

**FORCE DEVELOPMENT AND MODERNISATION  
IN INDIAN DEFENCE: AN ANALYSIS**

**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
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## **CERTIFICATE**

I have the pleasure to certify that Brig Gurbaksh Singh Sandhu, SM has pursued his research work and prepared the present dissertation titled “**Force Development And Modernisation In Indian Defence: An Analysis**”, under my guidance and supervision. The dissertation is the result of his own research and to the best of my knowledge, no part of it has earlier comprised any other monograph, dissertation or book. This is being submitted to the Panjab University, Chandigarh for the degree of Master of Philosophy in Social Sciences in partial fulfilment of the requirement for the Advanced Professional Program in Public Administration (APPPA) of Indian Institute of Public Administration (IIPA), New Delhi.

I recommend that the dissertation of Brig Gurbaksh Singh Sandhu, SM is worthy of consideration for the award of M Phil degree of Panjab University, Chandigarh.

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**March , 2019**

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## **DECLARATION**

I, the undersigned, hereby declare that this dissertation entitled, “**Force Development And Modernisation In Indian Defence: An Analysis**”, is my own work, and that all the sources I have accessed or quoted have been indicated or acknowledged by means of completed references/bibliography. The dissertation has not been submitted for any other degree of this university or elsewhere.

**March 2019**

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# **INTRODUCTION FORCE DEVELOPMENT AND MODERNISATION IN INDIAN DEFENCE: AN ANALYSIS**

## **CHAPTER 1 : INTRODUCTION FORCE DEVELOPMENT AND MODERNISATION IN INDIAN DEFENCE: AN ANALYSIS**

“A long range military problem is comparable to the problem of owners of a racing stable who want to win a race, to be run many years hence, on a track not yet built and between horses not yet born.

To make matters worse, the possibility exists that when the race is finally run, the rules may have changed, the track length altered and horses replaced by greyhounds”

- Rand Corporation Mathematician

## **General**

Peace is the essential foundation for all human and social development, the fertile ground on which we can strive to elevate our minds in knowledge, hone our productive skills, and strengthen our physical infrastructure into a strong, united and harmonious nation. The capacity to preserve and build lasting peace for all Indians will depend on the strength of our military to defend our borders and the potential of our economy to generate increasing employment and income opportunities for all citizens. Force development and modernization is a complex process and has to be in sync with the environment requirements.

Defence planning is the process of determining the long term military objectives in the overall context of national security objectives and aspirations of our country and the formulation of policies, strategies and planning guidelines that will govern the force development and acquisitions for force modernization, use and disposition of resources to achieve capabilities to fulfil these objectives. The causes for the above impediments need to be analysed for corrective actions. The maintenance of a nation's sovereignty and the projection of its will by military mean, where and if necessary, falls to the nation's Higher Defence Organization (HDO) to plan and implement. In case of India, the security environment in the South Asia, and Indian Ocean Region, the troubled relationship with some of our neighbours' calls for a well equipped and integrated military machine backed by higher Defence management which is adequately geared and resilient for these daunting tasks. Approach to force development has been explained in the table below:

<b>Approach to Force Development and Modernization</b>		
	National Security Objectives and National Security Strategy	
	National Military Objectives and National Military Strategy	
Military Missions	Concepts and Doctrines	
Required Capabilities	Capability Development Strategy	
	Capability and Force Development Strategy	

**Table 1 APPROACH TO FORCE DEVELOPMENT AND MODERNISATION: STEPS INVOLVED**

## Statement Of The Problem

Indian neighbourhood is embroiled in terrorism, including growing belligerence by our northern neighbour. The footprint of China is increasing in our neighbourhood with China Pakistan Economic Corridor (CPEC), deep sea ports in Pakistan, Myanmar and Sri Lanka.

However, the budget allocations for defence are seeing a gradual downward trend.

The acquisitions for modernisation or replacement of obsolete equipment are on a stand alone mode and do not follow a systems approach to defence acquisitions. It is perceived that force modernisation and development is slow.

## Review of Literature

K Subramanian (2005) has brought out that unless firm national security objectives are set; there can be no military doctrine for balancing of defence effort with other national objectives and priorities such as maintaining a viable economy and supporting development of society.

Indian force modernization has been characterized by ad hoc decision-making. The five year defence plans have suffered from not being finalized, at times even by the end of the plan period as per the sixth report of the “Standing Committee of Defence of the 10<sup>th</sup> Lok Sabha, New Delhi” (2004).

Praveen Joshi (2005) has brought out in his paper on ‘Defence Budgeting System: Need for Change’ that the absence of a well-defined defence policy has grave implication for budgeting and planning. A

goal-based budgeting system will allow the services to fulfil the requirements of the plans and indicate the progress that has been made over the years.

Amiya Kumar Ghosh (1996) in his article on 'India's Defence Budget and Expenditure Management in a Wider Context' recommends that the aim of reforms in the budgetary system should be to bring about changes in the decision making process by restructuring the issues in an appropriate manner. The purpose of planning and budgeting should be to allocate resources as per strategic requirements.

As per the study on 'Defence Planning in India' by V.P. Malik and Gurmeet Kanwal, the defence planning has been neglected for long in India. This has led to ad-hoc decision-making and adversely affected the modernization plans of the services. The key issues needing immediate attention include the need for formal prior approval for five year defence plans, better management of the defence revenue and capital acquisition budgets, streamlining of the defence procurement process and better human resource management.

Kapil Kak(1999) in his study on "Credible and affordable defence in 21st century" has analysed expenditure on defence since 1962 from different angles for assessing what should be the outlay in the future. According to him the greater stability in defence expenditure could be brought about if ad hoc approaches in creating defence capability are avoided.

A study entitled "Defence Budgeting and Planning in India: the Way Forward" by A. K. Ghosh (2003) states that the Defence budgeting system in Indian is not linked to the medium-term planning and cannot, therefore, play a useful role as a management tool or help rational allocation of resources. The author stresses the imperative need for conducting such a Defence review for establishing a framework as a major step towards achieving an effective Defence.

A study conducted by, Mrinal Suman, Ministry of Defence (2007) on 'Impediments to the Modernization of the Indian Defence Forces' brought out that for an emerging economic and military power, India must possess armed forces that can guarantee security of its interests in a dynamic international geopolitical environment. However, slow and tardy modernization of the Indian Armed forces has been causing disquiet amongst all who are concerned with national security.

Subrahmanian, (2000) in his study on "Wanted for India: A Long term Defence Planning", states that Defence Economics is essentially the application of economic principles and analysis to defence issues, including formulation of defence policy. According to him, the economic problems of defence can be considered at three levels: the quantity of national resources available now and in the future; the proportion of these resources allocated to national security purposes; and the efficiency with which the resources so allocated are used.



A research work on “Sustainable Defence: Harmonizing long and short term goals”, by Vir Narain (2006) states that when a nation underperforms, it develops weaknesses in almost all vital areas. National security is a vital concern since it is directly related to the survival of the nation-state. (Narain, 2006)

According to the report of the Standing Committee on Defence (2004-05) 14<sup>th</sup> Lok Sabha), on “Demands for Grants of Ministry of Defence for the year 2004-2005”, the underlying concern is to ensure a reasonably secure environment for sustained economic development and growth depending on the geo-strategic realities and threat perception of individual nations.

V. S. Shekhawat (2006) in his paper on ‘Challenges in Defence Planning’ states that among the various functions of a government defence planning is perhaps the most complex. There is need to assess the international security environment, the domestic situation, technologies, resources available, current capabilities and identify threats and opportunities.

## Research Gap

The present study is being carried out to analyse and study the force development and modernization with respect to India’s defence forces. To have an economics and management focus, it is imperative that instead of continuing with the existing system of defence planning process for force development and modernization, suitable steps are taken, at the earliest, to bring about essential changes in the planning, budgeting, processes and procure systems. This study will be different from the above studies as it proposes an ideal model for defence planning processes and procedures for optimal utilization of the allotted recourses with respect to force development and modernization.

## Hypothesis

The current processes and procedures for Defence Planning with respect to Force Development and Modernization need review.

## Objectives

The scope of force development and modernization though is focused on military affairs spans a vast expanse of diverse yet interrelated national endeavours. The proposed objectives of the study are as follows: -

- (a) To identify and analyse the inadequacies in the existing defence planning processes and

procedures.

(b) To analyse the factors of slippages in force development and modernization.

(c) To propose an ideal model and road map for force development and modernization by optimal utilization of defence budget in the most cost effective manner.

## Research Methods & Data Sources

The relevant data and information used in the study is collected from primary and secondary sources .The secondary data consists of facts and figures from various journals, magazines, internet and other government organizations including the Ministry of Defence. The primary data comprises of response to a questionnaire. Response is sought from approximately 25 officers (middle level officers).

Thus data collected will be suitably analysed using appropriate statistical tools.

## Research Design

Research shall be carried out using both the Exploratory and Descriptive methods.

Quantitative & Qualitative Methods will be employed for analysing the data and contents.

## Chapterisation

The Dissertation will be covered the following chapters: -

- Chapter 1. Introduction.
  - General.
  - Review of literature.
  - Rationale of study.
  - Aim, Hypothesis, Scope and Objectives.
  - Methodology.
  - Structure and Layout.
- Chapter 2. Defence planning.
  - Existing Model of Defence Planning process. The various steps and processes presently involved in the Defence planning shall be explained and analysed.
  - Force Development and Modernization. The concepts of force modernisation

and methodology for strategizing shall be listed, discussed and enumerated.

- Inadequacies for Defence and Perspective Planning. The shortcomings and inadequacies will be listed and gaps involved highlighted.
- Chapter 3. Environmental Scan, Nature of future warfare and force development
- Chapter 4. Economics of Defence.
  - Severe resources crunch and financial constraints for force development. The allotments made for defence including specific allotments for modernisation including the shortages creating gaps in creating optimal defence capability and ability to modernise.
  - Defence needs, expenditure, resources allocations, distribution and defence budgeting. The specific requirements for various needs for modernisation including concept and force modernisation that needs to be provided for achieving the desired results.
  - Unpredictability of price system and uneconomic operation of DGOF productions units, Defence PSU's and DRDO. The necessity to procure only from defence PSUs and DGOF, the resulting delays in obtaining desired equipment for planned defence capability creating the negative strategic gap vis a vis our adversaries.
  - Strategic Gap. The gap being created between our desired capability to negate force development by our adversaries due to budget constraints, technology obsolescence, and changing security scenario.
- Chapter 5. Conclusion.
  - Findings and proving the Hypothesis.
  - Recommended changes to current system-Road Map. Give out specific recommendations and a road map to overcome the negative strategic gap. Prevent similar situation from occurring in the future.
  - Suggestions for future work.

## CHAPTER 2: DEFENCE PLANNING IN INDIA : NATIONAL SECURITY, DEFENCE POLICY AND PLANNING

**"So marked is resistance to change here, and so deep the mutual suspicions, inertia and antipathy, that all efforts at reforming the system have always floundered against a rock of ossified thought."**

**Jaswant Singh- "Defending India" (SINGH, 1999)**

### Introduction

It is generally acknowledged that the approach to national security requires a comprehensive view of various political, social, economic, technological and strategic aspects. National security implies not only safeguarding territorial boundaries but also that the nation is able to build a cohesive, egalitarian, technologically efficient and progressive society with a good quality of life. Compared with national security, defence policy is more focussed, concerned with the protection of the state and its citizens from direct and indirect (proxy) military threats and actions of other states. In defence planning, the emphasis shifts to national security concerns that are mainly military in nature.

There are two concepts at this level: deterrence (including coercive diplomacy) and defence (dissuasion). Deterrence refers to policies designed to discourage the adversary from taking direct or proxy military action, by raising the cost so that it outweighs the gains that he may wish to attain. Defence (dissuasion) policies are designed to reduce the capability of the adversary to cause damage—and own costs and risks—in the event deterrence fails. Deterrence and defence are two interwoven strands of defence policy. Defence planning involves the conceptualisation of plans and decisions for the execution of defence policy. Long-term planning for defence is essential for the following reasons:

- The existence of a highly fluid strategic environment, which results in continuous shifts and changing profiles of threat and power equations.
- To ensure judicious allocation of resources and cost effective utilisation.
- Revolution in Military Affairs (RMA), i.e. advances in technology, which result in weapons and equipment systems becoming obsolete at a fast rate.
- Lead time required to raise and prepare defence units; to produce or acquire and introduce new weapons and equipment systems.
- The changing nature of conflict and reduced reaction time.

- Coordination problems between defence, economic, science and technology, infrastructure and industrial activities, as well as among the Defence Forces. The defence planning process attempts to match the budgetary resources likely to be made available for the requirement to establish the defence capability necessary to face the threats and challenges.

This exercise is undertaken in two phases:

What should be the proportion allocated to the defence effort as against other areas of national security concerns and economic growth? This exercise involves a 'visionary' analysis of external and internal security threats (often linked) and challenges. In order to minimise adverse effects of high military expenditure on socio-economic development, it is necessary to harmonise national development planning with defence planning.

Optimisation of allocated resources, i.e. distribution of resources within the Ministry of Defence (MoD) based on Force planning (Force and weapons mix, command and control, logistics and human resources management) by the Defence Services to combat current and future threats, and development of required capabilities by the Defence Research and Development Organisation (DRDO), defence production and other agencies concerned. The quantum of indigenous production and the requirements to be procured from outside are decided in this phase. The objective is to achieve maximum defence capability from within the given resources.

Both allocation and distribution are closely linked. They need to be reviewed periodically but not so frequently that the planning process becomes ad hoc. In India's case, this is done at an interval of five years.

## Background : Defence Planning in India

Before independence, the defence services worked on a system of contract budget. Defence expenditure was pegged at Rs 55 crore per year, which was more than half of the Central Government's revenue. There was no serious threat from outside (except during World War II, when a fresh agreement was signed) and this amount was more than adequate to maintain the establishment. The savings were not allowed to lapse but put away in the Defence Reserve Fund that was utilised to finance measures for re- equipment of the Defence Services, thus freeing the Government from having

to provide fund money greater than the contract amount.

Expenditure on defence rose steeply soon after independence. However, there was no planned effort and defence programmes consisted mainly of outright purchases from abroad, drawing heavily on available Sterling reserves. In the late 1950s, some efforts were made to initiate domestic weapons production by the Ministry of Defence when Mr Krishna Menon was the Defence Minister. The Sino-Indian conflict in 1962 aroused a new defence consciousness in the country. After taking care of immediate post-war requirements, systematic defence planning started in 1964. Defence requirements were assessed on a five-year basis and the First Five Year Defence Plan (1964-69) was drawn up. This plan took into account the resources available and assistance which could be expected from friendly foreign countries. The plan was primarily based on an expansion and modernisation programme considered necessary by each Service in the light of the respective threat perception assessed. It also proposed a defence production base that would gradually reduce the country's external dependence, provide for improvements in border roads and communications, and a modest expansion of DRDO. (Mehrotra, 1993)

The Government recognised the imperative need to synergise 'defence' and 'development' instead of planning each on a separate and un-related level. The MoD emphasised the "inevitable need to harness all resources of the country for the country's defence and for the defence effort to derive full sustenance from the country's economic development plans". Thereafter, the National Development Council authorised the Chairman of the Planning Commission to review the needs of both development and defence. A Planning Cell was established in 1965 in the Ministry of Defence 'to deal with the wider aspects of defence planning'. The new system was intended to facilitate medium and long-term defence planning and to maintain constant liaison with the Planning Commission and other ministries. It was expected that the MoD would derive maximum advantage from the development effort by being able to place its priorities for consideration along with the overall economic and industrial plans drawn up by the Planning Commission.

The experience of the First Five Year Defence Plan showed that the development of weapons and equipment was a long drawn out process. The Government realised that there could be no forward movement in attaining self-sufficiency in weapons and equipment unless these requirements were planned over a reasonably long period, long enough to cover the span of development and production of new weapons systems and other fighting tools. The inadequacy of foreign exchange reserves was another hindrance in planning and implementation.

In order to mitigate some of these drawbacks, the Second Five Year Defence Plan (1969-74) was

instituted on a “roll-on” basis. After a year, an additional year was added so that the Defence Services would have before them a revised and up-dated five-year plan. In this context, the MoD commented: “Opportunity is taken by this annual exercise to take note of and reflect the change in priorities, the shifts in emphasis and the latest concepts and programmes to reorient the plan within the scheme of resources so that the aims and means are most effectively balanced.” This system was expected to facilitate the planning of projects that took five years or more and to revise or eliminate projects, depending on the prevailing foreign exchange situation and availability of domestic resources. For a period of five years, firm assurances were to be given on the availability of resources. This, unfortunately, never happened. (Singh A. C., 1996)

In 1971, it was impossible to adhere to the discipline and the pattern of the roll- on plan. Instead of roll-on annual revisions, immediate requirements dominated the Government’s attention that pre-empted plan efforts. In its 1971-72 Annual Report, the MoD acknowledged that having a Planning Cell in the ministry was an insufficient and unsatisfactory method of meeting a crisis. The Planning Cell was not taken seriously in the crucial stages of economic planning and the argument that defence needs would be adjusted in the over-all allocation of resources was proved wrong. (Nayyar, 1995)

In 1974, an Apex Group headed by the Union Minister for Planning again suggested that steady long-term defence programmes would be more cost effective and economical rather than fluctuating allocations due to periodic economic and security crises. In order to integrate defence planning with the overall economic planning effort, defence and economic development plans were made co-terminus. (Chadha, 2016)

## The Planning Machinery

Most of the defence planning machinery and planning methodology was developed in the decade 1964-74. The Joint Intelligence Committee (JIC) was established in the Cabinet Secretariat to provide external and internal threat assessments. Inputs for this purpose were to be provided by all Intelligence agencies of the Government. The Service Chiefs were to assess the broad military aims and a strategy, coordinated in the Chiefs of Staff Committee, was to be approved by the Defence Minister. However, this was seldom done. Each Service ended up planning its own force level, choice of weapons and equipment, and build-up of infrastructure.

In 1977, the Government formed a Committee for Defence Planning (CDP) to “undertake regular assessments relevant to defence planning in the light of all factors having a bearing on national security and defence”. However, this committee could not function smoothly nor meet the desired goals.

Planning units were also established in the Department of Defence Production and DRDO. A Planning and Coordination Cell was created in the MoD to coordinate and compile various plans into a 'Defence Plan' for Cabinet approval. As the bureaucrats in the ministry had no professional knowledge or background, this cell could only compile different requirements without any analysis.

In Army Headquarters, the Deputy Chief of Army Staff was made responsible for preparing the Army plan. A Perspective Planning Directorate was established in the late 1970s. Naval and Air plans were prepared in the respective Planning Directorates. Financial considerations, non-existent at this level earlier, were introduced through Finance Planning Sections attached to these Directorates.

In 1986, the Directorate General of Defence Planning Staff (DGDPS), comprising officers from the three Services, DRDO, and Ministries of Defence and External Affairs, was established under the Chiefs of Staff Committee (COSC) to coordinate and harmonise defence planning. Civilian officers from the Ministries probably did not find the job professionally satisfying and were gradually withdrawn, thus leaving the DGDPS a tri-Service set up.

All these measures enabled each Service headquarters to prepare defence plans in a more rational manner. But due to lack of clear political direction and each Service primarily planning for itself, joint planning, coordination between Services and other departmental plans of the MoD, were largely ignored.

After the Kargil conflict in 1999, the Group of Ministers (GoM) and later the Cabinet Committee on Security (CCS) approved several reforms. (Kargil Review Committee, 2000)

## Existing Model of Defence Planning Process

Defence Planning is "The process of determining the long term military objectives in overall context of national security objectives and aspirations of a country and the formulation of policies, strategies and planning guidelines that will govern the acquisitions, use and dispositions of resources to achieve capabilities to fulfil these objectives." Defence planning begins with a certain set of assumptions relating to the dynamic and complex environmental threats the country is likely to face and state of security it aspires in the short, medium and long terms. The purpose of Defence planning is a top down approach to establish systematic link between higher dictates of national aspirations, vision, mission, aims, interests, objectives, strategy and national policies with the drivers of nation's military enterprise in iterative manner as under.



- To evolve strategic parameters for effective management of the nation's military instrument and lend it to a realistic long term direction and focus.
- To formulate and promulgate macro parameters and strategic guidance for initiation of the integrated and inter-dependent forms of military planning for force development, maintenance and employment of desired and existing military capabilities.
- To derive the process of long term integrated perspective plans by the Armed Forces for development of military capabilities in short, mid and long terms.

It is the process of matching futuristic threats and national security objectives with military capabilities and other constituents of national power. It entails a futuristic threat assessment, examination of military options and objectives, careful evaluation of desired military capability to counter visualized threat; thereby ensuring close monitoring of entire process for corrective actions in accordance with changing situations. Type of military planning can be seen in figure 2.1.

### TYPES OF MILITARY PLANNING



Figure 0-1 TYPES OF MILITARY PLANNING

In a larger economic perspective, the scope of Defence planning could be viewed in terms of resources and would embrace in these three stages.

- Setting long-term military objectives.
- Formulating Long term Planning Guidelines and allocation of resources to Defence.
- Distribution of resources amongst various agencies and their to develop desired military capability.

## National Security Policy and Strategy

The concept of national security rests mainly on the proposition that many foreign and domestic political, economic and military issues are inter related, each with implications on the other. In India's case, this has been highlighted by insurgencies and other political events, particularly in border states, and other outside pressures, which are brought to bear on the country's economy and technological progress from time to time. A response to this type of environment calls for a highly focussed national security policy and strategy.

Effective guidance on national security and defence policy objectives is fundamental to the defence planning process. National security is a relative matter without a firm criteria but unless firm national security objectives are set and a defence policy evolved, there can be no military doctrine or balancing of defence effort with other national objectives and priorities such as maintaining a viable economy and supporting development of society.

The lack of a cohesive national security strategy and defence policy has many implications. First, it results in the absence of clear political direction regarding politico military objectives, which is the very basis of sound defence planning. Secondly, there is inadequate coordination of defence plans and economic development. Finally, science and technology policies for defence, general industrialisation and other development programmes are not coordinated properly to achieve security goals and objectives. (Nanda, 1994)

Once the essential politico-strategic inputs are available, the process of Defence planning gets initiated. It is an iterative process and may be referred as Bi-Cyclic since the overall process comprises of two seemingly exclusive and inter-dependent cycles, shown in figure 2.2 are categorized as under:

- Higher Defence planning (for formulating Strategic Defence Planning Guidance). The three stage Defence Planning process can be seen in figure 2.3
- **Perspective Planning** (for developing and maintaining the military capabilities, in time lines

and with financial resources as determined and specified in the Strategic Defence Planning Guidance).



Figure 0-2 DEFENCE PLANNING CYCLE

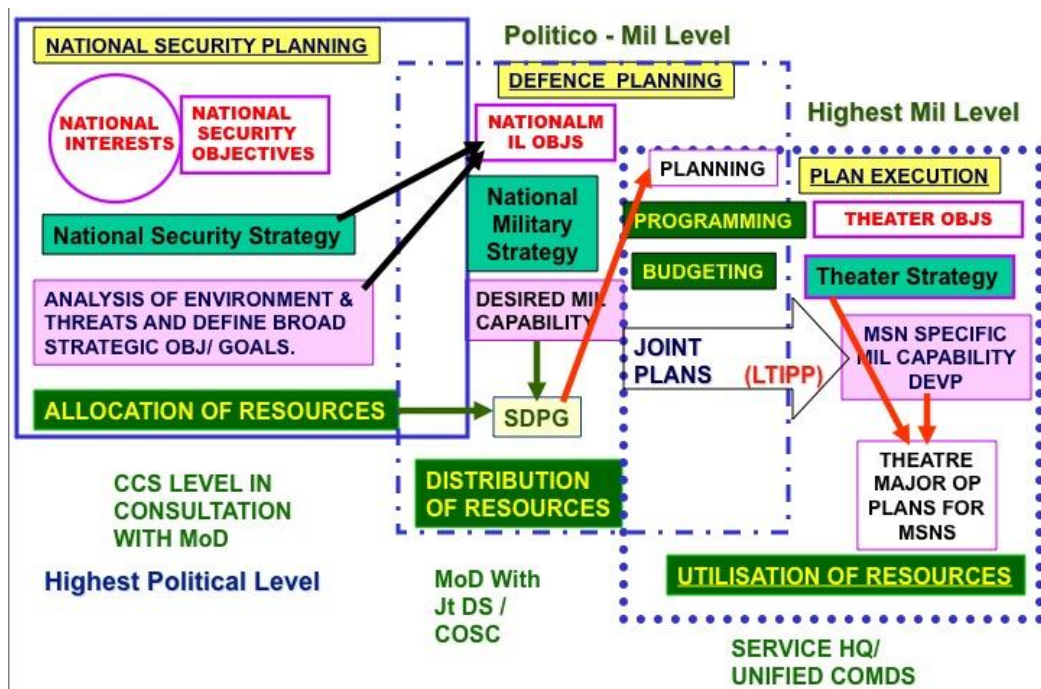


Figure 0-3 DEFENCE PLANNING PROCESS

The major activities of force development that merit attention have been shown in figure 2.4. These

activities have to be undertaken effectively within the domain of national security strategy and national objectives as part of overall Defence planning process. The learning objectives are: -

Develop an understanding of all stages for Defence planning process.<sup>[1]</sup>

Appreciate work flow, functions and drawbacks of all agencies in Defence planning.

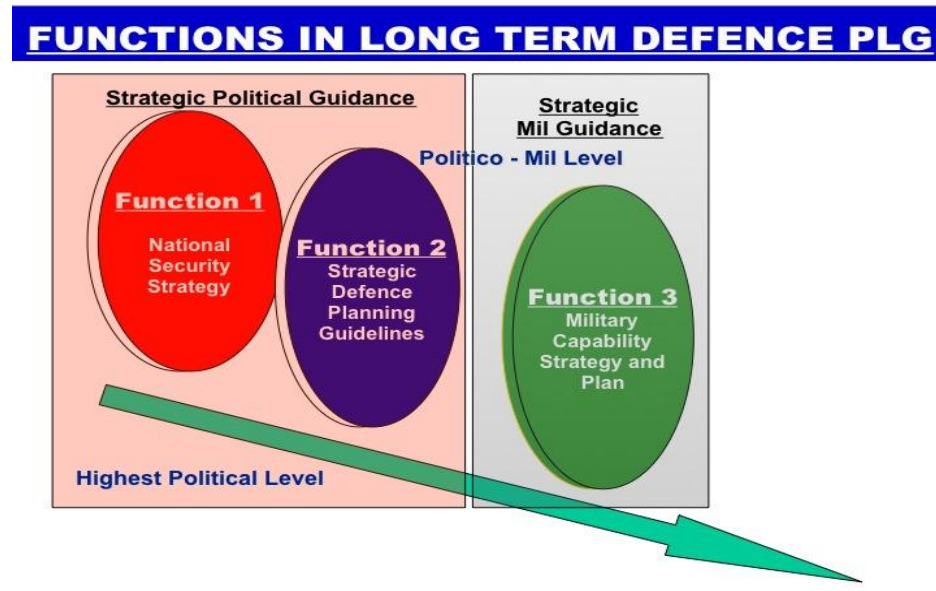
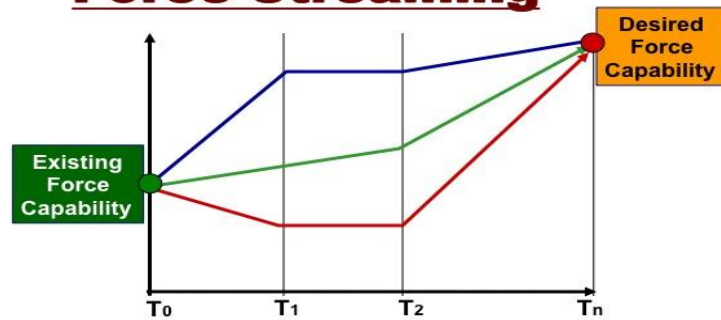


Figure 0-4 FUNCTIONS OF LONG TERM DEFENCE PLANNING

## Force Streaming

There are three force streaming options i.e. make, buy, buy and make. Each force streaming option will require different pattern of budgetary, technological and R & D support in short, mid and long terms. Different strategies for managing security environment during the interim period by the government and HDO will play an important role as shown in figure 2.5.

## Force Streaming



**Each Force Streaming Option will require:-**

- **Different pattern of Budgetary Sp in Short, Mid & Long Terms**
- **Different Strategies for Managing Security Environ During the Interim Periods**

Figure 0-5 FORCE STREAMING

## Force Development and Modernization

Defence planning for force development and modernization though focused on military affairs, spans a vast expanse of diverse yet interrelated national endeavours. It requires understanding in analysis and decision making in diverse domains as shown in figure 2.6.

## Higher Defence Planning Cycle

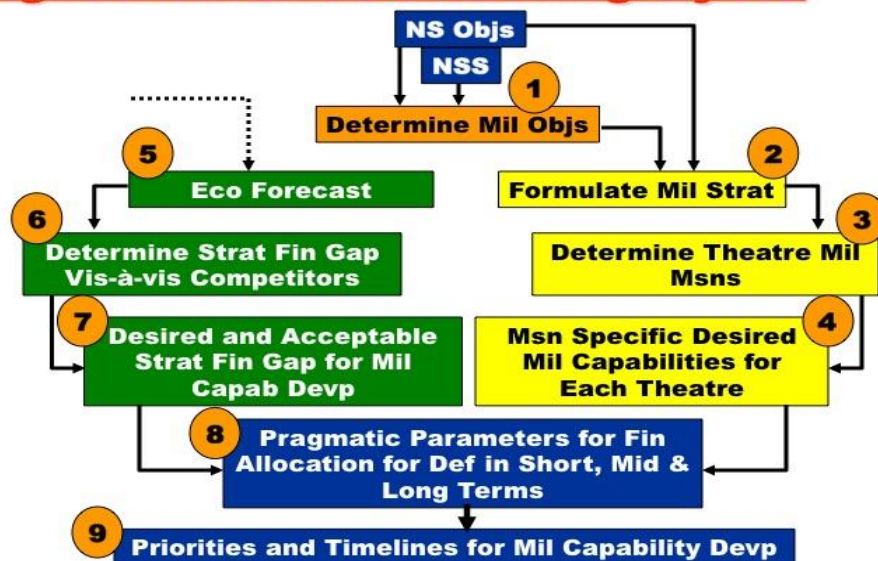


Figure 0-6 HIGHER DEFENCE PLANNING CYCLE

## **Perspective Planning Cycle**



Figure 0-7 PERSPECTIVE PLANNING CYCLE

The force development and modernization should also be related to national development. Based on the butter v/s gun theory, an optimum allocation for Defence has to be made so that it does not affect our nation's overall development to achieve minimum credible Defence. Defence and development are two sides of the same coin. Both are important and any one should not be sacrificed for the other. Any nation has to spend an irreducible minimum capital towards a credible Defence. A country may be economically strong but militarily weak. This could encourage its exploitation by other country.

### **CHAPTER 3 : ENVIRONMENTAL SCAN, CHALLENGES TO THE MANAGEMENT OF NATIONAL SECURITY, NATURE OF FUTURE WARFARE AND FORCE DEVELOPMENT**

National security is a function of a country's external environment and the internal situation, as well as their interplay with each other. The former is influenced by the major features of the prevailing international order, the disposition of its immediate and extended neighbours and the major powers. The internal situation encompasses many aspects of national life, ranging from law and order to economic fundamentals and from the quality of governance to national cohesiveness. The external environment and internal situation of a country do not subsist in watertight compartments but act and react on each other in ways which affect its security. In today's interdependent world, the distinction between internal and external security concerns often gets blurred.

The traditional concept of national security has undergone fundamental changes over the years. It is no longer synonymous with sufficient military strength to defend the nation and its interests. In today's world, military might alone does not guarantee either sovereignty or security. The more realistic and comprehensive approach to national security also includes economic strength, internal cohesion and technological prowess. The fundamental security of the individual citizen includes security of life and property, food security, energy security, clean environment, education and health. A strong sense of nationalism and good governance also form an integral part of national security; as does the ability to retain political and economic sovereignty and autonomy of decision making, in an era of globalisation and increasing economic interdependence.

Both the external and internal environment are changing at an incredibly fast pace, with developments in nuclear weapons and missiles, increasing cross-border terrorism, the emergence of non-state actors, the growth of Islamic fundamentalism, the narcotics-arms nexus, illegal migration and left wing extremism, gravely impacting upon the security of the country. The rapid technological developments underway at the same time not only facilitate these events by reducing our reaction time but add entirely new dimensions of threats and challenges, such as the Revolution in Military Affairs (RMA) and offensive/defensive information warfare.

Amidst these dramatic developments, the traditional structures and processes for the management of national security are under considerable stress. Not only are most of them over 50 years old but their effectiveness has also, over time, been attenuated. These need to be suitably restructured and strengthened, to cope with the new and emerging challenges facing us in the areas of Intelligence, Internal Security, Border and Defence Management, so as to help develop a more efficient and cost-effective national security system for the 21<sup>st</sup> century. (Katoch, 2017)

# Objective of National Security.

The prime objective of a national security doctrine is the preservation of the core values of the nation. The core values of the Indian nation derive their strength from its culture and civilization. A notional representation of national security is depicted at Figure 3.1. The innermost ring represents the core values and vital interests that a state seeks to protect, preserve and promote. Beyond the outermost ring are the multi-dimensional multifarious challenges and threats that impinge ultimately on this core through more visible components represented in the Illustration in terms of the middle ring. Crucial in this paradigm is also the factor of military capabilities although they must be kept at the minimum sufficient level to provide credible deterrence against challenges/threats to the innermost core.

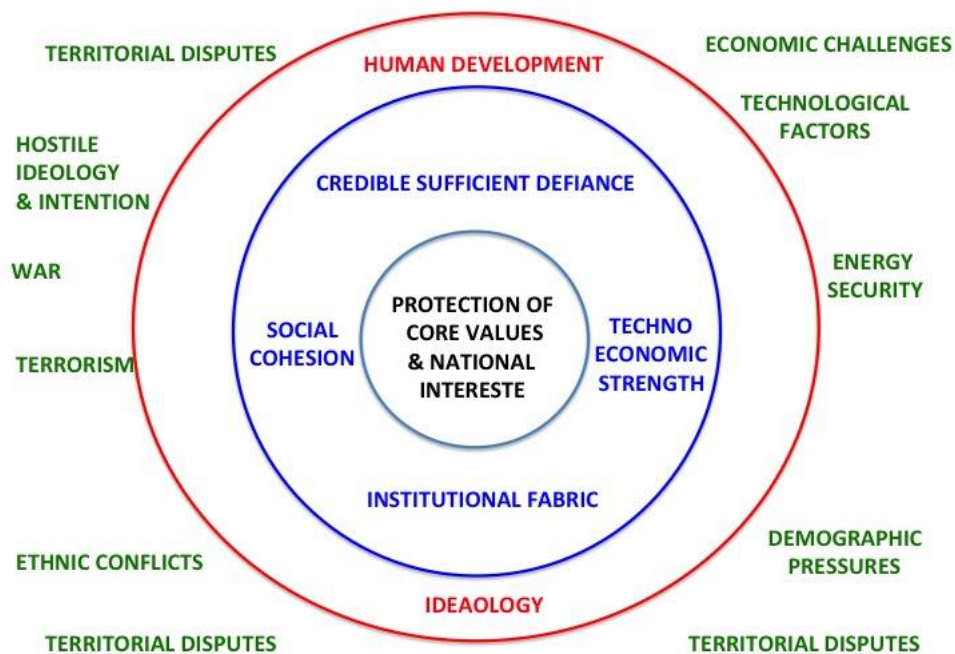


Figure 0-8 OBJECTIVES OF NATIONAL SECURITY

## India's Security Environment

**Areas of Responsibility.** India today is faced with an extensive defence and security perimeters; over 16,500 Km of land borders, including nearly 7,000 Km of borders with states with which significant territorial disputes still persist; a 7,600 Km long coastline and 2.5 million square Km of Exclusive Economic Zone besides over 650 islands, most of them separated from the mainland by as much as 1400 Km. By the middle of this decade this area of sea is expected to increase further, with maritime boundary extending to 550 km from 370 km at present. India has also been given pioneer status over a



1,50,000 square kms site in the Central Indian Ocean off Cochin for deep sea-bed mining. The exploitation of mineral sources from sea-bed, including hydro-carbons has taken on a new dimension with the evolution of technology and the growing awareness of declining land resources. India being the largest country on the Indian Ocean, Littorals has to be the first to develop adequate maritime, capable of safeguarding its such a long coast line. It is seldom appreciated that India's 1.3 million strong Army is stretched thin while covering a border of 15,600 kilometres. The statistics on the Military Balance between India, Pakistan and China given below are revealing by themselves. (Kapoor, 2004)

Country	Population		Strength of Army		Length of Land Border	Soldiers/population ratio		Soldiers/KM of border ratio	
	1987-88 (in ,000)	2002 in million s	1987-88	2002		1987-88	2002	1987-88	2002
India	777,983	1048	1100	1325	15,600	1:709	1:79	70:1	85:1
China	1,078,765	1281	2300	2250	21,000	1:469	1:57	109:1	107:1
Pakistan	99,705	145	450	620	6,480	1:221	1:23	69:1	95:1

**Table 2 Military Balance : India, China and Pakistan**

**India's Sphere of Influence.** India's sphere of influence encompasses the region from the eastern seaboard of Africa in the west to Malacca strait in the east and includes the Arab Islamic world, Iran, Central Asia, East Asia and China. Hence there are a variety of challenges to national security, way from the set scenarios of Pakistan and China that need to be factored in our planning process for the future. The ones, which impact specifically upon the structure of the Defence Forces are (Rajan, 1999) :

- Defence of Andaman and Nicobar Islands and other island territories separated by large distances from the mainland.
- Security of our off shore and on shore assets and resources rich area.
- Security of large and unprotected coastline and the national assets and infrastructure along the coastline.
- Internal dissent and claims to autonomy and ethnic recognition by sub national entities, who may be supported from outside.
- Demographic shifts in the South Asian region and other non military threats which may impact upon the military.

- Inimical actions by powerful multinationals, which may affect own vital national interests and which may be supported by other states.
- The beliefs of a single, very powerful, state which views its security as more vital than that of the world.
- The proliferation of weapons of mass destruction (WMD) and advanced delivery platforms such as missiles.
- Overspill of ethnic conflicts in the South Asian region into India. [L] [SEP]
- Global terrorism perpetrated by non state actors, which may be aided or [L] [SEP] supported by other states.
- Aid to civil authorities.
  - Terrorist activity. [L] [SEP]
  - Flow of drugs and narcotics. [L] [SEP]
  - Antagonistic para -military groups. [L] [SEP]
  - Large scale civil disobedience and internal disturbances. [L] [SEP]

The twentieth century, the bloodiest of the centuries, has closed. In the span of just one lifetime, the twentieth century witnessed a flowering and then domination of the thoughts of Marx, and then most remarkably a collapse of communism. As for India, the first half of the century saw it as subject nation struggling for independence; the second half saw it endeavouring to address itself to the challenges of direct conflict as covert war and clandestine war.

The warfare of the future, with the greater democratization of knowledge and resources, including weapons, and their concentration in uncontrolled private hands has been altered beyond recognition. It is no longer possible for nations to conquer another country, to subjugate an entire people or to take into captivity as a booty of war the adversary state as a colony. As the pace of change has accelerated in certain areas of technology, organization and concepts; therefore they have to be assessed and matched militarily. Allocation of funds being central to the subject, visualized spectrum of war in conceptual terms and the desired military and technological capabilities in future warfare would enable us to validate irreducible minimum allocation for our Armed Forces to meet the emerging threats as also fulfil international obligations.

## Emerging External Security Environment: Impacting India's Security

- [U.S. Pre-eminence in the World Order](#)

The hope that the demise of the Cold War era would bring into being a multi-polar world order has greatly diminished. Instead, the pre-eminence of the USA in political, economic, military and technological fields is more in evidence today than ever before. Its capabilities to forge coalitions and alliances and have its way on any issue is unmatched. This has resulted in increasing concerns in countries like Russia and China and to some extent, even in Europe. US pre-eminence in the global strategic architecture is unlikely to diminish in the foreseeable future. Meaningful, broad-based engagement with the United States spanning political, economic and technological interests and commonalities, will impact beneficially on our external security concerns with a resultant albeit less visible impact on our internal security environment. Conversely, an adversarial relationship with that State can have significant negative repercussions across the same broad range of issues and concerns.

- [Role of Nuclear Weapons](#)

Despite the end of the Cold War, nuclear weapons continue to be legitimized by treaties like the Nuclear Non-Proliferation Treaty (NPT). US, European, Russian etc. doctrines stress the value of nuclear weapons in national and collective defence strategies. The continuous proliferation of nuclear weapons and missiles in our neighbourhood and in particular, in Pakistan poses major threats to our security. The nuclear tests by India and Pakistan in May 1998 altered India's security environment in fundamental ways. (DOCTRINE, 1999)

## Rapid Technological Developments

The new strategic environment will be affected by technological developments in a more fundamental manner than ever before. Although technology has been a harbinger of change throughout history, the sheer scope and pace of current technological change is unprecedented. The revolution in Information Technology (IT) which is sweeping the world has deepened the process of globalisation. The role of the media in creating, shaping and changing perceptions will continue to expand. In the military sector, the technology-driven Information Warfare (IW) and the RMA will have a dramatic impact in the coming decades. Developments in communications and space technologies are shaping everyday life and economy in a far more fundamental fashion than is ordinarily realised.

## Possibility of Conventional War

Notwithstanding the deterrence provided by India's nuclear tests, the possibility of a conventional war between two nuclear powered states cannot be ruled out. This was amply demonstrated by the Kargil War of 1999. The battle field of the future, however, will be vastly different from the past - it would

be non-linear in nature, with real-time surveillance, integrated Command, Control, Communications, Computer, Intelligence and Information (C<sub>4</sub> I<sub>2</sub>) assets, target acquisition, and highly lethal precision weapon systems.

In essence, the future battlefield in our context is likely to be more digitized and transparent and would experience an exponential increase in the deployment of electronic devices, signalling the growing primacy of the electromagnetic spectrum. The future conflicts would be dominated by a wide variety of platforms and delivery systems with increased ranges and accuracy, as well as terminally-guided and precision-guided munitions.

Thus, while India needs to ensure credible nuclear deterrence to prevent the possibility of a nuclear misadventure by its potential adversaries, it has to simultaneously maintain adequate and duly modernized conventional forces which are properly managed, led and equipped to take advantage of the RMA and which can take care of any possible conventional conflicts.

## Increase in Tensions and Conflicts

While instances of inter-state wars have significantly declined and are expected to continue to do so, there is an increase in cross-border interference by one State in the internal environment of another arising out of territorial, religious, cultural and ethnic factors and the easy availability of sophisticated weaponry in international markets. As a result, there has been no let up in tensions and conflicts across the world. This trend is likely to continue at least in the short and medium terms. New doctrines of interventionism are being applied taking into account the experience of the Gulf War and the on-going RMA.

## Impact of Globalisation

As a result of globalisation, many aspects of national life which were considered to be within the domain of sovereignty have become subjects of multilateral consideration. This includes the vulnerability of many developing countries on issues such as the politicization of human rights and increasingly intrusive international regimes which curtail the autonomy of national decision making. There has also been a remarkable growth and influence of non-government and other voluntary non-profit organisations. These developments impinge on the sovereignty of nations in a subtle manner.

## Emergence of Non-State Actors

The emergence of non-state terrorist actors and the rise of their international influence is accelerating.

Much of their activity is clandestine and outside the accepted international norms. International and state-sponsored terrorism, often motivated by fundamentalist ideologies, backed by secretive but efficient financial networks, use of IT, clandestine access to chemical-biological and nuclear materials, and illicit drug trafficking, has emerged as a major threat to international stability. They pose threats to multi-religious, multi-ethnic and pluralistic societies. India is at the receiving end of these violent elements and is likely to remain a target of international terrorism in the future. Strategies need to be evolved to counter the threat of Weapons of Mass Destruction (WMD) terrorism as well as cyber-terrorism; the latter especially against infrastructural and economic assets such as banking, power, water and transportation sectors.

## II India's Neighbourhood

India faces multiple and complex threats and challenges to its security from the land, sea and air. Since Independence, five wars have been imposed on us - four with Pakistan and one with China. Many of the insurgencies faced by India have been fuelled or drawn sustenance from abroad.

### China

The rapid economic growth of China in the last few years coupled with its ambitious military modernisation programme will enable it to attain near superpower status by 2020. Special note must be taken of China's wide-ranging defence modernisation with a special focus on force-multipliers and high technology weapon systems. Since the defeat of India in war against China in 1962, a stalemate in Sino-Indian relations was broken with the signing of Agreement of Peace and Tranquillity between both the countries in 1993. Nevertheless, China continues to occupy 38,000 square Km of Indian territory, lays claim to another 90,000 square km besides the 10,000 square km of Indian territory illegally ceded to it by Pakistan. This represents a substantial challenge to Indian security in the long term.

The Chinese economy has been growing at a remarkable pace. This growing economy is able to sustain the massive modernization programme that Chinese armed forces have embarked. In recent years China has shown greater willingness to assert its power in pursuance of its interest in the adjacent regions. The construction of a new naval base on Hianggyi islands and naval infrastructure at Coco Island in Bay of Bengal indicate increased Chinese interests in the sea around India.

China is sensitive about Tibet, province of Xinjiang, Taiwan and Aksai Chin. Her views differ from that of India. Her policy of arms export to India's neighbours continues to be source of concern, particularly when it involves the supply of conventional and nuclear weapons technology to Pakistan.

China's large arsenal of medium range nuclear tipped ballistic missiles are likely to remain a critical factor affecting India's security. While the emphasis in Chinese national strategy has changed from a global general war to easing of tensions, contradiction in terms of emphasis in the shift in doctrine from strategic defensive strategy to a modern offensive – oriented doctrine need to be borne in mind.

### **Pakistan**

Pakistan will continue to pose a threat to India's security in the future also. Its traditional hostility and single-minded aim of destabilizing India, is not focussed just on Kashmir but on a search for parity. This arises out of the two-nation theory, coupled with a desire to exact revenge for the 1971 humiliation over the separation of Bangladesh. The Kargil War of 1999 has accentuated this. Pakistan has been waging a proxy war against India since the 1980s. Since the Kargil War and the military coup of October 12, 1999, Pakistan's support to cross-border terrorism has intensified and is expected to continue in the future. The rapid growth of Islamic fundamentalism in Pakistan is also of serious concern to India.

Pakistan continues to remain as primary source of threat to the Indian security. Pakistan's inability to work out a viable form of nationalism and its eternal quest for achieving parity with its larger neighbour remains at the core of Pakistan's hostility towards India. Pakistan's continued support to secessionists in Kashmir makes for grave tension for India. Pakistan has never given up the option of going to war with India on Kashmir issue . The intrusion in Kargil is the continuance of the same policy.

Further, despite the end of Cold War, Pakistan remains strategic- partner of United States of America. Besides, she has been regularly receiving massive military and security related economic aid packages from US resulting in possession of sophisticated weapons system. She is now a nuclear power state. She has also covertly acquired missile technology from China and North Korea and continues to upgrade her missile programme. Pakistan's military capability is surely to grow further both qualitatively and quantitatively. Pakistan Army is better prepared for war today than it was in 1965 or 71 with 45 days of reserve ammunition and fuel stock and its top brass convinced that Indian Army is no longer capable of launching a ground offensive. The threat from Pakistan is, therefore, continuance of the proxy war and at an opportune moment, its escalation into an offensive by regular forces, with the aim of separating Kashmir from the rest of the country. The use of nuclear weapons for the attainment of this aim is also a distinct possibility? Keeping Pakistan's "offensive-defence" doctrine and the military capabilities in view, both in conventional and nuclear weapons, India would have to be prepared to deal credibly to meet any eventuality.

Through its nexus with the Taliban and Jihadi elements, as well as its involvement in religious

extremism, international terrorism and the narcotics trade, Pakistan poses a threat not only to India but to the stability of the region as well. Hence, attempts to make Pakistan conform to international value systems and norms of behaviour is a problem .

As a result of Pakistan's political and economic instability, its military regime may act irrationally, particularly in view of its propensity to function through terrorist outfits.

Pakistan's weapons acquisitions from the West and China and its close collaboration with China and North Korea on nuclear and missile matters, will continue to be of grave concern to India. Pakistan will continue to seek further enhancement in the quality of its weapons to attempt to offset its conventional quantitative military inferiority vis-à-vis India. China can continue to make both hardware and technology available to Pakistan to offset the latter's domestic weaknesses.

Pakistan believes that nuclear weapons can compensate for conventional military inferiority; its leaders have not concealed their desire to use nuclear weapons against India. General Musharraf's proclaimed desire to talk to India rings hollow against the backdrop of continuing Pakistani support for militants and his unremitting obsession with Kashmir. Pakistan is following the policy of "bleeding India through a thousand cuts".

## SLOC & ANDAMANS

The heavily militarized Indian Ocean will continue to adversely affect India's economic, political and military interests in the area. India has a vital interest in the security and stability of the Sea Lanes of Communication (SLOC) in the Indian Ocean; our energy security is closely linked to maritime security.

The Andaman and Nicobar Islands, far removed from the Indian mainland, are increasingly vulnerable particularly in the context of the emergence of the Islamic separatist movement in Aceh. Illegal fishery, arms and narcotics trafficking and piracy attacks take place quite regularly on the seas adjacent to India. US nuclear-powered submarines armed with long-range land-attack missiles continue to operate in the Indian Ocean, with increased emphasis on base facilities in Diego Garcia adjacent to India's own seabed mining area.

## III Internal Security Environment

**Jammu & Kashmir** Pakistan is pursuing a multi-pronged strategy to destabilize India and annex J&K. Militancy is a direct consequence of the unremitting efforts of Pakistan's covert agencies,

particularly its Inter-Services Intelligence (ISI), to exploit the prevailing discontent and destabilize the established authority by creating an anarchic situation. Since January 1990, terrorism in J&K has resulted in the loss of over 30,000 lives, including nearly 2000 security personnel. Ethnic cleansing efforts have also been part of Pakistan's strategy.

Militancy has caused enormous human and economic losses in the State and shattered its economy. There is enough evidence that destabilizing India through actively sponsored terrorism is a matter of state policy for Pakistan. There are numerous training centres in Pakistan, Pakistan Occupied Kashmir (POK) and Afghanistan, where potential extremists are being trained.

### **The North East**

Insurgency is in some measure due to the ethnic divide accentuated by migrations from without and exacerbated by foreign intervention. Several insurgent groups in the region are currently demanding independence. Apart from maintaining an unacceptably high level of violence in some of the states in the region, they are engaged in widespread extortion from all sections of society. Drug smuggling and gun running are rife. Intelligence reports suggest that the ISI is extremely active in fomenting unrest in the area. The paucity of roads, railways, communication facilities, and slow economic growth, have further contributed to the grievances of the local populace.

### **Punjab**

The situation in Punjab needs to be kept under close watch. Many pro-Khalistan militants continue to enjoy shelter in Pakistan and there are reports of plans to revive terrorism in Punjab. Subversive propaganda is being aired from Pakistani Punjab. The appointment of a former head of the ISI as Chairman (a Muslim) of the Sikh Gurudwara Prabandhak Committee in Pakistan is an indicator of Pakistan's malafide intentions.

### **Islamic Fundamentalism and Pakistan's ISI**

The Taliban success in Afghanistan has brought about a qualitative change in the security environment of the region. It has also given rise to groups of "Jihadi" forces. These forces are unlikely to stop in Afghanistan and Pakistan. Fired with religious zeal, a large number of the so-called "jihadis" have already entered into the bordering States and are in the process of penetrating deeper inside the country. These bands of religious fanatics are indulging in subversive activities and have expansionist designs. They will work relentlessly for the break-up of the Indian Union.

A recent phenomenon is the mushrooming of pan-Islamist militant outfits with links to radical organisations in Pakistan, Saudi Arabia, Sudan and some other West Asian countries. Funded by



Saudi and Gulf sources, many new madrassas have come up all over the country in recent years, especially in large numbers in the coastal areas of the West and in the border areas of West Bengal and the North East. Reports of systematic indoctrination of Muslims, in the border areas, in fundamentalist ideology are detrimental to the country's communal harmony.

The so-called “Mujahideen” and the “jihadis”, operating from bases outside the country, have virtually taken control of the secessionist movement in J&K. Aided and abetted by the ISI, these forces are also active in the North East, West Bengal and in Tamil Nadu. The ISI has built new networks in Bangladesh and Nepal. The secessionist movements in J&K and elsewhere in the country are being transformed into a pan-Islamic movement against India.

### **The Narcotics-Arms Nexus**

The narcotics trade and the smuggling of arms and explosives are intimately linked and adversely influence the security and the social fabric of the affected region. India is located between two drug producing areas of the Golden Crescent in the West and the Golden Triangle in the East, which has resulted in drug trafficking through the country as well. The drug mafia has been improving its network and escalating its level of activities.

Terrorists/insurgents are receiving weapons mainly from across the borders with the assistance of organised smuggling groups. Most of the arms are coming from Pakistan through the ISI, Pakistani based fundamentalist organisations, Afghan Mujahideen groups and the militants themselves, who bring arms from Durrani in the North West Frontier Province (NWFP). While arms were being smuggled through J&K and Punjab borders, of late, due to the strict vigil along these borders the smuggling routes have been diversified. While the J&K border is still active, Rajasthan, Gujarat, Maharashtra and the West Coast of the country are also being used for this purpose. The smugglers have also acquired high- powered speed boats, which can land at uncharted beaches and creeks. Arms are also coming through the long and porous Indo-Nepal border. In addition, arms are being smuggled via Bangladesh and Myanmar.

### **Fake Currency and Money Laundering**

Due to the narcotics and illicit weapons trade, the resultant generation of black money and money laundering, there is a progressive blurring of lines between legal, financial and business operations and criminal activities; these create ample space for collusion between organised criminal and legitimate enterprises. A large amount of fake Indian currency is being smuggled into the country, giving a totally new dimension to the internal security scene. Laundering of proceeds from criminal activities has far-reaching implications; it sustains a large variety of criminal activities, including kidnapping and blackmail. Co-operation and collusion between organised crime and terrorist elements

has also grown. Given the law and order as well as insurgency situation in some parts of our country, the narcotics trafficking, arms smuggling, fake currency and money laundering rackets, provide a boost to the already adverse situation.

### **Illegal Migration**

The law and order problems of the North East have been aggravated by large-scale unchecked migration from Bangladesh.

The post 1971 illegal migration from Bangladesh into various States of the North East is estimated to be of the order of approximately 12 million people. This has generated a host of destabilizing political, social, economic, ethnic and communal tensions. Politically, the Bangladeshi migrants are in a position to influence the results of the elections in a large number of constituencies in the North East (about 32% of the constituencies in Assam). Economically, increased pressure on land, resulting in depletion of forest wealth, undercutting of wages of unskilled jobs, forcible occupation of Government land by the migrants and a host of other such issues, generate a ripple effect in the entire North East.

Social and ethnic frictions have also led to violence. Lately, attacks on the new immigrants by tribals have increased. Fundamentalist groups like the Jamaat-e-Islami (JeI) have engaged themselves in organising the Muslim youth to counter the attacks. Some have been given training in the handling of arms. The problem of security in the Siliguri Corridor needs no emphasis. Illegal migrants are not only confined to the North Eastern states but have spread to far off states like Tamil Nadu, Maharashtra, Gujarat, Rajasthan and Delhi.

### **Caste, Communal and Sectarian Violence**

The rise of fundamentalism threatens the plural and secular fabric of the Indian nation. Fundamentalist rivalry tends to turn into a vicious circle. All communities have experienced this problem. It is important to note that there is no Indian community which is not a minority in some other part of the country. It is the experience of each community that wherever they are in a local minority, they are subjected to tensions, victimisation and a regime of fear. This has resulted in large scale movement of people in some States, most notably in J&K and Assam.

While there have been some incidents of caste violence in Maharashtra, Gujarat and Tamil Nadu, large scale caste conflicts have, over the past years, been confined to the State of Bihar. However, this cannot constitute the basis for any complacency. Widespread political mobilization on the basis of caste has deepened cracks in India's social fabric and urgent attention needs to be paid to ensure that heightened tensions do not boil over into violence, particularly at times of political crises, electoral

contests, or failures of administration. Bihar is, in fact, a case in point and the rising caste violence in the State can be interpreted as the cumulative consequence of political mobilization based on caste, compounded by the failures of the State's administration.

### **Left Wing Extremism**

Left Wing Extremist violence is on the increase in Bihar, Jharkhand, Andhra Pradesh, in parts of Madhya Pradesh, Maharashtra and Orissa. Organisations like the People's War Group (PWG) and the Maoist Communist Centre (MCC) are very active and brazenly commit serious acts of violence in these areas. Armed caste-senas, some of them set up to represent powerful landed interests in the State, have multiplied in Bihar and massacres of innocent persons, including women and children, have become a regular feature. The Left Wing Extremist groups have virtually launched a war against the armed groups of higher castes, turning it into a caste conflict. The problem is compounded by the fact that these groups are often used, abetted and helped by various political parties. Though it is highly unlikely that these groups can succeed against the powerful State apparatus, they have the potential to create a serious instability in the affected areas.

The Left Wing Extremist groups are able to increase their followers in economically backward areas by exploiting their sense of economic deprivation. While the administration is not effective in the tribal areas, the people have no easy access to law and order machinery and the lower judiciary, is not easily available to the people.

## National Security Management

The developments in the country's security environment, outlined in the preceding sections, gravely impact upon the effectiveness of the existing national security structures and processes. To cope with these challenges and maximise our opportunities in the emerging world order, it is most timely that the Honourable Prime Minister took the initiative to mandate this GoM to review our national security structures in their entirety. While undertaking this review, the GoM has focussed in particular on the apparatus for the management of Intelligence, Internal Security, the Borders and Defence. (Nambiar, 2002)

## Indian Ocean Region

With the end of Cold War, the strategic importance of the Indian ocean has been further enhanced for USA, her western allies and Japan. The dependence of world on Persian Gulf oil is increasing by every passing day. USA is dependent on oil imports despite her strategic Petroleum Reserves. Japan

and Western Europe are importing nearly 90 per cent of their oil needs from the Gulf. South-East Asia has large volume of trade with USA and European-Union countries, which pass through the Indian Ocean.

United States is aware of new elements in the Indian Ocean. She has sea based nuclear deterrence, large naval forces and Centcom based at Diego Garcia. The Chinese are desperately trying to increase their influence in the region. With the reach of Chinese blue water naval bases coming up in Myanmar and with the access it has to the naval bases in Pakistan, Indian Ocean as a zone of peace is becoming a dead issue. Given India's strategic location in the area, India has abiding interests in long term stability and peace in area because any potential destabilisation or conflict would lead to insecurity in India's strategic neighbourhood.

### **Socio-economic Challenges**

**Relevance to National Security.** Poverty, hunger and malnutrition, illiteracy, unemployment, inadequate and ineffective health facilities, i.e. lack of development are the principal sources of threat. In the World Summit for Social Development in Copenhagen in 1995, the late Prime minister, Mr P V Narasimha Rao, had warned that poverty and distress anywhere in the world had the potential to threaten world security . The challenges to India's security are no exception to this theory. Lack of development and economic failure are the breeding grounds of terrorism, narco-terrorism and secessionism which threaten our very existence as a secular nation. Pakistan's efforts to exploit these opportunities to it's advantage are obvious. And thus it won't be wrong to sum up by saying that a weak socio-economic base, like a weakly defended border, will invite invasion and foreign domination. (Baru S. , 2002)

## Conflict Settings

Considering the challenges listed above and rapprochement processes underway with both our traditional adversaries, in the future, there could be three broad conflict settings, which need to be considered for force and capability development. These are :-

- Confront traditional adversaries plus the emerging challenges.
- Confront emerging challenges only.
- Confront one adversary plus the emerging challenges.

## The Total Spectrum of War

The total spectrum of war includes the types of conflicts that the Country's Armed Force are currently involved in and the ones they may be ordered to undertake in the future. These are :-

Limited conventional conflict under threat of use of nuclear weapons.

Border Skirmishes.

Defence of island territories and / or dislodging an adversary from our Island territories.

Counter insurgency and counter proxy war operations.

Global and regional terrorist actions including blackmail with WMD.

Internal conflicts caused by dissent.

Out of area contingency missions to assist friendly nations.

Military reaction to unforeseen contingencies demanding a pro-active (including pre-emptive) or reactive response, inside or outside the country.

Other forms of warfare such as information war including media, psychological and space wars.

Undertaking United Nations (UN) peace keeping operations.

Economic interdependence, international opinion and availability of nuclear weapons in the region may preclude full-scale conflicts (open wars) in the future. Hence the responses to the future threats and challenges explained above are likely to assume the forms other than a full-scale conflict.

## Approach to Force Structuring

In the next decade or so, there are distinct possibilities of rapprochement in India's relationship with Pakistan and China. This would have a very significant impact on Indian Army's organization and force structure. In this new environment, away from the set scenario in which we have spent more than 70 years we could downsize, restructure and transform the Army, based on new technologies and a new joint doctrine. This would have to be a holistic and joint effort of the three services. However should the expectations fail to materialise then the approach to restructuring would have to differ. In the latter case we would have to reengineer (reorganise, reorient and reequip) the existing force levels to acquire the additional operational capabilities desired. We could also be confronted with another scenario in which one adversary is marginalized, while the second adversary continues to pose a military challenge. Such a setting would also require the adoption of the former methodology. Hence the two basic methods identified, based on the emerging patterns of threat are: -

Downsizing and transforming the Army based on new technologies and new threats.

or

Re engineering the existing force levels to acquire new capabilities.

**Capability and Threat based Force Structures.** Under these circumstances, and in view of the present strategic settings and our current operational culture, we have no option but to develop force structures that are both capability and threat based. We must also operationally integrate the three services through reorganisation of our higher formations to optimise our operational capabilities to ensure coherence, synergy and success in war.

## Capabilities Desired

In view of the current and future threat patterns, the force development process will have to consider the range of operations mentioned earlier. This would mandate the development of the following capabilities: -

A smaller high technology conventional force to fight limited wars. [SEP]

Rapid deployment forces, re- engineered from defensive formations, to [SEP] deal with border skirmishes and other contingency missions.

Amphibious task force (tri service) operating with special forces for defence of island territories and for out of area missions.

Special forces for unforeseen contingencies and to counter terrorism (in all its manifestations including WMD).

Manpower intensive counter insurgency force for fighting insurgencies, proxy wars and for internal employment.

Strategic Forces for deterrence. Land component to have multi range missiles with nuclear warheads capable of a wide range of nuclear responses and options.

Army Aviation and supporting arms to support operations for entire spectrum of war.

Integrated airpower at strategic, operational and tactical levels through integrated theatre commands.

Ability to wage information wars (including media wars and psychological wars).

All capabilities to be integrated in the tri/ bi services context.

## Power Projection.

A regional and global economic status also bestows on India a responsibility of projecting military power to support her friends and allies and to safeguard her interests in Southern Asia (including the Indian ocean region). This capability, which would essentially be integrated, and tri services in nature, will have to be built into our future structure. We would have to bear in mind that we have a strategic geography, which demands long-range power projection.

## Technologies Desired

Effective employment of our forces on the battlefield will necessitate the use of some of the following technologies: -

Digital communications network linking sensors, communications devices and weapons for real time response of the command, control, communication , computers , intelligence and interoperability (c4 I2) system.

Ground and airborne surveillance with an array for manned aircraft and UAVs sending data direct to the integrated command headquarters with the intermediate units and formations receiving the data simultaneously.

Situational awareness and identification friend or foe (IFF) for combat vehicles and tanks for receiving and transmitting important information and data and for IFF.

Multi role aircraft (fighters and bombers) fitted with compatible equipment and IFF. [L] [SEP]

Digital imaging with global positioning system (GPS) to allow [L] [SEP] commanders to draw up fresh battle plans with accurate and up to date information of enemy movement.

Increased self containment of logistics for combat elements.

Networked logistics with tracking system for functioning in a mobile and dynamic environment. [L] [SEP]

Suitable transportation system (air and aground) for rapid movement of [L] [SEP] troops, equipment and logistics at strategic, operational and tactical levels.

Accurate long range firepower with a variety of munitions including precision munitions.

Some light tank units with heavier firepower capable of strategic and operational mobility (between and within command theatres).

Effective protection, firepower and communications for the individual soldier.

## The Required Allocations of Funds for the Armed Forces

Having studied the threat, conflict setting and desired capabilities to address the threats to national security, the subsequent Chapter analyses the India's Defence Budget and Defence Expenditure to validate the allocation of funds required for Armed Forces in the next Chapter.



## CHAPTER 4: ECONOMICS OF DEFENCE

*“The armed forces are not like a limited liability company to be reconstructed from time to time as the money fluctuates. It is not an inanimate thing like a house to be pulled down or enlarged or structurally altered at the caprice of the tenant or owner. It is a living thing. If it is bullied, it sulks; if it is unhappy, it pines; if it is harried, it gets feverish; if it is sufficiently disturbed, it will wither and dwindle and almost die, and when it comes to this last serious condition, it is only revived by lots of time and lots of money.*

Sir Winston Churchill (Speaking as a MP in the House of Commons, 1923)

### How Much Is Enough ?

Independent India had inherited a post Second World War Military. She was one of the least developed countries in the world at the time of independence, besides being one of the most endangered from the point of view of both external and internal threats – though the latter aspect was not at that time sufficiently appreciated. In the event, development received its due but at the expense of defence. In those early years, there could be no recognition of the fact that the armed forces were the weapons of last resort, the ultimate guarantor of law and order in the country. Having been caught unprepared more than once and experienced the ugliest of challenges to national security since its independence, there is a Hobson’s choice. Clearly India may have to make heavy sacrifices in the short and medium term to defend our borders even at the cost of development. Analysis of the India’s Defence Expenditure and its budgetary trends to determine as to ‘how much is enough?’ It is paramount to study the fundamental structure of India’s Defence Budget. (Zilberfarb)

### Structure of India’s Defence Budget

**Definition Of Defence Expenditure by SIPRI.** The standardised definition of defence expenditure used by SIPRI comprises the armed forces including peace keeping forces, defence ministries and other government agencies engaged in defence projects, paramilitary forces when judged to be trained, equipped and available for military operations and military space activities. Such expenditures should include personnel including pensions, operations and maintenance, procurement, military research and development, military construction and military aid.

**Structure.** By structure of defence expenditure, we basically mean (College of Defence

Management, 2005):

The distribution of total defence expenditure on capital and revenue items,

The distribution of total defence expenditure among the three services – Army, Navy, Air Force, and

**Distribution of total revenue and capital expenditure among these services.** The defence services estimates are presented in five demands – four on the revenue account (Army, Navy, Air Force and ordnance factories) and one on the capital account. The revenue account of the defence budget consists mainly of :

Pay and allowances

Payments to industrial establishments employed in stores, depots, factories, etc.

Transportation and miscellaneous expenditure

Stores purchase

**Works expenditure.** Similarly, expenditure on the capital account consists mainly of

land,

construction works,

military farms,

procurement of rolling stock,

Rashtriya Rifles,

NCC

Aircraft and aero-engines,

heavy and medium vehicles,

naval fleet, and

naval dockyards.

The Finance Minister presents defence budget to the Parliament, as a part of the Central Budget. However, it is the Defence Minister who, assisted by the Defence Secretary and the Finance Advisor (Defence Services), has the responsibility of defending and justifying the demands before the Parliament.

## Analysis Of India's Defence Expenditure

**Receipts and Distribution.** To arrive at any worthwhile deductions of 'how much is enough', it is important to analyse and validate the linkages between defence expenditure and the country's total resource. The same is represented with the help of following illustrations in which the receipt of a

rupee, its distribution and share of defence expenditure have been shown for the ease of understanding the subject :-

(a) See Illustration No 4.1 (2019) in the next page for the sources from where share of one rupee has been received in the Nation's Kitty & the share for defence expenditure:-

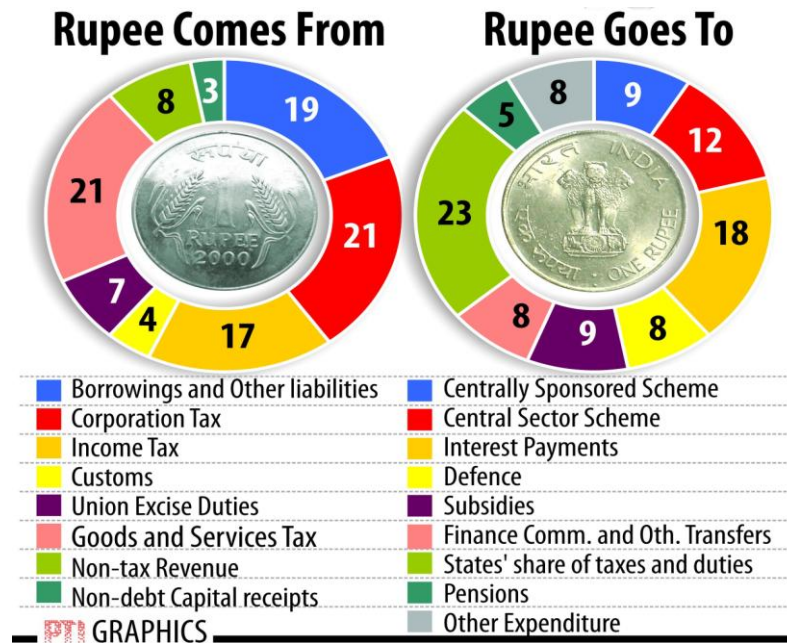
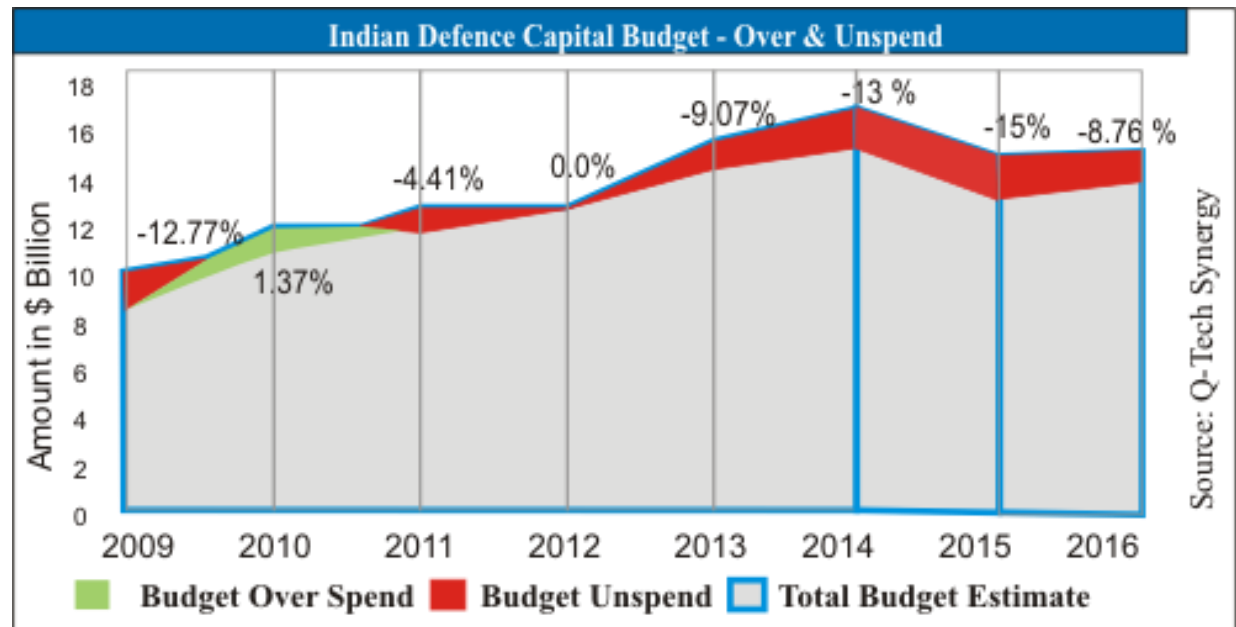


Figure 0-1 SOURCES OF GOVERNMENT RECEIPTS

Having seen the allocation to defence, it is extremely important to study as to how efficiently are the above allocation for defence utilized. See Illustration No 4.2 below for the share of defence expenditure (2019):-



**Figure 0-2 STATE OF SPENDING: DEFENCE BUDGET**

Linkages of expenditure, let us now study the following two universal ways by which the linkage is expressed :-

Having seen the receipt, its distribution and share of defence expenditure, let us now study the following two universal ways by which the linkage is expressed :-

**Defence Expenditure as Percentage of the GDP.** Projecting defence expenditure as a percentage of GDP gives a good idea of the trend of resources committed for defence over a period of time. In the case of India, the defence expenditure in 1950-51 was 1.62 per cent of the GDP, considered very meagre keeping in mind the size of the country and perceivable threats at the time. The expenditure fell to 1.52 per cent in 1956-57 and 1960-61. As an aftermath of the 1962 war, the defence expenditure rose to 2.48 per cent in 1962-63 and 3.54 per cent in 1963-64. Thereafter there was a steady decline with the expenditure falling back to 2.48 per cent of the GDP in 1969-70. It again rose up to 3.02 per cent of the GDP in 1971-72, the year of war in Bangladesh, and remained at 2.96 per cent in 1972-73. From 1973 to 1986, the defence expenditure was within the range of 2.46 per cent and 2.87 per cent. The period between 1986 and 1990 saw a major boost for the defence forces

of the country when the expenditure was at a high between 2.97 per cent and 3.37 per cent. This was also the period when the defence forces were fighting a war in a foreign land - Sri Lanka. In 1990-91, the defence expenditure fell to 2.71 per cent and thereafter has remained in the range of 2.54 per cent (1993-94), 2.16 per cent (1996-97) and hovered around at 2.5 per cent thereafter. The Graph shown at Illustration 4.3 below (College of Defence Management, 2005) :-



**Figure 0-3 DEFENCE EXPENDITURE AS PERCENTAGE OF GDP**

**Defence Expenditure as Proportion of Central Government Expenditure (CGE).** Another measure of a country's defence expenditure is in terms of proportion of the government's total expenditure for the year. In 1950-51, the defence expenditure was 31.90 per cent of the central government's expenditure. It came down to 18.20 per cent in 1955-56 and 14.50 in 1960-61. It went up again in 1965-66 to 21.57 per cent and 22.01 per cent in 1971-72. The average proportion of the defence expenditure in the seventies was 18.64 per cent, 15.96 per cent in the eighties and 14.70 per cent in the nineties. In 2004-05 and 2005-06, the defence expenditure has been 16.17 and 16.14 per cent of the central government's expenditure, respectively as shown in the Illustration No 4.4 below. It may be seen that the defence expenditure as proportion of CGE has progressively been declining.

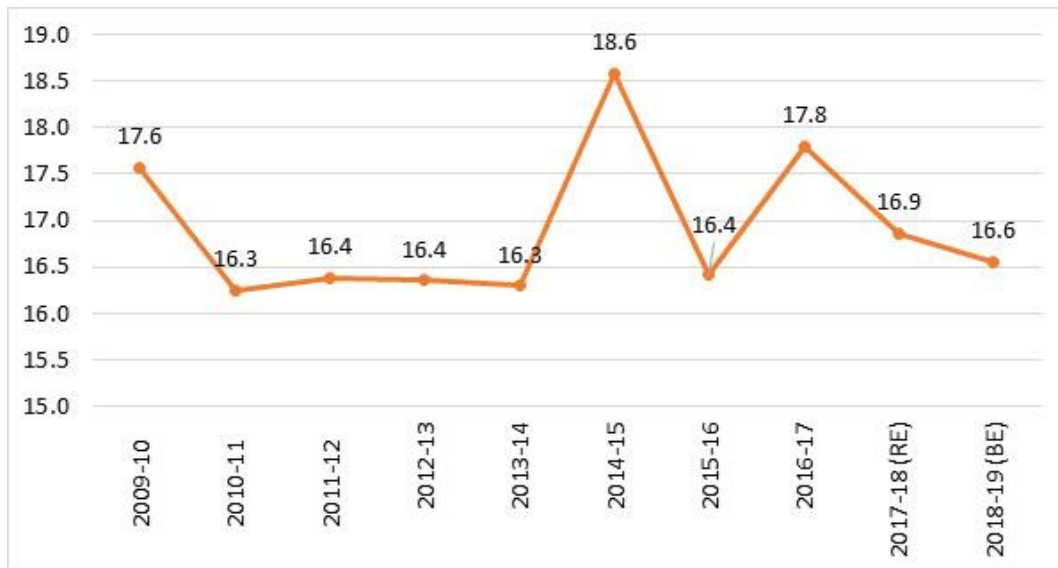
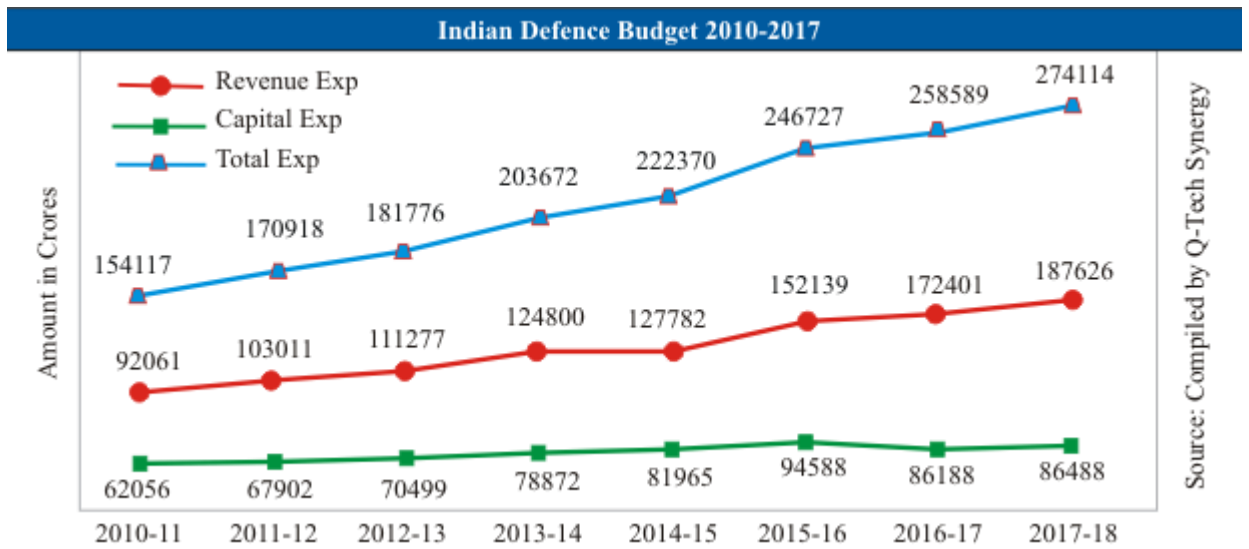
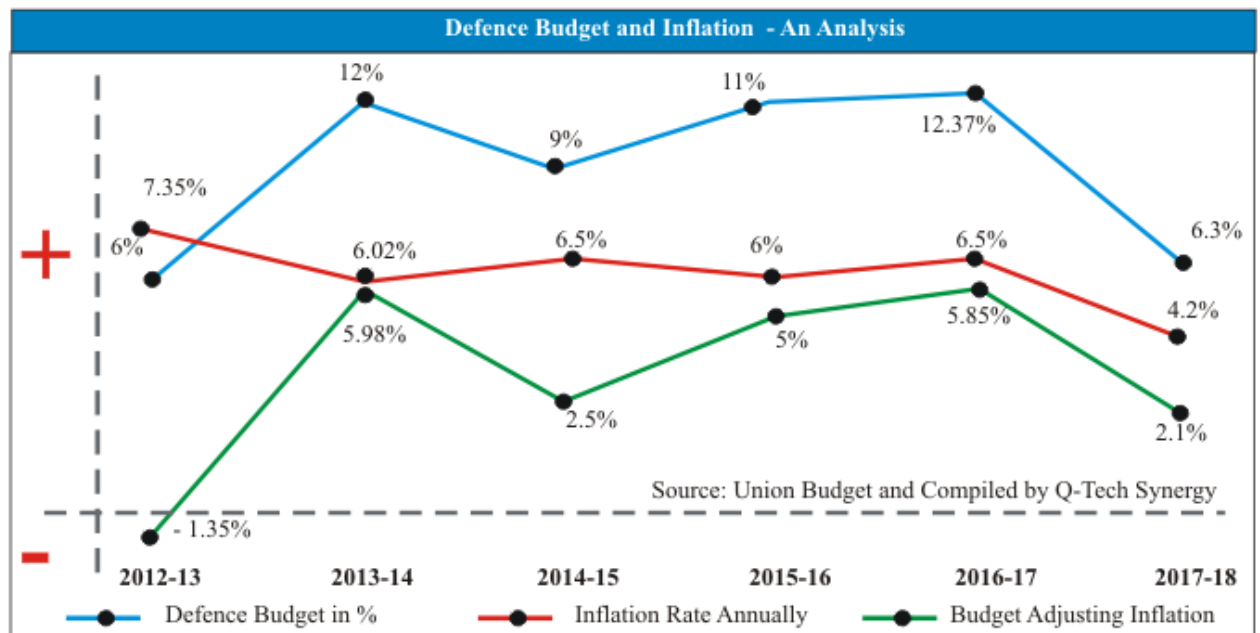


Figure 0-4 STATE OF DEFENCE BUDGET AS SHARE OF CGE

**Analysis of Annual Growth Rate.**  
 The Illustration 4.5 (Synergy, 2019) in the next page shows the Annual Growth Rate in allocation for defence. It may be seen that the Annual Growth Rate in allocation for defence has been inconsistent, fluctuating and declining from year to year.



**Figure 0-5 GROWTH RATE OF DEFENCE BUDGET**



**Figure 0-6 DEFENCE BUDGET ADJUSTING FOR INFLATION**

Capital and Revenue Budget.  
A major concern for the defence planners has been the proportionate allocation of funds

for the defence services under revenue and capital. While the revenue expenditure is for sustaining the existing forces, the capital expenditure indicates the amount spent on development, modernisation and building future capabilities. Any resource constraint would generally impact the capital budget, since revenue budget is mostly committed. Beginning with 1950-51, the revenue to capital ratio was 93:7. The allocations under revenue were highest at 94 per cent during the period from 1952 to 55. Thereafter up to 1986-87, the revenue expenditure was in the range of 88 per cent to 91 per cent of the total defence budget. From 1987-88 onwards, the revenue



allocations have not been higher than 75 per cent of the total. This is primarily due to the three heads for ‘modernisation’ having been introduced under the capital budget in 1987-88. Service wise, the army’s allocations under revenue, for obvious reasons, have been on the higher side. The Graphs (Behera L. K., 2018) show service (www.defproac.com, 2017) wise average proportionate allocations under revenue and capital for the three services: -

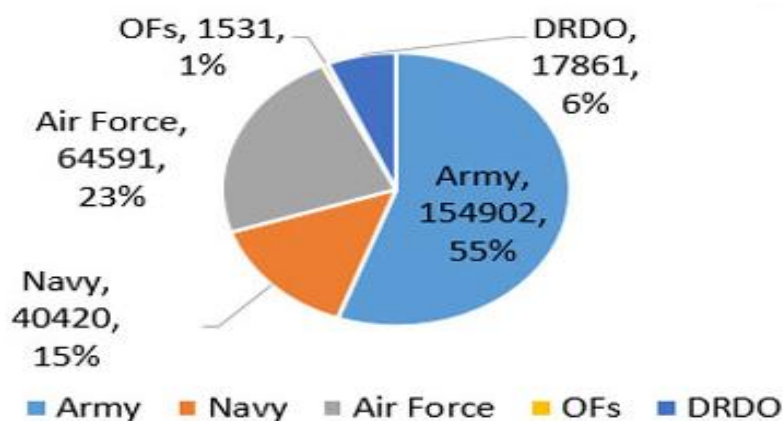
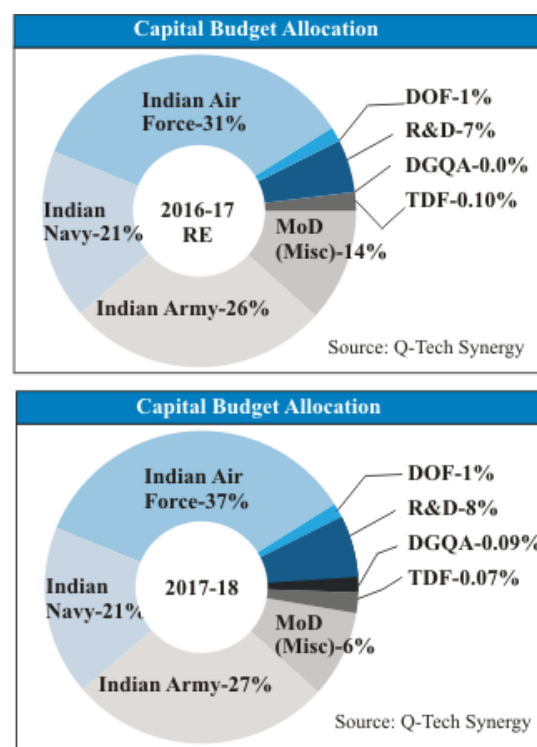


Figure 0-7 SHARE OF THREE SERVICES IN DEFENCE BUDGET 2018 - 19



**Figure 0-8 SERVICEWISE AVERAGE CAPITAL BUDGET ALLOTMENT**

As can be seen, in the initial years the proportion of capital expenditure of the air force has been low. However, allocations in the stores (revenue) budget for the air force during this period were high. While the navy and the air force have now reached an approximate level of 50 per cent each for revenue and capital, the very size of the army dictates more allocations for revenue. This can however, be reduced as and when the army is down sized, once the current operational challenges are overcome.

## *Proportion of Army, Navy and Air Force Expenditures.*

As is well known, in India amongst

the three services army is the predominant service, keeping in mind its roles and size.

Accordingly, the proportion of budgetary allocations has been highest for the army. In 1950-51 when the navy and the air force were beginning to establish themselves, the army's share of the expenditure of the three services was 84 per cent and six and 10 per cent for the navy and the air force respectively. As more allocations began to be made for the navy and the air force, the army's share gradually began to reduce and was 55 per cent in 1958-59, with navy and air force at 13 and 32 per cent respectively. As a consequence of the 1962 war, the expenditure on the army once

again rose, touching 70 per cent in 1962-63. The expenditure on navy and air force at this time was six and 24 per cent respectively. This proportion was more or less maintained up to 1968-69. The period thereafter up to 1980-81 again saw more allocations for the expansion of the navy and the air force. Expenditure for the navy reached 13 per cent in 1977-78 and 35 per cent for the air force in 1979-80. In the 1980s, the average proportion allocations were 59, 14 and 27 per cent for the army, the navy and the air force respectively. Through the 1990s these proportions were more or less maintained with army at 58 per cent, navy at 15 per cent and the air force at 27 per cent. In the

period between 2001 and 2004 the average expenditure on the army, navy and the air force has been 60, 16 and 24 per cent respectively. As the navy and the air force have undertaken major projects for modernisation, the allocations for army, navy and air force in 2004-05 were 49, 18 and 33 per cent respectively. See Illustration No 4.9 and 4.10 (Behera L. , 2018) for the capital and revenue expenditures as percentage of the total allocation to Army, Navy and Air force.

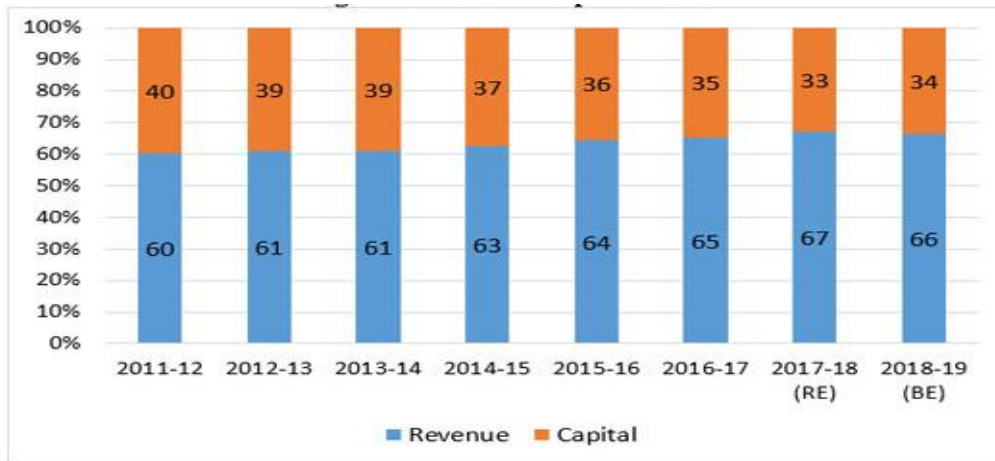


Figure 0-9 PROPORTION OF REVENUE TO CAPITAL

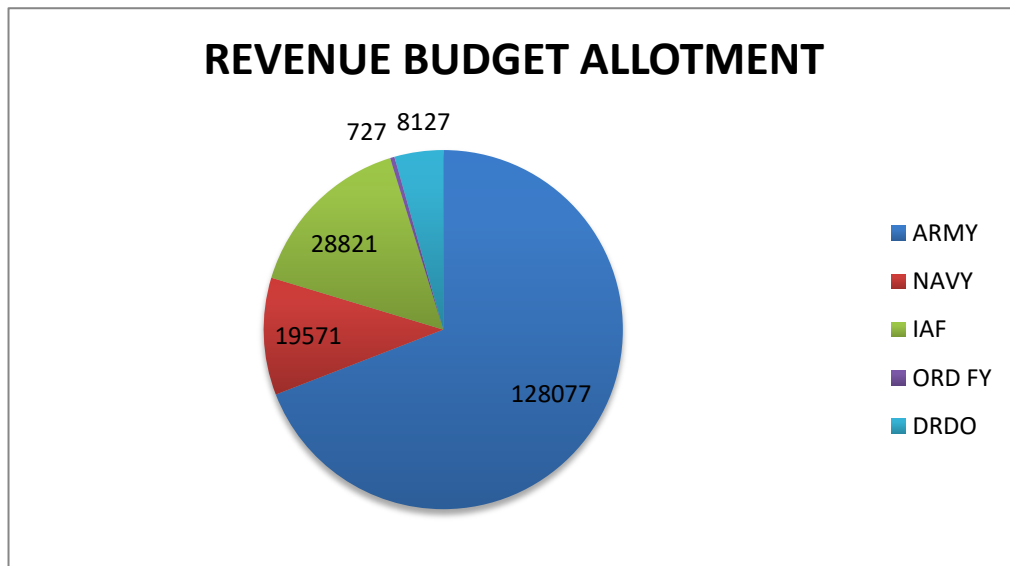


Figure 0-10 ALLOTMENT OF REVENUE BUDGET FOR THE THREE SERVICES

## Pay and Allowances.

This is another area of concern for the defence planners. Together, a mere 7.7 per cent growth in the defence budget, which itself is less than 1.5 per cent of GDP, and a

modernisation budget which is barely enough to meet the existing committed liabilities make a strong case for much higher allocations for defence than is being given now. However, any such demand must take into account the overall resources being made available to the MoD. In 2018-19, the MoD's overall allocation was increased by a whopping Rs 44,511 crore, but less than 10 per cent of that went as an additional amount to fund modernisation. What is significant to note is that this is part of a trend that goes back several years. Why has the situation come to such a pass? The answer lies in the government's inability to control manpower cost which is growing

## at an exponential rate.

As can be seen from the Table, the share of pay and allowances and pension in the MoD allocation has been increasing consistently since the mid-2010s. A large part of this increase has come at the cost of the modernisation budget, which now accounts for less than one-fifth of the MoD's total allocation, down from a high of 26 per cent. This is highly undesirable and needs to be corrected at the earliest for the sake of India's robust defence preparedness. (India's defence budget)

Year	MoD's Total Expenditure (Rs in Crore)	P&A and Pension (Rs in Crore)	P&A and Pension as % of MoD's Total Expenditure	Capital Procurement (Rs in Crore)	Capital Procurement as % of MoD's Total Expenditure
2011-12	213673	92971	44	56282	26
2012-13	230642	106366	46	58769	25
2013-14	254133	114725	45	66850	26
2014-15	309251	138480	45	66152	21
2015-16	293920	143089	49	62236	21
2016-17	351550	185084	53	69280	20
2017-18	374004	204874	55	69401	19
2018-19(RE)	404365	224522	56	74224	18

Table 3 PAY AND ALLOWANCES STATE

**Expenditure on Modernisation.**  
 Table summarizes the overall modernisation budget of the three forces. As can be seen, the overall allocation for 2018-19 has not only grown (although marginally)



over the previous outlays but also the latter is almost fully utilized at the revised estimate stage. It is, however, not yet clear if the near full utilization of the previous allocation is due to the efficiency of the procurement machinery or because the allocation was barely enough to meet all the ‘committed liabilities’. It is true that, of late, because of the resource crunch, the total allocation under the modernisation budget has been consistently less than even the projected committed liabilities. Given this, a mere 5 to 7 per cent growth in the latest modernisation budget is unlikely to free much resources for signing any new big contracts. Refer Table below for details. [L  
SEP]

Armed Force	2017-18 (BE) (Rs in Crores)	2017-18 (RE) (Rs in Crores)	2018-19 (RE) (Rs in Crores)	% Increase in 2018-19 (BE) over 2017-18 (BE)
Army*	20148	20177	21211	5.3
Navy	18749	18338	19927	6.3
Air Force	30885	30885	33085	7.1
Total	69783	69401	74224	6.4

Table 4 MODERNISATION BUDGET FOR THE ARMED FORCES

Modernisation Head	2017-18 (BE) (Rs in Crore)	2017-18 (RE) (Rs in Crore)	2018-19 (BE) (Rs in Crore)	% Increase in 2018-19 (BE) over 2017-18 (BE)
Aircraft & Aero- Engine	1466	1726	1813	24
H&MV	3194	1849	1972	-38
Other Equipment	15112	16386	17198	14
Rolling Stock	265	105	128	-52

Table 5 MODERNISATION BUDGET ARMY

Modernisation Head	2017-18 (BE) (Rs in Crore)	2017-18 (RE) (Rs in Crore)	2018-19 (BE) (Rs in Crore)	% Increase in 2018-19 (BE) over 2017-18 (BE)
Aircraft & Aero-Engine	3364	3047	1900	-44
H & MV	31	23	20	-35
Other Equipment	2299	3299	4863	112
Joint Staff	744	744	844	13
Naval Fleet	11023	9223	10300	-7
Naval Dockyard	1288	2002	2000	55
Total	18749	18338	19927	6.3

Table 6 MODERNISATION BUDGET NAVY

Modernisation Head	2017-18 (BE) (Rs in Crore)	2017-18 (RE) (Rs in Crore)	2018-19 (BE) (Rs in Crore)	% Increase in 2018-19 (BE) over 2017-18 (BE)
Aircraft & Aero-Engine	19278	24578	24709	28
H&MV	152	152	202	33
Other Equipment	11456	6155	8174	-29
Total	30885	30885	33085	7.1

Table 7 MODERNISATION BUDGET INDIAN AIR FORCE

## Summary of Validation. The following points emerge:-

The percentage of revenue of the total expenditure is highest in case of Army, being manpower intensive.

Through various optimization measures and cutting of costs over the last decade or so, this percentage was brought down. However, after implementation of the Seventh Pay Commission recommendations the manpower and pension costs have gone up.

The balance available for capital expenditure including modernization with the three Services is around 24%, 59% and 61% respectively.

## “How Much Is Enough?”

**Projections and Allocations.** Being a classified issue, the study on the subject and its validation is based on limited information available in the media. In FY 2016-17, the Services projected a requirement of Rs. 1,03,150.70 Crore and the Minister of Finance made a provision of Rs. 77,000.00 Crores. Given the mandatory percentage of revenue expenditure of all three services for current force structure and their maintenance as covered in the preceding paragraph, the Budget Estimates for the Defence Services at Rs 77,000 Crore, left only about Rs 1,000 Crore for new schemes/acquisitions.

**Impact on Modernisation**<sup>[SEP]</sup> The gap between services demand and what is actually made available is invariably large. The shortfall between the requirement and the allocation is 25.35 per cent. The Indian Army announced that it was cutting down its projected requirement of 800,000 assault rifles to 250,000 rifles in view of the severe financial crunch. The Army said it will reprioritise its modernisation expenditures in view of the very limited funds allocated. In February this year, in his statement to the Parliamentary Standing Committee on Defence, the former Vice Chief of the Army Staff (VCOAS), (Gurung, 2018) stated that the budgetary allocation for the financial year 2018-2019 had ‘dashed the hopes’ of the Indian Army for any meaningful modernisation. Poor budgetary allocation has been the major problem for the modernisation of the Indian Army over the last decade. In October 2017, the Chief of the Army Staff indicated the scrapping of a major modernisation programme, the Battlefield Management System (BMS), in favour of more immediate and pressing routine requirements. That was an indication of how precarious the Army’s position is with respect to its equipment and weapons. The statement by the VCOAS to the Standing Committee was a clear indication of this situation that 68 per cent of its equipment is vintage, only 24 per cent is of current technology and eight per cent is fit enough to be displayed as museum pieces. So much for the Indian Army’s combat capability; the Indian Air Force and the Indian Navy would fare no better. There is no doubt that when it comes to a crunch, the Indian military will fight with whatever it has. It is also true that in times of crisis, the government will rush to friendly countries such as Israel, Sweden, France and Russia to procure the required ammunition and equipment on a war footing. This happened during the war in Kargil in 1999, and even earlier in 1987. But is this the way to ensure that the military is well equipped, particularly for a nation that aspires to be a great power?

## Comparative Defence Expenditure.

The Comparative “GDP & Defence Expenditure” of various relevant countries is at Table (SIPRI, 2018), (CIA, 2018) below.

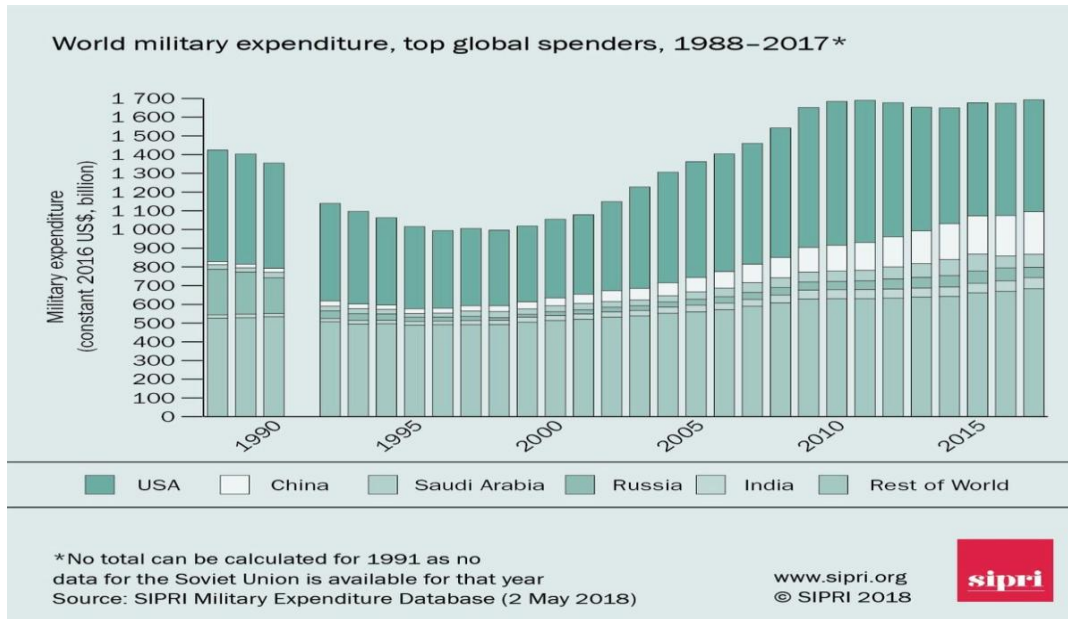
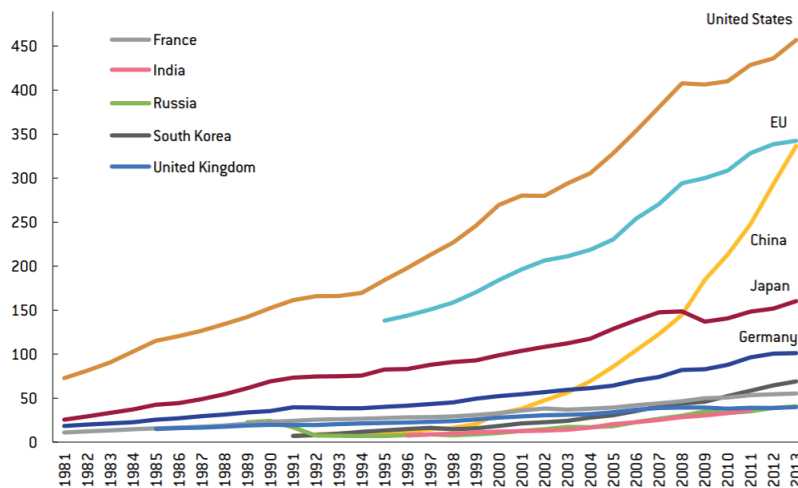


Figure 0-11 WORLD MILITARY EXPENDITURE



Source: Bruegel based on NSF (2016). PPP = purchasing power parity. NOTES: Foreign currencies are converted to dollars through PPPs. Some country data are estimated. Countries are grouped according to the regions described by The World Factbook, [www.cia.gov/library/publications/the-world-factbook/](http://www.cia.gov/library/publications/the-world-factbook/).

Figure 0-12 COMPARATIVE BUDGET BASED ON PURCHASING POWER PARITY

# Pakistan.

Pakistan's defence expenditure continues to be high, as shown below, well over a third of its budget devoted year after year to the acquisition of arms. The Pakistan government has set the fiscal 2018-19 defence budget at Rs1.1 trillion (US\$9.5 Bn) from a revised budget estimate of Rs 999bn in the previous year, 19.5pc of the total budgeted outlay, for the current fiscal year.

The increase in the defence budget for 2018-19 is the highest since the PML-N government took over in 2013. The hike comes at a time when the United States has suspended its military assistance to Pakistan amounting to \$2 billion.

Pakistan has reduced its defence capital expenditure following a shift from Western sources of arms to China. In fact, Islamabad has become Beijing's top arms importer during the last five years. According to a recent Stockholm International Peace Research Institute (SIPRI) report, Pakistan has spent less on weapons acquisition since 2013 while increasing big-ticket weapons buys, thanks to lower-priced military hardware from China.

Islamabad has ordered submarines from China last year and is involved in a venture to upgrade its JF-17 Thunder fighter jet to match with the latest iteration of the US-made F-16 jet, an aircraft whose sale to Pakistan was blocked by Washington on grounds that Islamabad supports terrorism.

Pakistan is looking to become an arms exporter and has met with some success with its Super Mushak basic trainer aircraft and exports of the JF-17 to Myanmar and Nigeria.

However, the allocation does not give the complete picture of the defence budget, as it does not include Rs260bn for pension of retired soldiers and the allocation for major weapon procurement. While there is no mention of expenditure incurred on the country's nuclear and missile programme, major planned military hardware acquisitions are also not part of the Rs1.1tr defence allocation. The defence budget details show that maximum growth (31pc) has been recorded in the employees-related expenses over the original allocation for the outgoing year and 16.25pc when compared with the revised numbers. This head covers the salaries and allowances paid to troops in uniform and civilian employees.

The operating expense, which covers transport, POL, ration, medical treatment, training etc, has grown by 12.4pc from the one allocated in the current financial year.

A 16pc increase has been proposed for physical assets that provides for local purchase and import of arms and ammunition and related procurements. The increase is 12.8pc over the revised figures for

2017-18.

Civil works that include funds marked for maintenance of existing infrastructure and construction of new buildings get a 10.1 pc increase over the original allocation, or six per cent when compared with the revised figure.



Pakistan Defence Expenditure (NEWS, 2018)

## China.

As per the Chinese official data, its defence expenditure has been rising at an annual average rate of 15.08% since 1989. The actual growth is likely to be higher. There is an urgency about better defence preparedness and acquisition of advanced military technology in the post Gulf-War scenario. The Chinese budget, if calculated on the lines of the Indian or NATO budgets could undoubtedly be several times higher than the official statistics put out by Beijing. China's defence budget for 2018 is 1.9 per cent of its GDP but we must remember that its economy is five times bigger than ours. The real comparison is that China will spend \$278 billion (as calculated by SIPRI) on its defence while India, with security commitments as much as that of China, will spend only \$64 billion. Even if we take China's official figure of \$175 billion, it is way above India's effective expenditure of \$44 billion.

A comparison of India's defence budget with that of China shows the expanding gap between the two sides. There is also the factor of China's domestic defence industry that is growing rapidly in capability and scale to support its military modernisation effort. In India's case, indigenous capability continues to be stagnant, unable to support its modernisation efforts effectively. This is reflected in the

huge differentials in the import and export performances in armaments of the two nations. China has invested heavily in its technology and product related developments, with inter-linkages in to the civilian sectors more effectively. The best example is the coupling of its civil aviation R&D with that of military aviation. More importantly, China is quite aggressive in exporting its defence products which were mostly small arms in the past, but has now expanded aggressively with aircraft, ships, weapons and UAVs. Every major defence import of China has subsequently resulted in a significant development of its indigenous capability. The best example is that of the Su-27 which was contracted by China almost at the same time as India's contract for the Su-30MKI. However, China has rapidly moved onto its indigenous (reverse engineered) J-11 series production, while India's licenced-production run of Su-30MKI will come to an end in 2020. Export orientation and export performance have a major impact on the country's defence modernisation.

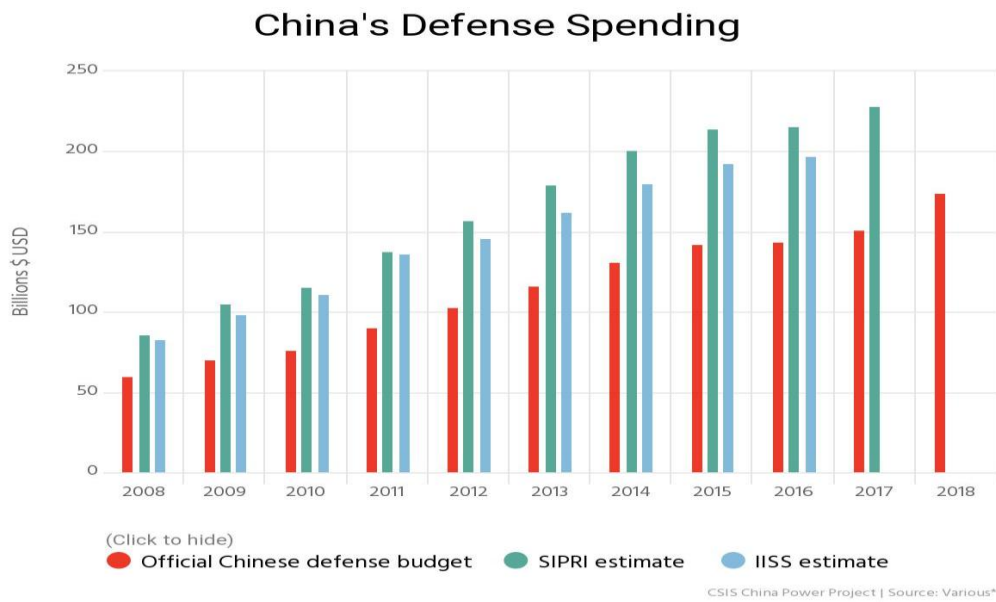
### **Inconsistencies in tracking Chinese military spending?**

There is no universally accepted standard for reporting military spending. Although reporting mechanisms for military expenditure exist through the United Nations and other international organizations, the reporting of military expenditure data is voluntary. Since the decision to release military expenditures is left to individual countries,<sup>1</sup> states report expenditures with varying degrees of detail. Some countries provide detailed breakdowns of their defence budgets, while others may report only one line in their budgetary reporting. As a result, estimating Chinese defence spending remains partially contingent upon Beijing's willingness to report its defence outlays.

On March 5<sup>th</sup>, 2018, the Ministry of Finance proposed a budget increase of 8.1 per cent from the previous year, pegging China's 2018 budget at 1.107 trillion yuan (\$174.6 billion).<sup>2</sup> The 2018 figure is in line with a recent trend that has seen yearly increases in China's defence spending fall to single digits. Nonetheless, the 8.1 per cent increase in 2018 does represent a small bump from the last two years when the defence budget grew by 7.6 per cent in 2016 and 7 per cent in 2017.

The actual amount China spends on its military is widely debated. Official figures released by the Chinese government peg the country's 2017 defence budget at 1.044 trillion yuan (\$151.4 billion) and 2016 defence budget at 955 billion yuan (\$143.7 billion). The Stockholm International Peace Research Institute (SIPRI) estimates the overall 2017 figure at \$228 billion and the 2016 estimate at \$216 billion. Estimates from other organizations vary. The U.S. Department of Defence (DOD), for instance, places the 2016 defence budget at more than \$180 billion, and the International Institute for Strategic Studies (IISS) puts the number at \$197 billion.





## Defence Expenditure as Percentage of Central Government Expenditure.

The predominant role of defence forces in Pakistan emerges quite clearly in this trend with the defence expenditure being more than one third (averaging 35%) of Pakistan's CGE. In case of India, the same has been in the range of 13 to 15%.

## The Requirement.

In view of the foregoing analysis, the threats to India's national security are compelling enough at least to match the defence spending of our adversaries, i.e., five per cent and above of GDP or at least 35% of CGE at an average as against current allocation of 2.54% of GDP and approximately 16.4% of CGE.

## Sustainability

A sustained defence effort of such a high magnitude, how ever, will certainly militate against long-term growth and development, and national security. Hence, there is a need to balance out the defence and development and arrive at an irreducible minimum allocation of defence budget.

# Affordability

According to trends in demographic growth and economic productivity increases, India is set to become the third most powerful country economically by 2030. It's rising foreign exchange reserve has enabled it to become a donor country to the International Monetary Fund from the status of a borrower. The economic leapfrogging India has done is directly attributable to the reforms and the removal of official fetters in business and industry started in 1992. The government's role in the economic life of the country being reduced to mainly oversight function will free up an over growing quantum of financial and other resources for developments (like the upliftment of rural India and the backward sections of society) and for national security. Hence, higher allocations for credible defence is highly affordable. (Pandey, 2002-03)

## Goal of Governments.

The primary goal of Governments, the world over is the betterment of its people. This especially is true for India, taking into consideration, the growing population of the country and the large proportion of its people who live below the poverty line. It is in this context, that expenditure on defence of the country, to have credible defence capabilities is maintained affordably at a realistic level. (PC, 1979)

## Protection of Society from External Aggression

There are many theories perpetuated by economic pundits on defence spending and development, which contradict each other. Adam Smith was one of the first economists to consider the implication of defence expenditure for a society. He considered protection of society from external aggression as the first duty of the state and justified the public expenditure on this public good despite the known faith in 'Laissez Faire' Fiacardo, Jean Baptise and Hirst all examined defence expenditure (Baptiste). Hirst, then editor of the Economist (London) in an address to the Manchester Statistical Society, in 1911, enunciated three principles of Defence Expenditure. His first was that, 'in the economic sense all expenses on armies and navies are wasteful'. This was qualified by his second principle that, 'Until universal and perpetual peace has been established some expenditure on their services is absolutely necessary'. His third principle is 'our expenditure must be sufficient to maintain the empire and give us ample security against invasion'.

# Effect of Military Burden on Growth.

In present time, the relationship between defence and development has been examined by Benoit's seminal study in 1978. Contrary to expectation he found that defence spending has a positive effect on the rate of growth of the national product in lesser-developed countries. According to him the defence programme of most countries make a tangible contribution by feeding, clothing and housing a number of people, by providing education and medical care as well as vocational and technical training in scientific and technical specialisations. Essentially this implies that for a range of countries the parameters showing the effect of Military burden on growth may be negative, yet for another range it might become positive. It is not easy to identify theoretically which type of country falls within which category. It is interesting to note that in the 1980s when the Indian Defence Expenditure increased to its highest level of 4 per cent of the GDP, the country also recorded the highest economic growth.

## Economic Miracle.

Continuing increase in defence expenditure in East Asian region has not had any adverse impact on the economic growth of these countries. In spite of military spending being around 6 per cent of GDP, the annual rate of economic growth of China, Singapore, Thailand and Malaysia have been of the order of 8-9 per cent. Both South Korea and France are perhaps two best examples of high defence spending along with rapid economic growth. France, whose defence spending in post World War II years has been similar to that of the United Kingdom, achieved what has been hailed as an "economic miracle" during the same period compared to British economy.

**Contradictions in Mid-Survey of Indian Economy.** In a mid-survey of Indian economy in September 1995, the World Bank did not consider that "defence expenditure, per se, was a constraint on India's development". The breaking mechanism in our economy, identified by the World Bank, was our "poor productivity, poor quality, subsidies and pricing policy." Resources freed by cuts in our defence expenditure have not been put into Education, Health or Social sector but diverted to Loan-Bazaars, Subsidies, Procurement Prices and Cost leakages.

## Liberate from Guns versus Butter

In India, the general mind-set of public, which is always inclined to view defence expenditure and economic growth as the two opposite ends of the possible option spectrum. Conventionally held "guns

versus butter” theory finds sustenance in this mind-set. But it must be understood by our leaders and public at large, can India given its present situation, relegate defence expenditure to a lower rung without exposing herself to the danger of dismemberment. Conversely, could Japan have reached the present ascendant position in global economic order without the security umbrella of the USA, which allowed her to concentrate on economic development. The emergence of Bangladesh as the new hub of international Islamist terrorism, the political uncertainty in Nepal and the spread of Maoist militancy across several states, have added new challenges to the traditional national security threats faced by India. Multifaceted, tangible and complex security environment involving external threat, internal dissensions, transnational terrorism, coercive diplomacy of strong powers etc. have perforce to rely on credible defence as the final guarantor to survival; even if it means relative relegation of other sectors in the immediate context. It must be understood that If there is no improvement in the national security environment, economic investment will not flow to India in the quantum the nation needs to lift its people above the poverty line. The defence budget has, in fact, a far greater impact than is generally assumed.

## Increase Our Defence Preparedness.

In view of the foregoing analysis, we must increase our defence preparedness in defence and offence. This will require additional outlays on defence as established above, which by any criteria, has been low since independence. The history is replete with instances when increased defence expenditure has co-existed with impressive economic growth.

**Defence Economics.** Defence economics is about allocating resources in terms of ‘choosing right doctrines, equipment and techniques, and so on to get the most out of available resources’. It is the application of economic principles and tools to all Defence related issues like, economics of war, disarmament and peace. After decades of planning and fighting many wars and near constant insurgencies, the continuing perception of Defence planning in India remains a book-keeping process of utilizing money and resources merely to meet the demands of the services and ministry departments.

**Defence Decision Making.** Strategy, programmes and budget are all aspects of the same basic decisions. Planning of Indian military procurement commits a significant portion of our nation’s wealth, and determines our ability to defend our principles and ourselves over the long terms. In India, the Defence budgeting system is incremental and input-based. Yearly allocation of funds is made without reference to the Defence plans. In effect, the budget does not get linked to any established goals or outputs. Resource planning beyond one year period is not carried out. Some have even called it an archaic system. The five-year Defence plans have lost their utility for resource planning. The

study has laid down a roadmap for future work for risk mitigation to bridge the strategic gap including evaluation and forecasting of Defence budget, thereby establishing a link between Defence budgets and fighting capability using operational research techniques.

## Resource Planning, allocation and expenditure.

Long-term Defence Planning and management have become increasingly complex tasks in the modern world. It is obvious that Defence planning needs close attention if Defence spending has to be optimized. The bulk of public debate on Defence expenditure in India has been centred on whether we are spending enough, too much, or too little in relation to our needs and resources. But rarely has a discussion taken place, at least in the public domain, on whether our system of budgeting (and accounting) is conducive to the two central goals critical to creating and sustaining credible and affordable Defence:

Cost-effective decision making for allocating and managing the resources.

Resilience and flexibility to deal with the changes in the security environment.

## Defence Needs, Allocation, Distribution and Expenditure

**Allocation.** For national security of country there is an absolute requirement of irreducible minimum Defence expenditure. If a country has low GDP and low rate of growth, percentage of GDP spent on Defence will be high and vice versa. If a country has very high GDP, then same absolute minimum amount will be a low share of GDP. Also Defence allotment will be based on threats and capability development and not only on GDP growth as shown in the above results. It is approximately 14 % to 15 %. We are presently maintaining revenue: capital ratio of 65: 35. We should reduce our revenue expenditure by restructuring, right sizing, use of technology, enhancing skill by training and thereby increasing capital budget which can be used for force development and modernization.

**Analysis.** Analysing GDP growth even if we grow between 6 % to 8%, we may allot 2.5% to 2.75% of GDP as Defence budget .

## Unpredictability of price system,

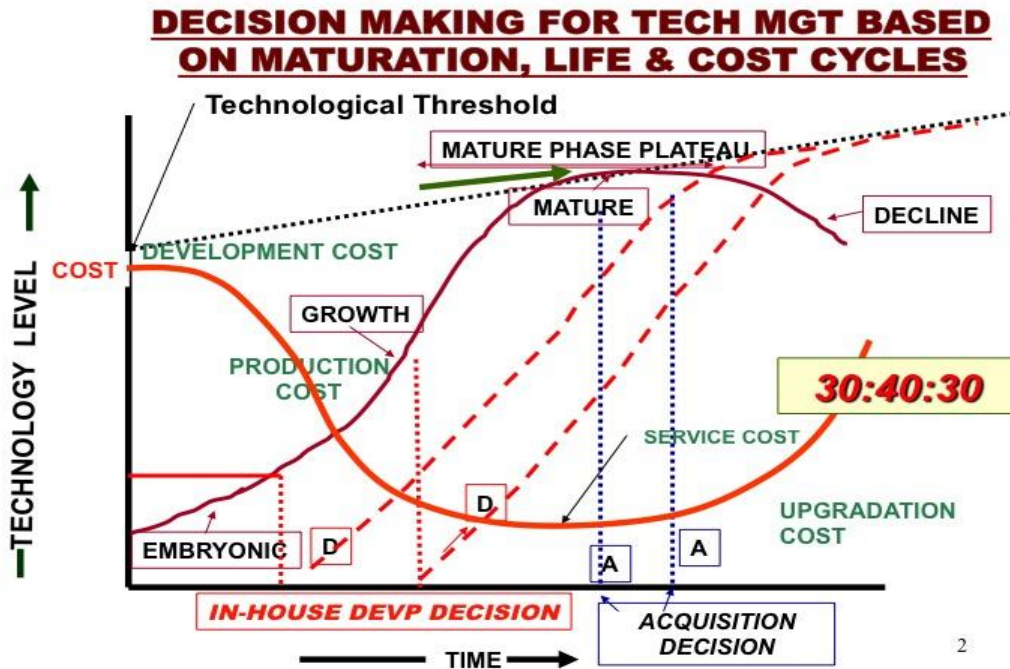
# foreign exchange rates and uneconomic operation of DGOF productions units, Defence PSU's and DRDO

**Indian Army.** Indigenous production of “Arjun” the Main Battle Tank (MBT) project by DRDO was sanctioned in 1974 at the cost of Rs 15.50 crores, which zoomed up to Rs 300 crores by 1995. The present cost of one ‘Arjun’ tank is Rs 16.80 crores, while it is around Rs 12 crores for the T-90s which is far superior tank in the world. Army made it clear that it did not want more than 124 Arjun tanks because Army’s requirement for MBTs to replace the older T-55 and T-72 tanks will be met through the progressive induction of Russian Origin T-90s tanks. Army now is looking 20 years ahead and wants DRDO to come up with next –generation MBT, something better without time and cost overrun. As per the DRDO, the main reason for delay is frequently changing of “qualitative requirement” by the Army. There is a requirement for better synergy and integration with DRDO and military users for indigenous development of better weapon systems at lower cost and in time. Technology management is very important for fructification of these projects.

**Indian Air Force.** The long delayed indigenous “Tejas”, Light Combat Aircraft (LCA) project was initiated in 1983 at a cost of Rs 560 crores to replace the ageing MiG- 21s in IAF combat fleet. LCA obtained final operational clearance (FOC), IAF to get the first delivery. Presently IAF is grappling with a depleting number of fighter squadrons, down to just 32 from a sanctioned strength of 39.5 (each with 18 jets) squadrons.

## Technology Management.

We must use Delphi Techniques for management of technology (MOT) and technology forecasting. A Nations Economic & Military power and its competitive position in World Affairs are benchmarked against its ability to develop and use Technology. Technology and Wealth creation are strongly linked as shown in figure below (College of Defence Management, 2009):



**OFB & Defence PSUs.** ‘The key to national prosperity in the modern age, apart from the spirit of the people, lies in the effective combination of three factors: technology, raw materials and capital, of which the first is perhaps the most important, since the creation and adoption of new scientific techniques can in fact, make up for the deficiency in natural resources and reduce the demands of capital.’ The performance of Ordnance Factories and Defence Public Sector Undertakings is not satisfactory. They have to be made more competitive and responsive.

## Defence Cover has Gaping Holes

As per the Comptroller and Auditor General (CAG) report tabled in Parliament on 24 October 2008, it was brought out that the Defence Cover has gaping holes. The CAG blasted the government for lapses with respect to two critical Defence areas i.e. country’s air Defence coverage of ADGES (Air Defence Ground Environment System) in IAF and fast dwindling strength of its underwater combat fleet, with projections of operational availability, showing Navy will be left with only eight to nine out of its present 16 diesel-electric submarines by 2012. India at present has only 10 Russian Kilo-class, four German HDW and two virtually obsolete Foxtrot submarines, none of them a nuclear-powered one, even less than Pakistan’s dozen or so submarines, which include three spanking new French Agosta-90B vessels. Compare to China’s 57 attack submarines, a dozen of them nuclear ones, this represent a stark asymmetry. CAG holds the operational availability of Indian submarines is as low as 48% due to an aging fleet and prolonged refit schedules.

# Strategic Economic Gap

Using statistical data we can forecast the likely financial gap and may take proactive actions for the same. While comparing the threat matrix vis a vis our adversaries.

**Findings of Strategic Gap.** This gap of desired and acceptable military capability is analysed and converted into risks. The risk mitigation measures recommended for minimum credible Defence. This will lead to elasticity of Defence expenditure ( $\alpha$ ). There is a large strategic economic gap with respect to the Defence budget of China and India. This gap can be seen from the graph given below :

## Geo-strategic Threat Matrix

The start point for laying down the transformation philosophy must be a critical look at the threats envisaged for the short, mid and long term to our national security. The conventional threat against our two nuclear-armed neighbours will persist, and therefore the core structure, equipment and training of the Defence forces will continue to have the basic focus on this threat. The matrix is also an essential tool for construction the force structuring road map. However, “this threat prognosis is based on our current appreciation of future trends in the regional geo-strategic domain. It will need a re-look from time to time.

THREAT	PAKISTAN	CHINA	OTHER NEIGHBOURS	NON STATE
Short Term: 2025	High	Low	Low	Mid range
Mid Term: 2030	High – Mid Range	Low – Mid Range	Low – Mid range	Mid Range - High
Long Term: 2035	Mid Range – High	Mid Range – High	Mid Range	High

Table 8 GEO STRATEGIC THREAT MATRIX



It is now perhaps the stage India has arrived where any further reduction in our defence allocation, would cause irreparable damages to our defence credibility. India must become sensitive to hard realities which threaten our basic existence as Nation State. Even from the fatalistic viewpoint, “God helps those, who help themselves”, India must react in time.

## CHAPTER 5 : CONCLUSION

“Armies can signify but little abroad unless there be counselled and wise management at home.”

- Field Marshal Montgomery

# Findings and Analysis of Questionnaire with respect to Defence Planning

**Findings.** The questionnaire and summary of interview is attached as per Appendix ‘A’ and ‘B’ respectively to this dissertation. As per the responses by the environment to the questionnaire the Study established that since the Government does not articulate the National Security Objectives, National Security Strategy and Defence Planning Guidelines; therefore, the Defence planning presently is based on the Raksha Mantri’s Operational Directive only. In view of the above, the existing Defence Acquisition Council (DAC) may be restructured as Defence Acquisition and Planning Council. The average allocation of resources for the Defence budget should preferably be 2.75% of our GDP. The capital to revenue ration should be 80%: 20%.

## Inadequacies in Defence and in Perspective Planning.

The major causative factors of slippages in force development and modernization that result in dissonance and ambiguity in the existing Defence planning process are listed below:-

- Absence of specific national security goals, objectives and Defence planning guidelines.
- Rapid changes in international world order. [L] [SEP]
- Severe resource crunch with respect to men, money, materials, time, space, [L] [SEP] information and technology.
- National plan does not include the Defence plan. [L] [SEP]
- No fixed allocation for Defence out of GDP. [L] [SEP]
- Unpredictability of price system and foreign exchange rates. [L] [SEP]
- Lack of adequate integration and synergy amongst services. [L] [SEP]
- Delayed approval of projects and Defence plans by the government. [L] [SEP]
- Cumbersome acquisition and procurement procedures for [L] [SEP] modernization.

Lack of suitable structures required for Defence planning in the organization. [L] [SEP]

Lack of strategic thinking and commitment with the higher leadership and in [L] [SEP] higher Defence Organization (HDO). [L] [SEP]

Uneconomic operation of DGOF production units, Defence PSUs and DRDO laboratories.

## Findings and Proving The Hypothesis

The current processes and procedures of Defence Planning with respect to Force Development and Modernization are inadequate and faulty. The inadequacies and problems of higher Defence control organization in India are:-

No single point of military advice. [L] [SEP]

Interpretation of civil authority. [L] [SEP]

Service HQ not integrated with MoD. [L] [SEP]

Dual responsibility of Chairman COSC. [L] [SEP]

Limited and short tenure of Chairman COSC. [L] [SEP]

Lack of synergy and Jointmanship. [L] [SEP]

Inter service contest for share of Budget. [L] [SEP]

Debate on Strategic air power and nuclear forces. [L] [SEP]

Polity neither involved nor has comprehension of Defence matters. [L] [SEP]

Change possible only by political intervention. [L] [SEP]

### **Slippages in force development and modernization.**

The Cabinet Committee on Security (CCS) takes decisions. It is chaired by the PM, and includes the Cabinet Ministers of Defence, Home, External Affairs, and Finance. Other Cabinet Ministers attend as special invitees whenever required. The major changes which have taken place include establishment of National Security Council (NSC), Integrated Defence Staff Headquarters (HQ IDS) for integration between service HQ and MoD, establishment of Defence Acquisition Council (DAC), Integrated Commands for Andaman and Nicobar Islands and for Strategic Forces. In addition to the members of CCS, the NSC also includes the National Security Advisor (NSA) and Deputy Chairman of the Planning Commission as its members. NSC comprises five structures – The council, the NSA, The Strategic Policy Group (SPG), the National Security Advisory Board (NSAB), and the National Security Council Secretariat (NSCS). The Cabinet headed by the PM carries the responsibility for national security through the Cabinet Committee on Political Affairs (CCPA). The civil servants by

Cabinet Secretariat replaced the military staffs. This is a serious lacuna whereby military advice is not available to the CCPA. The Indian Government constituted national Security Council (NSC) in April 1999 with the PM as its Chairman. Service HQ has recently been made as integrated HQ of MoD. The Raksha Mantri (RM) heads the HDO. MoD under him comprises of four departments, which includes the Department of Defence (DOD), Department of Defence Research and Development (DDR&D), Department of Defence Production and Supply (DDP&S) and Department of Defence Finance (DDF). The members include the Defence Secretary Scientific Advisor to RM, the three chiefs and CISC.

**Recommended Changes in Current System to propose an ideal model and road map for force development and modernization in the most cost effective manner.**

The major drawbacks in our HDCO and certain recommendations for improvement are summarized as under.

**Politico-Civil Control.** Though an accepted and correct form in a democracy, yet, this control is not executed in the desired manner with civil servants ensuring bureaucratic delays wherever possible.

**Poor Defence – Foreign Service Coordination.** Our present organization does not adequately provide for the coordination of the nation Defence foreign policies.

**Lack of Policy Directive.** Our HDCO lacks a clear cut policy directive<sup>[1]</sup> from the cabinet or a comprehensive statement on Defence policy available to it. Tends to discuss Defence policy only in crisis situations, and the process is confined to knee jerk situations.

**Ministry of Defence (MoD).** Over the years, the MoD has increased its role and authority, simultaneously reducing that of the service HQ; and the civil bureaucracy affects the decision making process.

**Structure Reforms.** The CDS (when appointed) and the three chiefs should be made part of CCS, and should attend all its meetings. They should be part of NSC and three vice-chiefs should be part of NSAB.

**Importance to Tri-Service Appointments.** The devolution of authority of the HQ IDS and tri-service appointments in the MoD as well as increased credit to joint service tenure structures. from CCPA

**Intelligence.** There is need for greater appreciation of the role intelligence. In the absence of overall, operational national security frame each intelligence agency is different in preserving its own turf.

**Inadequate Inter-service Coordination.** The need to integrate similar weapon systems,

training, communications, intelligence, logistics etc among the three services is sine-quo-non.

**Financial Control.** The Financial Advisor functions more as a financial controller than advisor, and there is no delegation of financial authority. Now new Defence Procurement Procedure (DPP) -2008 is likely to address certain anomalies for better and faster procurement procedures.

**Need for Integrated Commands.** Success in a war would be measured by the combined outcome of the Army, Air Force and Navy. Therefore jointmanship and integration is essential.

**Lack of Integration between the Services and Para Military Forces (PMF).** The optimum potential of the PMF has not been harnessed to enhance the overall national Defence effort for want of proper command and control arrangements and unwarranted sense of insecurity in the Home Ministry vis-à-vis the Army.

**Functions of Management of Military Security.** Divided into three sub categories as under.

Management of Defence [L]  
[SEP]

Administration of Defence. [L]  
[SEP]

Management of war. [L]  
[SEP]

**Credible Defence Capabilities.** Since independence, we have taken an accountant's approach to National and Military security. Defence policy and expenditure have been ad hoc resulting in knee-jerk reactions to threats in the terminal stages. It is essential that we are clear in our mind with correct assessment of our national security, the profile of threats and the defence strategy, we need to deter these threats with credible defence capabilities.

**Defence expenditure Versus Growth .** The demand of security and the economic needs of countries have always competed for primacy. The debate on guns and butter has had long history. The question to be resolved was not so much of a choice between one or the other but finding the right mix of both. Social and economic growth are the main reasons for the existence of nation states and neither can be had without security. Many empirical studies have finally concluded that "the evidence does not indicate that defence spending has had any adverse effects on growth in developing nations". In fact there is a strong evidence to suggest that defence spending encouraged the growth of the people in less developed countries.

**Modernisation and expansion of Indian Armed Forces.** The reduced defence spending by India has

its affects on its force structure, training, modernisation and re-equipment. All this, must be viewed in the light of, continued increase of military expenditure by our potential adversaries i.e. China and Pakistan. The Indian Ocean region has also gained importance with its enormous potential for exploitation of mineral sources. India being the largest country on the Indian Ocean Littorals has to safeguard her interests in this region.

**Affordable Defence Expenditure Apparatus.** The nuclearisation of India and the subcontinent has imposed tremendous responsibilities on India. This reality has to be incorporated into all our calculations of National Security Plans. The ultimate aim of achieving a credible defence with the existing ad hoc defence outlays or with the least cost is not desirable for a country as large as India. The ways and means would have to be found out to devise an affordable defence expenditure apparatus for the nation.

**India: Power of the Future.** An important aspect of the problem of resources for defence is the linkage between economic growth and the military strength. Sustained high economic growth can have beneficial strategic consequences. India will have to sustain higher rates of growth to impart credibility to its politico-strategic profile not only vis-à-vis its adversaries, but also for giving it the ability to alter the strategic balance in Asia. Citing the context of India-Pakistan strategic rivalry, Sanjaya Baru (Baru S. , 2012)states that the gap between Indian and Pakistani economic strengths can lead to a shift in balance of power in the region. He observes: “On present trends, India is likely to become the clearly pre- eminent regional power. Indeed, as the difference in economic growth rates becomes clearer, the trends in India’s favour will affect perceptions: India will be seen as the power of the future, and that will in turn multiply its power in present.”

**Liberate from Affordability factor.** For achieving credibility to its defence posture, India may have to liberate itself from the affordability factor and spend as per political decision. India may have to spend more than the state of its economy permits for maintaining credible minimum nuclear defence, nuclear forces, and effective and modernized conventional forces. Critics of this view argue that overlooking the affordability factor will be tantamount to following the former Soviet and Pakistani models of (undermining) national security through excessive spending on defence. 48 The argument is that the increased rate of economic growth can provide more resources for defence even without increasing percentage share in the GDP. For instance, if the Indian economy grows at the rate of 7 per cent annually, then even the present level of defence expenditure (that is, about 2.5 per cent of GDP) can provide enough resources for defence-preparedness and modernization.

**Long term Defence Budgeting.** The security scenario and threat perceptions call for restructuring of defence expenditure and long-term defence budgeting. A correction is needed for curbing expenditure on non-combat purposes, salaries and pensions, and spending more on combat-effectiveness,

modernization, technological upgradation and areas related to the RMA (Revolution in Military Affairs). Similarly, defence budgeting should be done on a long-term basis so that capability- building issues can be better addressed. Former finance minister, Jaswant Singh, had created history of sorts by instituting a rolling, non-lapsable defence modernisation fund of Rs 25,000 crore in the interim budget for FY '2004-'05. This progressive measure did not find favour with the new government. Without such a fund, large amounts of the planned capital expenditure will continue to be surrendered, year after year, due to paralysis in decision making.

**Affordability.** At present there are three factors, which will have a bearing on policy-makers. India is making good gains on the economic front. The Indian economy is among the fastest growing economies in the developing world at an average rate of over 7 per cent growth in its GDP. If the growth rate is sustained or pushed further up then it may liberate India from the fiscal deficit problem and provide reasonable amounts for defence. For a credible defence capability, India's defence expenditure must soon reach a level of 3.5 per cent of the GDP and that level be sustained over the next 20 years or so. Given the good rate of economic growth, India's defence expenditure at a level of 3.5 per cent of the GDP would be sustainable and affordable. This level of defence expenditure will not dilute the Government's priorities to the welfare and development objectives.

**Global Security Environment.** It has undergone a paradigm shift during last decade. India's regional security environment is characterized by politico-security instability in the neighbouring countries, increasing presence of China and USA in the Indian Ocean Region (IOR), the internal and externally aided threat of terrorism, proliferation of nuclear and ballistic capabilities of our adversaries and potential threats to our energy security. In the context of Defence Forces, their ability to operate in a joint environment will be crucial in the success of any military campaign in the future. A number of new structures were put in place by the government, including the NSC, HQ IDS etc. There is definite requirement for reorganization in order to be able to implement our national and Defence policies more effectively. The broad recommendations in the HDO would endeavour to create the requisite interface between the political authority and higher military organization.

Given the fluid strategic environment and the rapid advances in defence technology, there is a need for judicious allocation of the limited budgetary resources. Long lead times are required for creating futuristic Forces, hence the need to make long-term defence planning mandatory. Greater synergy between defence and development plans is required. [SEP]

The lack of a cohesive national security strategy and defence policy has resulted in inadequate political direction regarding politico-military objectives. The Government should prepare a clear national security strategy, defence policy, and review it every 4-5 years. [SEP]

In view of the time taken to create the capabilities necessary for facing future threats and challenges, it is essential for the Defence Services to evolve 10 to 15- year perspective plans with the required budgetary support. [SEP]

**Recommended Changes and Suggestions to Current System.** Defence planning for force development and modernization is the process of determining:-

Military component of National Security Strategy. [SEP]

Linkages and dependencies with other components of national security strategy. [SEP]

Preferred military responses for defeating military and non-military threats and for pursuing national aspirations.

Development of desired military capabilities in the short, mid and long terms.

Strategic Budgeting. [SEP]

**Contents for Defence Planning Guidelines.** Planning Guidelines are as under:-

National aim. [SEP]

National Interests. [SEP]

National Security Objectives. [SEP]

Outline National Security Strategy. [SEP]

Region and nature of military security concerns, derived from articulated region of security influence. [SEP]

National Military Objectives, as preferred military responses to defeat military and non military threats and for pursuing other national aspirations by the military through military and non-military means.

National Military Strategy. [SEP]

Theatre-wise likely military missions including contingency missions for short, mid and long terms. [SEP]

Desired military capabilities in each theatre including theatre independent strategic military capabilities.

Parameters for financial allocations for Defence in short, mid and long terms. [SEP]

Outline military capability and force development with timelines. [SEP]

The Chiefs of Staff Committee has not been successful in preparing comprehensive 'integrated defence plans' due to emphasis on single Service planning and constant competition among the Services for a bigger share of resources. The civilian bureaucrats in the MoD do not have the professional expertise to decide on inter- Service priorities. Hence, the early appointment of Chief



of Defence Staff (CDS) is essential as he will be the cornerstone for integrated defence and operational planning.

A non-lapsable Defence Modernisation Fund must be expeditiously created to ensure that allocations are optimally utilised and funds earmarked for capital acquisitions are not allowed to lapse. [L] [SEP]

The Revenue Budget of the Services needs to be better managed. Annual maintenance expenditure can be curtailed by greater exploitation of the available [L] [SEP] public and private sector industrial infrastructure capability and offering incentives to the Services to save.

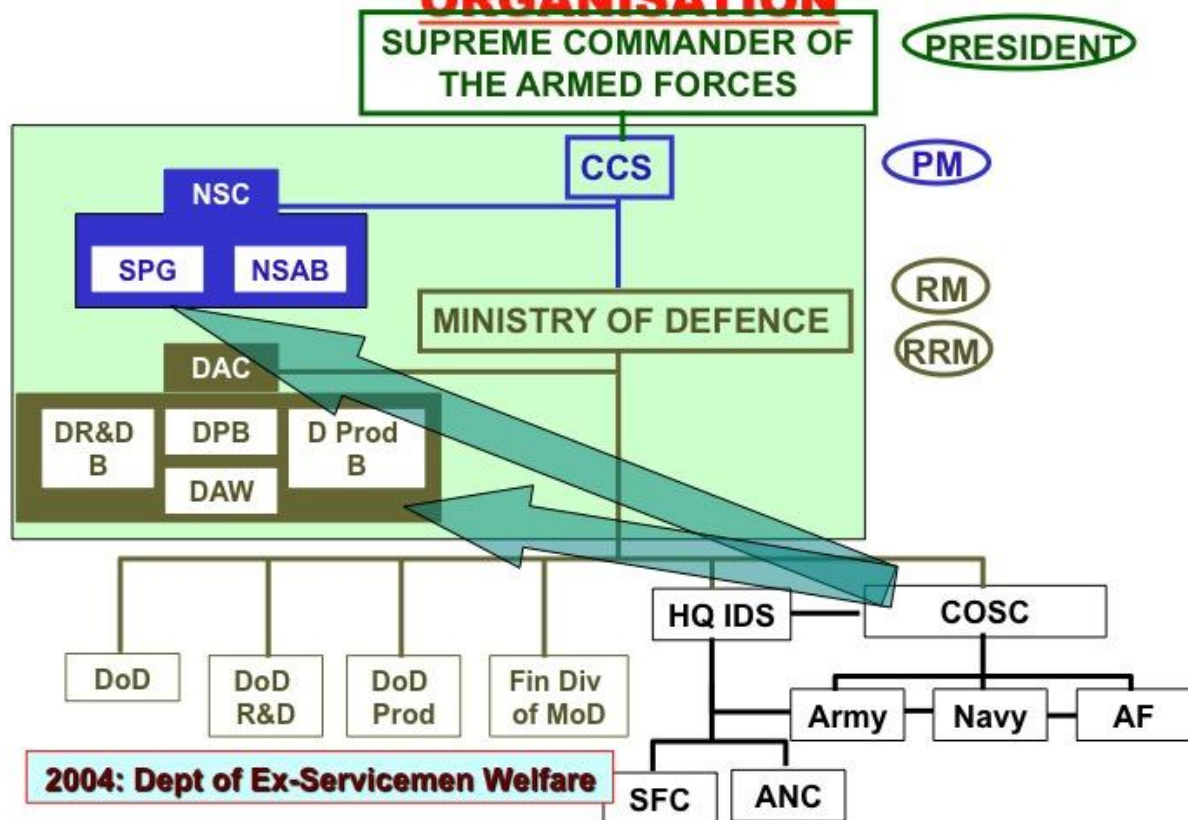
To ensure smooth progress towards self-reliance in defence technology, the [L] [SEP] Government must undertake a periodic performance audit of the DRDO plans and projects. The review should reinforce efforts in areas of success and weed out unproductive projects. [L] [SEP]

Ordnance Factories should produce only hi-tech products and shed the production of low-tech items to the private sector. [L] [SEP]


Integrated Defence Staff and the Services' perspective planners should acquire expertise in operational research and systems analysis, as also financial planning, for evolving complex integrated defence plans. [L] [SEP]

**Roadmap and Re-structured Organization.** Restructured higher Defence control organization is given below

## RE-STRUCTURED HIGHER DEF CONTROL ORGANISATION



**THE ROADMAP FOR FUTURE WORK**

			ACHIEVE CAPITAL TO REVENUE RATIO OF 80:20
MAKE ORDNANCE FACTORIES & DEFENCE PSU MORE RESPONSIVE		CREATION OF NATIONAL DEFENCE UNIVERSITY (80%)	
	DEFENCE PLANNING GUIDANCE		
APPOINTMENT OF CDS			DEFENCE BUDGET AT 3% OF GDP
		DEFENCE BUDGET AT 2.7% OF GDP	
RESTRUCTURING OF HDCO	DEFENCE BUDGET AT 2.5 % OF GDP		
DEFENCE BUDGET AT 2.5% OF GDP			
TIMELINES FOR 5 YEAR PLANS			
			

In view of our dynamic and rapidly changing security environment, the Ministry of Defence (MoD) needs to be suitably restructured and strengthened. Far reaching changes in the structures, processes, and procedures in Defence Management would be required to make the system more efficient, resilient, and responsive. This would also ensure the maximisation of our defence capabilities through the optimal utilisation of our resources, potential, and establishment of synergy among the Armed Forces.

There is a marked difference in the perception of civil and military officials regarding their respective roles and functions. There has also been, on occasions, a visible lack of synchronisation among and between the three departments in the MoD, including the relevant elements of Defence Finance. The concept of “attached offices” as applied to Services Headquarters; problems of inter-service relativities; multiple duplicated and complex procedures governing the exercise of administrative and financial powers; and the concept of ‘advice’ to the Minister, have all contributed to problems in the management of Defence. This situation requires to be rectified, to promote improved understanding and efficient functioning of the Ministry.

Ideally, the Government's national security objectives should lead to a formulation of defence objectives, which, in turn, define defence policy and the directives of the Defence Minister. This is not the case at present. The preparation, and subsequent implementation, of defence objectives and missions should result from an interactive process, in which the desired military capability, required technologies and industrial skills and capacities, and fiscal resources, are identified.

The defence planning process is greatly handicapped by the absence of a national security doctrine, and commitment of funds beyond the financial year. It also suffers from a lack of inter-service prioritisation, as well as the requisite flexibility. It is of prime importance that this process is optimally managed to produce the most effective force posture based on a carefully worked out long term plan, in the most cost-effective manner.

In equipment development, there is a visible dysfunction between technological planning and development and in the interface between R&D, production agencies and users, particularly in the critical linkages between Services Perspective Plans and the Defence R&D Budget. The potential for rapid movement to re-engineering technologies and production processes have also been undervalued in PAs as has the need to synergise Ordnance Factories Board/Defence Public Sector Undertakings/private sector institutions to impact maximally on both Service users and Defence R&D. The procedures, systems and methods to manage all these complex interactions require substantive re-examination.

A whole gamut of measures relating to cost efficiencies and effectiveness has been examined before by the Committee on Defence Expenditure and require methodical review. A very large portion of costs is manpower related and manning patterns/force levels should be critically reviewed.

In accordance with the existing delegated powers, acquisition/procurement proposals upto Rs. 20 crores are approved at the level of the Defence Minister and the Finance Minister clears proposals upto Rs. 50 crores. Proposals beyond this limit are required to be approved by the Cabinet

Committee on Security (CCS). These powers were delegated almost a decade ago. In the meantime, inflation and the growing sophistication of equipment has considerably enhanced the cost of refurbishing the Armed Forces. For expeditious decision making, higher financial powers need to be delegated to the Defence Minister and the Finance Minister for sanctioning acquisition/procurement related proposals/projects. Accordingly, it is proposed that the existing limits be revised to Rs. 50 crores and Rs. 100 crores for the Defence Minister and the Finance Minister, respectively. Orders in this regard would need to be issued by the Ministry of Finance (MoF).

### **Chief of Defence Staff (CDS)**

The COSC has not been effective in fulfilling its mandate. It needs to be strengthened by the addition of a CDS and a Vice-Chief of Defence Staff (VCDS). The CDS is required to be established for the following reasons:-

**To Provide a Single-Point Military Advice to the Government.** Under the existing system, each of the Service Chiefs renders military advice to the civil political executive independent of one another. This is unsatisfactory. Creation of a CDS would ensure provision of single point military advice to the civil political executive. Before presenting his advice, the CDS will consult the Service Chiefs and will inform Government of the range of military advice and opinion with respect to the subject in hand. Individual Service Chiefs will have the right to present their own view where that is at variance with the CDS's views.

**To Administer the Strategic Forces.** As India is now a state with nuclear weapons, the highest importance must be attached to the creation of appropriate structures for the management and control of our nuclear weapons and strategic forces. The CDS should exercise administrative control, as distinct from operational military control over these strategic forces.

**To Enhance the Efficiency and Effectiveness of the Planning Process Through Intra and Inter-Service Prioritisation.** Under the existing system, each Service tends to advance its own capability without regard for inter-Service and even intra-Service prioritisation. Accordingly, one of the most vital tasks that the CDS would be expected to perform is to facilitate efficiency and effectiveness in the planning/budgeting process to ensure the optimal and efficient use of available resources. This could be carried out through intra-Service and inter-Service prioritisation of acquisitions and projects.

**To Ensure the Required "Jointness" in the Armed Forces.** The capabilities of the Armed Forces can be enhanced significantly, if rather than operating as three individual units, they operate

with a high degree of “jointness” and in close tandem with one another in the conduct of various tasks, including training. Modern warfare demands a much higher degree of co-ordination in operations by all the three Services than ever before. Creation of a CDS would promote greater "jointness" in the Armed Forces.

The CDS may be a 4-star officer drawn from one of the three Services in rotation. He shall function as a permanent Chairman of the COSC with the VCDS as its Member-Secretary. Accordingly, he should rank *primus inter pares* in the COSC and function as the "Principal Military Adviser" to the Defence Minister. In temporary absence of the CDS, the senior most Chief of Staff in that rank may chair the COSC. It is essential that no CDS ever reverts to his original service after a tenure as CDS, as this stipulation alone will provide him the requisite objectivity and independence so as to enable him to render unbiased advice to the Defence Minister.

The currently envisaged institution of the CDS is likely to be the first step in a series of structural reforms to be implemented incrementally. As this institution is absorbed and evolves, further refinements and changes in concepts and structures will follow.

Given India's nuclear status, there is a pressing need to establish a Strategic Forces Command, to manage all strategic forces. While the operational control of the strategic forces should unambiguously vest in the highest political authority, the CDS should, as stated earlier, exercise administrative control over these forces and also be the channel of communication between the Government and the Strategic Forces Commander.

### **Defence Planning**

In the past, the individual Services have prepared their long term perspective plans. However, with the induction of the CDS and other related structures, there would be a need to prepare a holistic and integrated defence perspective plan for 15- 20 years through a rigorous process of Inter-Service and Intra-Service prioritization. The Five Year Defence Plans by the Services should be prepared on the basis of the LTDPP. These are to be followed up by analysis and preparations of the Joint Services Plan by the VCDS, which may be finalised through consultation between the CDS and the Defence Secretary. The defence planning process incorporating the long term defence plan, 5 year plan and annual budget should be revised at the earliest.

The MoD and the CDS may be directed to ensure timely completion of the LTDPP and five yearly/annual defence plans, apart from introducing all suggested measures to bring about

efficiency in defence expenditure. The MoF while deciding on annual budgets must keep in view the requirements of defence plans.

To ensure the effectiveness of the planning exercise, the Defence Minister's directive should be issued at least 12 months before the commencement of the next Five Year Plan. This will form the conceptual basis for the Defence Plan. The MoF should give a firm indication of the availability of financial resources, for a period of 5 years, at least 6 months before the commencement of the ensuing Five Year Plan.

To obtain the maximum value for money, the formulation of Services Equipment Policy Statements (SEPS) is required to be co-ordinated with the perspective planning and Services futuristic requirements.

### **Defence Budgeting**

To begin with, the joint time bound scrutiny of the 10<sup>th</sup> Defence Plan (2002-07) and introduction of zero based budgeting approach for all on-going schemes may be undertaken in a time bound manner.

Optimal utilization of resources cannot be achieved unless greater emphasis and attention is given to the process of budget formulation and implementation, including forecasting, monitoring and control. In this context, it is felt that capital schemes in Service Headquarters' budgets should be included only if reasonable assurances of contract conclusion and some payment within the financial year exist. Similarly, only those capital schemes should be included in the Service Headquarters' Priority Procurement Plan and annual budget, where there is adequate evidence that technical and commercial evaluation, leading to contracting and initial payment, can be completed in the relevant financial year. There is also a need for rigorous prioritisation and the order of charge on the budget being established with reference to the plan objectives. The monitoring of inter-Service and intra-Service prioritisation of capital schemes by the VCDS/CDS needs to be institutionalized for ensuring time bound action and the best value for money.

A need has been felt for a review of the form and content of the Defence Service Estimates and the expansion of budgetary classification to promote programme based budgeting, while ensuring compliance with security requirements.

As such, a Study Group, headed by a senior official from the Finance Division and including representatives from Service Headquarters and the Controller General of Defence Accounts (CGDA), should be constituted to make recommendations on budgetary reforms.

### **Committee on Defence Expenditure (CDE) Report**

An Implementation Committee to examine the CDE Report and Services' in-house studies to achieve cost effectiveness should be set up under FA(DS).

### **Private Sector Participation**

The Indian private sector has made significant progress during the last few decades in the industrial and technological field, especially in the field of IT. The country's vast industrial and technological capabilities and its future potential need to be harnessed to further national security objectives. The DDP&S, in consultation with all concerned, should examine this issue further, to formulate suitable proposals in this regard within a time frame of six months. Vigorous follow-up action on the reports of the six Task Forces for the Defence-Industry relationship, set up by the Defence Minister, needs to be taken up urgently. Measures to provide a level playing field to private industry should also be examined urgently, to encourage private sector participation. The commercial procedures suggested in the Arthur D. Little Report (1964) should also be examined for implementation. Further, Industry Associations need to be requested to furnish approved directories of vendors.

A large number of items that the Armed Forces procure from the civil sector are reserved for the small-scale industry. Since the Armed Forces have to procure such items from a large number of small-scale industrial units, they encounter many problems, such as dealing with a number of units spread over different parts of the country, delays in the tendering process, finalisation of lowest bidders and also in ensuring the requisite standards of quality. To overcome this problem, the National Small Industries Corporation (NSIC) and Development Commissioner, Small-Scale Industries (DC SSI), can play a pivotal role in the procurement of items reserved for the small-scale industry and the MoD can directly approach the NSIC/DC SSI instead of the individual units. Further, to begin with, the directives requiring purchases to be made only from the small scale industry, need to be relaxed for the Armed Forces.

### **Nuclear, Biological, Chemical (NBC) Terrorism**



Today's terrorists, be they religious extremists, Jihadis, international cults like Aum Shinrikiyo or individual nihilists, may gain access to nuclear, biological, and chemical weapons or raw materials. NBC terrorism today has moved from the stage of far-fetched horror to a contingency that could happen tomorrow. The advances in IT and communications have made terrorism with Weapons/Materials of Mass Destruction easier to carry out. The Government would, therefore, be remiss if timely measures were not taken to reduce the likelihood and severity of this threat. The National Security Council Secretariat (NSCS) has already prepared a detailed paper on this subject, which is scheduled to be considered in the Strategic Policy Group (SPG). Cabinet Secretary may have this important subject considered at the earliest, for formulation of a detailed action plan and designating a nodal ministry/agency for follow-up action in this regard.

A true partnership must be established between the Services and DRDO to ensure that the latter gets full backing and funding from the Services and the former get the indented equipment they require without delay.

# Suggestion for Future Work

The future work for execution of the above recommendations and suggestions can be worked out by a separate in depth research work.

We must aim to allocate 3% of GDP for the Defence.

Capital budget should be 80%. DPP 2008 is amended for better participation of private and public vendors.

Restructuring of Higher Defence Control organization is vital.

**DEFENCE PLANNING – QUESTIONNAIRE**

Q1. What percentage of GDP should be the defence budget keeping in minds the Gun v/s Butter theory for ensuring credible defence?

- (a) >3% (b) =3% (c) <3%

Q2. What is your opinion on spending of Defence Budget with respect to Revenue and Capital funds?

(a) Revenue. Should:- (i) Incr. (ii) Keep same. (iii) Decrease.

(b) Capital. Should:- (i) Incr. (ii) Keep same. (iii) Decrease.

(c) How much of the defence budget do you think goes towards things that is necessary for fighting and modernization?

- (i) A little. (ii) Some. (iii) A lot.

(d) If the government decides to increase spending on modernization, then, what percentage ratio should be between revenue: capital fund?

(i) 80:20%

(ii) 70:30%

(iii) 60:40%

(iv) 50:50%

Q3. For the year 2007-08, the Indian government is spending about Rs 96,000 crores on defence. How much would you like to see the India, spend on defence in 2008-09?

(a) > 89,000

(b) = 89,000

(c) < 89,000

Q4. If approx GDP growth is 8%, what percentage increase should be there in defence budget?

(a) >20% (b) Between 10% to 20% (c) <10%

Q5. Should there be increase in defence budget? (a) Yes. (b) No.

Q6. Do you think we are optimally spending in defence budget? (a) Too little. (b) About right. (c) Too much.

Q7. In view of the time taken to create the capability necessary for facing future wars, it is essential for the Defence services to evolve 10-15 years long term perspective plans. Should there be link established between these defence plans and defence budget?

(a) Yes. (b) No.

Q8. Are reforms required in resource planning, allocation and utilization with respect to defence budget?

(a) Yes. (b) No.

Q9. How much % of defence budget is surrendered or % cut is imposed in the end of Financial Year?

(a) >10% (b) between 5 to 10% (c) <5%

Q10. Is the present method of defence planning satisfactory? (a) Yes. (b) No.

Q11. Do you want to recommend the change in the present method of defence planning?

(a) Yes. (b) No.

Q12. Are we getting adequate funds for modernization?

(a) Yes. (b) No.

Q13. Defence budget should be based on:-

(a) Threat perception.

(b) Economic condition (c) Capability building (d) Population, Area and frontages.

Q14. Who is accountable and responsible for surrender of money from the allotted defence budget?

(a) Revenue Fund (i) Service HQ (ii) Ministry of Defence (iii) Ministry of Finance

(b) Capital fund

(i) Service HQ

(ii) Ministry of Defence

(iii) Ministry of Finance

Q15. I would like you to think, about how much the India spend on defence as compared to countries that are its potential adversary like Pakistan, China, Bangladesh and Burma etc.?

(a) A bit more than its most powerful potential enemy.

(b) About as much as all of its potential enemies combined.

(c) Less than its potential enemies combined.

Q16. Should India opt for emerging regional or global power?

(a) Regional power.

(b) Global power.

Q17. Given the fluid strategic environment and the rapid advances in defence technology, there is a need for judicious allocation of the limited budgetary resources for futuristic forces; hence the need to make long term defence planning is required. Is it true?

(a) Yes. (b) No.

Q18. The lack of a cohesive national security strategy and defence policy has resulted in inadequate political directions regarding politico-military objectives. The Government should prepare a clear national security strategy, defend policy and review it every 4-5 years. Do you agree?

(a) Yes.

(b) No.

Q19. Do you feel early appointment of Chief of Defence Staff (CDS) is essential?

(a) Yes. (b) No.

Q20. A non-lapsable roll over defence budget with respect to capital funds for modernization activities must be expeditiously created to ensure that allocations are optimally utilized and funds earmarked for capital acquisitions are not allowed to be lapse. Do you agree?

(a) Yes. (b) No.

Q21. Who should be accountable and responsible for surrender or non-utilization of capital funds?

- (a) Service HQ. (CFA for revenue funds).<sup>[1]</sup><sub>[SEP]</sub>
- (b) Ministry of Defence (CFA for capital fund).<sup>[1]</sup><sub>[SEP]</sub>
- (c) Secretary Defence Finance (IFA for capital fund).
- (d) CGDA and IFA (IFA for revenue fund).<sup>[1]</sup><sub>[SEP]</sub>
- (e) Both CFA and IFA.

Q22. To improve self reliance in defence technology, should the government undertake a periodic performance audit of DRDO plans and projects?

- (a) Yes. (b) No.

Q23. The revenue budget of the services needs to be better managed. Annual maintenance expenditure can be curtailed by greater exploitation of the available public and private sector industrial infrastructure capability and offering incentives to the services to save. Do you agree?

- (a) Yes. (b) No.

Q24. Ordnance factories are made more responsive, accountable and competitive. They should produce only hi-tech products and shed the production of low tech items to the private sectors. Is it true?

- (a) Yes. (b) No.

Q25. Should Integrated Defence Staff (IDS) and the services perspective planners acquire expertise in operational research and system analysis, as also financial planning, for evolving complex integrated defence plans?

- (a) Yes. (b) No.

Q26. In order to improve the age profile of the services and simultaneously reduce the pension bill of the government, personnel below officer's rank should be transferred to central police and para military forces (CPMF) after active services of 7-10 years. Do you agree?

- (a) Yes. <sup>[1]</sup><sub>[SEP]</sub>
- (b) No. <sup>[1]</sup><sub>[SEP]</sub>

Q27. Army should increase recruitment of short service officers to make up its short fall. Induction of these officers to the Central Police Para Military Forces after completion of terms of agreement in the service will be more cost effective and improve junior leadership/effectiveness of these forces in internal security and counter insurgency operations thereby cutting in training costs on one hand and enhancing job security on other hand. Is it true?

(a) Yes. (b) No.

Q28. What should be the percentage allotment of defence budget within the service HQ totalling it to 100%?

(a) Army<sup>[[[ ]]</sup> (b) Navy<sup>[[[ ]]</sup> (c) Air Force (d) Others.

Q29. Guidelines for procurements are given in DPM-2006 and DPP-2006. Is there a need for a far more efficient planning procedure for procurement for getting value for money?

(a) Yes. (b) No.

Q30. What should be the ratio of delegation of financial power of CFA with and without IFA?

(a) >1:10<sup>[[[ ]]</sup>

(b) Between 1:2 to 1:10<sup>[[[ ]]</sup>

(c) <1:2<sup>[[[ ]]</sup>

Q31. For enhancing capacity building and utilization in the Ordnance factories and to economize the cost of products, should the Ordnance factories be required to diversify their product profile and to broaden the customer base?

(a) Yes. (b) No.

Q32. Though, America's defence spending is out of all proportional to any conceivable threat, and yet, American's forces are in real trouble. How did it get this way? Simple, the Pentagon's management is incompetent, a congress, which is ultimately responsible, doesn't care. Is it applicable in India's defence spending scenario or not?

(a) Yes. (b) No.

Q33. What should preferably be the combat ratio between India and Pak; and between India and China as per your appreciated threat assessment?

(a) Indo-Pak<sup>[[[ ]]</sup>

(i) >1.75:1<sup>[[[ ]]</sup>

(ii) Between 1.75 to 1.50 : 1%

(iii) <1.5 : 1<sup>[[[ ]]</sup>

(b) Indo-China

(i) >1.75:1<sup>[[[ ]]</sup>

(ii) Between 1.75 to 1.5 :1 [SEP]

(iii) <1.5:1 [SEP]

Q34. What percentage of our defence budget is divided for conventional and sub- conventional war, totalling to 100%?

(a) Conventional. [SEP] (b) Sub-conventional.

Q35. How much budget is required to achieve the combat ratio as mentioned below?

(a) Indo –Pak. 1.5 : 1

(i) > Rs 1, 20,000 crores. [SEP] (ii) Between Rs 1, 20,000 to Rs 40,000 crores. (iii) < Rs 40, 000 to Rs 40,000 crores.

(b) Indo - China

(i) > Rs 1, 50,000 crores. [SEP] (ii) Between Rs 1, 50,000 to Rs 50,000 crores (iii) < Rs 50,000 crores

Q36. Do we use any budgeting methodologies and operation research technique for defence planning and resource utilization?

(a) Yes. (b) No.

Q37. Is there a need to establish a relationship between long term perspective plans and defence budget to quantify fighting capability of our Armed Forces?

(a) Yes. (b) No.

Q38. How do we reduce our revenue expenditure?

(a) Reduction in manpower. [SEP]

(b) Out-sourcing certain activities. [SEP]

(c) Combination of both the above. [SEP]

Q39. How do we prevent surrender of funds?

(a) Enhancing delegation of financial power. [SEP]

(b) Refining our procurement procedure. (DPM-2006 and DPP 2006) [SEP]

(c) Harnessing IT for faster processing thereby making system more responsive, [SEP] transparent and accountable. [SEP]

(d) All the above. [SEP]

Q40. Do you agree that we should outsource the development of customized application software for evaluation of combat potential of our armed forces using operation research technique?



**SUMMARY OF INTERVIEW REPORT**

- (a) Absence of specific national security goals and objectives. [L] [SEP]
- (b) Rapid changes in international world order. [L] [SEP]
- (c) Severe resource crunch. [L] [SEP]
- (d) National plan does not include the defence plan. [L] [SEP]
- (e) No fixed allocation for defence out of GDP. [L] [SEP]
- (f) Unpredictability of price system and foreign exchange rates. [L] [SEP]
- (g) Lack of adequate integration and synergy amongst services. [L] [SEP]
- (h) Delayed approval of projects and defence plans by the government. [L] [SEP]
- (i) Cumbersome acquisition and procurement procedures for [L] [SEP]  
modernization.
- (j) Lack of suitable structures required for defence planning in the organization. [L] [SEP]
- (k) Lack of strategic thinking and commitment with the higher leadership and in [L] [SEP]
- (l) Uneconomic operation of DGOF, defence PSUs and DRDO laboratories.

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