Energising Defence Production: Implementation is the Key

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But for a few inconsequential changes, India's national security system remains, essentially, what we inherited at independence, 65 years ago. The question why we, as a sovereign, independent nation, have failed to bring about reform in something as crucial to our existence as national security, has no simple answers. The impediments to change arise from sources within and without the system. These sources have remained steadfast in their opposition to change and have been instrumental in the maintenance of status quo over the decade since the Kargil Review Committee rendered their report.[1]

— Admiral Arun Prakash,
Former Chief of Naval Staff

Modern campaigns are fought at three levels: first, in the ideological realms; second, in the factories; and last, in the field of battle. Undoubtedly, campaigns fought in the factories play as important a part in deciding the course of war as those in the fields. In modern times, as a result of scientific and technological developments which have found expression in the variety and lethality of weapons of destruction, war is not merely the relative exhibition of physical prowess of the human component of combatant groups but much more a demonstration of financial stamina, industrial progress, richness of resources and growth of productivity of a nation.[2] In the major wars in this century, victory has resulted mainly from superiority in the economic sphere and the ability to expand

Indigenous defence production is only 30 percent of total requirement

industrial output according to the requirements of war. India's 39 Ordnance Factories (OFs) and eight Defence Public Sector Undertakings (DPSUs) form the backbone of its Defence Industrial Base (DIB). The OFs cater to 70 to 80 percent of the Army's running inventory while the DPSUs manufacture strategic items such as aircraft, warships and submarines, heavy vehicles, earth movers and missiles. The ratio of industrial output between the DPSUs and OFs is 65:35.[3] These factories function under the executive control of the Department of Defence Production (DDP) which was set up in 1962 in the Ministry of Defence (MoD), in the aftermath of the Chinese aggression, to create a self-reliant Military Industrial Complex (MIC). Despite a modernised state-of-the-art MIC,[4] India today remains the world's largest importer of arms as indigenous production is barely able to contribute 30 percent of indigenous content and self-reliance remains a dream, an issue which has been much debated in current times. Self-reliance in defence, though the stated national policy of India since independence, has not been translated on the ground. Much has been written on the dismal state of India's MIC and the government's protectionist mindset towards the DPSUs and Ordnance Factory Board (OFB) at the cost of the fast emerging private enterprises, thus, depriving the nation of the technological prowess acquired by the private sector, and its enormous potential remains untapped.[5] Since independence, a number of reform committees have been instituted to study and recommend reforms to enhance self-reliance in India's defence sector. Unfortunately, the reports, barring a few, have been kept out of the public domain and implementation has been perfunctory and sporadic. So potent and far-reaching are the major recommendations given by various reform committees that even their partial implementation would have had a major effect on energising the defence production in India. Sadly, that has not happened.

The Report of the Group of Ministers (GoM) of 2001 recommended setting up of a high-level 'Defence Minister's Council on Production' responsible for laying down the broad objectives of long-term equipment policies and planning on production, and the simplification of procedures to facilitate the participation of domestic industry. This council has not resulted in any significant changes in the existing processes followed in the defence production ecosystem. The Kelkar Committee Report submitted in 2005 brought out certain cogent recommendations such as identification of entry points for the private sector in the acquisition process, identification of

Raksha Udyog Ratnas and promulgation of a policy framework to promote the participation of small and medium enterprises in defence production. One of its path-breaking recommendations was the merger of all OFs under a single holding corporation on the lines of Bharat Sanchar Nigam Limited. The committee also recommended that all DPSUs, except a few sensitive ones, be allowed to invest in, and acquire, foreign companies with the objective of obtaining hitherto non-available technology. The Sisodia Committee Report of 2007 was of the firm view that the involvement of the domestic industry in the acquisition process from its earliest stage was a necessary condition for greater self-reliance. It recommended that the entry point for industry should be at the finalisation stage of the long-term defence capability plan when it can be invited to suggest a range of options to meet a capability gap. Similarly, the committee also recommended the inclusion of industry in the formulation of Services Qualitative Requirements (SQRs). To create a level playing field, the committee recommended that the DDP should be redesignated as the Department of Defence Industry and cater to the needs of the private sector. The Sisodia Committee also emphasised that the MoD should articulate a long-term export strategy in consultation with the Indian private sector to safeguard its business in view of the uncertainty in domestic demand. The Rama Rao Committee (RRC), in its report, submitted in 2007, highlighted the need for an unambiguous self-reliance policy articulated by the higher authority, and the setting of quantitative targets to achieve it. In its assessment, the RRC identified many missing links in indigenous defence Research and Development (R&D), including: lack of synergy among the three key branches of the defence establishment, namely, the Defence Research and Development Organisation (DRDO), industry, and users, the rigid financial, organisational and management structure of the DRDO and, most importantly, the RRC also recommended the creation of a Board of Research for Advanced Defence Sciences (BRADS), to function on the lines of the highly acclaimed Defence Advanced Research Projects Agency (DARPA) in the USA, a recommendation which was later backed up by the Naresh Chandra Committee in 2012 for setting up of the Advanced Projects Agency (APA) to undertake high-risk futuristic military research under the Scientific Adviser (SA) to the Raksha Mantri (RM). The Naresh Chandra Committee in 2012, among others, recommended cross-postings of Ministry of Defence staff into Service Headquarters (HQ) and vice versa. The Ravindra Gupta Task Force in 2012, recommended setting up of a national level oversight body to ensure

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enhancement of self-reliance with mandated milestones. It also recommended that the present 'Defence Production Board' should be replaced by a National Council for Indigenisation (NCI) under the chairmanship of the Raksha Mantri to ensure that domestic manufacturing gets due focus in achieving its goals. The task force also suggested that the Secretary DDP should be redesignated as Secretary 'Defence Industry and Trade' to clearly reflect his role in developing DIB as a whole, including the private sector and exports. On the lines of the Kelkar Committee recommendation for corporatisation of the OFB into the Ordnance Factories Corporation Limited (OFCL), the Ravindra Gupta Task Force recommended that the OFB should be converted into a holding company with five product groups i.e. high energy chemicals, small arms and ammunition, heavy vehicles, armaments and airdrop products as subsidiaries; and steps such as listing of Hindustan Aeronautics Limited (HAL) in the capital market with disinvestment of 10 percent of its equity must be encouraged.[6]

It does, therefore, merit an analysis as to why these recommendations so meticulously researched at the highest level fall short of reaching the implementation stage. Has our polity failed us? Is the bureaucracy to blame or is the military leadership responsible for these delays. The reasons for non-implementation may be many but it is amply clear that non-implementation of reforms remains the single largest reason why defence production in India remains below par. There are no quick fix solutions or novel approaches towards energising defence production. The novelty lies in pressing for implementation of the exhaustive recommendations of the various reform committees. While there is new thinking about Indian strategic and defence modernisation, there is still no framework that transcends the civil-military boundary. Coordination is, therefore, left to the Services themselves and depends a great deal on issues or personalities and, ultimately, on budgets. Self-reliance in defence today needs to be accorded the highest priority as is done in the developed world. While the reform committees mentioned above have primarily focussed on macro level organisational, structural and process changes, over the years, the fundamental principles necessary for a responsive procurement supply chain have been lost sight of and the stakeholders have not implemented and derived the benefits of Information Technology (IT) in supply chain management.

Non-implementation of reforms in the defence production sector apart, the procedural infirmities that India's defence production sector suffers from, point to a near total lack of implementation of contemporary supply chain practices in the Army's supply chain. While it may take time to implement the recommendations of various committees owing to turf issues and resistance to change, the Service HQ, being the ultimate customer, and the OFB, which is the ultimate supplier, need to take the initiative and implement the right supply chain practices, to fulfil the sustenance needs of the Army. The environment today is replete with critiques of the OFs and DPSUs which are often blamed for not rising to the occasion and meeting the requirements of the Army while the OFB levels counter-allegations on the Army for laying down erratic targets. While the criticism is not entirely without justification, the simple fact that application of IT even in the form of a rudimentary Enterprise Resource Planning (ERP) shall radically transform the internal lead time, improve accuracy, build in accountability and achieve transparency is somewhat lost on the practitioners of India's revenue procurement system and exponents of its materials supply chain. Lack of exposure to contemporary supply chain practices among the acquisition community in the Army has resulted in failure to implement even a pilot ERP for capital or revenue procurement. Existing automation packages in the Service HQ dealing with capital and revenue procurement, though contracted, are still unimplemented. Procurement in the Service HQ and MoD is still defined by impulsive decisions resulting from inadequate planning, decisions taken in the absence of availability of extensive global data warehousing on procurement, poor knowledge management and zero risk management, all as a result of a minimal application of technology. No improvement in the system can, therefore, be brought about without energising the Army supply chain at the apex level.

A supply chain is defined as the integrated process of planning, sourcing, making and delivering a product, from the raw material to the end customer.[7] This definition classifies the defence procurement set up in the MoD and Service HQ as a fully functional supply chain. Hence, it is imperative that the supply chain drivers, mainly the cross-functional drivers and associated flows should exist and be followed to achieve an optimal supply chain delivery. Supply chain management in defence involves primarily the flows of material and information in a network consisting of customers, suppliers, manufacturers, and distributors. Material flow includes both physical product flow from suppliers to customers through the chain and reverse flow via product returns, servicing, recycling, and disposal. Information flow is the major flow that makes other flows function.

These information flows are missing in the MoD's procurement supply chain where even the basic processes such as indents are also handled manually. As a result of this, at the execution level, the system suffers from functional afflictions starting from a delayed Supplementary Provision Review Directive[8] (SPRD) which is the basis for indenting. The Management Information System Organisation (MISO[9]) data which forms the basis for the preparation of the SPRD too is often inaccurate as it is also handled manually. The lack of supply chain drivers and flows impose on the Army a procurement lead time of an unparalleled 42 months from the OFB, and the supplies to the end customer in the Army encounter an exponentially rising delay spiral. The very fact that even placement of firm orders to the OFB through the roll on plans have not substantially reduced lead times shows that there is a need to revive the supply chain flows in the Army's revenue procurement supply chain through application of enabling technology and Supply Chain Management (SCM) best practices such as ERP.

ERP packages have been in common use for decades in most mid-level Indian corporate enterprises while advanced Armies have been using ERP solutions too for decades, having switched over from their customised software. Sadly, ERP is conspicuously absent from the MoD procurement supply chain. The three key dimensions that constitute supply chain integration, namely, information integration, coordination and organisational linkages in the case of the Army supply chain need to be reworked. This distortion in the Army's revenue procurement supply chain has already led to idle capacity, high manufacturing and transportation costs, flawed and delayed Qualitative Requirements (QRs), delayed procurements and, eventually, increasingly dissatisfied customers. In today's environment, the frontline forces or the end users are less forgiving of poor customer service and more demanding of customised products or services. As the competition and technology continues to introduce new offerings tailored to the requirement of the Army, suppliers have to respond by offering similar custom-made and highly personalised equipment to meet the aspirations of the users through a responsive, agile and collaborative supply chain.

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Notes

1. Adm Arun Prakash (Retd), USI, National Security Lecture, 2012, National Security Reforms, "Ten Years After the Kargil Committee Report", http://www.usiofindia.org/Article/Print/?pub=Journal&pubno=590&ano=1384

2. Bisheshwar Prasad,, *Official History of the Indian Armed Forces in the Second World War, 1939-45, Indian War Economy (Supply , Industry and Finance)* (Orient Longmans, October 1962).
3. Laxman Kumar Behera, "Indian Defence Industry, Issues of Self-Reliance", IDSA Monograph Series , No 21, July 2013.
4. Fifth Report of the Standing Committee on Defence, 2014-15, Sixteenth Lok Sabha, Ordnance Factories, Para 1.2, p. 7. 22 December 2015, 164.100.47.134/lsscommittee/Defence/16_Defence_5.pdf.
5. Mrinal Suman, "Dismal State of the Indian Defence Industry: Challenges for the New Government", October 11, 2014, http://mrinalsuman.blogspot.in/2014/10/dismal-state-of-indian-defence-industry.html.
6. "HAL IPO to hit Market in FY'15", *The Hindu*, May 25, 2015, http://www.thehindu.com/business/Industry/hal-ipo-to-hit-market-in-fy15/article6046185.ece
7. Sunil Chopra, Peter Meindel , DV Kalra , *Supply Chain Management Strategy, Planning and Operation* (Pearson Education Inc, 2010), Part 1, Ch1.
8. The SPRD is issued by the Ordnance Directorate responsible for revenue procurement and forms the basis for indenting on the selected source of supply. It contains details on the stocking policy, wastage and induction and de-induction of equipment, repair and overhaul liabilities thereby arriving at the required quantities to be indented.
9. The Management Information Systems Organisation is a part of Army Headquarters, responsible for maintaining the data on unit entitlements and holdings based on which the SPRD is issued.