

## The Defence And Development Debate: An Appraisal

Alice Mathew

Associate Professor, Department Of Political Science, Mount Carmel College (Autonomous),  
Bangalore

### I.

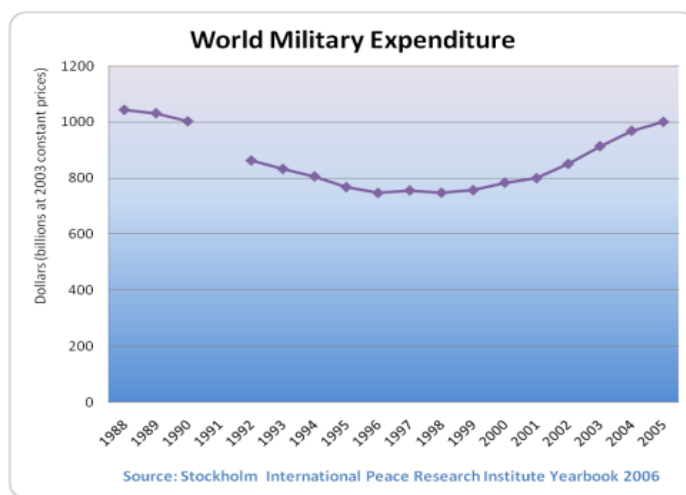
Accepting the Nobel Peace Prize in Oslo, in December 1984, Martin Luther King, Jr, spoke of the “need to overcome oppression and violence without resorting to violence and oppression.” He went on to say: “I refuse to accept the notion that nation after nation must spiral down a militaristic stairway into the Hell of thermonuclear destruction. I believe that unarmed truth and unconditional love will have the final word in reality. That is why temporarily defeated is stronger than evil triumphant.” (1)

If King were alive today, he would still have used the unarmed truth to alarm us that we all stand at the precipice of the hell of thermonuclear self-immolation. The last one-and-a-half decades have seen unprecedented global economic turmoil. A rapidly changing international economic order has had to accommodate the transformation of the financial system, including the massive increase in the price of oil, the international debt crisis, major recessions in developing industrial economies, the collapse of Third World export prices and large-scale famines and deprivation. Yet military expenditure continued to rise in an inexorable fashion - one of the unrelenting ‘growth’ areas of the global system.

A general overview of global resource use would show that a considerable amount of the world’s resources is taken up by defence, something like \$415 billion in 1979 – and there is no sign that the upward trend is slackening. The global defence expenditure had grown at an average rate of 10.29% in the ten-year period 1978-1988. (2) In other words a 30 percent increase in worldwide defence spending in real terms. (3) The poorest countries of the world showed an even greater propensity to spend on armaments and security - a rise of over 71 percent in defence spending during the same period, i.e., 1978-88. (4) Global defence expenditure registered a slight decline in 1987-88, primarily because of reduction in defence spending by developing countries. In particular, the earlier high spending in West Asia reduced as the Iran-Iraq war came to an end. The period between 1987-91 marked the end of the cold war and the intense East-West military confrontation. This was reflected in the global defence expenditure dropping from the 1987 level of \$1,012.66 billion to about \$850.36 billion in 1991. (5) This drop resulted primarily from the reduction of defence expenditure of the U.S.S.R and the

East European countries that were members of the Warsaw Treaty Organisation, which dissolved on April 1, 1991, in terms of military organization and on July 1, 1991 in political terms. The defence expenditure of certain other countries, such as India and the United States, also declined slightly during the period.

Global military expenditure and arms trade form the largest spending in the world at over one trillion dollars in annual expenditure and has been rising in recent years.

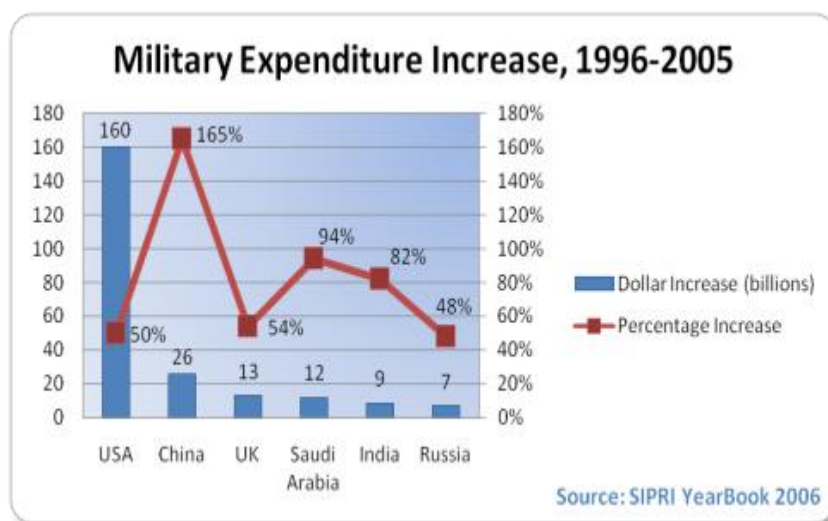


Summarizing some key details from chapter 8 of the Stockholm International Peace Research Institute (SIPRI)'s 2006 Year Book on Armaments, Disarmament and International Security for 2005:

- World military expenditure in 2005 is estimated to have reached \$1,001 billion at constant (2003) prices and exchange rates, or \$1,118 billion in current dollars;
- This corresponds to 2.5 per cent of world GDP or an average spending of \$173 per capita;
- World military expenditure in 2005 presents a real terms increase of 3.4 per cent since 2004, and of 34 per cent over the 10-year period 1996–2005;
- The USA, responsible for about 80 per cent of the increase in 2005, is the principal determinant of the current world trend, and its military expenditure now accounts for almost half of the world total; SIPRI also comments on the increasing concentration of military expenditure, i.e. that a small number of countries spend the largest sums:
- The 15 countries with the highest spending account for 84 per cent of the total;
- The USA is responsible for 48 per cent of the world total, distantly followed by the UK, France, Japan and China with 4–5 per cent each.

High and rising world market prices of minerals and fossil fuels is also a factor that has aided the upward trend in military expenditure, says SIPRI. For example, Algeria, Azerbaijan, Russia and Saudi Arabia have been able to increase spending because of increased oil and gas revenues, while Chile and Peru's increases are resource-driven, "because their military spending is linked by law to profits from the exploitation of key natural resources."

Also, "China and India, the world's two emerging economic powers, are demonstrating a sustained increase in their military expenditure and contribute to the growth in world military spending. In absolute terms their current spending is only a fraction of the USA's. Their increases are largely commensurate with their economic growth."



In a similar report from 2004, the authors also noted that, "There is a large gap between what countries are prepared to allocate for military means to provide security and maintain their global and regional power status, on the one hand, and to alleviate poverty and promote economic development, on the other."

For the developing countries the economic effect of defence expenditure is considerable as it involves the use of real resources, such as raw material, machinery, products, resources and manpower, all of which have alternative uses in the economic process that produces outputs for the civilian sector. In economics it is referred to as 'opportunity cost'. Such high spending on defence cannot be ignored.

The idea that defence expenditure is a burden on the economy is fairly well known in the literature. Defence expenditure can blight economic prosperity and progress; the present magnitude of defence expenditure can only cause discomfort and can never bring actual happiness. Amartya Sen, an eminent economist, viewing defence expenditure says, "From an economic point of view, the wastefulness of defence expenditure is obvious enough (so is the wastefulness of that expenditure from the political point of view, for the world as a whole). Defence spending diverts resources from more useful activities; reduces the productive potential of commodities vital for human well-being; limits the expenditure that could be devoted to eliminating poverty, hunger, disease and mortality; and so on. Even when aggregate production is demand constrained (with the resource constraints

being 'slack') the demand- expanding role of defence expenditure can be taken over by other more fruitful forms of public spending." (6)

These lines, in particular, the final sentence, need some elaboration. Private decisions to invest and expand productive capacity depend ultimately upon the anticipated growth of demand. And since the time of economist Keynes it has generally been accepted that when economic growth is constrained by deficiency of demand, then any activity, including absolutely unproductive ones, which create demand, may spur investments and hence also economic growth. Keynes' well-known example is, of course, that of employing workers to dig holes only to fill them up again. It is in a similar way that military expenditure can be expected to contribute to growth. Military expenditure may increase demand in the economy and thereby spur investment. The extent to which military expenditure will increase demand depends on several factors including the method of financing such expenditure. If the method of financing is such that it reduces demand somewhere else in the economy (for example, a tax on workers, which reduces their consumption of various goods) then the overall effect of military expenditure on demand may be negligible. However as Patnaik argues, even in such a case, in so far as this switch in the components of demand entails a larger investment than would have occurred otherwise, it has an indirect effect upon the magnitude of demand. (7)

We also need to note that in a situation where the economy is already operating at full capacity output, that is, there is no 'slack' in the economy, any demand increasing activity, including military expenditure, will lead to inflation.

However, the more important point is, and this is the point that Amartya Sen also makes, that during a period of demand deficiency, demand does not necessarily have to be created through unproductive activities such as military expenditure. If it were in fact created through various productive activities then it would also benefit the people at large. For the world as a whole guns and bombs can serve no positive purpose while investments in productive activities can enable many of the starving and homeless millions to live a life of dignity. We also need to make a necessary distinction between economic growth and economic development. Economic growth, that is, the growth in production of goods and services cannot be an end in itself. For the mass of the people it is the composition and distribution of this output, which is the important consideration. An economic system might be working largely to the benefit of just a narrow stratum within it. The masses might be deprived of food, education, health, housing, sanitation and other basic items of consumption. And it is these latter which are indicators of 'development'. Thus, a high rate of economic growth does not necessarily imply corresponding rates of economic development.

Though the distinction between growth and development is an important one, many tend to lose sight of the distinction and use the terms as synonymous with one another. A large number of researchers, for instance, claim to have tested the relationship between defence expenditure and economic development, when in fact what they have tested is the relationship between defence expenditure and economic growth. We shall, in what follows, look at some of the studies, which have sought to test the relationship between defence expenditure and economic growth/development in some detail. The studies come to diverse conclusions. But from what we have said previously about the way in which military expenditure affects the rate of growth of the economy, such diverse results are by themselves not surprising. For much depends on the country or set of countries that is/are being studied, the period of such study, the precise relationships sought to be tested and the statistical tools used by the researchers.

A well-known study on the relationship between defence and economic growth is the one conducted by Emile Benoit in 1973. Benoit shook a lot of students of development with his book *Defence and Economic Growth in Developing Countries*. Particularly surprising to many was his conclusion that "the evidence does not indicate that defence has had any adverse effect on growth in developing countries. (It even suggests the possibility, though this is not strictly demonstrable, that on balance the defence programs may have stimulated growth)." He goes on to add that "...The crucial evidence in this matter was the finding that the average 1950-65 defence burdens (defence as a percent of national product) of 44 developing countries were positively, not inversely, correlated with their growth rates over comparable time periods: i.e., the more they spent on defence, in relation to the size of their economies, the further they grew - and vice-versa. This basic correlation was strong enough so that there was less than one chance in a thousand that it could have occurred by accident." (8)

Benoit was as perturbed as some of his readers by the conclusions of his research. He noted that "at first sight, the conclusion that defence expenditure did not impede growth appears highly implausible if not paradoxical. It can hardly be doubted that if the developing countries had been able to get along with smaller defence programs, and had put more of their resources into highly productive investments, this would have improved their growth rates." Benoit however found that, in practice, in most developing countries only a small part of non-defence expenditure goes into productive investments. Most of it goes into consumption, and much of the rest into social investment such as housing which may contribute more to consumer satisfaction than to increasing future production, or into "productive investments", which, however, are so badly managed that they operate to uneconomically high costs and contribute less to real growth than they may appear to do. And on the

other side, defence programs could unintentionally contribute to growth and productive development indirectly. And therein lies the resolution of the paradox. (9)

Subramanyam feels that there is no correlation between the defence burden and the growth rate. (10) Hence the popular idea that defence and development are alternative choices lacks substantiation. Subramanyam argues that economic growth is a direct function of productivity, saving and investment. And defence expenditure forms part of the nation's consumption. To increase the rate of economic growth, it would consequently be more useful according to Subramanyam, to tap 'the top 20 percent of our population who appropriate an overwhelmingly large part of the national income, and to unearth the volumes of 'black money' in the Indian economy. (11)

Raju Thomas conducted a study to test the relationship between defence expenditure and growth rate in India. (12) He felt that bureaucratic failure; natural calamities and unexpected events have led to considerable fluctuation in India's annual growth rate. In the 1960's the growth rate was 2.6 percent in 1962-63, 7.3 percent in 1967-1968, and 2.5 percent in 1968-1969. Similarly in the 1970s, the GNP growth rate swung from -1.1 percent in 1972-1973 to 9.6 percent in 1975-1976 and -4.8 percent in 1979-1980. In the early 1980s growth rates showed signs of remaining high and commensurate with the high savings rate of 24 percent: 7.5 percent growth in 1980-1981, and 5.2 percent in 1981-1982. However, the growth rate fell to 1.8 percent in 1982-1983 because of unfavorable monsoon. Thomas, therefore, argued that the degree to which defence allocations contribute to the ups and downs of Indian GNP growth rates is unclear and the benefits or losses related to defence spending remain controversial.

Saadat Deger has challenged Benoit's view and has tried to show that there is a significant negative relationship between defence spending and investment-growth in developing countries, when all the interrelated factors are taken into account. (13) In a sample of fifty countries, Deger found that "an increase in defence spending leads to a reduction in investment as a proportion of GDP" and since investment is crucial to growth, a rise in military burden, must have a detrimental effect on development." (14) Deger feels that a rise in defence burden reduces the savings rate, competes for scarce foreign exchange, diverts imports from investment goods and increases the external gap (exports minus imports). Deger claims that for "a 1% reduction in military burden... there will be approximately 1% increase in growth rate."

A study by Tehral states that "for India, the real civilian opportunity costs implied by allocating scarce resources to military purpose have been substantial." (15) Tehral demonstrated in a study of the 1960-70 period that scarce foreign exchange, skilled manpower, research and development, and development funds had been substantially usurped by the defence sector. This diversion of resources according to Tehral, had a "negative bearing" on capital formation by the central government and partly contributed to its decline from a growth rate of 2 percent of the GNP in the period 1960-65 to 1 percent during 1966-1970.

Nicole Ball supported Tehral's conclusion in a broader study of several developing nations, including India. Ball claimed that high economic growth rate in no way guarantees socio-economic development. According to Ball, developing countries with high defence spending and high economic growth rates have usually been characterized by a high incidence of poverty, (16)

The argument that defence spending stimulates the economy through an increase in the aggregate demand is misleading because the same result may be obtained through civilian public works programmes. Ball feels that Benoit's case studies of Iran, Pakistan, Taiwan and South Korea, where he demonstrates a positive correlation, must be viewed as a consequence of the generous economic and military aid provided by the United States and the liberal domestic economic policies that encouraged private investment and growth conditions and policies that have not been part of the Indian experience.

Dumas conducted a detailed study to examine the particular economic effects of military expenditure in the U.S. context. [17] One of the important conclusions of this study was that the maintenance of high levels of military expenditure in the U.S. during the post-world war II period had massively contributed to the generation of both inflation and unemployment. Dumas discussed four important channels of causation. The first of these is the effect of military expenditure on prices through its effect on aggregate demand during a period of near full employment. We had discussed earlier how in the absence of any 'slack' in the economy an increase in military expenditure adds to aggregate demand, it does not add to aggregate supply. Military expenditure neither provides goods for consumption nor does it enhance the economy's productive potential. Dumas illustrates this in the US context for the period of the Vietnam war, when unemployment rates were very low (under 4%) and the rate of inflation more than tripled.

We had argued previously that if military expenditure is offset by taxation then such expenditure need not be inflationary. Dumas argues that the government did not resort to higher taxation because such raising of taxes for the express purpose of supporting increased military activity might have quickened public opposition, particularly during Vietnam, since the economic costs of this activity would be made more explicit. So a political sleight-of-hand approach was adopted, making the public pay through increased inflation that eroded their purchasing power, rather than through direct taxation.

The second effect works through the cost-plus system, where the military goods producing firm is paid an amount equal to its total cost of product (whatever that eventually turns out to be) plus a guaranteed profit. Thus, the firm involved not only has no risk but also has no incentive to hold its costs down. In fact, to the extent that the firm wants to increase its sales revenue, it has a very powerful incentive to run its costs up in order to achieve the highest possible payment for its product.

Further, in the US the incentive system has created a situation in which the military industry can and does pay whatever resources it needs or wants. As a result, it has bid up the price of those resources - like machine tools, engineers and scientists, skilled machinists, etc. - and other industries which require these same resources are now faced with increased costs and feel pressed to raise their price. Thus a cost-push inflationary pressure is seen not only in the military sector but the entire economy. Dumas feels that such an inflationary effect has preempted a substantial amount of some of these resources with long-term effects on the health of the civilian economy.

Thirdly, Dumas considers the role that US military expenditure played in affecting the US international economic position directly through outflow of dollars for defence expenditure abroad, and indirectly through its effects on the balance of trade, chiefly via its influence on the competitiveness of US civilian industries in domestic and foreign markets. The entire cumulative balance of payment deficit of the US for the period 1960-1970 (inclusive) was \$3.5 billion, whereas over the same period, total direct defence expenditure was more than \$30 billion, 86.6% of the entire US balance of payments deficit during that period.

During the years 1966-70, there was a huge inflow of foreign currencies into the US represented by a cumulative balance of trade surplus of nearly \$62 billion. But during the same year, net military expenditure abroad was responsible for an outflow of dollars from the US amounting to more than \$43 billion. The outflow of US currency owing to military spending abroad thus wiped out 69.9% of the balance of trade surplus during the period 1966-1970.

Dumas contends that even these figures understate the magnitude of US defence expenditure abroad because they do not include outright US grants of military goods and services. However, if included, the total of almost \$34 billion worth of such grants recorded during the years 1960-74 would increase the military expenditure figures given for that period by more than 80%. The data clearly show how outflows of dollars in the form of US military expenditures abroad played a major role in destroying the favourable balance of trade surplus, and contributed to the severe weakening of the US dollar. This raised the price of imported goods (including oil) upon which the nation's business and consumers have become increasingly dependent in the past few years. In so far as consumer goods are directly imported from countries against whose currencies the dollar is weakening, this will contribute straightforwardly to domestic inflation. When industrial goods and resources are imported the effect of a falling dollar in raising their prices will result in broad cost-push pressure in all US industries using these goods and resources (and there are many such industries). Thus, the massive outflow of military expenditures abroad has directly contributed to the generation of inflation within the domestic US economy.

Lastly, Dumas deals with the impact of military spending on civilian technology and the implications thereof. He feels that an important fraction of the engineering and scientific personnel in the US have been devoting their talents to the development of military oriented technology. These magnitudes of technological resources have been maintained for two to three decades or more.

Since more than one-third of the nation's engineers and scientists have been seeking military-oriented solutions to military-oriented problems for the past several decades, the development of military technology has proceeded at a far more rapid pace in the US than the development of civilian-oriented technology.

Dumas feels the argument that military-oriented technology development produces massive improvements in areas of civilian application and thus does not retard civilian technological progress in highly contradictory. The 1974 report of a committee of the National Academy of Engineering stated "with a few exceptions the vast technology developed by federally funded programs since World War II has not resulted in widespread "spin offs" of secondary or additional applications of practical products, processes and services that have made an impact on the nation's economic growth, industrial productivity, unemployment gains and foreign trade." (18)

Moreover, the number of innovations taking place in the US as compared to that in the UK, France, Japan and West Germany, has been very low.

The brief review above of some important studies on the relationship between defence expenditure and economic growth clearly shows the widely differing perceptions on this question. However, from what we had said earlier about the effects of any government expenditure on growth, such differing conclusions are inevitable. For much depends on the initial conditions in the economy/economies which is/are being studied as well as the method of financing such expenditure. Moreover, economic growth is affected by a number of

factors other than the expenditure on defence. Consequently, any serious effort at examining the relationship must isolate the effect of defence expenditure on the growth rate from those of the various other factors. Simplistic exercises, which merely compare the growth rates of military expenditure and GNP/GDP, are often quite meaningless. Benoit's study is one that has made an effort to isolate the effect of defence expenditure, but even in this case the reason put forth for the positive relationship is the squandering of resources allocated for non-defence purposes on unproductive activities by developing countries in general. Benoit's argument is that if expenditure on defence in developing countries is reduced the resources that are so released will not find their way into enhancing the productive capacity of the economy. He contends that a significant proportion of military expenditure on the other hand is used to create infrastructure, goods and services, as also certain attitudes, all of which benefit the civilian sector in various ways and help economic growth. The implication of such a finding, however, is not that military expenditure is beneficial for growth but that developing countries must find ways to employ their resources in general more productively. There are no valid economic reasons for the observation that resources allocated to defence are more productively used than those allocated to the non-defence sectors.

It may also be seen that almost all the studies look at the effects on growth and not those on development. The former we have said is an extremely narrow concept. Besides, it would seem almost cruel to suggest that guns and bombs would raise the level of development of an economy. Clearly, there is no economic justification for the development of armaments and the expenditure on defence. If nevertheless billions of dollars are spent every year on defence the reasons for this can only be political. It is to an examination of these political reasons that we now turn.

## II.

I do not propose to go into any detail about the reasons for the tremendous growth in defence expenditure particularly since the Second World War. The subject itself is extremely controversial and I shall restrict to stating, in brief, my own position.

A handful of developed countries accounts for about 84% of the total world expenditure on defence. The U.S itself is responsible for 48% of the world total defence expenditure. So our analysis should focus on the U.S.

Markets are crucial to the survival of capitalism and in its search for markets capitalism looks beyond national boundaries. It was this need for markets that drove the British, the Portuguese, the French, the Dutch and others to colonise vast areas of the globe in the 18<sup>th</sup>, 19<sup>th</sup> and early 20<sup>th</sup> centuries. And it is this very need for markets that continues to drive the US and other advanced capitalist countries to exercise control over the rest of the world. Such control presupposes military might. While it took directly coercive forms during the period of colonialism, in today's world the forms are often not so direct. Baran and Sweezy argue that, in the past one hundred years, America has developed its own 'empire' of effective control, based upon infiltration into industrial ownership, direct economic aid to sympathetic regimes, and also military assistance to such regimes which, of course, implies a causal factor in the growth in US military spending. They cite an impressive list of thirty-three countries, where such neo-colonialism occurs. (19) U.S. export of military equipment in the last few decades amounted to 35 to 50 per cent of the total world export of such items.

Every effort has been made by the U.S. to subvert the independence of sovereign nations. The rapid increase in the USA's military spending is to a large extent attributable to the ongoing costly military campaigns in Afghanistan and Iraq. Separatist and reactionary groups in these countries have found the ready support of the US. Moreover, the US has had no qualms about extending its support to some of the most oppressive and militaristic regimes in Latin America, Africa and Asia so long as they have been willing to toe the US line. Such support has invariably taken the form of military aid as well.

Further, on the question of disarmament, the US has taken extremely intransigent positions and has effectively thwarted a number of arms control proposals. The UN conference on Disarmament and Development was postponed twice following

US objections and when it was eventually held, in September 1987, the US boycotted it leaving no doubt about its position on the issue. The Reagan Administration held that the "conference presumes a relationship between disarmament and development, which has never quite been established." (20)

In sharp contrast was the position of the former Soviet Union on this issue. Brezhnev in 1978 stated very categorically "of course, we do have military plants and an army, but neither the workers nor the soldiers, associate their well being with war, with military orders. We would very much like - to the enormous benefit of the whole society - to convert military plants, too, to the manufacture of civilian commodities, to peaceful creative goals." (21)

This difference in positions of the US and the former USSR had time and again been reflected in their statements and actions. The UN General Assembly's resolutions on arms control, pertaining, among other things, to (1) Non-First-Use of Nuclear Weapons, (2) Comprehensive Ban on Nuclear Tests, (3) Nuclear

Weapons Freeze, (4) Nuclear Weapons Reduction. (5) Abolition of Nuclear Weapons, (6) Banning Chemical Weapons, (7) Scrapping of Military Alliances and Bases, and (8) Reducing Conventional Weapons and Forces, had all been wholeheartedly welcomed by the vast majority of UN members, including the Soviet Union, but the US and its major NATO allies have consistently opposed most of them. To this day, the US, UK and France have refused to pledge no-first-use of nuclear weapons even against non-nuclear countries. On the other hand, both the Soviet Union and China had unilaterally declared that they would never be the first to use nuclear weapons.

Further, at a time when stockpiling of nuclear weapons had reached unimaginable levels, enough to destroy the Earth many times over, a US administration document argued that the “United States should develop weapons that are difficult for the Soviets to counter, impose disproportionate costs, open up new areas of major military competition and obsolesce previous Soviet investment...” (22) This attempt at gaining absolute military superiority has found reflection in the fact that almost every major technological innovation in offensive strategic weapons since 1945 has been first introduced in the USA. (23)

Thus, the former Soviet Union’s military build-up as also the military aid provided by it to democratic regimes and forces had essentially been a reaction to that of the US – a reaction made necessary by the fact that the alternative would have been a world in which the US was absolutely free to do as it pleased.

The countries outside the NATO and the erstwhile WTO account for a mere quarter or so of the total world expenditure on defence. A large number of these are nations which achieved independence from colonial rule only a few decades ago. Their experience during the years of the freedom struggle had made them acutely aware of the need for building an adequate defence capability to preserve the nation’s independence. They knew only too well that the threat of imperialism had far from abated.

Border disputes have also been relatively common among developing countries, owing to social and racial tensions and disagreements over national boundaries. To some extent this may be seen as a consequence of the colonial legacy of arbitrary territorial compartmentalization. For instance, the virtually continuous conflict between India and Pakistan as well as India’s boundary dispute with China can partly be attributed to such compartmentalization and the colonial policy of ‘divide and rule’. Moreover, these arbitrary divisions have contributed to bringing about conflicts within states and demands for recognition by ethnic sub-states. An atmosphere of external danger is often created, and wars have also taken place, in an effort to divert the attention of the people from their suffering and oppression of the ruling regimes.

In a fairly large number of countries the army, in particular, has also been used to preserve political sovereignty within the country. Baran, for instance, was convinced that arms build-up in less developed countries was primarily, if not exclusively, used for suppression of internal popular movements. (24) In fact, in the period in which Baran was writing, i.e., 1957, there did indeed seem little possibility of a major intra-Third World conflict. The situation has no doubt changed since then, but the essential point remains that the army is used for internal security purposes, often in a very significant way.

In the years after independence a number of regimes have turned against their own people. The enormous dichotomy in terms of the distribution of wealth between the elite, who effectively control the means of production and who also possess the monopoly of political power, and the mass of the population has been primarily responsible for such a turn of events. The elite, in order to maintain its position and improve upon it, has sought to drain resources from the masses. The latter’s resistance to this has taken numerous forms, including such extreme ones as demands for secession by particular ethnic groups and nationalities. In such situations the army has invariably been used to put an end to the resistance. A glaring example of the expansion of defence for the purpose of internal repression was South Africa. Military expenditure had been a tool of the South African government in enforcing the obnoxious apartheid system and to prevent any strategic relationship from being formed between the indigenous black population and the anti-apartheid regimes elsewhere on the African continent.

Third World nations too have thus contributed to the arms build up.

#### FOOTNOTES

- [1]. Quoted in Patrick O’ Hefferman, ed., *Defence Sense: The Search for a Rational Military Policy* (Cambridge, Massachusetts, Ballinger Publishing Company, a subsidiary of Harper and Row, Publishers Inc., 1983), P. xxi.
- [2]. US Government, Arms Control and Disarmament Agency, *World Militar Expenditure and Arms Transfers in 1989*, (Washington D.C. 1990), p. 91.
- [3]. Calculated from SIPRI Year Book 1987: *World Armament and Disarmament* (Oxford University Press, Oxford 1987).
- [4]. These are the countries with per capita GNP less than US \$440 in 1982, as reported by the World Bank.
- [5]. Data based on *Military Balance* (IISS, London).
- [6]. Quoted in Christian Schmidt and Frank Blackby, eds., *Peace, Defence and Economic Analysis*, for the International Organisation and the Stockholm Macmillan Press, 1987), p. 450.
- [7]. Prabhat Patnaik, “Market Question and Capitalist Development in India”, *Economic and Political Weekly*, August, 1984, p. 1252
- [8]. Emile Benoit, *Defence and Economic Growth in Developing Countries* (London, Lexington Books, 1973), p. xix.
- [8]. *ibid*, p. xx.

- [9]. K. Subramanyam, *Defence and Development* (Calcutta: The Minerva Associates, 1973), pp. 1-4.
- [10]. *ibid.*
- [11]. Raju G. C. Thomas, *Indian Security Policy* (Princeton, New Jersey, Princeton University Press, 1986). Pp. 214-215.
- [12]. Saadat Deger, "Human Resources, Education and Military Expenditure in Developing Countries", 2<sup>nd</sup> World Congress Social Economics, August 1981, p.5  
*Ibid.*, p.3
- [13]. P. Tehral, "Guns or Grain: Macro Economic Cost of Indian Defence, 1960-70", *Economic and Political Weekly*, 5 December 1981, p. 2001.
- [14]. Nicole Ball, *The Military in the Development Process* (Claremont, California, Regina Books, 1981), pp.7-8.
- [15]. Lloyd J. Dumas, "Military Spending and Economic Decay", in Lloyd J. Dumas, ed., *The Political Economy of Arms Reduction: Reversing Economic decay*, AAAS selected symposium Series (Colorado, Westview Press, 1982), pp.1-22.
- [16]. Quoted in Lloyd J. Dumas, *ibid.*
- [17]. Quoted in David Whynes, *The Economic of Third World Military Expenditure* (London, 199), p.20.
- [18]. Quoted in Delhi Science Forum, *Darkness of a Thousand Suns: An Illustrated account of the Causes, Complexion and Consequences of the Nuclear Arms Race* (National Organizing Committee, Bharat Jan Vigyan Jatha, 1987), p. 38.
- [19]. Quoted in Delhi Science Forum, *ibid.*, p. 38.
- [20]. *Ibid.*, p.39.
- [21]. *Ibid.*, p.20
- [22]. Quoted in David Whynes, *The Economics of Third World Military Expenditure* (London, 1979), p.20.