is not enough to look at one category of spending and generalize from that what the total economic effect will be.

Aggregate Demand Effect

The one way in which it is generally agreed that military expenditure can benefit an economy is by increasing aggregate demand, just as any item of public expenditure can be expected to do. Researchers at MIT have summarized the aggregate demand argument as follows:

"A military twist on the basic Keynesian model is the most cogent argument in support of a positive impact of increased arms spending on growth. In an economy with excess production capacity, increased aggregate demand from the military or any other source will drive up output, capacity utilization and (under plausible assumptions) profit rates. Investment may respond to higher profits, increasing to put the economy on a faster long-term growth path."¹³

While the MIT group suggested that this effect was most likely to occur in industrialized countries, case studies of Morocco and India indicate that, all things being equal, military expenditure — just like any other items of public spending — can stimulate economic growth in developing countries.¹⁴ With regard to India, Emile Benoit believed that the government's restrictive monetary and fiscal policies between 1950 and 1961 had contributed to the slow growth of the Indian economy in this period. The war with China in 1962 was said to have stimulated the Indian government to raise its level of taxation and to carry a larger budgetary deficit. The effect of these measures, Benoit argued, was to increase India's growth rate through the aggregate demand effect.¹⁵ Computer simulations based on a macro-economic model of the Indian economy for the years 1951—1973 have demonstrated that public spending, including defense spending, had a positive effect on economic growth between 1962 and 1967.¹⁶

¹³ Faini, Arnez and Taylor, *op. cit.*, p. 2.

¹⁴ The Moroccan case is discussed in Fontanel, *op. cit.*

¹⁵ Benoit, with Millikan and Hagen, *op. cit.*, p. 243.

¹⁶ P. Terhal, "Guns or Grain: Macro-Economic Costs of Indian Defence, 1960—1970", *Economic and Political Weekly* 16 (5 December 1981): 2001.

Inflation

Simply stimulating the economy by expanding public expenditure is no guarantee, of course, that the *overall* effect of military expenditure on the economy will be positive. In the case of Morocco,

"Military expenditure has only a slight direct impact on GDP, marked by two contradictory forces: as an item of public expenditure, it has a positive role, while as a specific unproductive-consumption phenomenon, it has a negative impact. Because of interdependence, military expenditure has a strongly negative effect on the growth of Morocco, acting through the inflationary tensions it stimulates, the trade-balance deficit which it aggravates, and the opportunity costs which it implies."¹⁷

Any kind of public expenditure, military or civilian, can be inflationary because of the upward pressure such spending exerts on prices and wages. Thus, in the absence of adequate corrective measures, military expenditure is likely to produce some degree of inflation. Computer simulation of both the Moroccan and the Indian economies has demonstrated inflationary pressure arising out of military spending. In the Indian case, deficit spending, on which increased defense outlays in the mid-1960s were based, was one cause of inflation. Another was the upward pressure on civilian sector wages generated by higher levels of defense spending.

Peru is another country for which military expenditure has contributed to inflation. There are rather a large number of factors, both domestic and foreign, which can be seen as stimulating inflationary pressures in Peru. The domestic factors are deemed the most important, especially high government spending of which military expenditure forms a part. In particular, the rapid increases in military spending in Peru between 1971 and 1975 are thought to have been very important in producing the relatively high (for Peru) rates of inflation experienced in 1977—1980. Nonetheless, there are so many other potential contributory factors to Peruvian inflation that it is difficult to determine to what *degree* military expenditure has stimulated inflation.¹⁹

Trade Balance, Foreign Exchange and Investment

The Moroccan case study also indicates that "Globally, an increase in military expenditure leads to a deficit in the trade balance (or an aggravation of an existing deficit)."²⁰ It is not difficult to think of how this situation could develop. Military expenditure might, for example, entail the importation of an appreciable amount of military material from abroad. Foreign exchange will then be unavailable for purchases which would add to the productive capability of the economy. Another possibility is that because the state is an important provider of investment funds in many third-world countries, more military expenditure may mean less investment, requiring countries to import more goods and reducing their export potential.

¹⁷ Fontanel, *op. cit.*, p. 116.

¹⁸ Terhal, *op. cit.*, pp. 1998 and 2001, and Ved P. Gandhi, "India's Self-Inflicted Defence Burden", *Economic and Political Weekly* 9 (31 August 1974): 1493.

¹⁹ José Encinas del Pando, "Peru: A Case Study, 1950—1980 — Analysis and Evaluation of the Evolution of her Economic, Military and Socio-Political Variables", Lima: University of Lima, unpublished manuscript, October 1981, pp. 113—122.

²⁰ Fontanel, *op. cit.*, p. 117.

Foreign exchange: Foreign exchange is often in short supply in developing countries and it becomes necessary to apportion that which is available among competing requirements. It is not unknown for industries in third-world countries to be forced to slow or halt production while foreign exchange is sought to purchase components or raw materials necessary to the production process. Under such conditions, a large diversion of foreign exchange to military-related imports is likely to occur at the expense of economic growth and development. There are some developing countries, notably the oil producers and exporters, which do not have such serious resource constraints, but they are the exception rather than the rule.²¹ (They are, of course, some of the major weapon purchasers.) Raju Thomas believes that the biggest constraint imposed by India's defense spending (particularly on modern weapons and the development of an indigenous defense industry) is the reduction of foreign exchange available to civilian sectors of the economy.

The increasing indebtedness of developing countries both to public and private lending institutions was touched on earlier. While this indebtedness is well-documented, the extent to which it has resulted from military-related purchases is unclear. Given the rate at which third-world arms imports have increased over the last decade and the decline in the grant element of military assistance from the major donors, it is not unreasonable to assume that at least for some countries the military component of their external debt (to both Western capitalist and Soviet-bloc countries) must be sizable. Ethiopia, for example, is one of the poorest countries in the world, ranked 125th out of 126 countries in terms of per capita GNP by the World Bank and with a current account balance that more often shows a deficit than not. Yet, in 1977 and 1978, Ethiopia imported some 1.5 billion dollars in weapons from the Soviet Union and its allies. Some Argentinian economists argue that the military component of Argentina's debt is important although precise data are hard to come by.²²

²¹ Even oil exporters can have problems. Ambitious (some would say "illconceived") development programs have helped to turn Nigeria's oil-induced trade surplus into a deficit. In addition, much of the country's oil wealth has gone into trade and commerce, not productive industries. Agriculture was virtually ignored in the 1970s and once an exporter of food, Nigeria must now import food. In the mid- to late-1970s, military goods accounted for a very small amount of total imports, from 0.1 to 1.5 percent. It seems unlikely, in view of Nigeria's other import requirements, that weapons imports have played a serious role in Nigeria's indebtedness. See Tom Forrest, "Oil Revenues Spent on Food Imports and State Budgets", *The Guardian*, 30 March 1980; Martin Dickson, "The Challenges Awaiting Civil Rule", *Financial Times*, 20 March 1979; Maya Chadda, "Nigeria's Oil Boom", *Times of India*, 13 November 1981. Arms import data US Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers, 1970-1979*, Publication 112, Washington, DC: March 1982, p. 113.

Ann Schulz shows that arms imports from the 1960s and early 1970s contributed at least in part to the growth of Iranian indebtedness in the mid-1970s once oil income stagnated and declined. Arms imports cannot bear the brunt of the blame here either, since Schulz explains that Iranian policy has long been one of incurring debts to acquire foreign exchange. Ann Schulz, "Military Expenditures, State Planning and Economic Performance in Iran, 1950-1980", Worcester, Mass.: Clark University, unpublished manuscript, 1982, Chapter 4.

As far as arms imports and foreign exchange use are concerned, Barry Blechman and Edward Fried estimated in 1977 that non-OPEC developing countries (excluding China) were spending 3 billion dollars a year in foreign exchange on arms purchases. That sum was equal to approximately one-fourth of the capital inflows on concessional terms received by those countries in the mid-1970s. Barry M. Blechman and Edward R. Fried, *Disarmament and Development: An Analytical Survey and Pointers for Action*, E/AC.54/L.90, New York: United Nations, Economic and Social Council, 26 January 1977, p. 9.

²² Mario Esteban Carranza, "The Role of Military Expenditure in the Development Process: The Argentine Case", Buenos Aires: unpublished manuscript, 1981 p. 123.

At the same time, military-related debts must be put into perspective. At the end of the 1970s, Peru increased its international borrowing to pay for foreign arms purchases, notably from the USSR. In terms of Peru's overall debt profile, however, food was another important cause of borrowing during the late 1970s, while between 1968 and 1980, borrowing to finance investment accounted for over 50 percent of Peru's indebtedness. During 1979, in all of Latin America only Argentina imported more (in current dollars) weapons than Brazil and most countries imported considerably less. Still, the 200 million dollars Brazil is recorded as having spent in 1979 on arms accounted for only 1 percent of total Brazilian imports. By all accounts, Brazil's dependence on imported oil is currently a more serious economic burden.²³

Investment: Even Emile Benoit, who believed that overall military expenditure stimulates economic growth in the third world acknowledged that,

"...a rise in defense expenditure may divert into other uses resources that would otherwise have gone into investment."

"...To the extent that defense utilizes industrial-type resources (manufactured other than foods, construction, and foreign exchange which can pay for the imports of manufactures), it may have to get them to a considerable extent from the investment program, because that may be where a large part of the disposable resources of this type actually are."²⁴

It was mentioned previously that investment, particularly capital-intensive investment, has held a central place in Western development strategy since the 1950s. Critics of this strategy are most certainly correct in arguing that capital investment is far from being the sole or even the most important source of increased labor productivity, and, hence, economic growth. Nonetheless, some amount of capital investment is necessary for economic growth to occur and there is evidence that military expenditure hinders this process, at least in some developing countries. The computer simulation of the Moroccan economy showed that,

"Gross fixed-capital formation receives a negative impulse from an increase in military expenditure. This impact is very clear-cut in a country such as Morocco, which is highly sensitive to opportunity costs. A reduction in the national military effort leads to an appreciable increase in gross fixed-capital formation."²⁵

Where the state has only a small role in financing investment, it is difficult to say that military expenditures are made at the expense of investment. For example, the Chilean military drastically cut back the state's role in financing development following the overthrow of the Allende government. Prime responsibility for investment was handed over to the private sector. Thus, while military expenditure has risen considerably since 1973, both in absolute terms and as a percentage of total budgetary outlays, *total* investment levels in Chile have risen as well.²⁶

²³ On Peru, see Encinas del Pando, *op. cit.*, pp. 71. Data on Brazil from US Arms Control and Disarmament Agency, *op. cit.*, Table 2.

²⁴ Benoit, with Millikan and Hagen, *op. cit.*, p. 18—19.

²⁵ Fontanel, *op. cit.*, p. 116.

²⁶ Augusto Varas, "The Role of Military Expenditure in the Development Process: The Experience of Chile, 1973—1980", Paper prepared for the International Studies Association Meeting 1982, Santiago: Facultad Latinoamericana de Ciencias Sociales (FLACSO), March 1982, pp. 22—27.

3. Some indirect effects

The foregoing discussion summarized a number of the interactions between military expenditure and economic growth in developing countries. It was by no means an exhaustive survey; nor can it be taken to indicate what the balance of these interactions is likely to be for any particular country. Several in-depth case studies cited suggest that the overall effect of military expenditure on the country in question is negative, but no attempt will be made here to generalize on the basis of these findings.

There are also many indirect ways in which it has been hypothesized that military expenditure can stimulate the growth and development of third-world economies and societies. Indeed, some analysts give these effects more weight than the direct influences. The following section will examine three such relationships: improvement of the taxation effort, creation of employment, and promotion of industrialization.

3.1. *Improvement of the Taxation Effort*

An Indian analysts of military expenditure and development, Ved Gandhi, has suggested that periods involving wars and rising military expenditure can have some useful short- and long-term fiscal effects.²⁷ The long-term effect occurs when a government which has raised its level of taxation to help finance additional military expenditure maintains taxation rates at higher level while military spending declines or levels off. The short-term effect involves the ability of the government to take some of the extra revenue collected for the military effort and use it for non-military, growth or development, purposes.

Gandhi examined the Indian experience and found that while taxation rates have been raised by the Indian government during war periods (1962—1964, 1965—1965, and 1971—1972), the effect of this on Indian economic growth and development has been minimal. Gandhi decided that the long-term fiscal effect could not be said to apply in the Indian case because India's "...revenue effort slackened substantially after every war". Nor did the short-term effect seem to operate because, "A very large part of the increased revenue effort during the war years, and surprisingly even in later years, was always absorbed by defence". Other countries may, of course, have followed different policies and had more positive growth and development outcomes. Only studies of individual countries can determine this.

3.2. *Employment Creation*

One argument regarding military expenditure and employment generation is that educational and vocational training received in the military can, to some degree, contribute to economic and social development once military personnel leave the services and re-enter the civilian economy. The first question that must be asked when assessing this claim is whether the country in question has a conscript or a professional armed forces. If it has a professional force, the benefits of training to the civilian economy will be considerably reduced since the trainee will spend much of his active working life in the military. Very many African countries, for example, have professional armed forces.

²⁷ Gandhi, *op. cit.*, pp. 1485—1494. The two quotations in the next paragraph are from page 1493.

Emile Benoit placed considerable stress on the claim that vocational training received in the military gave former conscripts skills that would make them particularly attractive to industrial establishments or which would enable them to become "model" farmers. There are several points which need to be considered here. In countries where the urban unemployment rate is quite high or where industries are designed to be capital-intensive and labor-saving, the benefits of such training are negated if the ex-serviceman is unable to find a job. Benoit used the case of India to support his arguments, pointing, to military training programs which enabled Indian soldiers to become skilled in printing, bookbinding, blacksmithing, plumbing, the metal trades and so on. It turned out, however, that these were *post-release* training programs that Benoit was describing, rather than skills that the servicemen had been able to acquire in the normal course of their military careers.²⁸ Even more important, it has been argued that, in general, Benoit tended "...to exaggerate the differential civilian benefits spread by these people released from the services...", primarily because of the lack of adequately remunerative jobs in the Indian economy.²⁹

As far as military training producing "model" farmers is concerned, this manpower spinoff would apply only to countries where the military was involved in growing its own food or possibly in agricultural improvement activities under civic action programs. In countries where inequitable social structures have led to the concentration of wealth and productive resources in the hands of a relatively small rural élite, however, it is unrealistic to assume that simply because a person has training which should turn him into a "model" farmer, that he will have the necessary access to land, water, credits and other agricultural inputs to become one. In India, the military does produce at least some of its own food. At the same time, the degree of concentration of income and agricultural resources is high, as is underemployment in agriculture as well as landlessness.

Some analysts of military expenditure and economic growth in developing countries argue that far from creating employment, military-related spending diverts an important proportion both of the economically most productive segment of the labor force — 18—45 year-old males — and of a country's skilled workforce. Because skilled labor is in relatively short supply in developing countries, this argument runs, its disproportionate use in the military sector exacerbates labor shortages experienced by civilian industries and thereby slows down development, or at least economic growth.³⁰

Other analysts have taken the opposite view. David Whynes, for example, states that,

"...manufacturing industry does not require a substantial amount of labour in that it favours capital-intensive production.... Furthermore, the public and tertiary sectors whilst demanding labour of both the skilled and unskilled type, cannot produce a demand large enough for total resource utilisation.... We

²⁸ Benoit, with Millikan and Hagen, *op. cit.*, p. 244.

²⁹ Terhal, *op. cit.*, p. 1999. In India, the upper echelons of the military are often found jobs as heads of public industries, ambassadors or state governments upon retirement from the services. The ordinary soldier has had a much more difficult time and the creation of a new paramilitary force designed to combat communal unrest and insurgency and to be staffed by ex-servicemen has, perhaps not entirely cynically, been termed a means of providing some post-release employment for the ordinary soldier. See, "Police: All for Peace", *Economic and Political Weekly* 16 (10 October 1981): 1630.

³⁰ Herbert Wulf, "Dependent Militarism in the Periphery and Possible Alternative Concepts", p. 248, in *Arms Transfers in the Modern World*, eds. Stephanie G. Neuman and Robert E. Harkavy, New York: Praeger, 1979.

might therefore deduce that the military demand for labour can only produce the most minimal detrimental effect on the development effects in that a substantial surplus of labour is in continuous existence."³¹

While there certainly exists a general tendency to labor surplus in developing countries, it would be wrong to assume that serious conflicts cannot develop between the military and civilian sectors of an economy. Terhal has concluded that in India, "With respect of the scarcity of supply in the category of skilled workers the defense sector was (in the mid-sixties) apparently in strong competition with the civilian sector".³² In a country which is attempting to build up a large, diversified military industry, such a situation should not be surprising. In the case of Ghana — which Whynes used to illustrate his contention that the demand for labor from the military does not conflict with civilian requirements — there is no military industry as such (only the limited assembly of small arms, ammunition) and therefore less of a chance that the situation identified by Terhal for India in the mid-1960s would obtain.³³

3.3. Industrialization

Another aspect of military spending which is said to be beneficial for the development process is that the build-up of the military sector can promote industrialization. For one thing, military establishments are said to favor building up a country's industrial base because they wish to be able to produce military items domestically to avoid dependence on foreign sources of supply. For another, it is said "...that the domestic manufacture of weapons systems forces Third World states to develop important skills, creates foreign-exchange savings, and helps a nation keep abreast of current technology."³⁴

There are a number of questions that must be answered when one is assessing the role played by military industries in developing countries. This discussion will focus on three broad topics:

- Does investment in military industries affect the civilian sector?
- Is the investment in the military sector an economic benefit or an economic drain for the country?
- What are the implications of investment in military industry for development?

Military industry and the civilian sector: There are at least two ways in which one might expect industry to affect civilian sectors. First of all, military industries can buy — and thereby encourage the production of — inputs from the domestic market. David Whynes estimates that in all but the largest developing countries, the "multiplier effects" of defense industries, that is, the degree to which expenditure on military industry stimulates demand for local products and thereby fuels economic

³¹ David K. Whynes, *The Economics of Third World Military Expenditures*, London and Basingstoke: The Macmillan Press, 1979, p. 63.

³² Terhal, *op. cit.*, p. 1998. It is unclear if this situation persisted into the 1970s; Terhal's study covers only 1960—1970.

³³ In addition to having a much smaller arms-producing sector than India, Ghana seems to have a relatively larger industrial sector. In 1977, India's gross domestic product was 500 percent larger than Ghana's (measured at current factor cost and translated into US dollars). Manufacturing and other industry accounted for 25.2 percent of India's GDP and 18.6 percent of Ghana's GDP, making India's industrial output only 35 percent larger than Ghana's. Data from World Bank, *op. cit.*, pp. 87, 103, 390—393.

³⁴ Michael Moodie, "Defense Industries in the Third World: Problems and Promises", pp. 294—312, in Neuman and Harkavy, eds., *op. cit.*

growth, is low.³⁵ With regard to India, which Whynes considered one of the few developing countries which could support a military industry, Terhal showed that there was still a distinct divorce between the military-industrial and the civilian-industrial sectors at the end of the 1970s. Ann Schulz has shown that a similar situation existed in Iran during the last decade.³⁶

The second way in which the military sector might affect the civilian sector is by encouraging the creation of new industries. There is no denying that industries have been set up in developing countries because of their military uses. The Korean textile industry reportedly got its start in a decision to produce Korean military uniforms domestically. The Argentinian armed forces are said to have been instrumental in setting up the Argentinian iron and steel industry. In India, military electronics firms are now expanding into the civilian market by producing radio components, transmitters and receivers, and navigational aids. In all, about half the output of the nine Indian government-owned defense public sector corporations is classified as non-military. In addition to the electronics products, items produced for civilian consumption include earth-moving equipment, railroad coaches, and ships.³⁷ In general, it is probably only the largest third-world arms producers that can expect to benefit in this way from their domestic defense industries.

Economic costs and benefits of military industrialization: David Whynes concluded in his study of the economics of military expenditure in developing countries that the costs of creating domestic defense industries in third-world countries "...seem to preclude its development in all but the largest of the LDCs."³⁸ The costs identified by Whynes include large inputs of domestic financing (drawing funds from other uses), specialized raw materials which generally have to be imported (leaving less foreign exchange for other imports), and highly skilled employees (who require money and time to be trained and who are then unavailable for employment in the civilian sector).

One reason which is frequently given for developing arms industries in third-world countries is the foreign exchange savings that such industries will permit since it will no longer be necessary to import all the country's arms from abroad. In reality, particularly in the short term, domestic production is not necessarily associated with reduced foreign exchange outlays for military-related items.³⁹ Even India, which has gone a long way toward its goal of self-sufficiency in defense production, still has large defense-related foreign exchange expenditures. For one thing, particular materials and components must still be imported and production licenses purchased from foreign firms. In addition, the Indian defense industry cannot produce the quantity of some items required by the armed forces, and boats, planes and other weapons must still be imported.⁴⁰ India's defense-related foreign exchange outlays are considered by some analysts as a serious constraint on economic growth.

³⁵ Whynes, *op. cit.*, pp. 50, 53.

³⁶ With regard to India, see Terhal, *op. cit.*, p. 2000. On Iran, see Schulz, *op. cit.*, Chapter 3. In China, too, the military and civilian sectors of industry are poorly integrated. See John Frankenstein, "Chinese Defense Production", Paper prepared for the International Studies Association Meeting 1982, Cambridge, Mass.: MIT, March 1982, pp. 37-38.

³⁷ Thomas W. Graham, "India's Military Industrial Research Complex", Paper prepared for the International Studies Association Meeting 1982, Cambridge, Mass.: MIT, March 1982, p. 5.

³⁸ Whynes, *op. cit.*, p. 49.

³⁹ Wulf, *op. cit.*, pp. 247-251.

⁴⁰ Graham, *op. cit.*, pp. 15, 26, 29-30.

The question of exports is relevant here. Defense industries, even in industrialized countries, frequently rely on exports to remain economically viable. In addition, arms exports can earn back the foreign exchange required for arms production and improve a country's balance-of-payments situation. Brazilian arms exports have expanded rapidly in recent years and it has been suggested that one reason why Brazil has promoted the expansion of arms exports is to earn foreign exchange to help offset the Brazilian oil-import bill. India has not yet exported very much of its defense industry output but to do so would clearly make sense from a purely *national* economic viewpoint. From an *international* economic viewpoint, one must ask how many exporters of arms the world can support and what effect an even greater trade in weapons will have on countries' economies. From a political-strategic point of view, it is also important to consider what effect an expansion of the international trade in weapons will have on global and regional peace and security. While promoting the export of weapons may help individual countries overcome some of their foreign exchange and balance-of-payments problems in the short run, there is every reason to believe that the longer-term economic and security effects of such a policy will be negative.

Investment in military industries and development: There are many aspects of this relationship that can be explored; only two of them will be discussed here: the nature of the goods produced and the choice between capital- and labor-intensive production processes.

Even in the United States, the civilian spinoffs of military industry are *relatively* minor compared to the money spent on procuring weapons. In an economy where the ordinary citizen is still attempting to satisfy his or her basic needs, it would seem that the spinoff effects must be even less. It is easy to see that the creation of a textile industry can be very much in the interests of the local population (assuming that its output is sold domestically and that people can afford to buy its products). As the military items increase in technological sophistication, the positive spinoffs for the civilian population must inevitably decrease. The interest currently being exhibited in China in reducing military expenditures of all kinds and increasing the output of light industries and agriculture in order to aid economic recovery suggests that military industries there have not engendered the sort of production required by the economy as a whole.⁴¹

A good deal of the problem lies in the fact that what the majority of third-world people need are both basic consumer goods and remunerative jobs so that they can afford to purchase these goods. The technology used in many military industries is capital-intensive and does not lend itself to producing either the sorts of goods or the number of jobs required by third-world societies. Until relatively recently, many people involved with development took the position that, "Historical experience shows that a structural transformation mainly based on industry is a *sine qua non* of genuine development"⁴² and that the sort technology that would be employed to effect this transformation would be of the sort used in the industrialized countries (East and West).

This development strategy has come under attack over the last decade or so, and for good reason. As Keith Griffin has explained,

⁴¹ See Frankenstein, *op. cit.*

⁴² Arthur Ewing, "Some Recent Contributions to the Literature on Economic Development", *Journal of Modern African Studies* 4 (1966): 341.

"The effects (of a bias in favor of industry) were high profits for the capitalist class, high costs for the economy as a whole, high prices for the consumer, adverse terms of trade for the farmer and discouragement of small-scale enterprises, especially those located in rural areas. Industrial output did indeed expand rapidly in many countries, but as often as not poverty failed to decline significantly."⁴³

Critics of the externally oriented industrialization development strategy have called for the use of technology appropriate to the factor endowments and environmental conditions of individual countries. Industrialization based on military industries cannot provide this sort of technological alternative. Furthermore, the very existence of military industries reduces the likelihood that such alternatives will be developed since military industries absorb so much of a country's financial resources and research capacity.

Conclusion: Military Expenditure and Socio-Economic Development

The first two sections of this paper were concerned with the relationship between military expenditure and the stimulation of aggregate demand, inflation, the promotion of investment, the trade balance, the use of foreign exchange, the improvement of the taxation effort, employment creation and industrialization. There is evidence that military expenditure can have both positive and negative effects on a developing country's economy and that it is necessary to weigh up these effects to see on which side of the scale the overall balance lies. In most of the categories surveyed, when hypotheses have been tested against third-world realities, the economic effects of military expenditure have been negative. Where there have been positive effects, these have tended to be rather small.

To the extent that military expenditure does promote economic growth, it must be borne in mind that economic growth should not automatically be associated with socio-economic development. The latter is concerned with eradicating poverty at all levels of third-world societies and with providing for the basic human needs (food, shelter, clean water, health care, education) for all members of society. That it is not an automatic outcome of economic growth is evident when one looks at countries which have achieved high rates of growth of national product.

The disparity between Brazil's high rate of growth in the late 1960s and early 1970s and its increasingly skewed income distribution was discussed above. Real economic growth rates in Pakistan averaged 7 percent per year in the 1960s, and Pakistan was considered a great development "success story". Just how limited this "success" was, however, is indicated by the fact that in 1968 the 22 wealthiest families in Pakistan controlled 66 percent of the industrial assets, 70 percent of the insurance funds, and 80 percent of all bank assets.⁴⁴ At the other end of the economic spectrum, even conservative estimates show 25 percent of the Pakistani population living *below* the poverty line. Other estimates are much higher, with up to 50 percent of the population considered to be living in poverty.

⁴³ Griffin, *op. cit.*

⁴⁴ Growth rate data from World Bank, *World Tables 1976*, Baltimore, Md., and London: Johns Hopkins University Press, 1976, p. 396. Assets of the 22 largest families from Mary Kaldor and Javed Ansari, *The Political Economy of the Bangladesh Crisis*, ISIO Occasional Paper no. 1, Brighton, UK: University of Sussex, c. 1972, p. 9.

According to the government of South Korea, it has had a good record in combining rapid economic growth with a reasonably wide distribution of the benefits of that growth. Some analysts of South Korean development are doubtful, however, that government statistics tell the entire story. Official data, for example, show a narrowing of the income gap between rural and urban areas in the 1960s and the 1970s. A good case can be made that exactly the opposite has occurred. Nor are the fruits of growth as well distributed in the urban sector as the South Korean government would like to have one believe. A heavy reliance on poorly paid female labor in such important sectors as electronics, textiles and tourism means that the 7—8 percent increase in real wages claimed by the government for the end of the 1970s was probably limited to a relatively small labor élite.⁴⁵

As these examples suggest, to the extent that military expenditure does produce economic growth, the poorest members of third-world societies are the least likely to benefit from that growth. In addition, they are the most likely to suffer from the adverse affects of military expenditure, such as inflation. What is more, military expenditure can exacerbate the structural problems confronting third-world economies. Where military materiel is procured abroad, countries will be encouraged to increase the external orientation of their economies in order to pay for it. In many cases, as more production is devoted to filling the needs of external markets, it becomes even more difficult, for varying reasons, to satisfy the requirements of the domestic market for the basic requirements of food, housing, health care and so on. Increased external orientation of third-world economies tends to mean that the poorer segments of populations see their share of the national wealth stagnate or decline while the richer segments become richer.⁴⁶

Brazil, Pakistan and South Korea all were governed by the military when their "economic miracle" occurred. This should not be at all surprising since externally oriented, capital-intensive industrialization, failing as it does to fulfill the basic requirements of large portions of third-world populations, is most likely to "succeed" where the demands of the majority can be kept in check. Militaries have always been heavily involved in governing what is now called "the third world". At the moment, approximately half the countries in the third world have governments in which the military is the dominant element. In about half of these, the military actually controls the government; in the other half, civilians are nominally in control.

Military expenditure helps to perpetuate this state of affairs by strengthening the military against its civilian political and bureaucratic rivals. Simply eliminating the military from politics will not resolve any developing country's economic problems, however, since there often tends not to be a very great disparity between the social and economic policies followed by military-dominated governments and those followed by civilian-dominated governments.

⁴⁵ Critical analyses of the South Korean development policy can be found in W. Rosenberg, "South Korea: Export-led Development — Sewered and Unsewered", *Journal of Contemporary Asia* 10:3 (1980): 300—308; Gavan McCormack, "The South Korean Phenomenon", *Australian Outlook* 32 (December 1978): 262—278; and Samuel P.S. Ho, "Rural-Urban Imbalance in South Korea in the 1970s", *Asian Survey* 19 (July 1979): 645—659. The subtitle of Rosenberg's article derives from the World Bank's assessment that, as of 1975, sewerage facilities were available to about only one-third of South Korea's urban population (p. 303).

⁴⁶ Griffin, *op. cit.*, p. 224.

It is, however, a necessary first step toward resolving those problems. The effect that militaries have on the economic structure and socio-economic development of third-world countries is probably more important than the effect that military expenditure *per se* has on economic growth. Government in which the military is the dominant element are more likely to use force to prevent those structural changes that must take place if socio-economic development is to occur than are civilian governments. If alternative development strategies are ever to have a chance of developing and being implemented, third-world militaries must leave the political arena.