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EXPLORING THE NEED FOR OUTSOURCING/CONTRACTING IN DEFENCE SUPPLY CHAINS

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Abstract

Defence Supply Chain Management fundamentals are time tested and aligned to specific operational requirements. However, there is always scope for it to be modified with changing paradigm in view of the shift in present day war fighting. In order to serve its objective i.e. to win a war, all militaries across the globe need to keep on evolving, enhancing capabilities and keeping abreast with technological advancements.

In the Indian context, taking into account the ever-growing threat and an extremely sensitive geo-political environment, the above statement assumes greater importance. India, with its geographical spread, has probably the most overstretched defence logistics setup in the world. In such a scenario, developing and modernising a diverse defence logistic setup, such as ours, through acquisition of just hardware and technology may not be entirely prudent. Needless to say that the defence logistics management is complex, intermixed and has both horizontal and vertical flow operational in an extremely fluid and dynamic environment. Hence the aspect of outsourcing and symbiotic associations with existing civil infrastructure assumes context. Apropos the above, outsourcing/contracting in defence supply chains can therefore play an extremely important role to help achieve this stupendous operational feat in real-time.

KEY WORDS

Rate Contract: RC, Original Equipment Manufacturer: OEM, Systems, Applications and Products: SAP, Enterprise Resource Planning: ERP, Observe, Orient, Decide and Act: OODA, Third-Party Logistics: 3PL, Comptroller and Auditor General: CAG, Original Equipment Manufacturer: OEM, Contractor Logistics Support: CLS

INTRODUCTION

Defence forces, across nations, generally have dedicated organisational structures to address the logistic requirements arising due to their special operational needs and also to cater for their regular daily sustenance. These tailor made logistics organisations perform the mammoth role in supplying, replenishing as well as stocking the needs of men, material and equipment.

Majorly, defence supply chains are mix of multi-echelon logistic entities fed by larger depots like Central Depots and user interfaces designed to pull stores and resources based on operational requirements. These depots function as satellite entities delivering services at the last mile through a robust network/chain of linkages between the user (soldiers) and the provider (logistic element).

This model is fed its deliverables from procurement and manufacturing agencies such as Ordnance Factories(OF), Defence Public Sector Manufacturing Units (like the PSUs), R&D establishments and the private industry. To manage such a vast, diverse and uncertainty driven framework, numerous process modifications have been tried and tested over the years. For example inventories were digitalised, both locally and centrally, then interfaced with a robust SAP/ERP based system lending better transparency and visibility to the entire supply chain process. The supply chain model also has been reorganised and reoriented to factor in a mix of a 'pull and push' models. By doing so, till now, the requirements of the "performers" have been met by the "facilitators" through a robust three dimensional logistics chain system utilising the developed/developing framework of land, air and rail assets.

OBJECTIVE OF THE PAPER

The objective of the paper is to understand the present day relevance of "Outsourcing/contracting in defence supply chains". This is one area that has further more potential for major savings, both financial & resource based, as

outsourced logistic entities & their advanced processes, could generate more efficiency as also make the organisations more lean. As nations prosper and defence capabilities grow, the logistics system must also adapt to the new inevitable challenges and opportunities.

Outsourcing and Performance-based logistics is one such approach that shuns inclusive working and organizes logistics around the "changing demand matrix" thereby offering huge savings in the process. Performance-based logistics changes the metric by which the effectiveness of the logistics system is gauged in order to drive an alternative approach to manage a complex uncertainty driven dynamic system such as defence supply chains.

On account of transformational restructuring over the years, the defence supply chain, which includes logistics, must also undergo a parallel transformation. A de novo look needs to be given and concepts and best practices need to be adopted to synergize logistics towards the stated defence objectives. Accordingly, supply-demand balancing becomes a challenging task and shall remain relevant & highly significant in the future too. The pandemic disruptions had placed intense pressure on industry to adapt to the changing operational behavior towards the procurement of essentials and other products for our forces. Hence, employment of innovative ways such as Outsourcing/ Contracting and Performance-based logistics may be adopted for meeting the military necessities and to ensure sustainability of such processes in the future.

DETAILED ANALYSIS

Emphasis on doing away with unproductive practices and outsourcing routine & mundane activities to private players in the market, is strongly being professed across all levels of decision making. The allocation of non-critical contracts to private players is an initiative to bring to test the concept as also gauge the efficiency of the same. We are now observing that logistics setups are being revisited and their process dynamics are also witnessing up-gradation through modernisation endeavours. The new National Logistics Policy is also getting rolled out and enforced. The integration of depots by adoption of computerised technology and also encouraging flexibility in its functional structure is also getting visible. The endeavour to ensure the entire process from provisioning to procurement and finally to the delivery is getting automated and the data is made available to the head of the organisation for a better decision making. It is in this light that the logistic planners work overtime is to remain ahead of the operational OODA loop in order to achieve the required objective with success.

The defence supply chain has no parallel to any commercial supply chain both in terms of scope and the criticality of the execution (operations). Be it the advance winter stocking at posts in high altitude area as to the recent logistic build in our northern borders, all these are testimony to the fact that defence supply chain needs to stand the test of time and must have a phenomenal degree of tolerance for ambiguity. The optimal functioning of such support services is paramount for the soldiers at war and even small delays could result in catastrophic consequences to the security of the nations. Hence it is imperative that the models in vogue need to change timely with the changing paradigm in sync with the nature of future warfare. The defence supply chain can be broadly divided into three distinct chains.

- The first chain encompasses stocking and replenishment of fast and light stores.
- The second chain deals with provisioning, maintenance and replenishment heavy equipment.
- The third chain deals with the deployment and move of men, ordinance and life sustenance materials including food, water and medical stores.

Unlike a commercial supply chain, such supply chains are known to have reverse & lateral flows. We have seen in recent times how the industry has adapted itself to employ innovative methods of cost-cutting and improved efficiencies. One such measure has been to concentrate on the core activities and outsource the non-core activities. Therefore every complex supply chains such as the defence supply chain will have to have a contingency plan inbuilt. Resilient capabilities will have to be developed in order to respond to uncertainties.

The Government can play a major role in supporting the logistics sector by giving focus on the development of infrastructure like roads, railways, ports, airports, logistic parks, warehousing and inland container depots. This would help to improve the storage and handling of goods and materials by providing facilities to logistics companies at reasonable costs.

According to a report, industries in India currently outsource an estimated 62 per cent of their logistics requirements. There are leading providers of integrated logistics solutions to hundreds of industries that facilitate their working by integrating them with warehouses connecting thousands of towns pan India. These warehouses are linked and complex requirements are met for all through an integrated system of a transportation model using linear programming tools. These logistic professionals have also integrated third-party logistics (3PL) in its functioning and services like transportation, warehousing, cross-docking,

inventory management, packaging and freight forwarding are all amalgamated.

Is there a case in point where it can be explored to contract/ outsource these professionals for the defence requirements too? It can be argued that the spread and diversity of military hardware cannot be amalgamated into their inventory. But aren't many of these products procured for the military coming ex trade?

Supply chain management aims at minimization and elimination of all wastes through vertical integration of all functional activities in managing the suppliers' suppliers all the way through to managing the customers' customers and focusing on scheduling and time efficiency. This statement is as relevant to defence logisticians involved in the defence supply chain management as it is for anyone outside.

Embracing the Best

It is well recognised that the defence forces operate in some of the most hostile and adverse environmental conditions. Hence the felt need to stock and create reserves at all levels to cater for unforeseen contingencies. However, this existing multi-echelon system based on manual store keeping at multi level needs to be urgently modernised as also revisited. Need for redundancy, fear for the unknown and a no error syndrome has ensured that there is excessive provisioning at each store holding echelon and huge costs are incurred on account of an idle inventory.

Rampant and excessive storing raises another area of concern. In most cases by the time a spare part or sub-assembly is actually used, its warranty period is over and no claim can be raised for any defect or premature failure. This is particularly true for perishables.

Therefore, there is the ever increasing demand for a state of the art supply chain management tool to minimise idling inventory to a bare minimum, perhaps to the level of war wastage reserves. Adopting technology into supply chain processes is no longer considered proactive, but a standard operation. The trick is to choose a platform that meets your needs. Platforms, such as ERPs and SAPs, are a great tool to streamline processes, increase visibility, minimize paperwork, and automate certain activities. Transportation management systems and transportation spend management systems are ideal tools for the bigger picture in the supply chain—they help increase efficiency, reduce risk, and provide data-driven insights into business decisions. A strong platform helps streamline supply chain management and works in tandem with the laid out strategy.

In the last two decades, the logistics distribution networks of Indian OEMs have significantly improved especially of the common user items. Many of these items are also used and stocked in the Military depots. Military planners have realised that we need to have maximum items under a centralised "rate contract" (RC), they being used by a large majority. This would be far cheaper than the costs associated with idling inventory. Once successfully implemented, stocking norms can be reviewed and inventory carrying costs reduced significantly. We also have a number of items on the transportation model. The scope of this could be widened and numbers of items enhanced and thereby ensure all stock holding echelons right to the formation level are covered.

Contracting & Outsourcing

The provisioning of clothing and general stores, as required by the defence forces is generally bestowed with the defence ordnance verticals. The dependency is largely on Ordnance Factories that provide the complete range of clothing items based on the requirements projected by the services.

A performance evaluation by the Comptroller and Auditor General (CAG) in its report for the year 2019 on the OFB highlights a few of the lacunae due to professional and organisational shortcomings:-

- Overheads constitute a staggering 33 percent of the overall allotted budget for the year. The major contributors being supervision costs and indirect labor costs.
- The Ordnance factories achieved production targets for only 49% of the items. A significant quantity of Indian Army demand for principal ammunition items remained outstanding.
- More than half the inventory (52 percent) was the store-in-hand procured for the manufacture but not used within the year by the factories. This has serious implications wherein no scientific management techniques like selective inventory control, forecasting etc were used.
- Work-in-progress (unfinished items lying on the shop floor) constituted 32 percent of the inventory. Orders as old as the year 2009-10 were yet to be delivered, a delay of ten years.
- A total inventory of Rs 1055 Cr pertains to slow and non-moving items, which were still lying for further disposal.

Wouldn't it would be worthwhile to move our clothing requirements to the private sector to enable improvements in availability and quality?

These logistic professionals have also integrated third-party logistics (3PL) in its functioning and services like transportation, warehousing, cross-docking, inventory management, packaging and freight forwarding are all amalgamated.

Wouldn't it would be worthwhile to utilise these assets and expertise by outsourcing/contracting to enable release of pressure and strain on the already over stretched Defence Supply Chain architecture?

Performance Based Logistics

The defence forces can certainly operate more efficiently. One area that has potential for major savings is logistics. As combat capabilities grow, the logistics systems must adapt. Performance-based logistics is an approach that organizes logistics around these increasing combat capabilities, offering huge savings in the process. Performance-based logistics changes the metric by which the effectiveness of the logistics system is gauged in order to drive an alternative approach to manage the system. Performance Based Logistics is a strategy that optimises total system availability while minimising cost and logistics footprint. Trade off decisions involving cost, useful service and effectiveness shall consider corrosion prevention and mitigation. This can be achieved partially by Contractor Logistics Support (CLS) wherein a mutually agreed upon set of integrated support services, assets and resources gets provided by an outside company that becomes contractually obligated to a government agency or department. The new method involves taking bids and hiring private contractors for jobs that used to be performed using government workers. Since a private company could precisely control manufacturing and delivery costs, this method cuts waste and improves resource availability. Since processes are itemized, individual accounts became responsible for specific activities. In the case of Weapon Systems, PBL will seek to deliver product support as an integrated, affordable performance package designed to optimise system readiness. PBL meets performance goals for a weapon system through a support structure based on long term performance agreements with clear lines of authority and responsibility. PBL is not exactly contracting to commercial vendors but a support strategy to integrate the best of public and private sectors.

This is possible through government and industry partnering initiatives in accordance with the statutory requirements. There would also be a requirement for a separate Defence Logistics Agency to take on the requirement for the three services.

FINDINGS

Although based on empirical data, there was a need to gauge the validation of the construct. The intent was to gather a essence of the views expressed by a acceptable sample size with a fair variation in service bracket, in order to factor in diverse views with respect to the past, current and perceived future challenges.

Further, the sample had a healthy mix of supply chain defence professionals, users and also the representation of the three services. A Google form was circulated accordingly.

Data Interpretation

Approx. 63% felt that the present system needed changes to meet the challenges of future warfare. They felt that flexibility, adaptability or agility being the lacking factor. Almost 46% agreed to the fact that flexibility was something that was lacking more than the others.

More than 60% felt that there is certainly a need to get private players into the defence supply chain systems.

40% agreed to the view of contracting and outsourcing as a means to release pressure from an already overstretched defence supply chain entities. point too, which was encouraging.

More than 65% felt that there was indeed a need to understand and gauge performance based Logistics for its relevance and importance.

More than 71% felt there was indeed a loss being incurred due to the idle inventory.

Approx 35% people agreed that there is a need to change the current stocking policy in view of the pandemic like situation of similar contingency emerging again. However approx 56% felt there was a partial need only to do so and the policy need not be changed in entirety. Approx 10 % partially disagreed too on the idea to do so.

Approx 75% responces were in agreement that there is certainly a large scope towards optimising the defence supply chain architecture and functioning to achieve a lean and more agile system for future operations.

CONCLUSION

It is imperative that the Defence Logistics Planners keeps pace with the constantly changing technological environment in our country. In the changing paradigm, defence supply chains will certainly come under scrutiny and pressure to become more resilient and agile. The future requirement is to have logistic organisations to be:

- Faster and more flexible, to provide dramatically shorter lead times from order to delivery.
- Granular and segmented, to meet differentiated requirements for demand fulfilment in different categories and geographic locations, even while accommodating factors that increase volatility.
- Enabled by new technology and talent to full fill rising military services expectations, such as for instant customisation under similar or diverse conditions.

We can therefore infer that there stands merit to exploit the concept of outsourcing/contracting and consider trial and validation of performance based logistics to help re-energise, rejuvenate and synergise the existing complex and overstretched defence supply chains.

Disclaimer: The views and opinions expressed by the authors do not necessarily reflect the views of the Government, Establishment or Defence Research and Studies.

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