Optimizing Force Structure

A fine balance between modernization, cost and resources

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Introduction

The Indian Armed Forces have been getting technologically advanced weapon and support systems with increased lethality, longer reach and all-weather capability. When coupled with state of art surveillance, coordinated and unexpected application of firepower, these offer results far greater than the simple application of technology in isolation.

Despite the induction of these enablers, there has been extraordinarily little change in the Concept of Application of Force and the Indian Army, in particular, tends to remain in the dogma of manpower intensive tactical and operational application. Of-course the nature of deployment in inhospitable terrain and weather conditions, and the requirement of manpower intensive operation in Counter Insurgency/Infiltration operations does impose a caution on the commensurate downsizing. Warfare is evolving in its interpretation and application of forces is regularly seeing changes in its concepts. No longer the Infantry predominant bayonet charges are in practice in militarily advanced countries. Technology is being used the World-over to ensure that Boots-on-Ground no longer are used to 'fight to gain territory' but are rather used to 'occupy territory', preferable without fighting. Territory, by itself, is changing in its concept of strategy and destruction of war potential and economic resources is taking root. In fact, countries are evolving towards building up extensive conventional destruction capability with flexible means of delivery which act as a deterrent to any misadventure by the adversary. Emerging technological advancements, in conjunction with the futuristic security needs, merit an in-depth analysis of existing & planned force structures. Dynamic changes in the geo-pol environment as well as the developments in the contemporary battlefield sphere necessitate the force structure to be adaptive. A holistic review of doctrines, concepts, force structure and their application considering emerging technology will possible indicate lean and agile forces across the spectrum of ops.

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Illustrations

A few cases can be taken to illustrate the requirement of re-structuring and re-configuring

The configuration of the Armoured Regiment remains the same despite technological advancement in the Tank, the ICV supporting it as well as the combat support elements. This configuration is based on flexibility in employment, so that reserves are available to manoeuvre and, tank to tank distances which are restricted by optimum ranges of engagement by day and night. With advancement in technology, the ranges, rate of fire and accuracy have increased. Enhanced communications and night vision enablement has eliminated the sense of isolation and made the tank more lethal. The modern tank now fires a missile at 5km and is capable of the Hunter-Killer concept of employment. Protection levels have increased. The Squadron, and therefore the regiment, can easily cover a larger area and deliver immense destructive fire power in the battlefield. However, despite the enhancement, including that of the supporting Mechanised Infantry now on BMP-2's and availability of modern supporting Self Propelled Artillery like the K-9 Vajra which costs twice that of the Vijayant Catapult, the configuration of the squadron remains at four troops each. There is a case to reconfigure it to three troops, but something more than pure consideration of tactical and operational employment of forces leave it at the erstwhile composition. What must be appreciated that a T-90 costs 1.5X a T-72 which in turn is 1.5X the outdated T-55. A modern MBT like the ARMATA-14, would be 1.5X to 2X the T-90. With increasing cost of modernisation, commensurate saving must accrue in the equipment and manpower for it to be optimum in cost implementation.

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The configuration of the Infantry Battalion has largely remained the same despite the change from .303 Rifle and LMG and RPG3V to SLR and 84mm RL and then to INSAS and 84RL, with better munition. The Infantry Battalions are now getting modern Sig Sauer assault rifle, IWI LMG and sniper rifles which provides better ranges, rates of fire and accuracy than the INSAS rifle/LMG and Dragunov sniper rifle, along with better night fighting capabilities and communication arrangement. The AK 203 is a definite improvement over the INSAS or the AK 47, for counter insurgency/ conventional operations. With destructive power of modern munition, precision guidance and artillery available for support there is definite case to look at the configuration of the Infantry battalion, its strength, and the number of such battalions. The case is for a three-company configuration which is the case in advanced countries. The Infantry soldier will have to be multi-skilled to remain relevant in the modern battle field.

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The artillery has improved over the decades. From 25 pounder and 105 mm we are progressing towards medium-isation of the regiments. The 155mm BOFORs is now being supplemented with the Dhanush 155mm system followed by the 155mm towed artillery. With Smerch Regiments and raising of the additional Pinaka Regiments, firepower takes supreme position in the battlefield. With aerial surveillance resources and the indigenous Gun/Mortar locating radar, we have the capability of neutralising enemy artillery and directing accurate fire at the target end. The guns also have the capability of neutralising two to three targets simultaneously with their enhanced rate of fire and flexibility of switching targets. Mobility offer the advantage of flexibility of deployment which allows enhanced firepower to be concentrated at the decisive point. With all this fire power at disposal, the tactical norms of deployment and utilisation of resources remain the same.

The concepts of the number of forces and their structuring in operations, needs a change to enable commensurate savings for modernisation

The destructive and accurate fire power must enable a change in concept from 'attacking by Infantry to capture', TO 'attacking by infantry to occupy'. This too indicates a change in the concept of the ratios of employment of troops for capture of objectives. The integral infantry firepower and support by artillery also enable a change in the ground holding configurations and frontages held. The enhanced fire power of artillery and greater flexibility indicate a change in the requirement of the number of artillery regiments resulting in savings to get technologically advanced weapon systems. The concepts of the number of forces and their structuring in operations, needs a change to enable commensurate savings for modernisation.

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With the planned induction of the S-400, air defence is stronger. Airforce now requires lessor number of planes for air defence role. We are looking at an interdiction role of strategic objectives thus crippling the infrastructure and industry of the enemy. The isolation of the battlefield becomes an important task and with precision ammunition it can be achieved easily. The enhanced firepower that the IAF provides is a deterrent to any country. The emphasis of build-up of capability must be in more towards the IAF and that is expensive.

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Take-Aways from the Drone/Swarm Threat

The Drone/Swarm strike on Saudi Arabian Oil fields, influence of the Turkish drones in Libya and Syria against the Russians and the more recent Azerbaijan-Armenia Conflict has brought home the stark reality of such weapon systems to the Indian Armed Forces. The low-cost Armed Drones and Swarm attacks will take its toll on mechanised forces and the combat support elements with it. The Infantry, in the open will be sitting targets. These would require a major upgrade in terms of the counter measure being adopted in tactical employment as well as equipment that can neutralise such threats. These technology additions on-board to weapon platforms or off-board on support systems, will be finance constraints that will tax the defence budget, but will become essential in case the threat is to be countered.

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The weapon systems will have to be protected with on-board/off-board counter measures and active protection systems, as also means to destroy such threats.

The Cost of Modernising

The advance systems make a huge dent for the exchequer. Sustaining such costs should be offset by a commensurate reduction of forces as also weapon systems in their authorisation. Nowhere, world-over in advanced armies is both, technological advancement as well as manpower, growing at the same rate. In fact, the cost of technology advancement must be offset by saving in manpower and equipment/weapons in order to enable technological advancement.

The Indian Armed Forces have seen technological enablement in the last decade. The Indian Army, however, does not appear to be downsizing commensurate to the technological jump in order to ensure that the defence budget is contained to manageable levels. If at all right sizing has been attempted, it has been in the marginal cut in services which has been offset by raising of new formations and infantry battalions. Our complete concept of force requirement revolves around a bean-count of divisions, ours, and adversary, which at time extends to holding of major weapons to assess comparative capability. In the modern battlefield this does not stand to scrutiny as what matters is not the number of heads/weapon [platforms, but how the heads are armed/equipped and their weapon combat potential synergised. This synergy gets into being an area of concern, both within the service and more-so when extended in a tri-service domain. In fact, it is time the terminology of tri-service stops in its relevance of segregation and everything operational is assessed as across full military potential which is synergised. As such, without this consideration being uppermost, the modernisation of the Armed Forces has suffered due to lack of attention possibly attenuated by the restricted finances which are in turn grouped into non-interrelated three parts, one each to each service, rather than looking at it as one block.

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For India, considering the terrain conditions and the extensive deployment of the manpower intensive arm viz Infantry, in counter insurgency environment, the solution is not simplistic. Calculations for conventional warfare do not hold good when applied to the sub conventional domain. Mountain and glacial warfare are rather manpower intensive. The problem is further accentuated by the rotation of troops, to give them relief from being 'forever in operations'. Also is our predicament of possibly fighting a war simultaneously against two adversaries coupled with the induced insurgency. It is a complex situation, which requires a deliberate consideration, which is becoming even more important as against the challenges of the modern battlefield within budget constraints.

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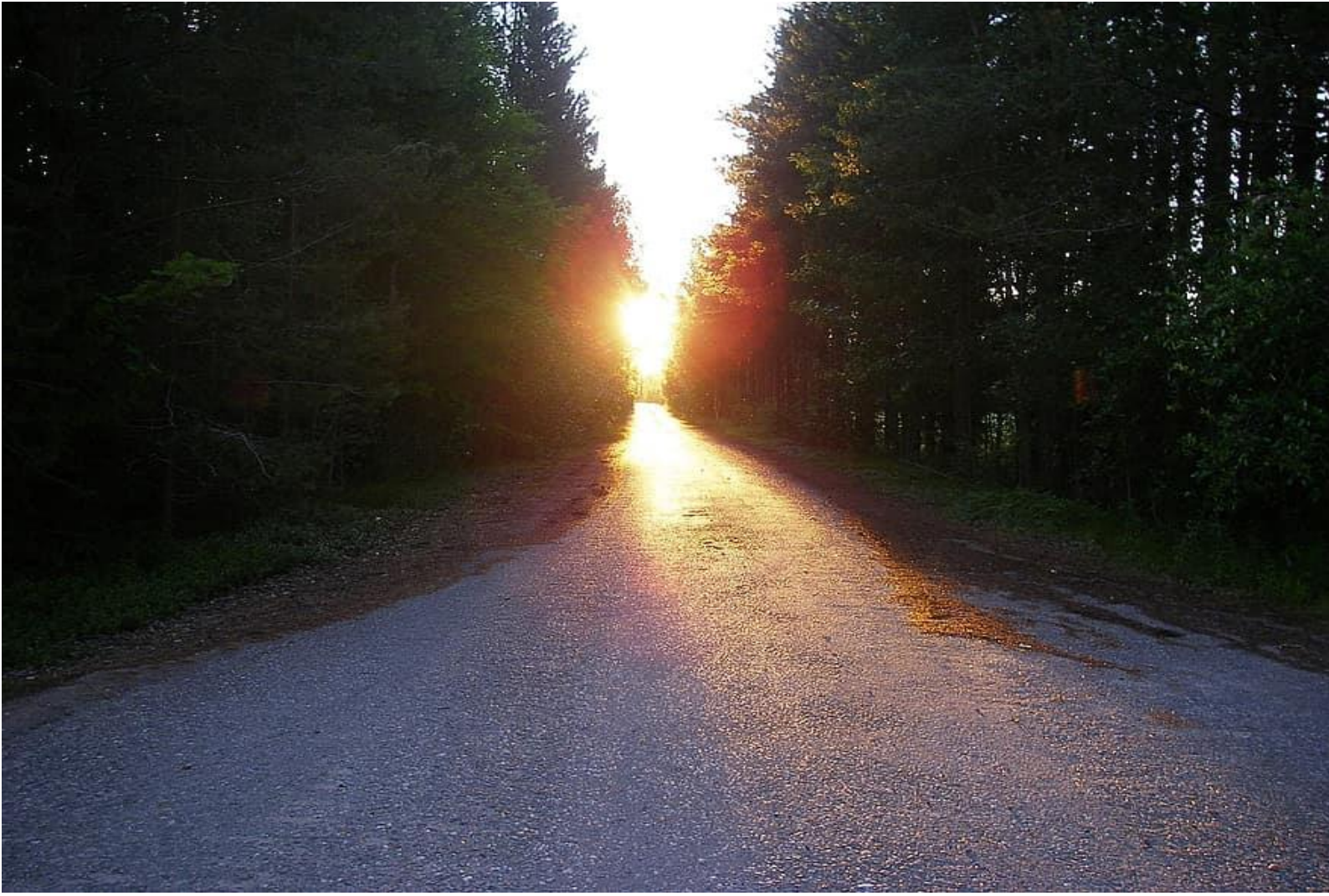

The Way Ahead

There is a need to re-look at our force structuring with commensurate technologically enabled weapon and support systems. There is a definite need to look at the required force structure to deliver the military aim in both Conventional and Sub-conventional warfare, the required technological enablement to achieve it, commensurate downsizing based on a system analysed design which sets in place a plan to downsize based on the present holdings as also, a road map to both the acquisition of enablers and equivalent savings. Integration must be enabled across the three services wherein capabilities can be synergised leading to exponential increase in effect of weapon impact needs to be factored in and duplication of resources weeded out.

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Having outlined thoughts on the issue of savings commensurate to technology enhancement, to enable technological advancement for the modern battlefield, there is a definite need to examine the matter in all aspects of its application. Some of the aspects that could be studied, to come to any viable implementable conclusion, are as under:

a. The Azerbaijani-Armenian Conflict; how do the modern systems, battle array and tactical/operational concepts used relate in the Indian context.

b. Changes that have taken place in modern armies of the world. The span could be restricted to USA, UK, Russia, and China.
    i. Modernisation and induction of new technology into the armed forces of these countries
    ii. Changes in concept of Warfighting. Have the technological advancement had any effect on the tactical and operational concepts.
    iii. Changes in Force Structuring in these countries. How much of the changes are due to induction of new technology and resultant changes in tactical and operational employment of forces.
c. Aspects above as relate to Indian Armed Forces:-
    i. Has India kept pace with evolving concepts of employment of forces and tactical doctrines?
    ii. Induction of technology in the last 10 years into the forces and its effect on
        (aa) Tactical and operational employment of forces.
        (ab) Commensurate reduction of manpower or equipment/weapons.
        (ac) Incorporate integration of the already introduced technology advancements in the operational plans and then deduce the corresponding reduced requirement of manpower.
    iii. What is the deterrence level required to be reached with respect to our adversaries in conventional weapons? Identify how much has been achieved and what more is required.
    iv. How do we intend fighting/ prosecute war of tomorrow? There would be no front and rears. How do we organise the force dispositions and what type force multipliers/ reserves are required? In that context, how do we achieve optimisation.

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    v. Important technological advancements at the tactical level which directly effects employment of forces, thereby reducing the manpower requirements.
d. Establish a relationship between high technology equipment/systems/ weapons to manpower and vintage equipment. Identify areas where:-
    i. With the present high technology systems, identify the reduction in manpower and other equipment/systems can be affected.
    ii. Set out a road map for the next 10 years for induction of new technology and commensurate savings in manpower and old vintage equipment/weapons.

To do the above, a System Analysis and Design Model will have to be evolved with weightages to salient attributes. A survey could be conducted to evolve the matrix of evaluation. The study would have to be integrated across all three services, as technology advancement and its impact cannot be restricted to the domain of only one service; the combined arm concept of employment of forces and obtaining best results must be evolved.

Conclusion

The necessity of utilising technological advancements as Force Multiplier, in the modern battlefield, in effect leads to re-structuring and optimisation of the def forces, which in turn releases funds for modernisation. It may also be considered that the genesis of the modernisation drive is not dictated by the requirement of downsizing armed forces. Optimisation leads to downsizing which is, in itself, not the purpose of introducing the technological advancements, but it certainly a by-product of the entire process.

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Downsizing in defence forces across the world, like in the case of China (2014-20), has been considered along with the implementation of a framework for overall restructuring and reorganisation, capability enhancement in terms of induction of New Generation Equipment, integration of the defence potential in form of theaterisation. Our transition must be accordingly well calibrated considering the threat perception and associated two and a half front dilemma. The training methodology and concepts have also to be evolved accordingly. However, the dogma of the multi fold threat must become the catalyst for change in induction of technology, which, considering the financial constraints of a growing economy, can take place by optimising the force strength both in terms of men and weapons/equipment.

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