



Atmanirbhar Bharat as a Pivot to Leverage Strategic Autonomy in Defence



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India is one of the biggest importer of Arms and globally ranked second during 2016-2021 with 9.5% of the global share.¹ The clarion call given by the Hon'ble PM for an *Atmanirbhar Surakshit Bharat* has galvanised the entire defence eco-system to rise to the challenge. Recent initiatives announced by the Government have generated a strong sense of purpose and resolve amongst Users, the Defence Industry, startups and the Academic Community at large. There is a strong and visible energy and unity of effort amongst all stakeholders. In addition, stakeholders' entire eco-system has been galvanised into an unprecedented collaborative synergy. There is a strong case to accord a very high priority to *Make in India-Defence* for development & manufacturing in Aerospace and Defence (A&D) sector in order to reduce India's dependence on imports for defence preparedness— one of the essential

Key Points

- Make in India in Defence is vital for gaining strategic autonomy and technological superiority.
- Multiple lines of effort is required to incubate technologies, encourage innovation & entrepreneurship, create skillsets, build specialised infrastructure and invest in IPRs.
- The Government of India has initiated several policy & process reforms and have taken initiatives to encourage positive synergies between stakeholders.
- Defence technologies being critical to the effort, several grants and incentives have been instituted in the private sector with an aim to build technology value chains.
- Preferential market access to Indian industry should be given by prioritising indigenous products and restricting imports of certain defence equipment.



means to achieve the target of \$5 trillion economy, creation of jobs and setting up of a vital defence manufacturing hub plugged into the global supply chain system. This was possible by creating conditions suitable for private industries to play a positive role— enhancing potential of MSMEs and startups in the indigenisation efforts and towards broadening the defence R&D base of the country.

The Government of India has been at the forefront of leading the Atmanirbhar Abhiyan through a slew of policy and process initiatives. The Defence Acquisition Procedure 2020 (DAP 2020) was drafted after protracted consultation with all stakeholders and since its promulgation, on 30 September 2020, has been further modified to reflect the aspirations of an increasingly assertive indigenous defence industry and a rapidly expanding domestic defence industrial base. The Defence Production and Export Promotion Policy 2020 (DPEPP 2020) has been designed to provide a focused, structured and significant thrust to defence production capabilities of the country for self-reliance and as a catalyst for export of sub-systems, systems and end products. The Defence R&D and Innovation space has been considerably strengthened through substantial increase in funding through the The Innovations for Defence Excellence (IDeX) and various technology development initiatives by the DRDO and the Service HQs. Several concrete steps have been taken by the Government to promote indigenous design, develop and manufacture defence equipment by harnessing the capabilities of the public and private sector. Policy and process changes have been brought in to give higher priority for procurement from Indian Defence Industry. Statutory provisions have been made to increase share of procurement from Indian industry from existing 58 percent to 68 percent in the Union Budget for 2022-23.² This is likely to increase further in the forthcoming budget. The Ministry of defence has promulgated and is actively pursuing several enabling and flexible processes like the modified Make-1 or the simplified Make-2 to accelerate induction of indigenous products. Ushering in of an era liberal licensing regime, creating single window agencies like the Defence Investors Cell (DIC) and the Defence Export Promotion Council, increasing the limit of FDI in defence sector through the automatic route from 49 percent to 74 percent and empowering the users by delegating procurement of operationally emergent requirements. Defence clusters have been planned in close contiguity by setting up of Defence Industrial Corridors in UP and Tamil Nadu which will create unprecedented synergies and economy of effort besides



extending tax benefits and incentives to the Defence Industry in these designated geographies. Three positive indigenisation lists (also known as negative import lists) have issued between³ 2020-2022 listing more than 350 defence items which can no longer be imported and simultaneously simplification of export procedure has created ample opportunities for the Indian industry to rapidly occupy the resultant space. Defence Offsets policy is constantly evolving to focus on the needs of defence eco system be it technology, skillsets, specialist infrastructure or materials. Technology transfers from DRDO to defence industry have been fast tracked and the Mission Raksha Gyan Shakti is encouraging the development of an Indian IPR development mechanism. opening up of government test laboratories for Indian Industries, Apart from the iDeX, multiple funding mechanism for technology and innovation have been created to foster innovation & technology development and to encourage Indian industry to invest in R&D Aerospace & Defence sectors 25 percent of defence R&D budget has been reserved for private sector.

These initiatives are part of a continuum of our resolve to realise the dream of 1.3 billion people for a strong, secure and self-reliant India. The senior leadership of the armed forces, leaders of defence industry, directors of IITs, startups, young innovators and entrepreneurs, are all being encouraged to join this enterprise with each one having a distinct and a significant role to play. Since policy, technology, manufacture, testing, evaluation and skilling are key components of self-reliance, therefore we need to ensure that all stakeholders, in each domain, are fully in sync with the objectives and goals of Atmanirbharta.

Synchronising Efforts: The Bigger Picture

The Ministry of Defence has been proactively engaging with stakeholders in the quest for self-reliance. The broader policy construct and inter-ministerial coordination emerges from these deliberations. The **Department of Military Affairs** has held several outreach programs to synergise capability development in a dynamic and rapidly evolving security scenario. It plays a significant role in calibrating the military needs and indigenous capabilities. Maintaining a fine balance between ensuring operational efficiencies and catalysing Indian defence manufacture, is an important role for the office of the CDS. The **Department of Defence Production** is pivotal in energising the nascent Indian defence industrial base. It has not only created a positive and growing collaboration between the



Public and Private Enterprise but also ensured that sustainable business models are created— both for the DPSUs and the Private OEMs. Adequate testing, evaluation and certification facilities aligned with global best practices, must be made in defence clusters and their availability ensured to all participants so that indigenous products are globally competitive in cost and quality. The **Defence Acquisition Wing** has been fine tuning the process to create a pragmatic and an efficient procurement which promotes self-reliance.

The **Defence Research and Development Organisation** has engaged with the public and private sector in the recent past to create world class technologies and products; current initiatives include a whole of 'nation approach' to technology development, talent spotting & retention and a powerful thrust on innovation. All **Service HQs** have created vibrant mechanisms for interacting with the industry for Technology Development Projects and the 'Make' Projects.

Defence R&D

The Ministry, through TDF and iDex initiatives, has outlined a roadmap that encourages Defence R&D, rewards innovation and creates Indian Intellectual Property in the National Security space. The recent announcements of reserving 25% of Defence R&D budget for Private Sector⁴ has been a path breaking initiative which has the potential to transform the Defence R&D landscape radically. Initially, the focus must be towards enhancing sub-systems or systems that facilitates faster development and deployment cycles and creates traction in the system. The Government must ensure that there is limited involvement of bureaucracy and single window clearance of R&D projects focusing on delivery rather than interventions. It is expected that these policy interventions will empower the India's defence industry to provide world class equipment to Indian defence forces and create a robust and lasting presence in the global supply chains. The promulgation of the three Positive Indigenisation Lists and similar lists by DPSUs have given preferential access to Indian companies which have the potential to kickstart the economy and pump in fresh energy into the MSME sector.



Job Creation in Defence and Aerospace Sector through Manufacturing and Services

Defence and Aerospace are largest employers globally and each one billion US dollar investment creates 25000 jobs. In our context, an average investment of 10 billion US dollars by the private sector can lead to 6 lakh new jobs in the defence sector. Though the potential exists, jobs in D&A would require specialised skillsets with very limited cross sector utility. These skills must be nurtured, groomed and absorbed in the defence industry which will require sustained business models rather than the present order based business—after all, how long can a factory making missiles sustain an employee base of skilled missile technicians if there are no follow up orders in the system. Thus, a complete relook at the ‘**Skill to Serve**’ model has to be examined and niche curriculum introduced into management courses particularly focusing on Defence Technology Management and Defence Manufacture Management.

Creation of Defence Corridors

Defence Corridors, as dedicated geographical entities, has been created by the Government for consolidating the defence industry segments. Policy incentives have been built to provide tax benefits, concessions and certain multipliers to populate these corridors and create an end- to- end manufacture, integration, evaluation and certification system in close proximity. The two notified defence corridors at Tamil Nadu and Uttar Pradesh, have seen a very vibrant participation by the defence companies. Efforts must also be made to include defence research and skilling segments into these corridors for proximate research and employment opportunities.

Defence Testing Infrastructure Scheme

The new scheme for creating testing infrastructure, in collaboration with Private Industry,⁵ is expected to be a potential game changer as ‘testing and certification’ forms an important part of D&A Industry. Testing and evaluation is cost intensive and standards are dynamic. While large defence OEMs have the capability and capacity to build their internal testing labs, for MSMEs and startups, testing and certification remains a huge challenge. Multiple level testing is required for components & systems at different stages of development & procurement and the availability & cost involved tends to keep the MSME’s, startups and the bigger private players away from global competition. Current estimates indicate the



present defence testing and evaluation market value to around Rs. 6000 Crore with an annual growth rate of 10% CAGR. The Atamnirbhar Bharat Abhiyan is expected to generate a market for of Rs. 11000 Crore by 2030.

Involvement of private Sector in Defence Testing and Certification is a well-established concept globally, in all leading military industries across countries like UK⁶, USA⁷, France, Germany⁸ and Israel. Privatisation of Government funded laboratories have led to successful revenue generating enterprises like the QinetiQ, UK⁹ (formed out of DERA, UK)¹⁰ or Rheinmetall, Germany with labs at multiple locations in Germany and Switzerland or the Thales R&D, France¹¹. Many of these laboratories are offering their testing services globally, as a business, in addition to catering for their domestic defence requirements. Privatisation and monetisation of the DGQA can unlock huge opportunity and act as a catalyst in the growth of Defence and Aerospace (D&A) industry in India.

Defence Exports

Defence exports form an important part of the defence eco-system. Defence manufacture is a niche segment which needs numbers to ensure quality and cost. While India has a large domestic market, it must explore geographies beyond its shores to establish a significant global presence in the defence space. Defence Exports are highly regulated space with strict global conventions and protocols. Controls over access to technology, hardware & software protection and strong monitoring of designated end-use of equipment, needs to be ensured by the OEMs. Global trade has its risks of single currency dependency, exchange rate variations and rapidly evolving global environment of alliances.

Defence Offsets

Defence offsets were introduced to create a viable avenue for defence manufacturing. Over the years, scope of offsets has evolved to include technology, testing, finance and services besides manufacture. The defence offset trigger limit was raised from Rs.300 Crore to Rs.2000 Crore in 2017. This is one avenue whose potential is yet to be fully exploited to accelerate the indigenous Defence Industrial Base. Innovative approach to harnessing the defence offset provisions like strong incentivisation of critical technology transfer or setting

up of 'state of art' certification infrastructure can yet be created to unleash the power of offsets.

Such initiatives and resolves of the stakeholders has started showing positive changes in the defence eco- system of India. Defence related exports have increased phenomenally to Rs.13000 Crore in 2021-2022 against Rs.1941 Crore in FY 2015.¹² Six out of seven ordnance companies, made after restructuring of the Ordnance Factory Board (OFB), have shown profits in the year ending March 2022.¹³ The target for procurement of indigenous stores has increased from \$10 billion to \$20 billion by 2025 and our export targets are expected to hit \$5 billion by 2025.¹⁴ Most importantly, our defence imports have reduced significantly— from 14% in 2011-2015 to 9.5% in 2016-2021 as per SIPRI report 2021.¹⁵

Recommendations

The slew of initiatives have had a profound impact on the Atmanirbhar Defence Initiative and is slowly redefining the defence enterprise in India. The focus so far has been on creation of a robust manufacture base. While, there has been major initiatives in the technology and innovation space, some aspects that need further policy intervention are :

- Creating a level competition in development of technology, both in the public and private sector.
- Indigenisation has an initial cost disadvantage which must be overcome by providing financial and tax incentives for indigenisation.
- Earmark a separate budget for Atmanirbhar Initiative. This must be clearly divided between public and private sector, if we need strong defence OEMs in the country.
- Concerns over quality issues of indigenous equipment be seriously addressed. Archaic quality control mechanisms must be rebooted and scaled to Industry 4.0 levels. Third Party Certification from credible private agencies must be the norm.
- Improve long term demand visibility.
- Decrease the timeline from issue of the tender to conclusion of the contract to increase faith and efficiency in the system.



End Notes

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¹¹ Available at <https://www.thalesgroup.com>.

¹² *The Economic Times News*, 26 March 2022.

¹³ *Business Lines*, New Delhi, 29 April 2022.

¹⁴ N.4.

¹⁵ N.21.

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