Challenges of Optimal Resource Allocation, Inter and Intra – Service Allocation and Sharing: Perspective of the Army

Vickas Kapur*

October 08, 2008 was the day that signaled the end of Nuclear Apartheid against India. It also brought into focus her growing status in the comity of nations. India's inevitable transformation into a global economic power house is an acknowledged fact. It's democratic polity, pluralistic society, and maturity in its dealings with the other nations, especially the troubled states in the immediate neighborhood, has earned her universal respect. As India grows economically and in strategic terms, her influence is bound to expand much beyond the immediate region. She already has a growing role in international institutions and groupings such as the UN, WTO, G7, G10, G20 etc.

India occupies an important geo-strategic location in the Indian Ocean. Her regional influence extends in an outer arc from the Eastern littoral of Africa and the Persian Gulf to South East Asia and the Indonesian archipelago and she harbours aspirations of being a global player. This also confers on her the status of a tangible security provider, in tune with her expanding role and responsibilities. Though security encompasses a host of issues like economy, trade, food, demographic security, the paper is alluding to only the military budgetary aspects.

While inclusive growth may be the stated end, ensuring that it happens is quite another thing. The expansion of the economy automatically widens the chasm between the 'haves and have-nots', leading to incidents of terrorism and calls for secessionism and separate statehood by disgruntled elements; thus increasing the vulnerability of the State to inimical neighbours, ready to take advantage of the situation. This necessarily means that the state should have in place, suitable security means to pre-empt such a scenario. Which leads one to the next question – 'How much should we spend'? A couple of examples will serve to put things into perspective. Soon after the end of the First World War, both Germany and France started investing heavily in building up their defence capabilities, with the latter spending decidedly more than the Germans. Yet, when World War II broke out, the German blitzkrieg took just six weeks to overrun France. In another instance

^{*}Major General Vickas Kapur, VSM is Additional Director General, Financial Planning at the Integrated HQ of Ministry of Defence (Army).

pertaining to the period between the two World Wars, both USA and Japan embarked on an exercise to build a base for a carrier – dominated fleet. Japan was able to achieve the same results as USA, despite having manufacturing capabilities that were one-fifth of the latter, which brings one back to the point that – 'Is it about the quantum of money, or how wisely is it invested?'

When India gained independence, Pandit Nehru adopted a policy of non-alignment and de-mobilized a large segment of the Army, leaving a standing strength of barely 5.5 lakh soldiers. The requirement, he felt, was for a larger police force, since he believed that we would maintain friendly relations with all our neighbours. He fixed the defence budget at 1.69 per cent of the GDP and that is where it remained for over a decade till the Chinese attacked in 1962 and we were rudely introduced into the world of 'real politik'. Overnight a decision was taken to augment the Army to a strength of 9.2 lakhs. The defence budget was enhanced to 3.2 per cent of the GDP, though a large proportion comprised Pay and Allowances. The 1990s saw the defence budget decline slightly and plateau off at about 2.5 per cent. However, since the turn of the century, this figure has been steadily dipping and currently stands below 2 per cent of the GDP—a disturbing trend.

The Finance Minister is in an obvious dilemma and often in a no-win situation. His prime focus must be development but security issues are equally important so he has difficult choices to make. Any decision on size and quality of the armed forces is foreign policy driven and warrants a holistic look at how India views herself in the regional and global context and the responses that she should be capable of making. With the rapid modernization of China and requirement of a larger regional and trans-regional role, budget allocation and its further utilization in a growing economy such as ours, assumes far greater importance than ever before; notwithstanding the constant reassurances of the Finance Minister that the genuine demands will always be met.

The last two decades have been marked by distinct, visible and welcome changes in our society, primarily due to economic reasons. Businesses and government departments are transforming their attitudes and work culture by adopting some of the best business practices prevalent in the world. However, the defence budgeting system has generally retained its pre-independence systems. Whatever little changes that have come about, have been sporadic and too little. As resources of the world start depleting, the possibilities of conflict will grow even larger, necessitating maintenance of strong security forces. The old guns versus butter debate must be replaced with an approach that treats allocation towards defence as an '*engine for growth'* (Lt. Gen. S. S. Mehta, former DCOAS).

Defence Planning and Its Linkage to Budgeting

General

Allocations by the Government to Defence rarely coincide with projections. The Ministry of Finance, supposedly the custodian of efficiency and economy in public expenditure; resorts to arbitrary cuts, sticking to an additional of around 10 per cent each year, irrespective of the projections made. This approach owes its legacy to early 20^{th} Century when the British rulers followed such a method to prevent loose budgeting by the various administrative departments of the ministries to tide over frequent cases of large surrenders (due to initially over-estimating the requirements and later under-spending the allotments).

Budgeting

While revenue allocations have barely matched inflation figures, capital allocations have been based on funds required for servicing existing contracts and government assessment of new schemes likely to be signed, based on past precedence. The gestation period from inception to final purchase of any equipment is often unpredictable. At times, it is difficult to forecast accurate requirement of funds especially when large value purchases are involved. This has often led to adverse comments on the planning process and, as we shall discuss later, is one of the major areas where slippages in budget utilization occur.

Planning and Budgeting

The first Five Year Defence Plan (FYDP) which covered the period 1964-69 was an aggregate of the estimated yearly defence budgets of the five year period, with little linkage to long term requirements. The next FYDP (1969-74) however, for the first time, took into account the strategic and operational needs over a ten year horizon. In 1980, it was decided to align the Defence Plans with the National Five Year Plans and make the budgetary process of the two complementary. Thus, from the 6^{th} National Five Year Plan (FYP) onwards, the FYDPs were made concurrent with the FYPs (this was the fourth FYDP). The 7^{th} FYP was followed by a two year plan holiday. A planning perspective over a fifteen year time horizon, based on the recommendations of the Arun Singh Committee, was considered for the first time, in the eighth FYDP (1992-97).

Defence Planning Paradox

After fighting four conventional wars (including Kargil in 1999), and facing an

ongoing proxy war for almost three decades in J&K, the method of budgeting remains essentially a process of utilisation of funds to meet the demands of individual services. This was probably because – upto the tenth FYDP in the absence of a clearly elucidated Defence Capability Policy, there was limited integration between the Services and plans were formulated based on individual Service's perceptions of threats and challenges. Also, in the absence of timely endorsement of the Plans–full availability of funds was not assured. Thus, projections became hostage to efforts of getting the most for 'Your Service,' with little attempts at compromise.

The Defence planning is also affected by the fact that there is no forum for actual discussion of the Plan and its subsequent 'Owning' by the concerned functionaries within the MoD. Absence of participation at the inception stage, often leads to inaccurate perception of the nuances of a Plan–fostering suspicions of non-optimised expenditure within the MoD and MoF. As a result, barring a few exceptions, Defence Plans receive the approval of the Government at a very late stage (e.g. both the 8th and 10th FYDPs were never formally approved); leaving commitment of the Government somewhat ambiguous for execution of the plan. Tacit assurances of Government support are not enough, as much time is spent in questioning of acquisition schemes at each stage, including their rationale and necessity. Lack of such integration also leads to a flawed view that the Services procurement programme is a 'Wish List'.

Defence Planning - Recent Developments

The unqualified need today is to have an Integrated Perspective Plan emanating from a well-defined and articulated National Security Strategy. The Tri-Service Doctrine has been a positive first step. Plans emerging from the Doctrine must clearly lay down the joint capabilities to be developed – without getting entangled in narrow parochial interests. This is the only logical basis for inter-service allocation of funds. Such a plan would find ready acceptance at the highest political levels. It would also ensure 'ownership' and financial commitment of the Government to fund its execution. This logically warrants creation of an apex body for coordinating the planning, resource allocation and procurement functions as under:

- *MoD Services HQ Integration:* MoD officials must be integrated into the planning process from the drawing board stage itself, to avoid situations later-where necessities are questioned.
- *HQ IDS has its task cut out:* It needs to get more assertive and must be widely supported in its attempts at taking up with the Government, the

synergized concerns of the Services. With the eleventh FYDP already submitted, it now needs to be pushed up for its approval.

Translation of Plans into Budgets

Budget Allocation

Budgetary allocations to Services regularly fall short of projections made in the Five Year Plans. A quick look at the table below clearly illustrates this:

	Allocations				
Financial Year	Revenue (Rs. crores)		Capital (Rs. crores)		
	Projection	Allocation	Projection	Allocation	
2002-03	29305.03	27301.32	10047.05	7414.47	
2003-04	29459.55	28227.34	14029.58	5676.71	
2004-05	31915.01	27140.58	17202.25	8831.86	
2005-06	30746.15	30535.46	13944.58	9421.14	
2006-07	32617.51	31527.23	11941.28	10387.56	
2007-08	35959.90	33269.16	13518.30	11621.02	

While revenue allocations have been reduced by approximately 10 per cent, the effect has been largely on the capital budget. The background to these reduced allocations is the common refrain of the Government that the Services are unable to spend the allocated budget. In fact, the whole system is like a Catch-22 situation. Smarting from the infamous 'Tehelka' expose, the Defence Ministry formulated the Defence Procurement Procedure for capital acquisition, in its attempt to ensure greater transparency and probity in the selection process. On ground, this noble intent has only served to increase the tedium of the acquisition process, often making the whole exercise self-defeating.

Optimisation of Budgets

The key is to create a firm linkage between the Five Year Plans and Budgets. Once the capabilities are converted into programmes or missions taking into consideration the long term strategic and operational needs and budgets directly allocated to them,

the linkage between long term Plans and budgets would get clearly established. A quote from Shri C. Subramaniam, former Finance Minister on Long Term Planning will set things in correct perspective, *"Long term planning must become an article of faith with us, if crisis management and ad hocism is to be avoided, and nation is to be provided with sound and desired Defence capability"*. This would also help in measuring the progress of the programme while allowing planners the flexibility to focus on priority areas for fund allocation. Whether we use Planning, Programming and Budgeting or performance budgeting or even output budgeting, is immaterial. What would be of greater import is the establishment of a concrete, formalized, time-bound linkage between the budget and its proper utilization to meet the objectives.

Energising HQ IDS

Rightfully, the task of sub allocation of the Defence Budget must rest with the IDS (since it is the designated apex body). However, to expect it to undertake such a role would be counter productive unless it is suitably energized by providing staff increments, both from the Services and the MoD. In its current form, IDS can only make a 'compiled' consolidated bid to the MoD, for fund allocation. One would like to see an IDS appropriately staffed, fully involved in strategy selection and designing of forces, making fund allocations based on tasks, modernization plans, operations and maintenance, followed by a suitable monitoring mechanism to ensure that we get the biggest 'bang for the buck'.

Inter-Service Allocations - Concerns of the Army

General

The trends in budget allocation to the Army have been causing serious concern for some time now. From a share of around 60 per cent in the 1990s, there has been a steady decline to a dangerously low level of just under 47 per cent, today.

Revenue Compulsions

India has a huge land border, much of which runs through mountainous terrain where the impact of force multipliers is limited. This entails requirement of 'boots on the ground'. Lines of communication are stretched and large logistics bases have to be pre-positioned well forward. Coupled to this are the ongoing insurgencies and proxy wars, all of which are manpower intensive. Though no yardstick exists to calculate the exact spending on hygiene factors, a rough comparative analysis of the inter-se, pro rata expenditure, based on figures of FY 2006-07, excluding Pay and Allowances, taken cumulatively on heads like medical, accommodation, transportation, training, clothing, victualling and welfare reveals glaring differences in per capita spending between the ratings of the Army, Air Force and Navy (0.69 : 1.06 : 1.92) skewing grossly against the Army. Of the different issues mentioned, accommodation and clothing have the most serious impact on morale. Difficult living conditions as a result of large shortages in accommodation and limited funds to maintain even the existing one (since a large segment of it consists of old accommodation dating to the British Army days) are strong de-motivating factors, even for future aspirants looking for a career in the Army. Infusion of a large quantum of Revenue funds are needed to rectify this imbalance.

Capital Expenditure

Being manpower intensive, the Army's capital acquisitions do not consist of large cash outgoes and carry over liabilities get liquidated in a span of two to three years. Comparatively, acquisitions of both the Navy and Air force comprise massive expenditures, with large committed liabilities extending over several years which impinge, not only on the overall availability of Capital funds for the Army, but have an inadvertent impact on the overall allocations under both, the Capital and Revenue Heads of the Services.

Structure of the Army Budget: Intra-Service Allocation

General

In the Government's perception, the ideal ratio between the Revenue and Capital Budget should be 52:48. The current ratio, at 55:45, is almost in tune with this magical figure. However, this is largely due to the budgets of the Navy and Air Force whose Revenue vs. Capital ratio approximates 40:60. Most developed countries recommend expenses on Pay and Allowances to be in the region of approximately 25 per cent. This is largely due to the fact that their defence forces have a large complement of draft and reserve forces to supplement the permanent cadre. In the Indian Army's case this figure comprises 50 per cent of the Revenue Budget and 35 per cent of the overall budget. From a purely budgetary stand point, increasing the Territorial Army component may be desirable, but given our various operational roles and commitments, this may not be entirely feasible.

Revenue Budget

In its current form, the Army Budget weighs heavily towards the Revenue expenditure, leaving barely 25 per cent towards capital. New works which include the Married Accommodation Project, account for almost 15 per cent of the capital

expenditure. Once the project is completed, maintaining this accommodation would mean even greater requirement of funds under the Revenue Head and the revenue to capital ratio is likely to be adversely affected, unless modernization schemes are planned and executed vigorously. A category wise, rough distribution of funds is given below:

1)	Pay and Allowances	-	50 per cent
2)	Stores (Ordnance including Medical)	-	20 per cent
3)	Victuals and Fuel (Rations, milk, etc.)	-	10 per cent
4)	Works (Infrastructure maintenance)	-	10 per cent
5)	Transportation	-	2 per cent
6)	Grants (ACG, Training, Technical Equipment)	-	2 per cent
7)	Miscellaneous	-	6 per cent

Two areas which can have a tangible impact on the morale and welfare of a soldier (besides Pay and Allowances) are stores and works. The former is dependent on the ability of our ordnance factories to deliver, while the latter requires substantial infusion of funds, even if the existing maintenance scales are to be met. To make a tangible difference, there is really no alternative to increasing allocations under Revenue as diverting expenditure from the stores head to meet the requirement of the latter would be counter-productive. However, revenue allocations have stagnated at inflation levels, registering no actual increase. Given the nature of the role of the Armed Forces, there is a strong case for placing revenue expenditure of the Armed Forces outside the purview of the FRBM Act. Only then would there be some respite in terms of increased allocations towards revenue. Recent steps of transferring high value purchases logically under revenue, to the capital head is really working round the problem rather than addressing it head-on.

Capital Budget

The Army capital budget is unique, in that it comprises two distinct heads-*Modernization* and *Non-modernisation*. The Modernisation component which comprises of 55-60 per cent of the capital budget includes all equipment and systems being procured for modernising the Army. The 'Non-Modernisation' component consists of funds used for procuring specific high value equipment and acquiring assets such as land, buildings, etc. Funds under Modernisation are normally available to the desired level, though this may not reflect so in the initial allocations. However, there is a cap on allocations under construction works. A large segment of the Army (65 per cent) is living in Non KLP accommodation and major allocations are required towards creation of infrastructure, to ameliorate the situation.

Allocations and Expenditure

General

Being a cash-based budgeting system, the unexpended portion of the budget lapses at the end of the Financial Year. A few years ago, the Army had the dubious record of regularly surrendering funds. However, things have changed considerably due to greater levels of awareness permeating the environment. Surrenders are rare and confined to the capital modernization category, which cannot be entirely attributed to some flaws in the management of the budget, but is very often due to extraneous reasons over which the Services have little or no control.

IFA System

Over the years, the IFA System has fairly stabilized and the initial apprehensions and cynicism have been substituted by an understanding of the advantages accruing through their presence. The IFAs have also been instrumental in advising the CFAs in exercising their enhanced delegated powers with greater confidence. However, a formal government notification defining their role is yet to be issued.

Budgeting for Revenue Procurements

After Pay and Allowances, the highest allocations of the Revenue Budget go towards Ordnance Stores and equipment. Admittedly, surrenders were occurring a few years ago, due to inaccurate projections and lack of knowledge of the procurement procedures for Revenue Purchases. The Defence Procurement Manual has refined procedures, sensitized the environment, and brought in a degree of confidence, amongst CFAs responsible for concluding contracts. Another factor responsible for surrenders has been the uncertainty linked to target fixations with the Ordnance Factories which are constrained by a different set of dynamics; e.g. labour or material procurement problems. In the current format, the Master General of Ordnance has little control over the latter's functioning and is unable to do much, if targets are not met. There may be wisdom in shifting to a two to three year budgeting cycle for the DGOF, with whom bulk orders are placed, thus reducing the time spent on contract negotiations every year. This will not only help in timely budget expenditure, but will also assist in capacity utilization and economies of scale. The balance period can be utilized for producing alternate items which have a market demand, through competitive pricing.

Budgeting for Capital Procurements

More than 65 per cent of the Capital Budget, is generally used for new acquisitions. Often the Army has been castigated for under-utilisation of funds under the capital budget. There is also a widespread view in the environment (though erroneous) that the Army has not yet got its act together and constantly surrenders funds, which is not true. What is not commonly known is that the procedure for induction of any equipment is very tedious and slippages could occur at any level—whether at the technical evaluation stage or trials stage, shipping delays or vendor problems, leading to delayed decision making, causing time and cost overruns.

Challenges and Initiatives

Improving the Revenue: Capital Ratio

Consequent to the imposition of the FRBM Act in 2004, several initiatives were launched to improve the Revenue vs. Capital ratio which earlier hovered around 85:15. This was done through re-categorisation of certain high value equipment and large investments in the Married Accommodation Project, which made this ratio a healthier one at 73:27. Expecting it to fall much further, is not pragmatic and may be more a case of wishful thinking, especially since the Army is manpower intensive and pay and allowances account for 50 per cent of the Revenue Budget. Any real change will only depend on large cash outgoes from new acquisitions. But, major changes are unlikely. Thus, we may see a sort of sine curve wherein this ratio may rise and fall contingent on the frequency of high value purchases from year to year.

Outcome Budgeting

Revenue and capital expenditures are mere figures and we should not be really concerned about them. The focus should shift towards outcome or performance budgeting to determine the efficacy in budget utilisation. While larger delegation of financial powers has certainly helped, this must be linked to accountability of the budget holder and the effectiveness with which the 'monies' have been expended. Unspent budgets and cost and time overruns need to be justified to ensure that responsibility is assigned for any slippages that occur. Where Capital procurements are involved, the responsibility should not be limited to uniformed personnel alone, but all concerned including functionaries in the MoD, OFB, Defence PSUs and others associated with the project-creating a sort of 'ownership' and responsibility towards fructification. There is a common refrain that much of what is accomplished is intangible and not easily measured. Ways and means will have to be devised to benchmark standards against which evaluation can be carried out.

Indicative Budgeting

The current Government financial system is cash-based. Yet it would be of immense help if an indicative budget can be given for the following one, or preferably two years. This is bound to help immensely towards efficient planning and control of obligatory expenditure, by allowing a certain degree of flexibility to the budget holders.

Life Cycle Costing (LCC)

The present system of capital procurements is not firmly based on LCC, whereas in all developed countries this is the norm. It is fallacious to follow a system of awarding contracts to the lowest bidder without taking into account the LCC of the equipment. In fact, this should form part of the RFPs as well, where manning requirements, spares support, operations and maintenance form an integral part of the analysis process, as only then will the true value of the equipment be assessed.

Functional MIS

Presently, budget holders are somewhat constrained in their planning and monitoring functions due to a limited data base. Major objects of expenditure for which an efficient database with appropriate linkages is necessary are Pay and Allowances, ASC supplies, Ordnance Stores, Works and transportation. Use of e-mail and e-payments/e-receipts has opened another dimension for expenditure monitoring. Once the whole Army is connected to CGDA through the PCsDA/CsDA, 'real-time' information/data would be available and budget management would become a lot easier and smooth.

The implementation of the CICP pilot project for ordnance depots and introduction of e-ticketing are two such initiatives in their final stages. It is proposed to extend the former facility to the regional and field ordnance depots as well.

Outsourcing

One of the major means of improving the teeth to tail ratio is to resort to outsourcing. Several areas can be examined for their cost - benefit analysis though most pertain to the field of logistics. A few examples are highlighted below:

• *Rations:* In UK, an exercise to outsource provisions—to be delivered to unit cook houses within UK and even in the Balkans, Iraq and Afghanistan,has been an unqualified success. They coined a phrase for this—*Factory to*

Foxhole. The company which got the original contract for five years has now been replaced by another firm in competitive bidding. A major impact has been, freeing troops involved in logistics support, for front line operations. There is a large organization that handles our rations. If the provisions are outsourced and delivered to the ultimate consignee, trained manpower can be spared for operational duties.

- Ordnance Depots: When the Chief of Defence Logistics, UK, visited COD, Delhi, he found the organisation to be unduly large for the task it was performing and felt that there was ample scope for pruning it. In a similar move in his country, bids for running ordnance depots in a more efficient and cost-effective manner were thrown open in the commercial sector. The Ordnance services too were permitted to compete. The final award went to the Ordnance Services Directorate itself as they promised savings running into almost half a billion Pounds Sterling, through various cost cutting measures. It included a 40 per cent reduction in Staffing levels, closure of three depots, design changes in the organization and providing the work force with new skills and working methodologies. The threat of outsourcing to industry had the desired impact. We could take a cue from the Multi-National Forces operating in Iraq who have outsourced a slew of activities like :
 - Avionics and aeronautical engineering aspects.
 - Chemical matter analysis, especially IEDs, etc.
 - Rations.
 - Vehicle repairs.
 - Transportation.
 - Training (especially psychological and pre-induction training) prior to being launched into the operational environment.

In effect, enough scope exists for exploiting outsourcing avenues, if the issue is examined with an open mind. The guiding factor must be to identify the core and non-core functions and then see how to maximize outsourcing of the latter.

• Services of Class 'C' and 'D' Staff: Shortages in Class 'C' and 'D' staff have been increasing. Often there is dissatisfaction in the standard of services provided. With the Government persisting in its policy of limited fresh recruitment, this is an opportune time to shift to outsourcing. Outsourcing releases manpower, is cost effective and brings with it efficiency as there is assignable accountability of both—the service provider and the individuals

performing the tasks, since the former cannot afford to lose business because of the latter. Currently, IMA Dehradun, has outsourced the complete cooking and dining facilities in one of the Cadets' Messes. The outcome of this initiative is awaited.

- *Maintenance and Repair:* Much debate has taken place on the wisdom of outsourcing repair and maintenance functions of equipment, currently handled by the EME. An exercise is already underway which, if successful, could be extended to other areas as well. Everything will hinge on building a level of confidence with the OEMs and industry, so that they can prepare themselves accordingly. Fears of services not being available at remote locations may be unfounded, as contracts concluded will have safeguards suitably built-in.
- *IT Sector:* This is one area where expertise in the civilian sector is already being drawn upon in a major way with encouraging outcomes.

Miscellaneous Areas Requiring Examination

General

Most decisions to optimize expenditure normally veer towards cost-cutting in logistics. There is also a need to holistically consider the logistics costs of strategic military decisions. Even logistics comprise two kinds of costs - operational and administrative. Since not much can be done about the latter, it is the former cost estimated at about 20 per cent, which are impacted. However, there is general agreement on one fact that there is ample scope for resource optimization.

PSUs

There are various regimes operating in the world at any one time, each with their unique interests and 'conditionalities'. The time may now be right to bring industry into the system in a big way and establish a long term relationship – making them play a greater part in the security dynamics of the country, while developing enhanced competencies. Their manufacturing capabilities must be augmented by adopting best business practices prevalent, to achieve much higher outputs. Other aspects worth considering include:

• Identifying ways of utilizing idle capacity for cost cutting and increasing profits. It amazes one to think that during World War II, the Soviet Union produced 7,000 T-34 tanks each year over a 5 year period from 1940-44, while USA produced 21,000 Sherman tanks in a single year. Surely, we can build a capacity of being able to produce at least 200 tanks a year.

• Competing with the corporate world in non-core products.

Procurement Decisions

Despite re-working the procedures listed in the revised DPP-2008, procurements still take inordinately long. Delayed decision making and lack of accountability only serves to exacerbate matters – resulting in cost overruns. Normally, all procurement decisions are guided by a combination of induction cost (in large measure) and in service cost of operations and maintenance over the desired period. Because of procurement delays, equipment life is extended beyond that originally intended, substantially increasing the cost burden. The L-70 AD Guns, 105 mm IFG of the Artillery and ANPRC-25 radio sets are glaring examples. The same is the case for the Navy and Air Force. All this makes one wonder whether there is a need to review the basic parameters when deciding to acquire any equipment.

Prolonging In-Service Life

Equipment introduced into service has a designated life. For various reasons, including decision delays, induction of replacements are not effected, when due. Obsolescence is resisted through micro innovations, in an attempt to increase equipment life. However, not only does this mean increased costs on operations and maintenance but the originally thought of replacements may no longer be required, as, even threat levels may have changed. Part of the problem lies within the service itself, which often demand weapon systems capable of doing everything and then keep making changes through out the development cycle leading to further delays and cost escalation. The facetious remarks of the former US Under Secretary of the Army, Norman R. Augustine will have its relevance, *"In the year 2054, the entire Defence Budget will purchase just one aircraft. This aircraft will have to be shared by Air Force and Navy 3-1/2 days each per week except for leap year, when it will be made available to the marines for the extra day." The bottom line must be to improve our operational preparedness and remain relevant in our operational and strategic environment.*

Delayed Approval of Defence Plans

Besides posing uncertainties on allocations, delayed approvals affect systematic implementation of the defence plans. Early approvals could help our indigenous efforts by sounding the Defence PSUs and even Industry, who depend in large measure, on orders from the Army. It will also enable the former to forecast periods of idle capacity for producing other goods.

Optimal Mix Strategies

Enough scope exists for the use of mathematical modeling to arrive at an optimal mix, both for strategic – operational requirements and for acquisition of weapon systems. We are yet to develop enough confidence and faith in operational research and other techniques, to have a positive impact on our decision making.

Lessons from the Corporate World

Private industry is always on its toes in trying to remain ahead of the competition. Techniques like Six Sigma and Lean Six Sigma, which focus on quality, product improvement, elimination of waste and value addition along with reduction of inventories and production time, must be drawn upon, for implementation in our internal functioning. Each Service organisation must make a list of all the activities carried on within, and focus on each separately, to see how things can be done better. Small savings in cost/time could lead to large savings in expenditure, when viewed cumulatively.

Budgeting System

While the current cash based budgeting system has been running satisfactorily since Independence, there is a need to consider a non lapsable provision especially where capital procurements are concerned. The C&AG has often pointed out instances when inordinately large purchases were made in March of the financial year, raising questions of compromises in equipment selection. This provision will automatically ensure value for money and be a suitable insurance against canny vendors who deliberately delay negotiations in an attempt to exploit our system. The 12^{th} Finance Commission has recommended to the government, to shift to the accrual system of accounting as is being followed in some developed countries. This may not be easy e.g. Australia after using the system for over a decade has found several pitfalls and is already contemplating on reverting to the old cash based system. Sweden too, has reverted to its original system. In our context, may be a mixture of the two systems could provide better options.

Contingency Reserve Fund

The Defence Budget caters for normal expenditure likely to be incurred during the financial year. There are no reserves to cater to sudden requirements of emergent situations especially, those arising at the end of the financial year e.g. wars, disasters or even major acquisitions, which cannot await circuitous procedures for special

allocations. An amount of around 2 per cent of the revenue allocations could provide reasonable reassurance.

Accounts Cadre

As larger and larger finances get delegated to lower levels, there would emerge a requirement for having Army Officers trained to perform tasks similar to those being performed by IFAs at the Command HQ. Commanders at even the lowest levels are required to take financial decisions-with large cost implications. The prevalence of high levels of probity will warrant such decisions to be above board. Officers would need to be suitably trained to provide financial advice and move beyond just being able to handle regimental funds. Suitable Army specific courses in finance would need to be structured in concert with the CGDA, to provide the required competencies. There may even emerge a case for creation of a Finance Cadre as a career option within the Service. Such a cadre already exists in the IAF and in a larger way in some other Armies such as Australia and USA.

Research and Development

Lastly, our R&D efforts must shift attention from mundane low technology products like clothing and foodstuffs (which can easily be outsourced) to niche technology products of strategic nature. Globally, much of R&D is privatized and there is no reason to be unduly apprehensive on this score. The spin offs will benefit both, while building up scientific temper in the country. In fact, the Defence R&D organizations need to get the industry on board, by making them equal stake holders, as opined by the SA to RM. Retention of scientists is a further problem being faced by the DRDO. In a recent report it was mentioned that, a total of 745 scientists have left this Government organization for more lucrative assignments with MNCs in India and abroad. Unless greater research challenges and better remuneration is provided, our R&D efforts will not bear the desired fruits.

Conclusion

India is in the process of metamorphosing from an agrarian economy with an often ridiculed 'Hindu rate of growth', into a dynamic economic and technological powerhouse. To keep pace with its economic resurgence (less than three centuries ago, India produced 25 per cent of the world's industrial output) in a dynamically evolving geopolitical environment with several uncertainties, there is an equally strong need to have defence forces capable of insuring the nation against both internal and external threats. Therefore, to realize its legitimate aspirations and address its enhanced security concerns, the need for a modernised, well equipped, highly motivated and optimally funded Army, cannot be over emphasised.

Despite voicing otherwise, defence planning and fund allocations still remain largely individual service efforts to garner the most for themselves with the MoD(Finance) moderating the allotment based on precedent and their own perceptions. Considering the tri-service nature of all future conflicts or responses to national disasters; having a single agency to coordinate the Services effort is not only required but an undeniable necessity. An HQ IDS driven integrated approach, to formulation of a synergised Perspective Plan and Five Year Defence Plans is the only method of achieving optimal inter-service allocation of funds. A matter of concern continues to be the Army's declining share of the overall budget and more so, the Revenue component which urges immediate attention.

Finally, there is a need to widen the participation of industry, as important stake holders in the over all security paradigm. Outsourcing as a policy too, deserves serious consideration as a means of reducing the logistics tail and adding to economy and effectiveness.