

Defence Acquisition Procedure for Self-Reliance

*Amit Cowshish**

Atmanirbharta, or self-reliance, in defence production is a long-cherished objective of India's defence establishment. In the last one decade (2014–24), the expenditure on procurement from domestic sources has increased, but according to the Stockholm International Peace Research Institute (SIPRI), India was also among the top two largest importers of arms during the same period. What explains this dichotomy? Does the rising expenditure on local procurement indicate that India is inching closer to being self-reliant in defence production? If so, is it attributable to the steps taken by the government in the last one decade, especially for making the acquisition procedures more efficacious? This article examines these, and some other related questions in the backdrop of the past efforts at becoming self-reliant and highlights some issues related to the policy and procedural framework which may possibly be encumbering the process of achieving self-reliance in the true sense of the term.

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* Mr Amit Cowshish is an ex-Financial Advisor (Acquisition) to the Ministry of Defence (MoD), Government of India.

INTRODUCTION

The idea that India must be self-reliant in defence production is not new. Many efforts were made by successive governments, but the results were not commensurate with those efforts. This is evident from the Stockholm International Peace Research Institute (SIPRI) report of March 2024, which pegs India as the largest importer of arms during 2019–23, accounting for 9.8 per cent of the global arms imports, up from 9.1 per cent in the previous four-year block (2018–22).¹ This is not in consonance with the official narrative that India is becoming increasingly self-reliant, which is evidenced by the rising expenditure on procurement from Indian companies.

This dichotomy is primarily due to the difference in approach to measuring the volume of imports. While SIPRI measures the volume of deliveries of major conventional weapons and components to a country using a common trend-indicator value (TIV) which is intended to reflect its military capability rather than its financial value,² the Indian Ministry of Defence (MoD) measures imports in terms of the payments made in foreign currencies to foreign vendors during a particular year. It is possible to criticise SIPRI's methodology but, as argued later in this article, reduction in foreign exchange outflow and corresponding rise in expenditure on domestic procurement cannot also be a true indicator of declining dependence on equipment of foreign origin and growing self-reliance in defence production.

INITIAL EFFORTS

India inherited a well-developed chain of ordnance factories at the time of its independence in 1947. These factories, along with a few Defence Public Sector Undertakings (DPSUs), continued to meet the armed forces' requirements, mostly through licensed production of foreign-origin equipment, though some major platforms were also occasionally imported. The first serious attempt to curtail imports was made in 1992 when a committee headed by Professor A.P.J. Abdul Kalam, then Scientific Advisor to the defence minister and later the President of India, was constituted to identify the steps required for reducing dependence on transfer of technology from foreign original equipment manufacturers (FOEMs) and outright import of equipment, weapons and other military platforms.

The Kalam committee recommended a roadmap for bringing down the dependence on imports from the then prevailing level of 70 per cent to 30 per cent of the total expenditure on procurement by 2005. Not much

is known about the specific measures recommended by the committee or why the goal could not be achieved as planned. The international sanctions imposed on India following the second nuclear test in the summer of 1998 also did not help.

RENEWED EFFORTS

The Kargil War in 1999 triggered a comprehensive review of the national security apparatus and the factors impairing defence preparedness. One of the many measures taken by the government following the review was the constitution of a 24-member committee in 2004, headed by Dr Vijay Kelkar, to recommend the modality of integrating the MoD with the armed forces and the Indian industry with a view to strengthening self-reliance in defence. After extensive consultations with all key players, the committee submitted its report in 2005 making a dozen-odd major recommendations.³

Many of those recommendations were implemented over the next few years. For example, a 15-year Long Term Integrated Perspective Plan was promulgated for the period 2007–22, based on which a ‘Technology Perspective and Capability Roadmap’ was released in 2013 to sensitise the industry about the future requirements of the armed forces. A scheme to identify ‘Raksha Udyog Ratna’ (industry champions), capable of undertaking major projects, was evolved, but it was shelved before it could be promulgated. A ‘Make’ procedure was introduced in 2006 to encourage design and development (D&D) of futuristic equipment by the Indian industry with substantial funding by the MoD for developing prototypes, but nothing much came out of it. A Defence Offset Policy was also adopted a year earlier in 2005, and a Defence Production Policy was promulgated in 2011.

Meanwhile, the Defence Procurement Procedure (DPP)—first promulgated in 2002—was revised in 2003, 2005, 2006, 2008, 2011 and 2013⁴ to promote indigenous production. Defence production was opened to private enterprises and foreign direct investment (FDI) was permitted up to 26 per cent through the government route. Some important structural changes were also made, which included creation of the Integrated Defence Staff to, inter alia, steer the capital acquisition proposals. A dedicated Capital Acquisition Wing was created within the Department of Defence. In addition, a loosely knit acquisition organisation was created, comprising two categorisation committees, a Defence Procurement Board and the Defence Acquisition Council under the chairmanship of the defence minister.

These were well-intentioned, progressive steps to promote self-reliance, or at least domestic production, but the outcome was not as transformative as intended. In fact, self-reliance in defence production was still a distant dream after almost a decade of somewhat disjointed reforms since the Kargil War. This is evident from the following observation made by the then Finance Minister Arun Jaitley while presenting the budget for the financial year (FY) 2014–15 on 10 July 2014:

India today is the largest buyer of Defence equipment in the world. Our domestic manufacturing capacities are still at a nascent stage. We are buying substantial part of our Defence requirements directly from foreign players. Companies controlled by foreign governments and foreign private sector are supplying our Defence requirements to us at a considerable outflow of foreign exchange.⁵

ATMANIRBHAR BHARAT (SELF-RELIANT INDIA): THE CURRENT PHASE

A watershed moment came when Prime Minister Narendra Modi exhorted the foreign manufacturers in his first Independence Day speech, on 15 August 2014, to manufacture their products in India and sell them anywhere in the world. ‘We have got (the) skill, talent, discipline, and determination to do something (and) want to give the world a favourable opportunity’, he said.⁶ It was a call for expanding the manufacturing sector, which currently accounts for about 17 per cent of India’s Gross Domestic Product (GDP).⁷ For sure, local manufacturing is an essential element of self-reliance but, as argued later in this article, local manufacturing alone is not enough to reach the goal.

Be that as it may, the prime minister’s call triggered ‘Make in India 2.0’ initiative, which was formally launched on 25 September 2014,

with the objective of facilitating investment, fostering innovation, building best in class manufacturing infrastructure, making it easy to do business and enhancing skill development... (and)... creating a conducive environment for investment, modern and efficient infrastructure, opening up new sectors for foreign investment and forging a partnership between government and industry through positive mindset.⁸

Aerospace and defence is among the 25 manufacturing and service sectors which are presently the focus of attention under the Make in India 2.0 initiative.⁹

STEPS TAKEN BY THE GOVERNMENT SINCE 2014

Since 2014, the government has taken many steps and introduced reforms ‘to encourage indigenous design, development and manufacture of defence equipment, thereby promoting self-reliance in defence manufacturing & technology in the country’.¹⁰ It is a mixed bundle as some of these steps and reforms fall in the category of policy initiatives, while others are primarily related to the nitty-gritty of the acquisition procedure. The major steps taken in the last 10 years are listed below in random order:¹¹

1. Setting up of the Defence Planning Committee.
2. Creation of the Department of Military Affairs to, inter alia, promote the use of indigenous equipment by the armed forces.
3. Raising of the cap on FDI.
4. Setting up of two Defence Industrial Corridors.
5. Preference to procurement from Indian companies.
6. Recalibration of the Defence Offset Policy.
7. Setting up of Technology Development Fund and promulgation of Innovations for Defence Excellence (iDEX).
8. Embargo on import of specified items.
9. Earmarking of increasing proportion of capital outlay from Indian companies and 25 per cent of defence research and development (R&D) budget for the private sector
10. Notification of the lists of systems to be developed only by the industry and not by the Defence Research and Development Organisation (DRDO).
11. Revision of the capital acquisition procedures in 2016 and 2020.

It would be legitimate to ask if these reforms, most of which were aimed at giving a fillip to local manufacturing and promoting self-reliance in defence production, have indeed made India more self-reliant than it was at the beginning of this phase in 2014. The MoD would answer the question in the affirmative, citing the increasing proportion of capital outlay being set aside for procurement from Indian companies as proof of its claim. In FY 2023–24, a record-breaking 75 per cent of the capital budget was set aside for this purpose,¹² up from 58 per cent in FY 2021–22.¹³ However, as pointed out in the beginning of this article, the latest SIPRI report presents a totally different picture. More importantly, even if the SIPRI report is discounted for being opaque and based on questionable methodology, the increased expenditure on procurement from local companies also cannot be accepted as a true indicator of self-reliance.

IS EXPENDITURE ON LOCAL PROCUREMENT A TRUE INDICATOR OF SELF-RELIANCE

This brings us to the question as to why local manufacturing and procurement cannot be considered a true indicator of self-reliance. The difficulty in answering this question is that there is considerable opacity around the definition of self-reliance in defence production. In the absence of an official definition, one needs to consider whether self-reliance means increased domestic production of defence equipment or attainment of the stage where all, or most, of the critical technologies that go into manufacturing of defence equipment are designed and developed within the country by Indian companies, thereby eliminating the possibility of local manufacturing (or maintenance/upkeep) of the locally manufactured equipment being hampered by denial of those critical technologies by the FOEMs for geopolitical or other reasons?

For example, a large proportion of the Light Combat Aircraft (LCA) is indigenous, but it uses a foreign engine, without which it cannot fly. This can potentially compromise self-reliance in manufacturing the aircraft if there is a disruption in the supply of the aeroengines. The point is now moot, but a difficult situation could have arisen had the United States (US) decided to impose sanctions on India, under the Countering America's Adversaries Through Sanctions Act, 2017, for continuing to buy military equipment from Russia.

This vulnerability, arising from dependence on uninterrupted supply of critical parts, assemblies, components, specialist services, etc., does not figure in the local discourse on self-reliance. On the contrary, a general review of the Standing Committee on Defence reports, parliament questions, Press Information Bureau handouts and sundry official statements indicates the tendency to measure self-reliance either in monetary terms, that is, the expenditure incurred on sourcing defence equipment from local companies, or in terms of indigenous content (IC) in the equipment manufactured in India. In both the cases, the dependence on import of critical components is not taken into account.

Thanks to the policy adopted by the MoD in 2016, most of the contracts are awarded to Indian companies as prime vendors under acquisition categories, like Buy (Indian–Indigenously Designed, Developed and Manufactured), Buy (Indian) and Buy and Make (Indian). Under these categories, the Indian companies are permitted, to varying degrees, to enter into agreements with foreign companies for transfer of technology, obtaining specialist services or importing raw material or some critical components. All

payments to these companies are made by the MoD in Indian rupee (INR), which accounts for the rising expenditure on local procurement. This is also true of equipment manufactured in India under other categories, like Buy (Global–Manufacture in India) and Make.

However, this method of calculation excludes the payment that Indian companies make to their foreign suppliers for obtaining technology, raw material, etc., required for manufacturing the equipment in India, which they sell to the MoD and for which they get paid in INR. This leads us to the conclusion that expenditure in INR cannot be an index of self-reliance in defence production as long as the local manufacturers continue to depend on foreign sources for critical manufacturing technologies, specialist services, raw material and the like.

Self-reliance is often also conflated with the percentage of IC in a product. The MoD has progressively increased the level of IC required in the equipment acquired under various categories from Indian companies. It presently ranges between 50–60 per cent, but IC is also measured in monetary terms and not in terms¹⁴ of the nature of technology transferred by the FOEMs to their Indian production partners.

This implies that the FOEMs can transfer non- or less-sensitive technologies to the Indian companies, while holding back transfer of sensitive technologies which are critical to operational exploitation of the equipment in question. The BrahMos medium-range ramjet supersonic cruise missile being built in India with Russian collaboration is one of the many examples which illustrates the point. The ramjet engine and radar seekers for the missile are imported from Russia. In fact, according to some media reports, Russia supplies around 65 per cent of the components for the 3.9 tonne BrahMos.¹⁵

Dependence on import of critical parts of the BrahMos missile is not an exception. Engines for land systems, like Arjun main battle tanks, BMP-2/2K infantry combat vehicles, K-9 Vajra-T 155mm/52 mm calibre tracked self-propelled howitzers and wheeled armoured platforms, are also imported, alongside all their transmission systems and other related gear, some of which was licence-built locally with overseas collaboration.¹⁶

Dependence on import of engines for not just the land based but also the airborne and naval platforms has been India's Achilles heel. For example, the LCA, Su-30MKI fighter jets and Hawk trainer aircraft are powered by imported engines, although they have IC of 82 per cent, 68 per cent and 71 per cent, respectively.¹⁷ This is equally true of all naval vessels, which also depend heavily on import of the weapon systems installed on them.

It is not as if the MoD has not been conscious of the importance of developing an indigenous engine, but the ambitious Kaveri engine project, launched in 1986 by the DRDO at the Gas Turbine Research Establishment at Bengaluru, has not succeeded in its mission. In 2016, a French engine maker, Snecma, had offered to assist the DRDO in developing Kaveri, as part of the offset obligation associated with the Indian Air Force's import of 36 Dassault Rafale fighters, but apparently nothing has come of it so far.¹⁸

This is not to play down the DRDO's achievements in developing several technologies, despite the many constraints it faces,¹⁹ or the Indian industry's capability to undertake local manufacturing of the most sophisticated equipment, weapon systems and platforms, but to point out that a high level of IC in locally manufactured and procured equipment cannot be a true indicator of self-reliance, which is also true of the increasing expenditure on procurement from the local sources. A very high level of IC in locally manufactured equipment, though important, does not necessarily lead to self-reliance if the operational exploitation of the equipment depends on import of a critical sub-system, part, code or component.

DEFINITIONAL, STRUCTURAL AND PROCEDURAL ISSUES

The foregoing analysis points to certain issues which may be impacting India's march to self-reliance in the real sense of the term, defined as the capability to indigenously design, develop and manufacture all manner of defence equipment required by its armed forces without having to rely on import of critical technologies to make the equipment ready for operational exploitation. This capability is independent of the industry's competence to manufacture equipment in India, under licensing arrangements, technology transfer agreements or other analogous tie-ups with FOEMs and service providers.

A change in the definition of self-reliance in defence production, whether on the lines just suggested or in a more refined form, would also need a different approach to measuring self-reliance. A new yardstick or method will have to be evolved for the purpose. The practice of calculating IC in locally manufactured equipment and ensuring that the Indian companies are the prime vendors in defence contracts so that the payments are made to them in INR can co-exist with the newly developed method of calculating self-reliance.

This change in approach to measuring or assessing self-reliance presupposes the MoD's focus on promoting development of critical technologies required

for becoming self-sufficient in manufacturing equipment and platforms across the entire spectrum of military capabilities. It also presupposes design and development of futuristic technologies and platforms within the country. The Capital Acquisition Wing, which is the primary agency handling acquisitions, is not suited for this purpose as its prime focus is on acquisition. Design and Development (D&D) of critical technologies and platforms is the main responsibility of the DRDO which, for a variety of reasons, continues to face criticism for chronic delays in completing many critical projects.

While the routine acquisitions can continue to be handled by the Capital Acquisition Wing, some structural changes appear to be necessary to reorient the task presently being performed by the DRDO. The Raghavan Committee, set up in August 2023 by the government to, among other things, restructure and redefine the organisational role, is reported to have recommended a big shake-up in the DRDO and a bigger role for the private sector in defence research.²⁰

This idea has been around for a long time. More recently, in her budget speech for FY 2022–23, Finance Minister Nirmala Sitharaman had announced on 1 February 2022 that defence R&D will be opened for the private industry, start-ups and academia, with 25 per cent of the DRDO budget being earmarked for it.²¹ Apparently, the modality of implementing this decision could not be worked out.

In the US, the responsibility for developing emerging technologies for the military is shouldered by the Defense Advanced Research Projects Agency (DARPA). It functions with a small complement of approximately 220 government employees—the DRDO has more than 26,000—in six technical offices, including nearly 100 programme managers, who together oversee about 250 R&D projects.²² Most of the heavy lifting is done by outside R&D agencies with the DARPA coordinating all those efforts.

This kind of agency was long seen as an ideal solution for promoting defence R&D in India and, in 2005, the Kelkar Committee had indeed recommended setting up of a Board of Research for Advanced Defence Sciences (BRADS) to function on the lines of the DARPA of the US, but the recommendation was not accepted by the government.²³ The fact that the iDEX scheme and the Technology Development Fund—two of the few highly successful R&D schemes—are managed by a not-for-profit Defence Innovation Organisation under the aegis of the Department of Defence Production and by the DRDO, respectively, points to the pressing need for an overarching coordination mechanism.

It remains to be seen whether the Raghavan Committee has made any specific recommendations as to how the private sector's involvement in defence R&D is to be increased and what impact it will have on the existing structure and functions of the DRDO. It also remains to be seen whether the private sector's involvement will spur development of major critical and futuristic technologies as expected.

Another factor that has a bearing on the future of self-reliance in defence production is the efficacy of procedural framework. The existing procedures are oriented towards acquisition with D&D being incidental to it. A mention must be made of the Make procedure of 2006 which aimed at the design and development of futuristic equipment, but, for one, it envisaged harnessing of available technologies for developing a new product with a lot of emphasis on IC, and for another, hardly any major project has fructified under this category in nearly two decades.

The procedures followed by the DRDO are no different. The *DRDO Procurement Manual 2020*,²⁴ as the name suggests, is arguably more about procurement than development of futuristic technologies or carrying out fundamental research. It is replete with subjects such as standards of financial propriety, guiding principles of public buying, booking of capital and revenue expenditure, bidding system, evaluation of offers, contracting, outsourcing and so on. Developmental projects, especially those involving futuristic technologies and platforms, require a totally different procedural framework.

While definitional, structural and procedural issues can be fixed with comparative ease, the inadequacy of the outlay for defence R&D is a more intractable problem. As a proportion of the total defence outlay, the R&D budget came down from 6.38 per cent in 2018–19 to 5.1 per cent in 2023–24, a sizeable chunk of which is anyway spent on salaries. Likewise, allocation for defence R&D has come down from a meagre 0.088 per cent of the GDP in 2017–18 to 0.078 per cent of the GDP in 2023–24.²⁵

Some analysts could argue that among the 12 major scientific organisations of the central government, the DRDO accounted for the maximum share of 30.7 per cent of the total R&D budget during 2020–21. This is not much of a consolation in view of the overall national R&D expenditure, which declined from 0.68 per cent in 2009–10 to 0.64 per in 2020–21.²⁶ This is in sharp contrast to the share of defence R&D budget in the total R&D budget among the Organisation for Economic Co-operation and Development (OECD) countries in 2021.²⁷

SUMMING UP

The foregoing analysis shows that self-reliance cannot be measured in terms of the expenditure incurred on procurement from the Indian companies or the IC in the products manufactured in India. The real test of self-reliance is the capability to design, develop and productionise critical technologies without which the equipment or platform cannot be operationally exploited. As long as the country has this capability, it matters little if the IC in a particular equipment, weapon system or platform is low, provided the non-critical components are available from multiple sources.

This requires redefining the objective of self-reliance and evolving an appropriate methodology for measuring it. This would also require development of an appropriate structural and procedural framework, as the existing framework is geared more towards acquisition than development of futuristic technologies and undertaking fundamental research. It is unquestionable that the private sector will have to play a greater role in this venture.

Increased private sector participation can also mitigate inadequacy of budget outlays, which is otherwise an intractable problem. In the US, 75 per cent of the total R&D funding is by the business enterprises, with the academia, government and other sectors contributing 11 per cent, 9 per cent and 5 per cent, respectively. China, South Korea, Japan and the Russian Federation are comparable with the US in this regard. India, however, seems to be at the other end of the spectrum, with 50 per cent of the outlay being contributed by the government, 41 per cent by the private enterprises (of which defence accounts for a negligible proportion) and the remaining by the academia.²⁸ This needs to change.

In the ultimate analysis, it is all about the mindset. There can be no better way of concluding this article than by quoting the Irish playwright George Bernard Shaw, who famously said: 'Progress is impossible without change, and those who cannot change their minds cannot change anything.'

NOTES

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