



India's Emphasis on Self Reliance in Defence Manufacturing and Technology and the Role of Private Players

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Abstract: With the opening of the defence sector for private players, several players have made their foray into defence manufacturing. Modi government's Atmanirbhar Bharat (self-reliant India) and 'make-in India' initiatives are expected to give a fillip to the domestic defence industry. It is in this backdrop, this paper traces the role of private players in the Indian defence manufacturing sector and the hurdles ahead.

Keywords: Indian defence industry, indigenisation, self-reliance, role of private companies

INTRODUCTION

The regime type and the domestic and international milieu greatly determine the nature of a nation's defense policy (Budania, 2002). With the adoption of the new economic policy by the Indian government, its impact has been gradually felt in other sectors, including the defence sector. The Indian defence industry was opened one hundred percent for the private sector in 2001. This marked a turning point for many private players to enter the sector of defence Research and Development (R&D) (Behera, 2009). Traditionally India's defence industry is dependent on foreign procurements. But, India is steadily focussing on indigenisation of its defence industry. Modi government's Atmanirbhar Bharat and 'make-in India' initiatives are expected to give a fillip to the domestic defence industry. India's Defence Minister, Rajnath Singh stressed that about fifty percent of India's defence production should come from the private players (PTI, 2024). He also urged private defence firms to transform India into a technology hub (Shukla, 2024). Against this backdrop, this paper traces the role of private players in the Indian defence manufacturing sector. The paper also points out the hurdles before the private players in the field of defence manufacturing.

The rest of the paper is organised in the following terms. The first section hints at the military modernization and reorientation of Indian defence policies. A discussion on the government steps for indigenisation of the defence industry follows this. The next section provides an overview of the private companies' engagement in India's defence sector. In the subsequent section, the paper highlights the hurdles ahead before India's private defence industries.

MILITARY MODERNIZATION AND REORIENTATION OF DEFENCE POLICIES

Modern India's first recorded history of armament manufacture dates back to 1801 when the East India Company established the Gun Carriage Agency near Calcutta (cited in (Matthews, 1989; Pardesi & Matthews, 2007). There were only six ordnance factories in British India when World War II started, but the numbers increased to 16 during 1942-45 due to the growing need for armaments (Pardesi & Matthews, 2007). In the immediate aftermath of independence, India's focus on developing the civil-industrial complex somewhat stunted the growth of defence-industrial complexes (Patel, Patil & Viswanathan, 2023). After the defeat of India in the 1962 war against China, India sought to modernise its military and reorient its defence and security policies. The Government of India constituted the Department of Defence Production in November 1962. This was followed by the creation of the Department of Defence Supplies in November 1965. These two institutions were merged later to form the Department of Defence Production and Supplies, which was again changed to the Department of Defence Production in 2004¹.

As of now, the Ministry of Defence consists of the following departments:-

¹ Retrieved November 2, 2024, from <https://mod.gov.in/about-ministry-0>

1. Department of Defence (DoD)
2. Department of Military Affairs (DMA)
3. Department of Defence Production (DDP)
4. Department of Defence Research and Development (DDR&D)
5. Department of Ex-Servicemen Welfare (DESW)

India's defence budget also increased over the years after the debacle of the War of 1962 against China. It may be mentioned that Rupees Rs 6,21,540.85 lakh crores have been allocated for India's defence budget of 2024-2025 (Press Information Bureau, 2024a). The following table and the figure indicate the trend of the increasing defence budget of India in the last five years.

Table 1: India's Defence Budget

Year	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Amount INR (in crores)	4.71 lakh ²	4.78 lakh ³	5.25 lakh ⁴	5.94 lakh ⁵	6.21 lakh ⁶

Source: Press Information Bureau, Ministry of Defence Database

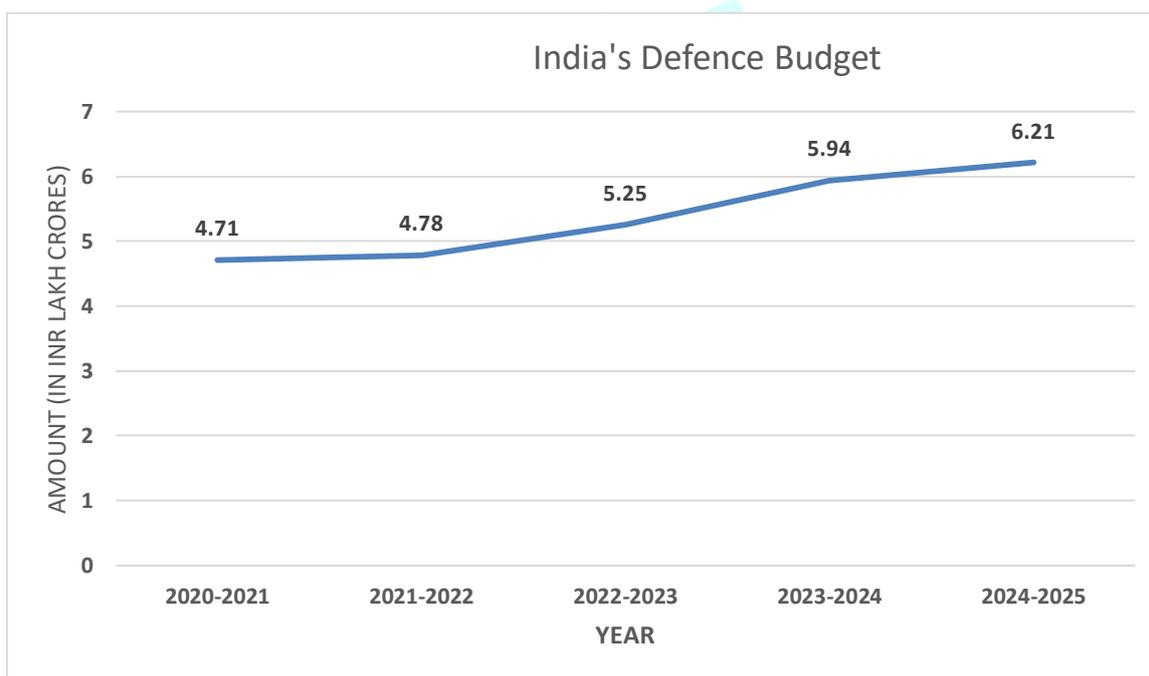


Figure 1: India's Defence Budget

Source: Press Information Bureau, Ministry of Defence Database

As shown in Table 1 and Figure 1 above, in 2020-2021, India's defence budget was 4.71 lakh crores. In 2021-2022, the figure partially increased to 4.78 lakh crores. During 2022-2023, India's defence budget reached 5.25 lakh crores. It became 5.94 lakh crores and 6.21 lakh crore in 2023-2024 and 2024-2025 respectively.

According to Stockholm International Peace Research Institute (SIPRI) estimates, India has become the world's largest arms importer today (cited in Behera, 2015). Pant noted in strong words, "India today imports defence equipment worth over \$8 billion annually even as the story of the Indian state-run defence industry has been largely one of gross inefficiency, incompetence and failure" (p.4).

As stated, India's defence equipment traditionally depended on foreign arms exports. India's foreign arms exports come from countries like Russia, the United States, France, and Israel. With the change of balance of power scenario, rapid militarisation of China, and trouble brewing up on India's frontiers, among other factors, India is gradually striving for self-reliance in defence manufacturing. As part of its ambition to become a global leader, India aspires to become self-reliant in arms production to meet its growing security needs. According to government reports, about 65 % of India's defence requirements are now manufactured indigenously, of which around 21 % comes from the private sector (Press Information Bureau, 2024b). In the year 2023-2024, the country reached an all time high domestic production to the tune of rupees 1.27 lakh crores (Press Information Bureau, 2022). India

² Retrieved November 10, 2024, from <https://pib.gov.in/PressReleasePage.aspx?PRID=1601632>

³ Retrieved November 10, 2024, from <https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=1693987>

⁴ Retrieved November 10, 2024, from <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1794415>

⁵ Retrieved November 10, 2024, from <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1989502>

⁶ Retrieved November 10, 2024, from <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2001375>

has set the target of defence production to 1.75 lakh crores by 2025 (cited in Sultana, 2022). Prime Minister Narendra Modi tweeted on October 24, 2024, “India is attaching topmost priority to defence manufacturing and this is being noted globally”⁷. Thus, the private sector may become crucial in India’s defence sector in the coming decades. JP Morgan predicted that the Indian defence sector is gearing up for ‘substantial and sustained growth’ (Asian News International, 2024).

The following table reveals the magnitude of India’s Defence exports from 2017 to till 06.03.2023.

Table 2: India’s Defence Exports from 2017 to 2023

Year	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023 (Till 06.03.2023)
Amount	4682	10746	9116	8435	12815	16000 (approx)

Source: Ministry of Defence (2023)⁸

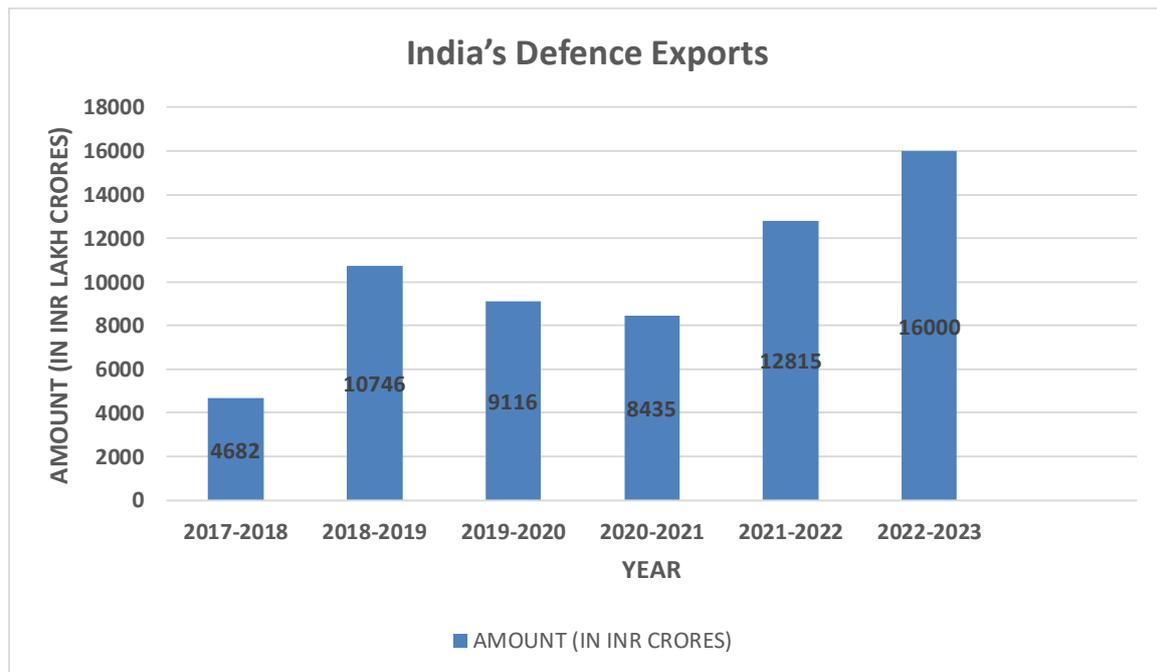


Figure 2: India’s Defence Exports from 2017 to 2023

Source: Ministry of Defence (2023)⁹

GOVERNMENT STEPS FOR INDIGENISATION OF THE DEFENCE INDUSTRY

Indigenisation of the defence industry denotes “increasing manufacturing capacity within the country, create research and development, and boost exports” (Sultana, 2022)¹⁰. As of April 2023, a total of 606 Industrial Licenses (IL) have been granted to 369 private companies¹¹. Foreign Direct Investment (FDI) in the Indian defence sector has been approved up to 74 % through direct route¹².

A press release of the MoD dated July 26, 2021, explicates a number of steps undertaken by India’s government to promote private sector participation in the defence sector. Some of these include:

- An allotment of 64.09% has been earmarked for domestic capital procurement from the Capital Acquisition Budget during 2021-22.
- Increase of Defence capital outlay by 18.75 % during 2021 – 22.
- Simplification of the ‘Make’ Procedure of capital procurement.
- Giving top priority to ‘Buy {Indian-IDD (Indigenously Designed, Developed and Manufactured)}’.

⁷ Retrieved November 2, 2024, from https://x.com/narendramodi/status/1850806608789651931?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1850806608789651931%7Ctwgr%5Ecd53fe0a1371e2ff78c9bee9ffbc2c81e6c49124%7Ctwcon%5Esl_&ref_url=https%3A%2F%2Fpib.gov.in%2FPressReleasePage.aspx%3FPRID%3D2068818

⁸ Retrieved November 3, 2024, from https://mod.gov.in/sites/default/files/E-%20BOOK_English_021123.pdf

⁹ Retrieved November 3, 2024, from https://mod.gov.in/sites/default/files/E-%20BOOK_English_021123.pdf

¹⁰ Retrieved September 03, 2024, from <https://www.forbesindia.com/article/take-one-big-story-of-the-day/why-indias-defence-sector-is-booming/81639/1>

¹¹ Retrieved September 14, 2024, from <https://www.investindia.gov.in/sector/defence-manufacturing>

¹² Retrieved September 14, 2024, from <https://www.mod.gov.in/sites/default/files/Mod2RE7621.pdf>

- Establishment of Defence Corridors in Uttar Pradesh and Tamil Nadu and investment of Rs 20,000 Cr for the same. (Press Information Bureau, 2021)

Apart from these, the Corporatization of the Ordnance Factory Board (PTI, 2024); launching of Innovations for Defence Excellence (iDEX) framework and Defence Innovation Organization (DIO) (MoD, 2021); indigenization of 2,972 items out of 4666 by Defence Public Sector Undertakings (DPSUs)¹³; launching of Self-Reliant Initiatives through Joint Action (SRIJAN) portal for promoting defence indigenization (Press Information Bureau, 2021), progressive implementation of import embargo by MoD on a list of 101 items to be implemented between 2000-2024¹⁴ are some other steps in this direction. So far, five Positive Indigenisation List (PIL) have been released by the Government of India as of December 22, 2023¹⁵. PIL would make India a self-reliant and secure nation (Ahmed, 2023).

Currently, 16 Central Public Sector Undertakings are within the Department of Defence Production, Ministry of Defence. These are Hindustan Aeronautics Limited (HAL), Bharat Electronics Limited (BEL), Bharat Dynamics Limited (BDL), Beml Limited (BEML), Mishra Dhatu Nigam Limited (MIDHANI), Mazagon Dock Shipbuilders Limited (MDL), Garden Reach Shipbuilders and Engineers Limited (GRSE), Goa Shipyard Limited (GSL), Hindustan Shipyard Limited (HSL), Advanced Weapons and Equipment India Limited (AWEIL), Gliders India Limited (GIL), Troop Comforts Limited (TCL), Armoured Vehicles Nigam Limited (AVNL), Munitions India Limited (MIL), Yantra India Limited (YIL) and India Optel Limited (IOL)¹⁶. However, the public sector defence undertakings are not enough to meet the growing defence needs of India. This is where the private players can play a supplementary role.

PRIVATE COMPANIES IN THE INDIAN DEFENCE SECTOR

Since the opening of the defence sector for private players, many Indian companies have made their forays into the defence sector. Some of the key Indian private players in the defence sector include L&T India – Defense and Aerospace, Tata Advanced Systems Limited, Tata Power Sed, Reliance Naval and Engineering Limited, Mahindra, Mahindra Aerospace, Kalyani Group – Kalyani Strategic Systems Ltd, Kalyani Group – Bharat Forge, Hinduja Group – Ashok Leyland Defense, Adani Aero Defense Systems & Technologies Ltd, Alpha Design Technologies Pvt Ltd, and Punj Lloyd among others¹⁷. These companies have ventured into diverse areas like the construction of armoured vehicles, troops mobility vehicles, general service logistical vehicles, bridging systems, rocket launchers, land mobility solutions, electronic warfare systems, and border security management systems.

Tata Advanced Systems specialises in areas like defence and security, airborne platforms and defence systems, a diverse range of land mobility vehicles, aerostructures, and aero-engines among others.

One of the prominent Indian companies in defence is Adani Defense and Aerospace. It has ventured into unmanned systems, counter-drone systems, small arms and accessories, ammunition, missiles, aircraft services, MRO (Maintenance, Repair and Operations), and Missiles¹⁸.

The inauguration of C295, India's first private-transport aircraft manufacturing facility at Vadodara, on October 28, 2024, marks a new landmark for India's private-sector defence enterprises. Tata Advanced System Limited and Airbus Defence and Space S.A., Spain have joined hands for this defence venture (Press Information Bureau, 2022).

Given India's ambition to become a world leader, it must maintain a robust defence system. Private sector defence industry need not supplant the role of existing public sector enterprises, but they need to play a supplementary role. A self-reliant defence industry would also give India formidable diplomatic leverage on the world's stage. By exporting indigenously produced defence equipments to friendly states, India could gain political, technological, and economic leverage.

HURDLES

Traditionally, India has a deplorable record of the engagement of private players in the defence sector (Rossiter & Cannon, 2019). Rossiter and Cannon (2019) observed, "This may stem from knee-jerk governmental mistrust of the private sector that dates back to 1947 when the future industrialization of the country was purposely divided into three separate sectors: public, private and joint" (p.10). This approach must change if India's private defence sector is to prosper. The private sector should be treated equally (Behera, 2015). There have been instances when the Ministry of Finance rejected the proposal of a joint defence venture by an Indian company with a foreign company (Behera, 2008).

Defence industry is a 'single consumer-driven and highly capital-intensive' industry. This poses a greater risk for the private defence industry with little experience and expertise in defense-technology (Behera, 2008). Another problem for the private defence industries is that they spend little on defence R & D (Gupta, 2018). Chinese defence enterprises spend much more on R & D in comparison to their Indian counterparts. This is an area where both Indian government and private defence enterprises must pay more attention. In a military drill with Cambodia, China exhibited a robot dog with automatic rifle designed for modern tactical

¹³ Retrieved September 14, 2024, from <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2033571>

¹⁴ Retrieved September 10, 2024, from <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1644570>

¹⁵ Retrieved September 16, 2024, from <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1989502>

¹⁶ Retrieved September 15, 2024, from <https://www.ddpmod.gov.in/defence-public-sector-undertakings>

¹⁷ For a detail analysis of the defence ventures of these institutions, refer to <https://www.ddpmod.gov.in/export-booklet-high-tech-propels-indian-defence>

¹⁸ For details of Adani Defence and Aerospace productions, refer to <https://www.adanidefence.com>

warfare (Lendon & Gan, 2024). Indian government and private firms should also put emphasis on developing such innovative and state-of-the-art defence technology.

The defence deals must also be free of corruption and other malpractices that prevailed in the past. Accountability and transparency are the core principles that may prevent anomalies in defence deals. Furthermore, defence budget and national security ambitions should not be framed to gain electoral leverage (Bahadur, 2023).

According to D. Raghunanadan (2021), technology is more important than funds when it comes to defence self-reliance. He argued, “No self-respecting nation of India’s size and technological capability can or should accept dependence on foreign manufacturers for defence requirements, whether directly through imports or indirectly through FDI”.¹⁹

SUMMARY

Indigenisation of the defence industry makes a country self-reliant and gives diplomatic leverage and economic advantage. India’s vision of self-reliance and indigenisation would not be possible without including the private players. In the coming decades, the role of the private sector will increase manifold in the defence sector. However, sole reliance on the private sector for defence production would be a blunder. So, there has to be a delicate balance that private sector can play a complementary role in enabling India to build a robust defence system.

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