

# COVID-19 Warrants Long Overdue Doctrinal Shifts in Military Planning

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## Abstract

The economic shock of COVID-19 makes the current method of defence budgeting redundant. When the GDP itself is set to reduce, defence expenditure demands as a percentage of GDP is less feasible. On the other hand, the situation on the Line of Actual Control (LAC) in Ladakh has demonstrated again that managing China, not just Pakistan, should be the focus of India's military planning. To overcome these two challenges, a few incremental budget cuts, postponing of capital acquisition plans, and forgoing of salaries for a day would be insufficient. This paper proposes major doctrinal shifts in military planning. It identifies the mismatches between India's political objectives and the kind of force structure put in place to meet those objectives. Derived from these mismatches, six doctrinal shifts — a paradigm of employable power, a structure for integrated theatre commands, conversion of manpower to human capital investment, organisational changes to build firepower, and a shift in focus to the seas and new domains — are discussed. The paper ends with a discussion on the civil-military pieces that need to fall in place in order to execute these shifts.

**Keywords:** COVID-19, Defence Expenditure, Military Planning, Theatre Commands, Defence Pensions, Employable Power

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## Introduction

Defence economics as a discipline is non-existent in India. What exists in its place is an anodyne debate on the size of the defence budget. The contours of this debate peaks closer to two specific days every year. The first day is when the Union government releases its annual budget. The second day is when the Swedish think tank SIPRI releases its formidable military expenditure report. On both occasions, the number that captivates analysts and reporters is defence expenditure expressed as a percentage of India's GDP. In this analysis, 2 percent of GDP is the anchor; if the expenditure is below 2 percent, India is underspending and if it's about 2 percent, it's not doing all that bad<sup>i</sup>.

Over the last few years, this anchoring point in India has changed to 3 percent of GDP. The Parliamentary Standing Committee on Defence 2017-18 noted that 'the defence spending of 1.56% of GDP is way below the 3% mark, which is considered to be optimal and necessary for ensuring the operational preparedness of the Forces (Parliamentary Standing Committee on Defence 2017, 108-109). Here again, there's no attempt to explain how an expenditure of 3 percent would effectively counter India's national security threats. The assumption being made is that higher the defence expenditure, the better India's defence preparedness would be. Such an approach neither takes into account India's developmental needs nor does it concern itself with increasing the effectiveness of every rupee being spent on defence.

There's another pressing reason why this narrow defence budget analysis doesn't make sense. COVID-19 has resulted in a global slowdown. The World Bank estimates that India's GDP will shrink 3.2 percent in FY20-21. In other words, the Indian economy is set to encounter recession for the first time in forty years. Given this unprecedented economic shock, government expenditure, including defence expenditure is set to decline in absolute terms even if there's a rise in the spending relatively when expressed as a percentage of GDP.

To put this economic challenge posed by COVID-19 in perspective, we need to understand the qualitative and quantitative nature of defence spending in India over the last decade. Quantitatively, defence expenditure as a proportion of both union government expenditure and GDP has decreased in the last ten years. In 2009-10, defence expenditure was 2.8 percent of GDP and 17.6 percent of union government expenditure, which has decreased to 2 percent and 15.5 percent respectively, in 2019-20 (PRS India 2019).

More importantly, the qualitative nature of this spending has changed. One, the capital outlay as a percentage of defence expenditure has declined over the last ten years from 32 percent in FY10-11 to 24 percent in FY20-21 (BE). On the other hand, spending on pensions has increased considerably. FY19-20 was the first year when the defence pensions expenditure exceeded capital outlay expenditure. This difference will only widen due to a perpetually growing liability of One Rank One Pension (OROP).

The rise in the pension bill has been accompanied by an almost equivalent drop in the expenditure on capital expenditure this decade. Laxman Kumar Behera and Vinay Kaushal, researchers at the Institute of Defence & Analysis (IDSA), observe:

“...the entire increase in the pension's share (from 2011-12 to 2020-21) has come at the cost of the capital procurement, which together with Stores has dwindled by 11 percentage points from 36 per cent in 2011-12 to 25 per cent in 2020-21. In other words, the fast rise in the pension expenditure has a significant crowding out effect on stores and modernisation, two major components that determine India's war-fighting ability.” (Behera and Kaushal 2020)

While these qualitative and quantitative problems with India's defence spending have continued over the last decade, the threats and demands from India's defence establishment have only risen. The situation on the Line of Actual Control (LAC) in Ladakh has illustrated again that managing China, and not just Pakistan, should be the focus of India's military planning. Managing a much bigger adversary would require India to not just spend more but spend *more productively* for its defence preparedness.

Taken together, the supply-side challenge of COVID-19 and the demand-side challenge posed by China require a fundamental change in our military planning. A few incremental budget cuts, postponing of capital acquisition plans, and forgoing of salaries for a day would be insufficient given the scale of the problems. Instead, what is required is a convergence between political objectives and the kind of force structure required to meet those objectives effectively and efficiently.

Towards that end, it is necessary to assess how India's imagined political objectives through the application of force stack up against the force structure created for achieving those objectives. If there's a mismatch, it requires a change in the objective, the force structure, or both. This comparison is the focus of the next section. In section three, the article proposes some paradigm shifts required in order to better match the political objectives to India's force structure. And finally, section four talks about the civil-military pieces that need to fall in place in order to undertake the significant military planning shifts proposed in section three.

The article eschews a narrow quantitative analysis of defence expenditure. The aim instead is to move the discussion towards increasing the effectiveness of our armed forces to meet political objectives of the future, even under budget constraints imposed by COVID-19.

## **The Problem**

This section discusses some of India's major political objectives that require the application of force by India's armed forces. For each political objective the force structure put in place at present is discussed and it is found that there is a significant mismatch between the imagined political objective and the force structure created to achieve that objective. This mismatch is the real cause of a drop in the effectiveness of India's military instrument.

### **Objective 1: To get Pakistan to stop its proxy war in Jammu and Kashmir.**

This political objective has given birth to the notion of limited war — it is believed that a military solution ranging from invasion and land grabs to air strikes and the threat of nuclear retaliation combined with economic sanctions and political isolation can deter Pakistan (Menon 2020a, 172).

India's force is structured in specific ways to carry out the above political objective through military means. There are three strike corps to execute land grabs and invasions as a bargaining chip. To increase the speed of such an operation, the Cold Start doctrine was also put in place. These are high cost instruments requiring significant budgetary allocations for their development, maintenance, and execution.

At a strategic level, there are two gaps between achieving the political objective of changing Pakistan's behaviour and the military means. One, the threat of limited war by India hasn't had much success in being able to change Pakistan's behaviour yet. For instance, in 2002, a limited war threat only forced

Pakistan to temporarily promise the cessation of infiltration. Two, the threat of use of nuclear forces by Pakistan in such a situation is highly likely and though India may call this bluff, nuclear alerts on both sides would make the overall situation extremely dangerous and may not be warranted by the issues at stake. Thus far, despite the rhetoric, political leaders on both sides have displayed caution in crisis situations. Even a time-bound threat to nuke one of India's cities unless India ceases conventional operations can cause immense economic and political damage to India.

Thus, India is in a situation where the force posture it has invested in against Pakistan, is ineffective in attaining an important political objective.

### **Objective 2: Defending Indian territory against a possible two-front war against China and Pakistan**

A two-front war must be based on an active defence on the land boundary in the Western and Northern front and a strategic offensive in the maritime domain. This objective would require that India's military weight on the land frontiers must be *ab initio* postured towards the Northern front with flexibility to shift to the Western front. Presently, the posture is biased towards Pakistan and that should be reversed. More importantly, the strategic offensive assets in terms of maritime power is financially under sourced and therefore the strengthening of naval capabilities is impacted.

### **Objective 3: Preventing a large-scale invasion from China**

This threat has gained salience with China's recent overtures in Doklam and Ladakh. The military means being considered for this objective is to raise a strike corps that can move, deploy, and launch limited offensives in the high mountains. The Mountain Strike Corps (MSC) sanctioned in 2013 aimed to add a force the size of India's entire Navy (approximately 90000 personnel) at a cost of ₹65,000 crore. The huge cost has been a deterrent and the raising has been put on hold since 2018.

Ignoring the financial costs, the bigger issue here is again the mismatch between the political objective and the military means. One, deterring an adversary like China across a 3500 km long border needs at least three Strike Corps. Two, with one Strike Corps, coupled with the distances, terrain and lack of infrastructure, there is very little possibility of application as an integral offensive formation. Three, even if some major elements of the Strike Corps managed to launch a successful offensive across the Himalayas, it would be a logistical nightmare to maintain the force. Four, if we do find a solution to the logistic problem, China's interior line of communications on the Tibetan Plateau could facilitate a concentration of Chinese forces that could threaten the survival of the Indian forces. Five, unless the elements of the MSC are prepositioned well forward and thinly spread across the long border, they would not be able to quickly react speedily even to the most probable threat - salami slicing (Menon 2020b).

Here again, India's force posture is ineffective in attaining important political objectives.

### **Objective 4: Securing Indian seas**

The Indian Ocean and India's continental layout provides great potential to protect and control the sea lines of communications in the Indian Ocean. India's growth as a maritime power can provide the strategic heft to counter an aggressive China due to its inability to escape from the Malacca dilemma despite attempts at finding other transportation links and signified by the Belt and Road initiative.

However, developing maritime power is extremely costly and needs the correction of the existing balance between India's continental and maritime military power.

The current military planning is overly focused on the political objective of fighting continental wars with China and Pakistan. The naval instrument does not fit this political objective and hence it has not been paid attention to. In FY20-21, the Navy still accounts for just 13 percent of the total defence budget, as against 63 percent for the Army and 18 percent for the Air Force (PRS India 2020).

The development of maritime power is heavily capital-intensive. Over time, it appears that its priority is in fact decreasing in India's strategic approach. For instance, the percentage of capital outlay for the Navy to the total defence budget has declined from 6.8 percent in 2015-16 to 5.6 percent in 2020-21. The number of ships and submarines was 138 and naval aircrafts was 235 in 2017, which decreased to 136 and 219 respectively in 2018 (Ibid).

Thus, the mismatch here is that India is not paying enough attention to developing the maritime component of its military instrument commensurate with the gains it has to offer.

## **The Solutions**

Having highlighted the mismatch between objectives and means, this section talks about changes to military planning that can close this gap. Such an approach would warrant a paradigm shift on one hand in the way India prioritises its political objectives, and on the other, in the way India develops its military instrument. This section lays out a few such paradigm shifts that need to be internalised before designing future plans.

### **1. The Concept of *Employable Power***

For military planning purposes, India's defence establishment needs to conceptually distinguish between deterrent power and employable power.

Deterrent power aims to project military power by being in possession of robust arms, platforms, equipment and other military wherewithal that are embedded in flexible structures, undergirded by doctrine and can speedily absorb technology. Nuclear weapons, aircraft carriers, submarines, naval ships, fighter aircrafts, strike corps with tanks, mechanised units, special forces and artillery, missiles, all provide deterrent power even though their actual utility is circumscribed by the reality of uncontrolled escalation — especially between nuclear powers.

Employable power on the other hand is closely linked to the level of conflict and escalation and is indicated by the type of military systems in play, the geographic spaces of the conflict, and the issues at stake that influence the toleration of risks. It resides in those systems where coercion is attempted through threat or actual use in a spectrum of conflict that can be described as 'Operations Less Than War' (OLTW). For instance, cyber space is today the best suited domain for employable power as it combines effectiveness through speed and plausible deniability. It can be used to deceive, misinform, divert, blind and to impact directly where application of force matters – the minds of decision makers. These systems combined with force instruments that are considered the minimum requirement for early warning and defence of territory constitute the bulk of employable power.

For the purpose of budgetary allocation for building military capacities, **military planning should move to a paradigm of employable power and deterrent power. This means that higher the employability of a military instrument, the more it should be prioritised.**

The concepts of deterrent power and employable power when applied to the type of threats from China and Pakistan, indicate the type of operational posture required. The operational doctrine for the Northern borders should first privilege improvement in surveillance of the long border that is coupled with active defence capabilities for Quid Pro Quo (QPQ) actions as a speedy response to China's salami slicing. This will require further improvement of the overall infrastructure which is an ongoing process. Such capability must be housed in brigade-sized groups that are pre-located with the forward deployed Corps with the Corps Commander being delegated powers to react as soon as a salami slicing action is discerned. Maximising brigade sized offensive assets must not however play into China's strategy of getting India to expend more resources on the Northern border. Instead the resources must be harnessed by rebalancing from the Pakistan front. For paradoxically, despite acknowledgement that China is a greater threat, the weight of India's military power is towards Pakistan.

The primary role of the military instrument in dealing with terrorism from Pakistan, is punitive. In operational terms, it means adopting a doctrinal shift to being able to strike without posturing. This calls for preponderance in fire power assets like air power, long range missiles and artillery that is coupled with Special Forces capabilities. At the upper limit, the capability for shallow thrusts is necessary, which must preferably reside in Division or Brigade sized formations. There is therefore a strong case to deconstruct the existing Strike Corps which would also provide resources to strengthen the QPQ capability on the Northern borders.

Applying this concept of employable power, it also becomes clear that the alternative to the Mountain Strike Corps (MSC) lies in rebalancing India's military power from the west to the north and reallocation of MSC resources. The nuclear factor should have retired India's operational plans for deep ground thrusts into Pakistan and instead morphed into the ability for speedy shallow thrusts. This change in operational concept would free resources for deployment to the North and facilitate the creation of offensive capabilities against China that could be based on brigade sized formations that can be airmobile. This coupled with Force Multipliers (FM) by way of accretion in artillery, missiles, armed helicopters, UAVs, Intelligence and Surveillance assets etc could be far more affordable and employable.

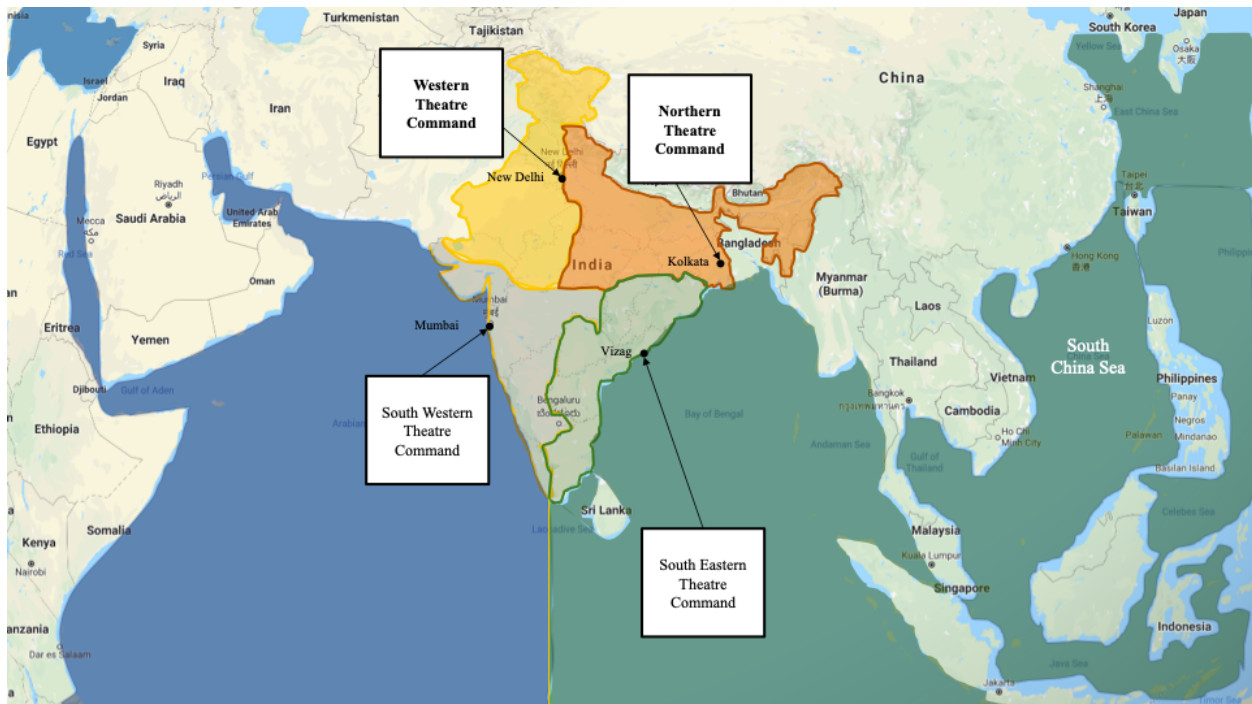
## 2. Towards Jointness

The Chief of Defence Staff (CDS) has been politically mandated to facilitate Theatre Commands. The execution of this reform will be challenging and must be carried out with political oversight. A discussion document by the Takshashila Institution (Menon 2020c) has suggested a structural framework for India's Theatre Command System based on terrain and strategic threats as the prime factors. The conceptual framework relies on larger theatre structures to facilitate flexible cooperation in greater volumes of military power. Concurrent with the inter-service integration, it would cater for centralised joint planning and decentralised execution. This would in turn improve the effectiveness and efficiency of India's military instrument.

A Theatre Command System with four theatres, as proposed in the document mentioned above, is illustrated in *figure 1*. In this structure, The Northern Theatre Command will be responsible for the land border with China, Myanmar and Bangladesh, the Western Theatre Command for the Pakistan border, the South Western Theatre Command and the South Eastern Command for the Western part and Eastern

part of the Indian Ocean. All Theatres would also be responsible for the hinterland areas based on state boundaries.

**Figure 1: A Theatre Command System for India**



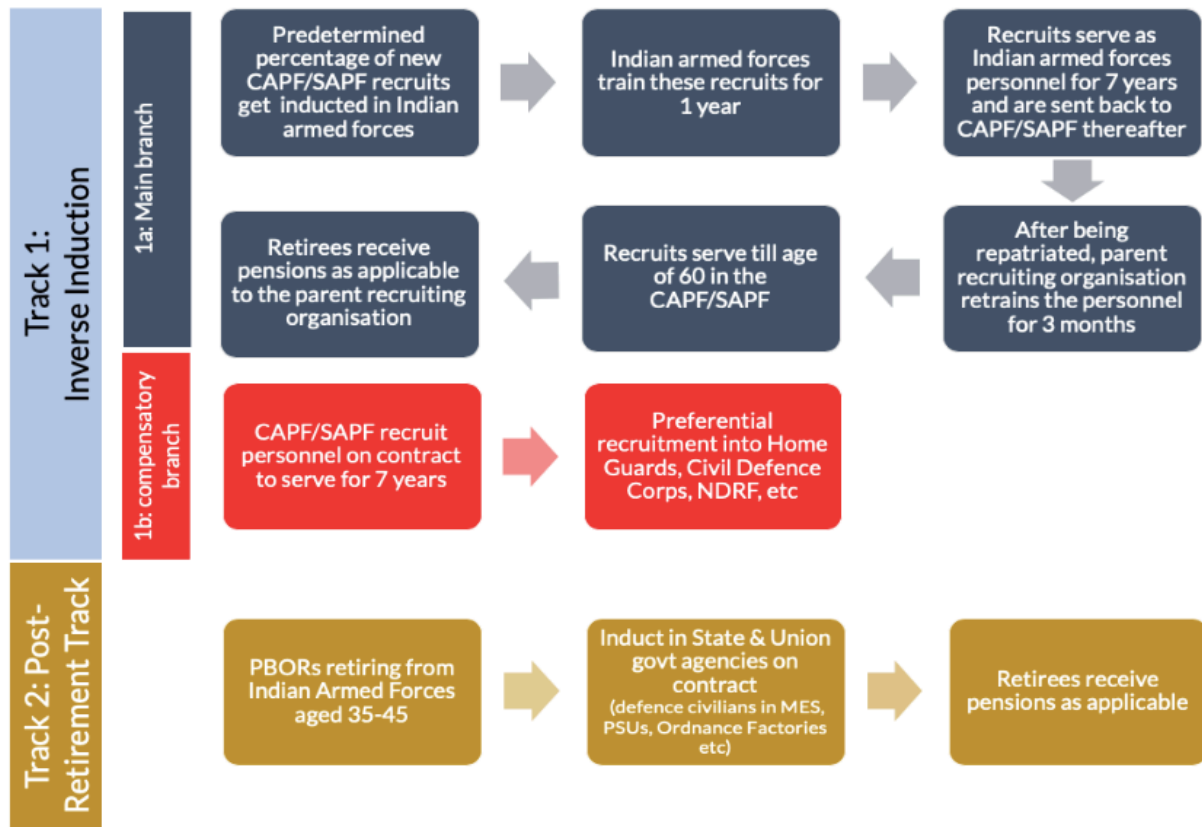
The Integrated Theatres mentioned above will optimise resource utilisation and would lead to savings that can be utilised for force modernisation. The budget squeeze resulting from COVID-19 must hasten the transition to Theatre Commands and not delay it.

### 3. Manpower to Human Capital Investment

The continental threats will continue to require immense investment in armed forces personnel, particularly for the army. However, the current methods of managing manpower suffer from two drawbacks. One, most of the Persons Below Officer Ranks (PBORs) retire after a fifteen-year service period. In other words, the employability of manpower is constrained by this short time period. Two, the expense on defence pensions is high because of early retirement and increasing lifespans. Moreover, the implementation of a defined benefit scheme such as One Rank One Pension (OROP) has meant that the Union government has committed itself to a perpetually growing liability.

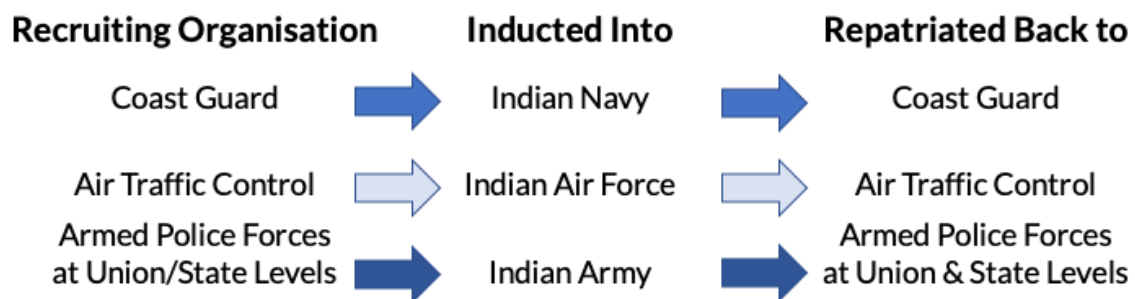
Both these problems can be tackled by creating a human capital investment system that harnesses the capabilities of armed forces personnel in India's national security for a longer period. One such solution has already been recommended by the Standing Committee on Defence as part of its 33rd Report to the Lok Sabha titled Resettlement of Ex-Servicemen. A Takshashila document has operationalised the Report and is explained in Figure 2 (Menon, Kotasthane 2019).

Figure 2: The Human Capital Investment Model for National Security System



This model can be described the Inverse Induction Model, as in the first track, a government agency recruits persons and then sends the persons selected to the Armed Forces to serve for five to seven years, after which the person returns to the parent organisation where his seniority is protected. Ideally, all government agencies can be part of this model, though preference accorded to armed organisations like Central Armed Police Forces (CAPF) at the central level and similar organisations at the state level. Table 1 illustrates how this model can be applied across the government.

Table 1: Illustration of applying Inverse Induction that can be scaled up to other parts of government



There is a secondary track in the main track that compensates for persons serving in the Armed Forces for five to seven years.

In Track-2, there is also the provision to utilise wherever feasible the retired persons but on contract and therefore will receive pay less the pension as is already the practice in organisations like the National



Security Council Secretariat. This model is ideal for soldiers rather than officers, as the bulk of the pension outflow is due to pensions of people below officer rank. However, officers too can be accommodated in the model.

Though recommended by the Standing Committee and affirmed by the MoD, the MHA has opposed it on frivolous grounds like people who serve in the Army would be culturally unfit to carry out police duties etc. It is clear that it is turf protection and requires political resolve to overcome such reservations. By the most conservative estimate, for a 10 percent inverse induction rate, the net present value of the pension reduction bill comes out to ₹1.2 lakh crore.

Investing in India's armed forces personnel and their retention is critical for making India's national security system more effective.

## **4. Building Firepower**

India's high import dependence for its defence equipment has long been a subject of discussion. In response, various efforts aimed at import substitution have been tried but they have not delivered results. Instead of piecemeal reforms, building India's firepower requires a combination of reforms in research, a robust defence industrial base and an efficient acquisition system.

### **4.1 Reforming Research & Development**

The major reform in the apex research decision making mechanism is to broaden its composition through informed oversight. The AEC and the ISRO provide good examples to emulate and therefore the DRDO must be reconstituted under a Defence Technology Commission, located under the PMO and an annual review done of DRDO's performance<sup>ii</sup>.

The inability to exploit potential for innovation outside the Government agencies is a major drawback. The innovation start-up potential can only be harnessed, if decision making mechanisms to fund innovation are relieved of the domination by the DRDO to reduce conflict of interests. An increase in R&D expenditure in the private sector through collaboration with the government is needed. Indigenisation of subsystems in platforms would significantly improve self-reliance. Some of the other measures could be provision of tax exemption; infrastructural and technical support; duty free import of laboratory and test equipment for R&D; tradeable IPR and patents and allowing the private sector to outsource projects<sup>iii</sup>.

The DRDO must not be involved in production except for hand holding during transfer of technology to production agencies. It must forgo its present hold on manufacture of strategic missiles systems, which has endured on the obsolete notion of secrecy. The competency of manufacturing of the private sector will certainly boost missile manufacturing capability.

### **4.2 Building a Defence Industrial Base (DIB)**

India's DIB ecosystem remains tethered to the public sector despite several initiatives to broad base it by increasing private sector participation. The perceptual leap that must be taken is about viewing the private sector as another important limb of India's manufacturing capacity and not as an outsider that has to constantly knock on the door and seek permission to be made part of what is essentially a national enterprise. Building a robust DIB ecosystem, comprising Indian private sector, FDI-backed firms, and the Indian public sector will help reduce the rising capital outlay over the long-term, for two reasons. One,

competition between firms will reduce prices. Two, platforms trial costs and duration will also come down if the competing entities are based in India. Importantly, the DIB must have an export orientation to be financially viable.

In practice, private sector participation in defence production must contend with the protective shield provided by the Department of Defence Production (DDP) to the public sector units. This remains the prime reason for the private sector being confined mostly to the role of vendors in the value chain. The conflict of interest is obvious. With greater civil-military fusion necessary to achieve economies of scale and merger of commonalities, the national manufacturing ecosystem cannot and should not be kept separate from the DIB.

There is a strong case to move the DDP and the public-sector production organisations as another vertical in the Ministry of Commerce and Industry. This will dissolve the conflict of interest and provide a level playing field for the private sector. Corporatisation of production entities combined with adoption of arrangements that facilitate private human capital to utilise public sector infrastructure should be done as embodied in the Government Owned-Contractor Operated model.

All these moves may face opposition from the labour unions, but it is not insurmountable considering the existing electoral mandate for the ruling party.

### **4.3 Acquisition System**

The route to technology transfer lies in attracting FDI and getting OEMs to use India as a manufacturing base<sup>iv</sup>. The liberalisation of FDI norms in March 2020 provides the opportunity to attract FDI, as up to 74% is now permitted under the automatic route. This would however take at least five years to bear fruit and till then there would be no alternative to import, if required items are not available indigenously and are needed urgently.

Procedural simplification requires decision making to move from 'play safe' to 'safe play'. Presently, the fear of being taken to task for violating procedures even when done in good faith, has choked the speed of the acquisition system. Integrity and responsibility must guide authorities for achieving outcomes.

Procedurally, the offsets policy should be scrapped altogether. It has created impediments for FDI without resulting in significant transfer of knowledge or skills needed to create a robust industrial base. The human capital problem in the acquisition system has not been adequately addressed despite the Comptroller and Auditor General (CAG) pointing out that Defence Acquisition is "a cross-disciplinary activity requiring expertise in technology, military, finance, quality assurance, market research, contract management, project management, administration and policy making" (Mrinal 2012, 01-12). Such specialisation is needed in the post COVID-19, for the inevitable budget squeeze would be another major challenge for putting in place an efficient acquisition system.

## **5. Focusing on the Seas**

*Objective 4* section spoke about the mismatch between India's political objectives in the maritime domain and the force structure designed to meet that objective. The long-term focus must not waiver from developing India's maritime power that can protect its national interests not only in the Indian Ocean littoral but beyond it. Maritime power is to be understood as inclusive of a robust naval power including amphibious capability, merchant shipping, ports infrastructure with inland connectivity, oceanography expertise coupled with exploitation of fishing, and seabed resources. A Maritime Commission on the lines of a Space Commission must be established.

The military leadership, especially the Army leadership has found it difficult to jettison the ideas of waging the ‘big fight’ to impose our will. Such a mental shift that is informed by a holistic perspective will fade military demands that sustain the logic of the Strike Corps and the Mountain Strike Corps. It would also free resources for the cutting edge of military strategy of seeking greater strategic influence in the maritime domain.

## **6. Focusing on the New Domains**

While the nature of war will endure as the use of force for political purposes, the perpetually changing character of war will be driven primarily by technology, innovative doctrinal conceptions and flexible organisational structures incorporating newer tools for conduct of warfare. The nuclear shadow has also caused a growing trend for seeking coercion through means that are less than war which is essentially oriented towards the achievement of psychological effects through stealth and subterfuge backed by demonstration of force. Military power will at its core, retain the traditional notion of hard power, but be increasingly employed in close combination for influence in the information domain through non-kinetic means especially through the imaginative utilisation of the electro-magnetic spectrum reinforced by cutting edge technologies like artificial intelligence, biotechnology, quantum computing et al. The threat spectrum will continue to expand at an unknown pace from its traditional domains of land, sea and air to include cyberspace and space.

Given the high employability of these domains, it is necessary to develop these capacities in conjunction with our conventional force structure and involve an effort synergised with the civilian domain. Achieving political objectives in the future will be increasingly dependent on winning the battle in the information domain.

### **How to Make these Shifts?**

The suggested shifts require reforms that must leverage the structural potential offered for integrated civil-military and joint planning by the institution of CDS, Department of Military Affairs and Theatre Commands. Till now, joint planning was about stitching together service-centric plans and working out a compromise on sharing limited resources. The structural reform promises to remedy this by ensuring that plans are joint from the incubation stage. This would cater for moderating and balancing for the demand-side of the military structure.

This will resolve the major issues; however, the demand-side cannot work in isolation. It needs to generate demands based on a dialogue between intra-military and between the military and the civil side.

The CDS structural reform was a necessary reform but it will remain an insufficient one unless followed by reforms along four axes. The first axis is to provide political guidance to the military for crystallising a military strategy that directs the growth of military capability. Such guidance must emanate from a National Security Doctrine/Strategy. The second axis is to reform and strengthen the Research, Defence Industrial Base and the Defence acquisition system. The third axis is to create the Theatre Commands as suggested above. Fourth axis is to address the budget issue by tackling pension outlay problem which should in turn enable the development of India as a maritime power.

None of these reforms are possible without political patronage. They are necessary to overcome entrenched interests that have resisted the implementation of reforms by a plethora of committees. The situation can best be described by “the government knows what to do but cannot get it done”.

## Conclusion

The reforms suggested must be undertaken holistically approach that must simultaneously address all sub-systems. Recent reforms like CDS hold promise to address the demand side of the defence equation. But its potential cannot be realised unless the supply side of the defence preparation is addressed. The Research and Defence Industrial base must function as a sub-system of the larger national effort and not remain under the umbrella of a segregated structure of Defence. The ubiquity of dual use technologies and production processes must be leveraged.

The security pressures generated by the global geopolitical flux are already revealing the inadequacies in India's defence architecture. The trajectory of present defence economics is headed for a crash with grave consequences to national security. The pathologies are well known. Political will accompanied by perennial monitoring of reforms may still save the day and for sure it is a national emergency that cannot be ignored. Time will not wait so also the reforms.

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## Notes

<sup>i</sup> What’s often forgotten in this mechanical derivation is that the 2 percent defence investment guideline in fact comes from NATO. It is meant to ensure that states don’t freeride on an alliance partner’s investment in defence. As such, its application to the Indian context is dubious — neither is India a part of an alliance and neither are India’s security challenges comparable with that of the NATO states.

<sup>ii</sup> This recommendation has been made by the Gupta committee but was not implemented

<sup>iii</sup> *ibid*

<sup>iv</sup> For example, India needs to leverage its position as the world’s fastest growing civil aviation market with a demand of 850-1,000 civil airliners to extract key technologies from vendors seeking to supply to India.