

INDIGENISATION – IN NEED OF POLICY FRAMEWORK

Relevant for: Science & Technology | Topic: Indigenization of technology and developing new technology

[More from the author](#)

India has been striving for indigenisation of defence production for close to three decades. To give impetus to the efforts, the Ministry of Defence (MoD) had constituted a committee in the early 1990s under Prof APJ Abdul Kalam. The committee suggested a 10-year roadmap to increase the indigenous component in the total expenditure on capital procurement from 30 per cent in 1992-93 to 70 per cent by 2005. This goal could not be achieved and there continues to be some confusion about the present state of indigenisation.

Several steps have been taken in the last 20 years, but the outcome of these efforts remains a matter of debate as the available data on indigenisation is confusing. According to a recent report of the Standing Committee on Defence (SCoD), only 93 of the 213 contracts worth about Rs 1,76,569 crore were awarded to foreign vendors of the USA, Russia, Israel, France, and some other countries between the financial years (FYs) 2016-17 and 2019-20.^{[1](#)}

The same report shows that the proportion of expenditure on imported defence equipment in the total expenditure went up from 30.41 per cent in the FY 2010-11 to 43.22 in the FY 2019-20, and though in the first three quarters of the following year (FY 2020-21), it plummeted to 32.39 per cent,^{[2](#)} it is possible that the percentage jumped up again by the end of the year. These figures give the impression that the goal set by the APJ Abdul Kalam Committee has largely been met. However, this is not borne out by other empirical evidence.

In the last five years alone, several contracts have been awarded to the foreign vendors for an assortment of platforms like Dassault's twin-engine Medium Multi-Role Combat Aircraft (MMRCA), Boeing's multi-role combat AH-64E Apache and vertical-lift Chinook helicopters, Lockheed Martin's C-130J Super Hercules four-engine turboprop military transport aircraft, and Russian Almaz-Antey's S-400 Triumph Air Defence System.

The Strategic Partnership Model adopted in 2016, which envisages manufacturing of foreign-origin platforms by the Indian companies with the transfer of technology from the former, is another indication that presently India does not have the capability to design and develop state-of-the-art fighter aircraft, helicopters, submarines, and armoured fighting vehicles/main battle tanks. But, above all, according to Stockholm International Peace Research Institute (SIPRI), India was the second-largest importer of arms in 2016-20 after Saudi Arabia.^{[3](#)}

The best explanation for these contradictory sets of facts is that while the Indian industry has done reasonably well in manufacturing foreign-origin equipment with the help of technology transfer from the foreign Original Equipment Manufacturers and in indigenising components, it still lacks the capability to indigenously design and develop major platforms, with a few exceptions like the Light Combat Aircraft Tejas, which is what indigenisation should be all about.

Even in respect of components and assemblies, no data/information is available to show whether these are critical parts of the equipment/platforms in which these are used. This is important because the extent of indigenisation of a product matters little if a critical part, even if it constitutes a miniscule percentage of the overall product, is not indigenised. In hostile circumstances, the OEM or the country of its origin could deny the export of such items and paralyse production in India.

Seen in this perspective, the level of indigenisation of defence production in India is quite low. Broadly, there are four reasons for this.

Absence of an Overarching Policy Framework

The primary reason is the absence of a pragmatic overarching indigenisation policy. What comes closest to it is a notification issued by the Department of Defence Production (DDP) in 2019.⁴ It cannot be the guiding document for a concerted effort as it only contains the policy for indigenisation of components and spare parts used by the Defence Public Sector Undertakings (DPSUs) and the Ordnance Factory Board (OFB) in the manufacturing process.

Be that as it may, this document too suffers from many conceptual and procedural inadequacies. For example, the stipulation that the 'indigenised product should invariably be cheaper and meet all technical and functional specifications of the imported component which it seeks to replace'⁵, makes it unrealistic and unworkable as the indigenised products are not always cheaper.

No wonder then that the focus of the DPSUs/OFB has been mainly on the indigenisation of items that can be manufactured in India at a cheaper cost vis-à-vis the cost of importing them. Such items do not generally account for a substantial proportion of the technologies that go into the making of a high-technology product and, therefore, the extent of indigenisation of critical components in various defence products continues to be low.

Absence of an Overarching Organisation

The second reason is the absence of an overarching organisation to channelise the efforts being made by several agencies towards a pre-defined goal. Besides DPSUs and the OFB, other agencies presently involved in indigenisation efforts include the Indigenisation Directorates of the Services, Defence Research and Development Organisation (DRDO), and the Defence Innovation Organisation (DIO).⁶ The efforts being made by these agencies are largely disjointed and lack synergy, and no mechanism is in place to facilitate their interaction with the armed forces which are the primary stakeholders in the indigenisation efforts.

Procedural Complexities and Financial Viability

Procedural complexities are the third reason for the slow pace of indigenisation. Though some efforts have been made in recent years to smoothen the process, agencies involved in indigenisation continue to follow their own procedures and norms.

A typical example is the process of selection of partners from, and giving assurance of orders to, the private sector industry, especially the Micro, Small and Medium Enterprises (MSMEs), who play a critical role in developing niche technologies and providing solutions that are critical for indigenisation. Besides, no satisfactory system is in place to address the issue of Intellectual Property Rights violations that are bound to arise if import substitutes are to be designed and developed in India.

Budgetary Constraints

Lastly, there is a severe budgetary constraint, making it difficult to earmark substantial sums of money to undertake large-scale efforts, especially for indigenous design, development and production of futuristic equipment, platforms, and weapon systems, which is essential for achieving self-reliance.

Indigenisation depends heavily on research and development (R&D), on which the public

spending in India has consistently been quite low. Barring a few notable exceptions, even the private sector has been reluctant to make heavy investments in R&D because of the uncertainty that the MoD will procure the indigenously developed product.

As the first step, the MoD needs to formulate a composite policy that focuses on indigenisation in high priority technology areas, shedding the notion that it must necessarily result in savings. The commercial viability of the identified projects and institutional arrangement for financing them, apart from a mechanism to accommodate the cost of failed efforts, must form the bedrock of the policy.

As a matter of policy, a distinction needs to be made between indigenisation of major systems-equipment, weapons, and assorted platforms – that of components, assemblies, and sub-assemblies. This is important because the challenges faced in the indigenisation of these two categories of defence materiel are different. The approach to indigenisation in these two distinct areas will have to be different.

Secondly, there must be an overarching organisation to coordinate indigenisation efforts currently being made almost independently by several institutions mentioned above. This organisation will have to work out a system for ensuring deeper involvement of the private sector in the indigenisation effort, apart from engagement with other scientific institutions, innovators, foreign entities, and academia.

The private sector, especially the MSMEs, and Start-ups, can play a major role in achieving the intended results. However, funding is a major issue for them, as also the assurance of the follow-on orders being placed on them. These issues will require to be addressed.

Thirdly, procedural issues need to be resolved to ensure that the testing, quality assurance and certification agencies work more as a part of the team engaged in indigenisation rather than as external technology audit entities. This may also require the quality assurance personnel to acquire and upgrade their domain expertise, as well as test procedures, equipment and methodologies.

This is just an example of the procedural tangles besetting indigenisation. Many other issues, such as the setting of extremely stringent specifications by the services and lack of clarity about the aggregated long-term demand for the indigenised product – for special alloys, for example – also slow down indigenisation as action cannot be taken in such cases in the absence of economy of scales.

Fourth, legal issues that often come in the way of indigenisation of products need to be tackled. This is more relevant in the case of substitution of parts and assemblies fitted in the imported equipment through indigenisation efforts which pose a problem because of the legal constraints imposed by the warranty/guarantee clauses in the contracts awarded by the MoD/Services to the technology provider concerned.

Lastly, indigenisation is driven by commercial considerations. No seller will opt for indigenisation if it involves the risk of conceding a competitive edge to another seller because of the additional cost of indigenisation, or if the delivery schedule is inflexible allowing no room for indulging in time-taking indigenisation efforts, or there is uncertainty about the MoD's ability to place follow-on orders for indigenised products because of the enduring financial constraints it has been facing for long.

A more modest and focussed mission-mode approach to indigenisation can produce better results.

Views expressed are of the author and do not necessarily reflect the views of the Manohar Parrikar IDSA or of the Government of India.

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

crackIAS.com