Defence Indigenisation:
Made in India, by India, for India

Bikramdeep Singh

Defence indigenisation has remained the inner calling of a nation, which has the third largest Army, is the eighth largest military spender and has emerged as the largest importer of weapon systems and platforms in the world[1]. As India inches to achieve its rightful strategic autonomy, it needs to do much more in planting the seeds for a commercially viable and technologically robust indigenous defence industrial base.

The Self-Reliance Index (SRI) which may be defined as the ratio of indigenous content of defence procurements to the total expenditure on defence procurements in a financial year is at an abysmal 0.3. In 1992, Abdul Kalam, then Scientific Advisor to the Raksha Mantri, constituted a Self-Reliance Review Committee to formulate a 10-year long-term plan to transit from a dismal SRI of 0.3 to 0.7 by 2005. This would have implied that the import content of defence procurements, which includes import of weapon systems/platforms by the armed forces as well as services sought from foreign vendors/Original Equipment Manufacturers (OEMs) by Defence Public Sector Units (DPSUs) and Ordnance Factories (OFs), be brought down to 30 percent or less. Sadly this was the first and perhaps the last time such an exercise was undertaken and there is good reason to believe that the SRI has ever since remained stagnant at 0.3, if not dipped further.

Indigenisation was earlier included in the primary functions of the Department of Defence Production (DDP) and Directorate General

Colonel **Bikramdeep Singh** is Senior Fellow, Centre for Land Warfare Studies, New Delhi.

of Quality Assurance (DGQA), however, this responsibility has since been transferred to the Ordnance Factories Board (OFB) and Services[2]. Ironically, this important aspect does not find mention in the charter of the OFB as spelt out on its website and they have further decentralised indigenisation functions to the respective OFs. The Services on their part have established a dedicated Directorate of Indigenisation for their respective Services. The Army and Navy, for instance, have even formulated a well articulated 15-year Perspective Plan for Indigenisation with a mission to carry out purposeful indigenisation of spare parts, sub-systems, special maintenance tools, test equipment and entire equipment (non-war like) with a view to effecting significant savings in life cycle costs of imported weapon systems. This roadmap gives a clear perspective of technologies and defence products that are likely to be inducted.[3]

Challenges and Response to Indigenisation

The Continuously Evolving Defence Procurement Procedure (DPP): Indian capital defence acquisitions are governed by the provisions of the DPP. This mother document has been revised seven times since its inception in 2001 on the plea that the system is on a learning curve. Notwithstanding, the following amendments to the erstwhile DPP 2011, promulgated in the DPP 2013 version applicable June 1, 2013, are considered as stepping stones to our indigenisation effort:

Introduction of new Para 20 (a) to the DPP which stipulates preferred categorisation in the preferred order as 'Buy (Indian)', 'Buy and Make (Indian)', 'Make', 'Buy and Make' and lastly 'Buy(Global)'. While seeking the approval for Accord of Necessity (AoN) in a particular category, say, Buy (Global), it will now be necessary to give detailed justification for not considering the other higher preferred categories. This stipulation is expected to give an impetus to indigenisation.

Clarity has been put forward as regards provisions related to the indigenous content and these have now been made more stringent.

Indigenous content requirement will now have to be applicable to the lowest tier of the sub-vendor base. Hence, import content in the products supplied by the sub-vendors will not qualify towards indigenous content.

The requirement of the prescribed indigenous content, e.g. 30 percent in the Buy (Indian) category is to be achieved on the overall cost basis, as well as in the core components i.e., the basic equipment, manufacturer's recommended spares, special tools and test equipment, all taken together. In addition, the basic equipment must also have a minimum 30 per cent indigenous content at all stages, including the one offered for trials. It has been further stipulated that an indigenisation plan will need to be provided by the vendor. These stipulations will ensure more meaningful efforts towards indigenisation.

Further, a penalty has been stipulated for not achieving the required indigenous content at a given stage although an alternative scope to make up the deficiency at a later stage has been provided.

In 'Buy and Make (Indian)' cases, there is no stipulation regarding the minimum indigenous content in the 'Buy' component and the Indian vendor is given elbow room to achieve the prescribed indigenous content in the overall delivery. This provides the Indian vendor the time to absorb Transfer of Technology (ToT) and set up a manufacturing facility while concurrently meeting the Service requirements. A method for assessment of indigenous content, based on self-certification by vendors, has been given at Appendix 'F' to Chapter I, while keeping provisions for audit by the Ministry of Defence (MoD) or its nominated agency.

Issues in Progress: Further impetus to indigenisation would also require simplification of the 'Buy and Make (Indian)' and 'Make' procedures. The exercise to simplify the 'Buy and Make (Indian)' procedure has been completed, doing away *inter alia* with the requirement of shortlisting vendors through a 'Project Appraisal Committee' while keeping the validity of the AoN to two years, thus, permitting comprehensive consultations with the industry. This is expected to bring

more projects under the ambit of 'Buy and Make (Indian)' category, while simplification and streamlining of the 'Make' procedure is underway by an empowered committee under the Defence Secretary and is likely to conclude soon.

Private Sector Participation: The public sector (DPSUs/OFs) by far has enjoyed the preferred categorisation, particularly for big ticket purchases, when considering the Indian route, despite its poor track record as regards time and cost overruns, inefficiencies and poor financial performance. The defence industry *per-se* being a capital intensive industry with high risks on investments leaves very few private players in the arena. DPSUs, on the other hand, have not done much to promote proficient business practices by involving the industry and Micro, Small, and Medium Enterprises (MSMEs). The report of the 33rd Standing Committee on Defence – Indigenisation of Defence Production: Public-Private Partnership was highly critical of the steps taken by the government to promote indigenisation. It stated that although several new policy initiatives had been undertaken for promoting public-private partnership in defence production, the statistics furnished to the committee revealed that the share of the private sector, including small scale industries was a meagre 23 percent of the total purchases made by the DPSUs during 2006-07.[4] Although the Indian defence sector was opened up to private industry in 2001, we still lack a clear, articulated and laid out plan for indigenising of this $46.1 billion sector. Undoubtedly, this situation is far from satisfactory, particularly when the government aims at the harnessing of available expertise and capabilities of the private sector towards the national defence effort and its quest for self-reliance. This task can be accomplished by taking timely and appropriate initiatives to integrate the private industries of proven capabilities in the defence sector. Efforts are also required to be directed towards earnest implementation of the policy framework envisaged from time to time with a view to achieving the desired objectives. Enhanced participation by the private sector would

not only promote healthy competition between the public and private sectors but would also give an impetus to industrial and economic growth in the country. The first step in this direction has been taken by sharing the Technology Perspective and Capability Roadmap (TPCR) with the industry in April 2013. The industry now needs to undertake a similar exercise under the umbrella of the Federation of Indian Chambers of Commerce and Industry/Confederation of Indian Industries (FICCI/ CII) to work out the roadmap for development of critical technologies that the armed forces require in the coming decade and establish Joint Ventures (JVs)/ink Memorandum of Understandings (MoUs) with OEMs.

Assessment of Degree of Indigenisation: As of today, no scientific system is in place to assess the extent/ level of indigenisation achieved by defence production entities in the country. As a matter of fact, statistical information on the extent of indigenisation available in the open domain fails to reflect the true picture as some of the data does not include the quantum of import content utilised in products manufactured by DPSUs/OFs. The quantum of financial outgo to the foreign and indigenous sources of supply for procurement of defence equipment continues to be the primary criterion for evaluating the level of indigenisation. However, if the primary aim is to achieve higher levels of indigenisation and self-reliance in defence production then it cannot merely be viewed as a mere commercial and statistical analysis. There is, therefore, a need to evolve models and mechanisms for evaluating the degree and extent of indigenisation to ensure an objective and incisive analysis of our indigenisation endeavour.

Foreign Direct Investment (FDI): Defence being a capital intensive industry, the role of FDI in building a robust domestic industry and creating an enabling environment for ToT from foreign OEMs cannot be overemphasised. The erstwhile 26 percent cap on FDI in defence disincentivised investment and ToT can be substantiated from the fact

that total inflow of FDI during the period 2000-2012 in this sector has been a meagre US$ 3.72 million out of a total FDI of US$ 160,094.45 million that the country received during the period[5]. Given the strategic and technology intensive nature of the defence industry, no foreign vendor/OEM is keen to part with critical technologies, over which it will henceforth have little control.Wisely the FDI cap has now been revised to 49 percent with the caveat that such investment must provide access to state-of-the-art technology[6]. In case of the inflow exceeding Rs.1,200 crore, it must, however, be approved by the Cabinet Committee for Economic Affairs (CCEA). Further applications for FDI exceeding 26 percent will need to be examined by the Department of Defence Production (DDP) to vet, analyse and recommend access to "state-of-the-art" technology. On the basis of the recommendations of the DDP and Foreign Investment Promotion Board (FIPB), the DDP will seek approval of the Cabinet Committee on Security (CCS), thus, retaining the avoidable bureaucratic controls, which the industry will continue to grapple with.

Licensing Norms: Investment in the defence sector is subject to compliance with the licensing requirements stipulated by the Department of Industrial Policy and Promotion (DIPP). Defence manufacturers are required to obtain an industrial licence under the Industries (Development & Regulation) Act 1951, prior to setting up shop. Although the government has been successful in bringing much needed clarity in the licensing process by publishing the defence products list and by clarifying that dual use products do not need licensing, the necessary sensitisation of this standpoint is required so that there is consistency between the policy and its implementation. It is also interesting to note that though the defence products list has been put up on the MoD's website, it refers to a 'dual-use' list which has not been made available to the public, hence, providing only partial clarity.

Offsets as a Route to Indigenisation: The DPP lays down the applicability of minimum 30 percent offsets for all procurements over Rs 300 crore. The Defence Acquisition Council (DAC), however, retains the leeway of prescribing varying offsets above 30 percent and, at the same time, waiving off offset obligations in certain cases, depending on several factors, such as the type of acquisition, strategic importance of the acquisition and/ or technology, enhanced ability of Indian defence industry to absorb the offsets, export potential generated and others. In the case of 126 x Medium Multi-Role Combat Aircraft (MMRCA), the offsets have been pegged at a staggering 50 percent. The current Defence Offset Guidelines (DOGs) in-vogue since 2012 include aspects such as ToT and multiplier of offset credits for collaboration with MSMEs, thus, compelling OEMs to source more components from domestic suppliers. This will incognito lead OEMs to increasingly engage with smaller Indian players by establishing partnerships or JVs and in the process, playing a part in the growth of MSMEs in India. While the offsets policy can help stimulate creation of a domestic value chain, it will be prudent to examine the flip side of the recent guidelines and other developments in this field as well.

Unrealistic Indigenous Requirement and Timeframe Under 'Buy (Global)' Category[7]

The DPP clearly defines an Indian defence item as one that has a minimum 30 percent indigenous content while the offset provisions for Indian companies under the 'Buy (Global)' route nullify such a definition. Beyond the definitional issues, what is more important is the potentially damaging impact on the domestic defence industry of the revised DOGs' 50 percent indigenous requirement and timeframe to achieve that. It is well known that very few Indian companies can offer products with 50 percent or more indigenous content. This is perhaps the only reason why the indigenous requirement under the 'Buy Indian' contracts has

been kept at 30 percent. Given this, it is inconceivable to imagine why the requirement has been suddenly pegged at a significantly higher level. Moreover, even assuming that some Indian companies would like to achieve the stipulated indigenisation level, the timeframes provided in the DOGs simply do not encourage that. Indian companies are now required to prove the indigenous content at the time of submission of technical bids, which means they need to have 50 per cent indigenous content even before the actual production commences. This is not only unrealistic but also dissuasive for any Indian company which wants to compete at the global level.

Knee-Jerk Solutions: Post the Augusta revelations, a recent office memorandum issued by the Department of Defence Production to keep in abeyance certain 'service' related paragraphs in offset guidelines raises significant concerns on the fate of the eligibility of services as an offset avenue. India is a pioneer in rendering engineering, design, testing and software development services and this notification will have a negative impact.

Ability of the Industry to Absorb Offsets: Though the procurement of weapons and equipment worth more than Rs 300 crore invites offsets varying from 30-50 percent, it is doubtful whether the Indian industry is ready to absorb such high levels of offsets. For instance, the MMRCA contract, which is likely to be worth US$ 10-12 billion or more, will result in an offset obligation of US$ 5-6 billion. This is much more than the Indian defence industry can possibly absorb over 10-12 years, when the country has no viable private defence sector to speak of, and will, thus, tantamount to the offsets being absorbed by Hindustan Aeronautics Limited (HAL) and the likes, with no formal guarantees on the extent and timelines for their absorption.

Research & Development (R&D): The field of defence R&D has been the bastion of the Defence Research and Development Organisation (DRDO) ever since its foundation in 1958. It started

as a small organisation with 10 laboratories, and today has grown to over 50 labs and a workforce of over 35,000 personnel[8]. The premier research agency has had its share of successes (IMDP) and failures (MBT, LCA), however, despite large scale investments in terms of finances and resources, the national technological scene remains devoid of critical and core defence technologies in the fields of night vision, high strength materials, seeker technology for missiles and Precision Guided Munitions (PGMs), fast speed data integration, fifth generation technologies, viz, low observability, unmanned weapons delivery, tracked armament, space, nano technology and combat modelling and simulation. DRDO, as of today has accumulated over 1,000 odd projects and is continuously making bids for virtually everything that the Indian armed forces need with a cumulative production value of all the DRDO developed systems having crossed Rs 1, 55,000 crore.[9] Nearly all DRDO projects of strategic importance are associated with cost and time overruns coupled with a double whammy of a sub-optimal technological threshold.It is a given that R&D is critical to achieving indigenisation and, therefore, the creation of a National Defence R&D Council is imperative to undertake an assessment of our national technology threshold and determine the strategic technology gap. Such a council should have representatives from all stakeholders, viz Services, bureaucrats, technocrats, industry, academia, think tanks, Science & Technology Ministry and could be spearheaded by DRDO. Further recommendations with regard to R&D are:

- Utilisation of DRDO labs and facilities by the industry on a royalty basis.
- Adoption of Defence Advanced Research Projects Agency (DARPA) approach to defence R&D projects.
- DRDO to concentrate on basic research and core technologies.
- Greater participation of the industry in DRDO projects.
- Sharing of ToT received through the offsets route with the private sector/industry under the provisions of DOGs 2012.

- Tax incentives to the private sector in defence R&D.
- Greater interaction and increased involvement of the DRDO with academia through technology clusters based on their respective domain expertise.

The Road Ahead

The Vijay Kelkar Committee constituted in 2004 to examine the acquisition processes and procedures and recommend changes in the acquisition process, ironically made similar recommendations on the issues discussed, nearly a decade ago. The major recommendations on this vital aspect being:

- Encourage the involvement of the country's best firms in defence capability building.
- Pursue offset policy to bring in technology and investment.
- Explore synergies amongst the private sector, DPSUs, OFs and DRDO to promote high technology capabilities.
- Create an environment for a quantum jump in the export of defence equipment and services.

Indigenisation being limited to absorption of ToT under licensing arrangements by the DPSUs and OFs and indigenising a few components, spares and assemblies do not comprise the answer. These public sector entities are burdened by poor work and management cultures, short on productivity, stringent quality controls, innovation and even devoid of costing transparencies. Subjecting them to market pressures and competition with the private sector would yield the desired results. Creation of JVs with global defence players by both Indian industry as well as DPSUs will also go a long way in nurturing the growth of this sector. Adopting a collaborative approach involving the public and private sectors in the Public-Private Partnership (PPP) mode will yield rich dividends. The public sector possesses massive infrastructure, facilities

and vast skilled workforce. The private sector, on the other hand, is more inclined to handle high end technological advances, have efficient managerial practices, marketing skills and exhibit financial prudence in keeping with efficient business and commercial practices. A synergy of the two can capitalise on their respective strengths and mitigate the risks on account of their individual weaknesses.

No tangible results can be forthcoming without the involvement of the government for which it is essential to evolve a long-term defence procurement and production plan, which will set clear ground rules on a competitive basis between the industry and DPSUs/OFs. The protectionist approach towards the public sector needs to be shed by the bureaucratic structures. We need to look at system and sub-system development competencies and a good hit rate at converting R&D to production in quick time, with stringent quality controls and at competitive costs. Formulation of a National Indigenisation Plan, mechanism and structures to monitor the extent of indigenisation achieved and sharing the same with all stakeholders will be worthwhile. Too much has been said and talked about indigenising our defence sector – it is high time that we now deliver.

Notes

1. Details available at, http://www.sipri.org
2. Details available at http://www.dgqadefence.gov.in/inner.php?id=211
3. Available at http://indianarmy.nic.in/Site/FormTemplete/frmTemp1PCorps_EME2C.aspx?MnId=bR7R9IIifMv2p23VLGIxVw==&ParentID=XjTA55nSQzjlrsSKwbAymQ==&flag=z6AV93MYf0MleDpqCTda4Q==
4. Report of 33rd Standing Committee on Defence 2008-09, 14th Lok Sabha, Indian Parliament.
5. Available at http://business.mapsofindia.com/fdi-india/sectors/
6. Available at http://pxvlaw.wordpress.com/2013/09/01/revised-fdi-norms-in-defence/
7. Available at http://www.idsa.in/policybrief/ACritiqueofIndiasDefenceOffsetGuidelines2012
8. Available at http://www.drdo.gov.in
9. "AK Antony Hits Out at DRDO for Delays in Strategic Projects," *The Economic Times*, May 28, 2013.