CHAPTER V

THE SUGGESTED BUDGETING SYSTEM TO
BRING ABOUT COST EFFECTIVENESS

Drawbacks of the Existing Budgeting System

The existing input oriented budgeting system suffers from the following major weaknesses:

(a) Resources utilised by particular Establishment/Unit are not identifiable, thus cost of services provided cannot be ascertained and previous years inefficiency is carried forward.

(b) No linkage between resources utilised and the performance achieved.

(c) No initiation for Establishment/Unit to manage resources in a better way.

(d) No incentive for better utilisation of resources as cost of obtaining results ignored.

(e) The financial impact on elimination of an activity or reducing its level cannot be clearly seen.

In the early 1970's, United States of America was faced with a similar problem and evolved Zero Based Budgeting Process (ZBB) and Planning Programming and Budgeting System
(PPBS), with varied experience.

**Zero Base Budgeting**

This is an operating, planning and budgeting process which requires each manager to justify his entire budget in detail from scratch (hence zero base). All activities are required to be identified decision packages ranked in order of importance after evaluation by systematic analysis. Operationally the ZBB programme centres around the creation and evaluation of decision packages, including alternative programmes. A separate decision package is required for each major activity to be initiated or continued. The ZBB can accomplish the following for the management :-

(a) Cut budgets rationally.

(b) Reallocate resources from lower to higher priority areas.

(c) Yield better information and more credible justification to support budget requests.

(d) Provide a bridge between planning, budgeting and control.

(e) Provide top management better insight into the detailed working of the organisation.

(f) Create involvement of line managers in planning and budgeting.

(g) Enable top managers to evaluate the
managerial capabilities of subordinate managers.

**Planning, Programming and Budgeting System**

This system is based on programme activity structure, with greater emphasis on planning. Its main goal is to rationalise policy making by providing data on costs and benefits of alternative ways of achieving proposed objectives. It involves considerable analysis for identifying and selecting long term objectives, determining alternative programmes to achieve these objectives, undertaking cost benefit analysis, making specially indicating programmes and activities etc.

When Mr Carter was the President of USA, the Department of Defence tried to combine ZBB with PPBS, but they ended up adding only paper work and abandoned ZBB. In India the Defence Planning Staff (DAS) at Army Headquarters (AHQ) is also in the process of involving a PPBS for Defence Services.

**System Adopted by UK**

The British have introduced a Full Cost Executive Responsibility Budget (FCERB), at the logistic units wef 01 Apr 91. After initial development of the process in about
15 months, a paper budget exercise was conducted during FY 1989-90, which was followed by a "Shadow Budget Exercise". The process has been nick-named 'New Management Strategy (NMS)': The salient details are as under:

**New Management Strategy (NMS)**

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<th>A Strong Centre</th>
<th>-Delegated Management</th>
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<td>and Incentives.</td>
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**Organisation**

The work in the Ministry of Defence is done under the authority of various committees; one of the committees is responsible for budget planning and execution ie "Financial Planning and Management Group" (FPMG). The organisation of the group is as follows:

**Financial Planning and Management Group**

Permanent Under Secretary
Chief of Defence Staff
Chief of Naval Staff
Chief of General Staff
Long Term Costing (LTC)

It aims at equipment profile over a 10 year perspective to cater for the time span of development and production. The Chief of Defence Staff (CDS) makes recommendations on forward policy, overall priorities in resource allocation, programmes, current commitment and operations. The Permanent Under Secretary is responsible for long term financial planning and budgetary control.

Within the framework of LTC, Departmental Plans are made to cover a period of three years. The LTC sets out the aims of Defence policy and the strategy for achieving them. Public Expenditure Survey (PEC) records the cash allocation for major budget holders for these three years. Budget Estimates are made for one year only. The relationship between the Estimate year, PES years and LTC years is as under:

Estimates, PES and LTC Timescales

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<th>First year only</th>
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<tr>
<td>Budget Estimates</td>
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<td>Public Expenditure Survey</td>
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<td>Long Term Costing</td>
<td>First ten years</td>
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The annual budget is further divided into 21 Top Level Budgets (TLBs). At this level, the control is exercised by front line commanders, Support Headquarters and heads of other Executive Agencies. This operating budget is further sub-divided into Executive Responsibility Budgets, down the chain of command on the full cost concept.

**Full Cost Budget**

Key features of Full Cost Budgeting (FCB) are:

(a) Includes cash costs managed by the activity and costs of supplies and services provided by others.

(b) Includes costs which represent expenditure of cash in previous financial years, such as consumption of stocks.

(c) Not only considers the above input costs, but also how these inputs contribute to the final cost of outputs.

**Authority and Responsibility Centres**

It has long been felt that at the Establishment /Formation/Unit level, the budget holder should have the authority and flexibility on the expenditure of funds placed at his disposal and he should be accountable for the expenditure vis-a-vis the objectives achieved. Accordingly the
concept of "Authority and Responsibility Centres" (ARC) is being developed on lines similar to the New Management Strategy of UK.

A new concept or technique can pay us dividends provided the entire process of laying down National Defence Strategy, Military Strategy, National Security Objectives, Force structures etc, are well defined and coordinated with fund commitment.

Reorganisation of Higher Defence Organisation

To meet the external and internal threat to her security, India must evolve an efficient and effective decision making system. Most of the modern nation-states have National Defence Council (NDC) for the higher direction of Defence while the USA formed National Security Council (NSC) in 1947, for the formulation and implementation of her national security policies. It is only after the security objectives are identified and spelt out, that the finance allotted for Defence can be optimally utilised. Greater involvement of the Service officers at the decision making level at this stage, will ensure speed and to-the-point decisions being taken. Models of suggested organisations, are given at Appendices "G" and "H". The responsibilities as regards security, strategy, military strategy, preparation of de-
fence budgets and connected issues are also stated in the model.

**Budget Formulation**

The budget formulation can be realistic, provided correct financial advice is available to the decision maker. The formulation of Financial Planning Directorate at each Service HQ, is a step in the right direction. For this Directorate to perform its task efficiently, it is essential that the staff posted to this organisation has enough exposure in the functioning of the services, as also some training in the management techniques. They should be able to analyse the financial implications of various options. Selected officers could be given training in these aspects at the college of Defence Management, Secunderabad. Having selected and trained these officers, their continuity in the job should be ensured by longer tenures. It may be possible to find civilian officers to do this job, but lack of first hand knowledge of functioning of the Armed forces will be a handicap in their contribution to the organisation.

**Planning Programming Budgeting System**

This system provides a structure for identifying,
organising, comparing and presenting relevant information in a manner suitable for analysis and decision making, to achieve the objectives of an organisation. The objectives are spelt out by the National Security Council or equivalent body. Cost analysis for various projects are carried out. Costs are calculated for minimum period of five years. System analysis studies are carried out to determine the most optimum alternative. The first year's expenditure becomes the budget for the year. A suggested model of system analysis is given in the succeeding paragraphs.

**System Analysis**

System Analysis has been defined by Dr Alain Enthoven, "as the applications of methods of quantitative economic analysis and scientific methods, in the broadest sense to the problems of choice of weapon systems and strategy"\(^1\). It provides a decision maker with a full, accurate and meaningful summary of information, relevant to clearly defined issues and alternatives. E.S. Quade has defined Systems Analysis as "a systematic approach to helping a decision maker choose a course of action by investigating his full problem, searching out objectives, alternatives and compar-

\(^1\) K. Subramaniam "Perspectives in Defence Planning", pp,81.
ing them in the light of their consequences, using an appropriate framework, in so far as possible analytic, to bring expert judgement and intuition to bear on the problem". The Defence expenditure has an impact on the kind and amount of activity in a country's domestic economy and balance of payment. The sole aim being to achieve maximum efficiency at a minimum cost. Russia and America have gone about it in a big way. The cost of developing a new weapon system is enormous and may run into crores of rupees, billions of dollars, hence even before a project is undertaken cost evaluation must be gone into greater details. It is not only the aspect of the equipment alone, the technological base available and desired, availability of trained manpower for handling and maintenance, have to be analysed. Life cycle cost of the system must be compared with effectiveness and utility value.

The Planning Programmes, and Budgeting System (PPBS) will help to link the Defence budget with different programmes, of which the progress and success will be watched by the executives and audit, with reference to the programme provisions. Management consists of "planning, organising, motivating, co-ordinating, controlling and thereby ensuring successful execution. In other words, proper management of Defence finance would involve besides proper forecasting, planning, directing, supervising, regulatory and evaluating
performance. The financial management is not just translation of physical plans or targets into monetary terms; The economic viability of investments in financial, strategic or social terms should be examined in greater details. The technique thus makes an assessment of human and material capabilities to achieve physical plans. It often reviews and resets these targets: It relates these targets to availability of resources, which it has to generate and regulate. It assesses how far project estimates are realistic and reasonable; it ensures best possible contractual deals, participates in and contributes towards evaluation of policies and plans, specially in regard to production, purchase, personnel etc.

The objective of the Defence Services is optimum Defence preparedness at the most economic cost; it is making the most cost effective use of available resources.

The pre-requisite of financial management, is a clear statement of the parameters of Defence preparedness; a definition of the type or types of threat which the Services will be called upon to meet. This threat will have to be reviewed from time to time as geopolitical factors change, but the objective must never be allowed to deteriorate into just the maintenance of the Services at certain numerical levels, with whatever equipment that the country can bring
or produce.

The procedure for budget formulation being followed so far in the Defence services, gives the projection of threats as well as statistical projection of Defence expenditure and what follows thereafter: The finance that had been promised is spelt out and the needs of the Defence Services are accommodated within this finance. The Defence plan is thus pruned and projects of lower priority dropped or modified. Unfortunately, the stage and level at which it is done does not have the expertise or knowledge of the implications of such an arbitrary action. This technique does not lead to the building-up of team spirit and good human relations. It creates an atmosphere of uncertainty and leads to executive frustration. It is also more costly in the long run. These unrealistic and impracticable compromises and half measures, fail to achieve the objective.

The low priority measures continue to be sanctioned, whereas high priority schemes of re-equipment and modernisation keep on being postponed, till a critical situation is reached. Hence, there is a need to begin financial management of Defence from the top and move downwards. 'Top to bottom' approach, should be followed instead of the bottom to top approach. Responsibility, authority and accountability should be delegated to middle level commanders.
Expenditure in Aid to Civilian Authorities

Outside the Defence Services, the states, the Government departments and even the public enterprises, often do not wish to pay for services and expect the Defence budget to absorb the cost; at the same time they demand and get away with exhorbitant payment for services and supplies, thereby inflating the Defence budget unnecessarily.

Some of the important questions a good financial management has to ask are:

(a) Do the Services have to plan factories at a high capital expenditure, when the technology is advancing faster than the weapon or equipment for which the reserve capacity is kept, the latter may itself become obsolete soon?

(b) Does the Air Force have to plan the squadron requirements of aircraft on rather low serviceability basis, even when the cost of aircraft is in terms of crores and not in lakhs?

(c) The cost of training a soldier on sophisticated equipment is very high and it is becoming more and more costly to lose trained manpower: This is a very conflicting requirement of the Services, as against the need to keep them young.

(d) Does the organisation needs its own engineering and
medical colleges and military farms? The cost of training an engineering graduate or a medical graduate by the Services, is much higher than its counterparts in the civil. It is not cost effective.

(e) Does the NCC serve any useful purpose to justify a very heavy annual expenditure? Is there a case to replace this by compulsory military service for the youth, for a short duration of an year or two at the same cost?

(f) Is there any justification in the scales of land requirement, which give a population density for military population of less than 4 percent per acre?

(g) There is an acute shortage of residential accommodation for the Armed Forces. Is there a scope of encouraging private capital to build residential accommodation?

Financial management implies that it is primarily an executive function and not merely a system of regulatory controls, nor a set of specialised techniques to be applied by experts. It involves:-

(a) The evolution of a time bound and need based plan to achieve a clearly defined objective.

(b) Adjustment of the plan within the allocated funds, by means of fixation of inter-se priorities and review, as also revision of scales, both quantitative and qualitative and norms of its requirements.
(c) Linking of modernisation plans with programmes of cutting-out obsolete/obsolescent equipment and quick disposal of the latter.

Planning has to be precise and programme oriented: This means the full fledged adoption of Planning, Programming and Budgeting System (PPBS). A detailed study on the subject has been carried out at the College of Defence Management, Secunderabad. It implies, that the long term proposals have to be worked in detail realistically, with reference to:

(a) Check lists of items of estimates.
(b) Feedback information regarding completion costs.
(c) Cost trends.

It is only with realistic time and cost estimates, that the expenditure can be regulated and controlled. Projects must be completed in time to make effective use of manpower. The techniques of PERT or CPM have to be employed, to ensure timely and successful implementation of programmes. Cost benefit analysis has to made to select the most effective and economical option. The staff at Service Headquarters should be adequately trained to handle the task.
Relationship Between Service HQs, Ministry of Defence and Integrated Finance

Another important aspect of financial management of Defence Economics, is the relationship and coordination between the Service Headquarters, Ministry of Defence and Ministry of Finance. The legacy of 1906 having been shed, new organisation like the Defence Planning Staff (DPS) have been evolved, but unless the proper mix of the three is correctly represented and organisation vested with some authority and responsibility, it would amount to only adding overheads and delays. The Government machinery is heavily clogged today and needs to be pruned drastically: The effect of all this can only be highlighted with glaring example, that the Seventh Defence Plan 1985-90 was only approved in 1988 and that too not in full. What remained of the plan was the last year and Services could not carry out the correct and complete evaluation of the aims of the plan, leave alone using this vital data for the next five year plan.

The new pattern of relations will have to be based on:-
(a) Large scale delegation of powers to the Services, within the parameters of approved five year plans.
(b) Simplification of rules and regulations.
Manpower

This is the largest resource with the Defence forces. The existing terms of engagement warrant a soldier, airman and a sailor to serve for a minimum period of 15 years. Considering that a soldier is recruited at 18 years of age, he retires between 33 to 35 years of age. At this stage in life, he is too old to start a new career and his requirements warrant him to provide maximum for his family. The Government is faced with the task of providing employment to better part of 60000 odd men, who retire every year. As against this, if the organisation were to revert back to the old system of seven years colour service with eight years reserve liability, the following advantages would accrue:–

(a) Lower pay bill, as the bulk of the men will be in the lower service profile with less basic pay.
(b) Larger number of trained men will be available as reserve.
(c) Since larger number of people will get an opportunity to undergo training and service in a disciplined environment, they will be better citizens and an asset to the society.
(d) Reduced pension liability even though this aspect has been taken out of Defence budget.
(e) The age profile of the Services would be brought down considerably.
(f) The absorption of persons released after 7 years service into other Para Mil Organisations will be smoother.

(g) These men will contribute to healthy work force and breed good discipline in other organisations.

In certain trades where the training time is longer, this change should not be affected. Similar facility should be extended to officers and JCOs. JCOs in the rank of Subedar and Nb Sub tend to become non-productive.

**Study Leave**

The system of study leave should be reviewed, so that officers availing this facility should either be of better utility to the Services or be absorbed in a public sector undertaking. The present system has not contributed much to the Services. System of study leave should be extended to the JCOs and Other Ranks(OR) men also, so as to improve their transfer value.

**Review of Organisations**

The organisation of Army Education Corps, EME, Engineers, Signals, ASC, Ordnance Units and Military Farms should be reviewed to reduce manpower, where considered
appropriate. The telephones in peace stations should be through civil exchange. Funds can be allotted to each appointment, which can be reviewed from time to time. This will bring in cost consciousness in the users. The number of personnel from the (Corps of Signals), presently employed on the exchange duties can be reduced.

**Military Engineering Services**

During the last three to four years, the Military Engineering Service (MES) has not been able to carry out any worthwhile maintenance tasks due to shortage of funds. The situation is not likely to improve in the near future. It may be cost effective to carry out maintenance and repairs to the existing assets on a contract basis.

**Cost Consciousness**

Indian economy is poised for rapid expansion due to industrialisation, increased agricultural production, faster circulation of money and allied activities. The rate of inflation continues to be as high as 10%. The crisis in the Gulf has forced the country's oil import bill to rise to new levels and the nation has had to effect economy in Government expenditure and consumption of petroleum products. Services cannot remain isolated from these pressures. The
following steps can be taken to effect economy on this front:

(a) The existing 1 Ton vehicle gives 2 to 2.5 km per litres (KPL), whereas a jeep gives 4.5 to 5.0 KPL i.e. nearly double. There are occasions when a 1 Ton vehicle is used to carry men or stores which can be carried by a jeep. If jeeps were to be used for this purpose, considering that there are approximately 20000 x 1 Tons consuming about 2000 ltrs of petrol every year, the yearly saving in petrol alone could be 20000 x 500 x 10 = 1000,00,000 litres i.e. approximately Rs 10 crores considering that cost of petrol is Rs 10 per litre and 500 litres of petrol per vehicle is saved.

(b) The vehicle technology has undergone a revolutionary change and fuel efficient vehicles are available, which give much better performance than the ones in use in the Services. Moreover, the maintenance cost of petrol vehicles is much higher than diesel vehicles. There is a need to identify vehicles which can in stages replace the present fleet.

(c) Static units in peace stations require vehicles like Maruti Cars, Gypsy and new fleet of pick-up vans/passenger vans: Units in peace stations may be issued such vehicles for unit administration, to cut down on fuel consumption. A pick-up van gives approximately 15 KPL as compared to 2.5 KPL by a 1 Ton.
(d) 10 Ton vehicles should be introduced as load carriers for carriage of ammunition, to cut down on number of vehicles: Thus corresponding reduction in manpower can be affected.

**Trailers**

Trailers are a legacy of the British Army, which is still being carried by us. Most of the time these are not used and a lot of resources are spent to maintain them. Some formations advocate, that even during active operations these should not be carried as they hamper mobility. There is a need to review the utility of the trailers and discarding them. In lieu extra vehicles may be authorised to carry additional loads. Corresponding decrease in tools and spares will also be effected.

**Surplus Inventory**

The Services are managing a very large inventory at a very high procurement, maintenance and inventory carrying cost. Most of this had relevance during the World War II period or when the country was dependent on huge imports worth large time lag/lead time. But today, India has made considerable progress and the industry is in a position to support the Services for majority of the items. Thus the
inventory needs to be rationalised and reduced. Even the cost of running and maintaining Ordnance Factories is very high and quite a few items could be seconded to the private sector eg, clothing of all types, PT Shoes, boots, etc. Even the scales of spares need to be reviewed.

Reformed Procedures

If the basic principles of management are followed, the inventories will get controlled and thereby reduced automatically. The existing procedures need to be revamped and reformed. The maximum and minimum levels of stocks should be revised, with particular reference to future needs, as distinct from provisioning deficiencies. Some progress has been made, by classifying equipment and the ordering system based on ABC analysis or vital, essential and desirable analysis. A combination of the two, along with the state of stores ie, scarce, available and plenty has achieved a lot, but a lot more can be done to optimise Defence expenditure. Whatever is saved, is available for more essential requirements within the parameters of the Defence Plan.

Though no data is maintained about the cost of the inventory being carried, a conservative estimate would put the cost at around Rs 20,000 Crores (at present prices). The normal commercial estimate of inventory carrying cost is
about 22% of the book value.

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<th>Depreciation</th>
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<tr>
<td>(a) Storage, inspection, transportation</td>
<td>3.5%</td>
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<tr>
<td>(b) Accounting, stock verification</td>
<td>1.3%</td>
</tr>
<tr>
<td>(c) Depreciation in storage</td>
<td>2.5%</td>
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<tr>
<td>(d) Obsolescence</td>
<td>5%</td>
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<tr>
<td>(e) Interest on capital</td>
<td>9%</td>
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<tr>
<td>(f) Insurance</td>
<td>0.2%</td>
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</table>

**Russian Equipment**

A large variety of Russian equipment is held in the three Services. By careful cataloguing and analysis, economy can be effected in inventory management.

**Expendable Stores**

These are the stores required by units and formations to maintain the equipment held by them. The cost of procurement, transportation and storage is very high and tends to escalate the cost of these items. Some of these items cost twice as much as the local market. There is a need to identify these items and allot funds to the user to either procure them from the market or Canteen Stores Department, eg, soaps, brooms, vests and underwears for the men, paints
of sorts etc.

**Defence Land**

While the country has gone-in for multi-storey complexes, the Services still continue to use single or double storey buildings and bungalows with vast open spaces. There is a need to switch over to multi-storey complexes for optimum utilisation of land. Even family accommodation for officers, JCOs and Other Ranks should be in multi-storey complexes. Surplus land held by the Defence services should be developed to improve the environment.

**Computers and Simulators**

Computer technology and simulators should be used for training. Training of pilots, if carried out on simulators, can enhance the life of aircraft as also cost of maintenance and fuel can be saved. Thus the training of pilots will not be as expensive as it is today.

**Blue Water Navy**

India needs to project its Navy into blue seas to protect the EEZ, as also to ensure no intrusion takes place into her territorial waters. Moving an aircraft carrier
into the sea can be very costly: as high as Rupees 7 lakhs per day which the country cannot afford. The task of patrolling can be delegated to speed boats fitted with adequate weaponry.

**Technology**

The technology in India must keep pace with the rest of the world. Lot has to be spent on Research and Development (R&D) to get tangible results. In this fast pace of development all over, degree of obsolescence is fairly high, therefore the country should export technology to the developing countries to earn foreign exchange to meet the cost of R&D. The missiles and ship building technology may be considered for export. Since 1987, Indian arms have found a market in the world and the demand for the same is rising gradually. The 64 K fast speed computer which has been developed by the C-DAG (R&D Organisation), should be exported to earn foreign exchange.

**Private Sector**

The private sector contributes very little to the Defence, whereas a close interaction between two will ensure Defence getting quality items at competitive rates. The Ordnance Factories will also have some competition, which
will stop their monopoly: The Defence services will benefit from this arrangement.

**Maintenance of Operational Works**

The Army and Airforce have built certain operational works like bunkers, field defences, etc, at different places. Due to the weathering effect, these have to be cleaned and maintained every year. The drag line used to clean the ditches along the borders costs Rs one lakh a day. A proper study needs to be carried out to work out ways and means of reducing cost of maintenance of op works in each sector.

**Maintenance of Troops in Remote Areas**

Due to paucity of local resources in remote areas, every item has to be ferried from far off places, incurring heavy transportation cost. In some areas, the formations and units are being maintained by air. Units should be encouraged to generate resources. Local population should be imparted training in animal husbandry, diary etc. This will help local population in earning more, thus enabling them to join the National building process.
**Miscellaneous**

Each Arm and Service needs to go into details of the equipment authorised and held, as also work out requirements during war. This can result in substantial savings, provided there is sincerity in the identification of such equipment. The peace time requirement of transport and other equipment is limited and it is possible to identify those items which are redundant: These can be deleted from the equipment tables, eg, in a Divisional Sector in the Northern Command, the contingency plan caters for move of at the most one regiment worth of guns from one area to another, but the formation is holding 120 Field Artillery Tractors, whereas only 21 are required to move a regiment. Hence, reduction can be affected without compromising the operational preparedness.

Proper management of Defence economy does not imply effecting reductions, but making the most effective use of every rupee that is made available for Defence.