

From Dependency to Autonomy: Revamping the Defense Acquisition

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Abstract:

India's defense acquisition landscape has long been characterized by a reliance on foreign imports, hindering strategic autonomy and indigenous capability development. This paper delves with the imperative for India to transition from dependency to autonomy in defense acquisition, emphasizing the need for comprehensive reforms to strengthen domestic defense industry capabilities. By analyzing current challenges, including bureaucratic inefficiencies, technology gaps, and policy constraints, this paper identifies key areas for revamping defense acquisition processes. Proposed reforms encompass streamlining procurement procedures, enhancing research and development capabilities, promoting public-private partnerships, and leveraging emerging technologies. Drawing on international best practices and successful case studies, this paper offers actionable recommendations for policy makers, defense planners, and industry stakeholders to accelerate India's journey towards self-reliance in defense acquisition. Emphasizing the strategic significance of autonomy in defense procurement, this paper underscores the importance of fostering indigenous innovation, promoting collaboration, and investing in human capital to enhance India's defense capabilities and safeguard national security interests in an increasingly complex geopolitical landscape. It also focuses on the defense acquisition policies by Indian government under the 'Viksit Bharat 2047' and how it will ultimately help the Indian defense policies in a long-term manner. The primordial objective of this paper is to focus on the advanced indigenous defense acquisition policies of India for a defense autonomy nation in the world arena.

Key words: Defense acquisition, Defense autonomy, Defense procurement, Self-reliance, Viksit Bharat 2047

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Introduction:

From the past to contemporary, the defense sector has always been standing out as an important supporting pillar for every country. As the defense sector deals with the nation's security, it's a primordial for every country. The matter of a nation's security is very much secretive and crucial, that no country can compromise in it and also can't rely upon others. But in this regard relying upon others on specifically defense acquisition is partially threat to that country. The autonomy in defense sector for a country maintain the balance of power in the world arena. Reliance on foreign defense imports lead to hindrances in the strategic autonomy of that country. In the context of defense procurement, according to the Stockholm International Peace Research Institute (SIPRI), India was the leading arms importer globally from 2019 to 2023, experiencing a 4.7% increase in imports compared to the 2014-2018 period (Peri, March 13, 2024) (Times of India, Mar 11, 2024).

The major defense equipment imported by India includes Radars, Rockets, Artillery Guns, Rifles, Aircraft, Helicopters, Laser Designation Pods, Missiles, Simulators and Ammunition. Up to June 2018, 106 contracts have been signed with Indian vendors and 62 have been signed with foreign vendors including those from Russia, Israel, USA, France, UK, and Germany for procurement of defense equipment for armed force. But in recent years, there has been a concerted effort to transition from dependency towards achieving greater autonomy and self-sufficiency in defense production. And through the initiatives like 'Make in India' and 'Viksit Bharat 2047', and also through the advanced research and development India tries to produce more and more indigenous defense equipment for a secure defense sector.

India's Saga of defense Acquisition:

India's history of defense acquisition is a narrative marked by evolving strategic priorities, geopolitical shifts, technological advancements, and fiscal constraints. Since independence, India has grappled with the imperative of bolstering its military capabilities while navigating a complex global arms market. In the initial years post-independence, India relied heavily on military aid from various countries, particularly the Soviet Union, to build its defense infrastructure. However, the 1962 Sino-Indian War and the 1965 Indo-Pakistani War underscored the limitations of this dependency, prompting India to pursue indigenous defense production. The establishment of Defense Public Sector Undertakings (DPSUs) such as Hindustan Aeronautics Limited (HAL) and Bharat Electronics Limited (BEL) aimed to foster self-reliance in defense manufacturing. Despite these efforts, India continued to import

significant portions of its defense equipment, particularly advanced technology platforms. India has inked 264 capital acquisition contracts for military equipment since 2017-2018, which included 88 deals with foreign vendors accounting for 36% of the total value. (Bhamrein, Aug 01, 2018).

In the financial year 2017-18, India procured goods worth Rs 30,677 crore from foreign vendors. This amount increased to Rs 38,116 crore in 2018-19, Rs 40,330 crore in 2019-20, Rs 43,916 crore in 2020-21, and Rs 40,840 crore in 2021-22. Notably, the Rs 59,000 crore agreement with France for the acquisition of 36 Rafale fighter jets, signed in September 2016, is not included in these figures. India ranks as the third-largest military spender globally, surpassing Russia and the UK, but still spends significantly less than China and the US, with China allocating four times and the US ten times more to their defense budgets. The government has taken steps to get India out of its strategically vulnerable position as the world's largest arms importer, accounting for 11% of the global weapons imports. However, there remains a significant journey ahead. DRDO, defense PSUs and ordnance factories need to deliver much better in a cost-effective manner, while a much larger participation from the domestic private sector is required, with global majors setting up production facilities in India. (Ministry of Defense, Dec 22, 2023) (Ministry of Defense, Feb 01, 2024).

Challenges Posed by Dependency:

Dependency always blurs the self and also stand out as major threat to the privacy and security. Relying on foreign suppliers for critical defense equipment exposes India to geopolitical pressures. Suppliers may impose conditions or limitations on the use of acquired weapons systems, affecting India's strategic autonomy. It also affects the inconsistent supply chains. Reliance on foreign suppliers can result in inconsistent supply chains, leading to delays in procurement and maintenance of essential defense equipment. This inconsistency can undermine military readiness and operational effectiveness. Depending on a limited number of countries for defense acquisitions increases India's vulnerability in the event of diplomatic or geopolitical tensions with those countries. Disruptions in the supply of spare parts or technology transfers can significantly impact defense preparedness. Importing defense equipment often involves high costs, including not just the purchase price but also maintenance, training, and logistics expenses. This can strain the defense budget and limit resources available for other critical areas of national development.

(i) National Security Risks:

India's reliance on foreign defense acquisitions poses significant challenges to its national security on multiple fronts. While such acquisitions may address immediate defense needs, they can also exacerbate vulnerabilities and strategic risks in the long term. Firstly, dependency on foreign defense equipment undermines India's strategic autonomy. Relying on external suppliers for critical military hardware exposes the nation to geopolitical pressures and limitations on its ability to deploy forces or pursue its national interests freely. In times of crisis or conflict, dependence on foreign suppliers can constrain India's decision-making and strategic maneuverability, potentially compromising its sovereignty. Similarly, dependence on the United States for key defense technologies raises concerns about the implications of shifting political dynamics on defense cooperation and supply agreements.

Furthermore, excessive dependency on foreign defense acquisitions strains India's defense budget, diverting resources away from other critical national priorities such as economic development, social welfare, and infrastructure. High costs associated with importing defense equipment, including purchase price, maintenance, and logistics expenses, can impose a significant financial burden on the government, limiting investments in indigenous defense research, development, and production capabilities. The lack of technology transfer in certain defense deals has hindered India's efforts to develop advanced weapon systems and maintain technological parity with rival powers. (Singh & Bommakanti, Aug 14, 2023).

Additionally, technology dependence resulting from foreign acquisitions hampers India's efforts to build indigenous defense capabilities and maintain technological self-sufficiency. Without access to cutting-edge technologies or provisions for technology transfer, India risks falling behind in innovation and failing to address evolving security challenges effectively. Moreover, the lack of customization in off-the-shelf purchases may not always meet India's specific operational requirements, compromising interoperability and adaptability in diverse operational environments.

(ii) Economic vulnerabilities:

India's historical reliance on foreign defense acquisitions has engendered a series of economic vulnerabilities, underscoring the imperative for indigenous defense production and self-sufficiency. This dependency has manifested in several ways, with notable examples illustrating its impact on India's economy. Reliance on foreign suppliers has exposed India to currency fluctuations and trade imbalances, exacerbating economic vulnerabilities. The

depreciation of the Indian rupee against major currencies can inflate the cost of defense imports, eroding the purchasing power of the defense budget. Additionally, a disproportionate reliance on defense imports can widen the trade deficit and strain foreign exchange reserves, posing macroeconomic challenges.

The financial burden of importing defense equipment has strained India's defense budget, diverting resources away from critical areas of socio-economic development. The purchase of high-value defense platforms, such as aircraft, submarines, and missiles, often entails significant upfront costs, coupled with long-term maintenance and support expenses. For instance, India's acquisition of Rafale fighter jets from France involved a multi-billion-dollar contract, contributing to budgetary pressures and fiscal deficits. Technology transfer restrictions imposed by foreign suppliers limit India's access to cutting-edge defense technologies, hindering indigenous research and development efforts. For instance, the lack of technology transfer provisions in the acquisition of advanced fighter jets or missile systems constrains India's ability to develop indigenous capabilities and maintain strategic autonomy. (Pandit, Feb 03, 2023).

Moreover, dependency on foreign defense acquisitions undermines India's strategic resilience and security preparedness. Disruptions in the supply chain due to geopolitical tensions or embargoes can compromise military readiness and operational effectiveness, posing significant risks to national security.

(iii) Technological limitations:

Many defense deals with foreign suppliers have not included provisions for technology transfer, preventing India from acquiring crucial know-how and expertise. For example, the purchase of fighter jets like the Mirage 2000 and Sukhoi Su-30MKI from France and Russia respectively did not entail complete technology transfer, limiting India's ability to independently manufacture and upgrade these aircraft. Integrating diverse foreign defense platforms into the Indian military ecosystem often presents interoperability challenges due to differences in technology standards, communication protocols, and operational doctrines. For instance, the integration of Russian-origin systems with Western-origin platforms in India's armed forces has posed significant logistical and operational complexities.

Reliance on foreign acquisitions has led to a reduced emphasis on indigenous research and development (R&D) initiatives within the Indian defense establishment. Instead of investing

in domestic innovation, resources have been allocated primarily towards purchasing off-the-shelf solutions, thereby stifling the growth of indigenous technological capabilities.

(iv) Impact on Sovereignty and Strategic interests:

Dependency on imports undermines the long-term sustainability of India's defense industrial base, hindering the growth of domestic manufacturing capabilities and stifling innovation. Without a robust indigenous defense sector, India risks being perpetually reliant on external sources for its defense needs. Importing defense equipment often comes with limitations on technology transfer, hindering India's efforts to develop indigenous defense capabilities. For example, despite acquiring advanced fighter jets from foreign suppliers, India has faced challenges in maintaining and upgrading these platforms due to restrictions on technology access and spare parts availability.

Over-reliance on imports limits India's ability to independently formulate and execute its defense strategies. For instance, the imposition of sanctions by supplier countries could severely hamper India's military capabilities, as witnessed during the Indo-Pakistani conflicts of 1965 and 1971 when Western nations suspended military aid to India. Foreign defense acquisitions impose a significant financial burden on India's defense budget, diverting resources from critical sectors such as healthcare, education, and infrastructure development. The high costs associated with imports can strain the economy and limit investments in indigenous research and development initiatives. Off-the-shelf purchases may not always align with India's specific operational requirements, leading to compromises in functionality, interoperability, and adaptability. For instance, delays in the acquisition of essential defense equipment can undermine military preparedness and response capabilities during times of crisis or conflict.

India's Strategic expedient for Achieving Autonomy:

The 'Aatmanirbharta in Defense' program focuses on minimizing reliance on imports and enhancing domestic defense production capacities. Over the past seven years, it has granted around 350 new industrial licenses. Encouraged by government initiatives, private players are developing defense equipment manufacturing capacity to meet the armed forces' requirements and address programme delays, cost overruns, and quality issues. The Defense Acquisition Council (DAC) has granted several Acceptances of Necessity (AoNs) for various capital acquisition projects, aiming to enhance the nation's military and coast guard capabilities. These

approved initiatives target the advancement of the Armed Forces and the Indian Coast Guard (ICG) by including a diverse array of equipment and technological upgrades.

In a bid to fortify India's defense capabilities against evolving threats, the DAC has paved the way for the procurement of new-generation anti-tank mines equipped with seismic sensors and remote deactivation features. Additionally, approvals have been granted for the acquisition of air defense tactical control radar to bolster air defense systems and enhance surveillance capabilities. Fifth Positive Indigenization List (PIL) of Department of Military Affairs (DMA) comprising 98 items was released by Raksha Mantri Shri Rajnath Singh during the plenary session of 'Swavlamban 2.0'. The list comprises advanced systems, sensors, weaponry, and ammunition. All these items will be procured from indigenous sources as per provisions given in Defense Acquisition Procedure 2020 in staggered timeline. The Defense Ministry previously issued four Public Interest Litigations (PILs) that encompassed a total of 411 military items. Separately, the Department of Defense Production (DDP) has notified four PILs consisting of a total of 4,666 items, including Line Replacement Units/Sub-systems/Spares & Components for DPSUs. This year, DDP released the fourth Public Information List (PIL) comprising 928 items. (Behera, 2016).

In the Financial Year (FY) 2022-23, the value of defense production exceeded Rs one lakh crore for the first time. In comparison, the value stood at Rs 95,000 crore in FY 2021-22. The Government is continuously working with defense industries and their associations to remove the challenges faced by them and promote defense production in the country. Several policy reforms have been implemented to enhance the ease of doing business, such as integrating MSMEs and start-ups into the supply chain. Due to these policies, the industries, including MSMEs and start-ups, are forthcoming in defense design, development & manufacturing and there is almost a 200% increase in the number of defense licenses issued to the industries in the last 7-8 years by the Government. With foreign direct investment (FDI) in defense manufacturing now allowed up to 100% (74% via the automatic route and anything beyond that through the Government route) domestic industries have a significant opportunity to boost production in this sector. Both categories have experienced a rise in the procurement and acquisition of locally produced products and technologies. Additionally, Inter-Governmental Agreements (IGAs) will support the substitution of imported defense products, technologies, and spare parts with domestically manufactured alternatives. (Behera, Oct 30, 2020).

Innovative Gait for Defense Acquisition:**(i) Investment in Research and Development:**

On the aspect of in-house R&D, it may be noted OFB (Ordnance Factory Board) has an elaborate infrastructure, consisting of a cell in each factory. Besides, there are 11 Ordnance Development Centers (ODC) with specific expertise in different generic areas. ODCs are the nodal agencies for planning, besides providing advice for R&D-related work. OFB is also vested with full powers to incur R&D expenditure. One notable example is the Defense Research and Development Organization (DRDO), India's premier defense R&D organization. Established in 1958, DRDO has been at the forefront of developing indigenous defense technologies across various domains, including aerospace, missiles, naval systems, and electronics. Projects like the Agni series of ballistic missiles, the Tejas Light Combat Aircraft, and the BrahMos supersonic cruise missile are testament to DRDO's expertise and achievements in defense R&D.

The establishment of Defense Technology and Trade Initiative (DTTI) between India and the United States aims to promote collaborative R&D and technology transfer in defense. Projects under DTTI include the development of next-generation aircraft carrier technologies, unmanned aerial systems, and jet engine technology. Initiatives like the Technology Development Fund (TDF) and the Defense Innovation Organization (DIO) are fostering collaboration between academia, industry, and the defense establishment to spur innovation and entrepreneurship in defense technology development. These initiatives provide funding, support, and infrastructure to startups and small and medium enterprises (SMEs) engaged in defense R&D. (Behera, Oct 30, 2020).

(ii) Public-Private Partnerships (PPP):

For now, there are four defense shipyards and twelve defense PSUs and the private sector now sees an opportunity in the Make in India initiative to manufacture big-ticket items such as transport aircraft, submarines, Landing Platform Dock (LPD) and artillery guns. By emphasizing the enhancement of business operations and the elimination of certain obstacles, make in India presents the private sector with a significant historical prospect. One notable example of India's PPP initiatives is the Defense Research and Development Organization (DRDO) collaborating with private companies to develop cutting-edge defense technologies. For instance, the successful development of the Akash surface-to-air missile system involved partnerships between DRDO and private sector entities such as Bharat Electronics Limited

(BEL) and Larsen & Toubro (L&T), showcasing the synergy between government research institutions and private enterprises in advancing indigenous defense capabilities.

Similarly, the establishment of defense industrial corridors in states like Uttar Pradesh and Tamil Nadu aims to create conducive ecosystems for PPPs in defense manufacturing. These corridors provide infrastructure, incentives, and regulatory support to attract private investment and facilitate collaboration between domestic and international defense firms. For instance, the Uttar Pradesh Defense Industrial Corridor has seen partnerships between global aerospace companies like Boeing and Indian firms like Tata Advanced Systems for manufacturing aerospace components and systems. Furthermore, the 'Make in India' initiative launched by the Indian government seeks to promote indigenous defense production through PPPs. Under this framework, private sector participation is encouraged in the design, development, and manufacturing of defense equipment, with the aim of reducing import dependency and enhancing self-sufficiency in defense production. Projects such as the manufacture of helicopters by Hindustan Aeronautics Limited (HAL) in collaboration with private partners like Tata Advanced Systems exemplify the collaborative efforts towards realizing this vision. (Chinoy, April 03, 2024).

(iii) Cyber Defense and Space Security:

In the realm of cyber defense, India faces a multitude of threats ranging from state-sponsored cyber-attacks to cyber terrorism and espionage. To counter these threats, India has established dedicated agencies such as the National Cyber Security Coordinator (NCSC) and the National Critical Information Infrastructure Protection Centre (NCIIPC). These agencies work in tandem with the Indian Computer Emergency Response Team (CERT-In) to detect, respond to, and mitigate cyber incidents. One notable example of India's cyber defense efforts is the establishment of the Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre) by CERT-In. This initiative aims to provide citizens with free tools to clean their computers and devices from malware infections, thereby enhancing the overall cyber hygiene of the country. In addition to defensive measures, India has also focused on developing offensive cyber capabilities to deter potential adversaries and respond to cyber-attacks effectively. (Singh & Bommakanti, Aug 14, 2023).

The creation of the Defense Cyber Agency (DCA) and the Cyber Command under the Integrated Defense Staff (IDS) exemplifies India's commitment to bolstering its cyber warfare capabilities. Turning to space security, India's increasing reliance on space-based assets for

communication, navigation, surveillance, and reconnaissance has heightened the importance of protecting its space assets from emerging threats. India's successful anti-satellite (ASAT) test, codenamed Mission Shakti, demonstrated its capability to shoot down hostile satellites in low Earth orbit, thereby enhancing its deterrence posture in space. Furthermore, India has initiated the establishment of the Defense Space Agency (DSA) and the Defense Space Research Agency (DSRA) to enhance its space situational awareness, develop counter-space capabilities, and safeguard its space assets from potential adversaries.

(iv) Long-term Strategic Planning:

One key aspect of India's strategic planning is the pursuit of indigenous defense production and technological self-reliance. Initiatives like the Defense Research and Development Organization (DRDO) and the Defense Procurement Procedure (DPP) aim to foster innovation, research, and development of cutting-edge defense technologies within the country. For instance, the successful development and induction of the Tejas light combat aircraft and the Akash surface-to-air missile system exemplify India's progress towards indigenous defense capabilities. India's strategic planning emphasizes modernization and capacity-building across all branches of the armed forces. The implementation of long-term procurement plans, such as the Defense Acquisition Plan (DAP) and the Army's Future Ready Combat Vehicle (FRCV) program, underscores the nation's commitment to enhancing its military capabilities through the acquisition of state-of-the-art equipment and platforms.

India's strategic planning encompasses robust diplomatic and defense partnerships with like-minded countries to enhance interoperability, information-sharing, and collective security efforts. Collaborative ventures such as the Malabar naval exercises with the United States, Japan, and Australia, and defense cooperation agreements with countries like Russia, Israel, and France, exemplify India's efforts to bolster its strategic reach and capabilities through international cooperation. Initiatives like the Defense Cyber Agency and the Indian Space Research Organization's (ISRO) satellite-based surveillance and reconnaissance capabilities demonstrate India's recognition of the evolving nature of threats and the need for comprehensive defense preparedness across multiple domains. (McNeil, Feb 19, 2024).

Epilogue:

In conclusion, India's defense procurement journey reflects a complex tapestry of challenges, opportunities, and strategic imperatives. While past dependency on foreign acquisitions has posed significant hurdles, it has also served as a catalyst for introspection and reform. As India

charts its course towards greater self-reliance and indigenous capability in defense production, there are promising signs of progress. Initiatives such as 'Make in India' and the Strategic Partnership Model herald a new era of collaboration, innovation, and technology transfer in the defense sector. By leveraging domestic expertise, fostering public-private partnerships, and streamlining procurement processes, India is poised to emerge as a global hub for defense manufacturing and innovation. Recent efforts to enhance transparency, accountability, and efficiency in defense acquisition processes signal a commitment to good governance and fiscal prudence.

These reforms, coupled with a renewed focus on research and development, skills enhancement, and technology absorption, bode well for India's long-term defense preparedness and strategic autonomy. As India navigates the dynamic geopolitical landscape and confronts evolving security challenges, it must continue to invest in building a robust defense industrial base, nurturing indigenous talent, and fostering international collaborations. By harnessing the rich reservoir of human capital, innovation, and entrepreneurial spirit inherent in the country, India can not only meet its defense requirements but also contribute meaningfully to global security and stability. In essence, India's defense procurement journey embodies a narrative of resilience, adaptability, and forward-looking vision. By embracing a holistic approach that combines strategic foresight with pragmatic policy interventions, India can realize its aspirations of becoming a self-reliant and technologically advanced defense power on the world stage.

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