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Evolution of Indian Defense

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History

Since gaining its independence, India has cultivated and expanded its defence industry as a foundation in an effort to become self-sufficient. In 1947, India's previous colonial master, Britain, left behind much of her defence infrastructure and equipment. India concentrated on developing its capacity to manufacture basic equipment domestically throughout the 1950s, importing more complex equipment to meet its needs. The arms and ammunition industry were designated to the public sector by the 1956 revision of the Industrial Policy Resolution. The Defence Research and Development Organization was founded in 1958 by the ordnance factories established during British control (DRDO). India's defence sector gained momentum after it experienced significant setbacks in its confrontation with China in 1962. India increased her defence spending as a percentage of GDP from 1.5% to 2.3% in response to this. After India's defence connections with the Soviet Union were established in 1965 after the United States of America forbade the transfer of weapons to India due to its conflict with Pakistan. The majority of India's defence was provided by the Soviet Union. hardware throughout the course of the following 15 years. The nation obtained cutting-edge weapons and even started producing equipment, albeit under licence. The Bangalore-based Hindustan Aeronautics Limited Mig21 fighter jet served as a striking representation of this system. Although the country got cutting-edge weapons, India's internal capabilities in terms of research, development, and production stagnated as a result of manufacturing through the license-route from States and foreign corporations. India redoubled its efforts to revitalise its domestic defence sector in the 1980s by heavily funding DRDO and the creation of homegrown missile systems like "Prithvi," "Akash," and "Nag." During this time, India also started working on its most important aviation project, the Light Combat Aircraft. India and the Soviet Union signed a contract in 1998 to work together to develop the "Brahmos" supersonic cruise missile system.India started to open its doors to liberalisation and forward-thinking economic reforms at the beginning of the twenty-first century. The time of state-run businesses and a centrally planned economy was put on hold to make room for the private sector. The defence industry was completely open to the commercial sector. With the government agreeing to cover 80% of the development expenditures, the introduction of the "Make" form of procurement in the Defence Procurement Policy 2006 enables the sector to develop and create cutting-edge defence equipment. 4 The defence sector was also allowed to accept FDI of 26%. However, the government kept importing cutting-edge weapons, including new fighter planes like the Sukhoi 30 MKIbeing added to the Air Force, missile ships and submarines are being bought for the navy, and army howitzers like the BOFORS system are being bought. In an effort to boost domestic procurement, the government changed the Defence Procurement Policy of 2013's order of priority, making it the preferred option to develop, design, or produce defence equipment locally. By becoming one of the few countries to acquire and produce cutting-edge weapons like intercontinental ballistic missiles, aircraft carriers, and nuclear submarines, India has progressively progressed towards its goal of self-reliance. For its defence capabilities, it has continued a long-standing policy of cooperating with and receiving support from the most advanced technological nations.

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I. INTRODUCTION

India's defence industry sector is a strategically important sector.One of the largest military forces in the world, India has approximately 14.4 lakh (1.44 million) active members. With more than 51 lakh (5.1 million) soldiers, it has the largest volunteer military in the entire world. The Indian military has been granted a total budget of 4.78 lakh crore ($60 billion) for the upcoming fiscal year. Following only China (US$261 billion) and the United States (US$732 billion), it has the third-largest annual defence spending in the world. With 9.2% of all worldwide arms imports, it is the second-largest importer of defence goods after Saudi Arabia. In India, the government owns 80% of the domestic defence industry. The DRDO and its 50 labs, four defence shipyards, and twelve defence public-sector firms are all included in the public sector. India's new defence acquisition, manufacturing, and procurement policy aims to boost indigenous production while lowering imports.

The "Defence Production Policy of 2018" (DPrP-2018) aims to become one of the top five global producers of aerospace and defence manufacturing by 2025, with an annual export target of $5 billion. India receives 12% of global arms exports (by value). Only 45% to 50% of the defence products used in India are manufactured domestically, with the remainder imported. The military-industrial complex in India hasn't been very successful, and very lately the private sector was permitted to participate in the production of defence. In the years 2017–18 and 2018–19, India's defence exports totaled 4,682 crore (US$0.66 billion) and 10,500 crore (US$1.47 billion), respectively. 800 crore (7.6% of total defence exports) came from India's 41 ordnance factories and 8 defence public sector undertakings (DPSU). India was the world's second-largest importer of defence goods between 2014 and 2018.

For the fiscal year 2018-19, India's military budget is approximately 1.49% of total GDP. However, it spends nearly as much on importing weapons from other countries.Based on Ministry of Finance allotments, its defence expenditure for the 2017-18 fiscal year for defence capital was 86,488 crores and for defence pensions it was 2,96,000 crores.Service/department allocation in 2017-18 as a percentage of total defence estimates:

- **Army:** 55.9%,
- **Air Force:** 22.5%,
- **Navy:** 14.6%,
- **DRDO:** 5.7%,
- **DGOF:** 0.8%,
- **DGQA:** 0.5%

More than half of India's overall defence budget is allocated to the Indian Army, with the majority of funds spent on wages, pensions, and cantonment upkeep rather than essential weapons and ammunition. The difference between the government's real budget allocation and the military's budget request as of 2019 is 25%.
Utilizing the military's land bank to raise more funds to fill the funding shortfall for military modernization with cutting-edge equipment has been suggested. From November 2019, when domestic production is unlikely to meet the forces' technological demand, defence equipment which was imported is exempt from customs and import charges for a five-year term. 3.5 billion dollars will be saved as a result, which can be used to modernise the troops.

➢ **Domestic defence management**

In September 2019, DRDO published the "DRDO Policy and Procedures for Technology Transfer" and details on the "DRDO-Industry Partnership: Synergy and Growth and DRDO Products with Export Potential." The DRDO signed technology transfer agreements with 16 Indian companies, including three start-ups, during the Vibrant Goa Global Expo and Summit 2019 to create products for the Indian Armed Forces. This featured foods that were ready to eat on-the-go, had a high nutritional value, and could be enjoyed in inclement weather and challenging terrain. Defence Minister Rajnath Singh led a group of 50 Indian companies to Russia in November 2019 to hunt for Russian partners and joint ventures for Indian defence industry in an effort to increase domestic defence production capacity.In order to meet the requirements of ISRO's manned space mission, DRDO's numerous laboratories will adapt their defence capabilities for Gaganyaan, India's crewed orbital spacecraft project. The DRDO Chief has urged for increased cooperation with business, the private sector, and research and education institutions like IITs and NITs in order to become a leader in technological research and production, decrease reliance on imports, and boost self-sufficiency.

➢ **Make in India**

39 capital procurement proposals totalling 88,900 crore (US$11 billion) (or 96% of the total proposal value) were approved by the Modi government in its first year, 32 of which were categorised as Buy (Indian) and Buy and Make

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(Indian), the top two domestic industry-centric procurement categories under the defence procurement procedure (DPP).The Make in India in Defence programme, which is the centrepiece of Prime Minister Narendra Modi's administration, promotes domestic defence equipment production and export. defence exports have already grown significantly as a result, rising from $213 million in FY 2016–17 to $1.5 billion in FY 2018–19, a 700% rise in just two years. This encouraged the government, which set a goal for defence exports of 35,000 crore ($4.87 billion) over the following four years.

The defence ministry loosened export restrictions in July 2015 and stopped asking foreign countries for numerous assurances regarding final destination, even when Indian companies sold components. Some critics contend that the Modi administration has allowed the Armed Forces the financial authority to buy equipment worth up to 500 crores without contacting the Ministry, rather than promoting equipment manufacturing in India. As a result, there will be an increase in the varieties of weapons, their spare parts, and maintenance costs, which will lead to concerns with standardisation and non-compatibility in the near future.

➢ **FDI in Defence**

The Modi administration has made a concerted effort to boost foreign direct investment (FDI) in the defence industry by first raising the cap from 26% to 49% via the automatic route and 100% with the MoD's approval, allowing the investing foreign entity to own up to 100% of the defence manufacturing. With only a meagre investment of 56 lac (US$0.08 million) in 2014–15 and 71 lac (US$0.10 million) in 2015–16, it has, nevertheless, had a terrible response.

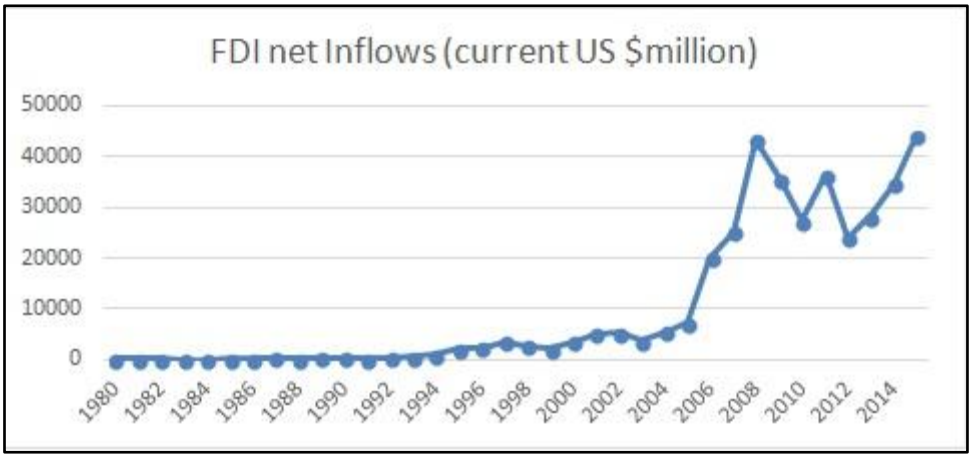

Figure 1. FDI Inflows in Defence Sector

➢ **Chiefs of the tri-services and Defence Staff**

The Commander-in-Chief position was eliminated in 1955, and the three service heads were given the titles of Chief of the Army Staff, Chief of the Naval Staff, and Chief of the Air Staff. Theheads of the three services of Indian Armed Forces are (*Https://En.Wikipedia.Org/Wiki/Indian_Defence#:~:Text=Indian%20Defence%20-%20Wikipedia%20Indian%20Defence%20In%20the,Characterised%20by%20the%20moves%3A%201.%20d4%20Nf6%20*, n.d.):

- Chief of Defence Staff — General Anil Chauhan
- Chief of the Army Staff — General Manoj Pandey
- Chief of the Naval Staff — Admiral Radhakrishnan Hari Kumar
- Chief of the Air Staff — Air Chief Marshal Vivek Ram Chaudhari

➢ **Vice Chiefs of the tri-services**

- Vice Chief of the Army Staff — Lieutenant General B. S. Raju
- Vice Chief of the Naval Staff — Vice Admiral Satish NamdeoGhormade
- Vice Chief of the Air Staff — Air Marshal Sandeep Singh

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➢ **Few Events Carried Out by The Indian Army**

I. Surgical strike day: Here's how the 2016 operation was carried out

The government allegedly granted the Army "full hand" to plan and carry out the surgical strikes after PM Modi realised, they sought retribution for the soldiers slain in the Uri incident when speaking with them. The Indian Army started carrying out surgical strikes against terrorist camps in Pakistan-occupied Kashmir in September 2016. The terrorist strike on September 28, 2016, was a response to a September 18, 2016, attack by Pakistan-based terrorists on an army post in Uri, Kashmir, which claimed the lives of 19 troops. Since then, September 29 has been proclaimed "Surgical Strike Day" by the government. The date of the attack was adjusted twice in order to ensure the safety of the populace and the protection of the forces, Prime Minister Narendra Modi said in an interview with the news agency ANI.

Figure 2. The Indian Army Camp

How the surgical strike was carried out

In September 2016, Jaish-e-Mohammed terrorists from Pakistan assaulted the Army base in Uri, close to the Line of Control, killing 20 troops. The Indian Army responded by conducting border raids on numerous targets, including commandos from various Para (Special Forces) groups stationed in Jammu and Kashmir. All of these targets served as launch pads for terrorist assaults on military and civilian targets once they infiltrated Jammu and Kashmir.

The government granted the Army "full leeway" to plan and execute the surgical strikes after PM Modi claimed that in speaking with the Army, he realised that they sought retribution for their killed soldiers. Both the public and the armed services praised the surgical strike, with defence minister Rajnath Singh claiming that it sent a clear message to the rest of the world that we can kill terrorists on this side of the border as well as crossing it if necessary.

II. Kargil War

From May to July 1999, India and Pakistan engaged in combat in the Kargil area of Jammu and Kashmir as well as other locations along the Line of Control (LoC). The conflict is also known as Campaign Vijay, the codename for the local Indian military action. The Pakistan Army and irregular Pakistani troops were driven out of abandoned Indian positions along the LOC as part of Operation Safed Sagar, which the Indian Air Force and Indian Army carried out in coordination.

The Line of Control,[21] which acts as the de facto border between the two nations in the contentious region of Kashmir, was breached by Pakistani troops posing as Kashmiri militants and infiltrating key locations on the Indian side. Pakistan initially put all of the blame for the fighting on free-standing insurgents in Kashmir, but documents left behind by casualties and later declarations by the Prime Minister and Chief of Army Staff of Pakistan showed Pakistani paramilitary forces, under the command of General Ashraf Rashid, were also involved. Pakistani soldiers left all remaining Indian positions along the LOC after being under diplomatic pressure from around the world.

The most recent instance of high-altitude conflict in a mountainous environment was the Kargil War, which presented substantial logistical difficulties for the participants. Additionally, it is one of just two instances in which nuclear-armed

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powers have engaged in conventional combat (alongside the Sino-Soviet border conflict). Just two weeks after India's second pair of tests, Pakistan, which had been developing its nuclear capability covertly since approximately the same time, carried out its first-ever public tests in 1998.

II. Literature Review

Rajiv Nayan, a Senior Research Associate at the Institute for Defence Studies and Analyses (IDSA), talked about the India's Defence industry base and explained how the sector evolved. In his paper he stated the following: - Ordnance factories were set up to carry out some military-related operations during the British era. The first ordnance factory, which produced firearms and ammunition, was established in Cossipore in 1801. The Council of Scientific and Industrial Research was established as an independent agency in 1942. A few technical development organisations were founded in 1947. Later, the Defence Research and Development Organization (DRDO) transformed some of these technical development enterprises into its laboratories. India has just 19 armouries prior to 1950. The Indian DIB currently refers to eight public sector defence companies, 39 ordnance factories that are geographically dispersed over 24 different Indian sites, and a rising number of big, medium, small, and micro private sector undertakings. Furthermore, the DIB includes more than 50 defence laboratories. The Indian government developed a policy that allows 26% of foreign direct investment and 100% involvement from the Indian private sector. 181 industrial licences or letters of intent were granted to businesses in the private sector as of May 7, 2012, to produce defence-related goods. An in-depth analysis of the evolution and the way forward for India's DIB(Organisation et al., 2012).

Another paper published in September 2012 tells us about foreign trade in respect to the defence sector in India. It tells us how the topic is related to the expansion of our economy. Making the nation independent was prioritised more during the early years of our freedom. However, that is actually more detrimental to the expansion of our economy. It is then felt that the development and growth of economy, an all-encompassing, comprehensive view needs to be taken for the overall development of the country(Wolpert & Brown, 2012).

A paper was published in 2016 stating the role of women in Indian defence as soldiers and warriors has been evident in history the world over for centuries. Razia Sultan and the Rani of Jhansi are two of the most well-known female soldiers in Indian military history. Subhash Chandra Bose established the Indian National Army to combat the British, and it included women as well. Post-independence, women have for long been serving the Indian Army in the Army Medical Corps, Army Dental Corps and Military Nursing Service(Bhoite, 2016).

An article published in 2020 tells mention the need of security industry in a country. The article talks about the components of security industry i.e., Homeland security, Personnel Security Industry (PSI) and Cyber security with reference to the case of 26/11 attack in Mumbai. These components of security are explained as follows:

- Homeland Security: The importance of homeland security can be seen increased during recent years as the budget allocation to this security is increased by about 58% from 2014-15 to 2020-21.The National Information Grid (NATGRID), a centralised database created by combining the databases of different government agencies, the Crime and Criminal Tracking Network and Systems (CCTNS), and modernization programmes for bettering the equipment and training of the security forces are all part of the homeland security development programme.
- Personnel Security Industry (PSI): Similar to homeland security, the importance of the personnel security industry has grown over time as a result of rising urbanisation, rising insecurity, the construction of shopping malls and self-contained townships, rising terrorist attacks, a shortage of police officers, and rising security firm profitability. There will likely be significant growth in this category in the next years.
- Cyber Security:We all know that every threat and every opportunity are interrelated. Growing internet accessibility has created a number of security concerns for people, companies, and governments. An effective cyber system is required to safeguard everyone's interests in light of the rising number of security concerns. Therefore, there is room for expansion in this sector, which is supported by the budget's increased allocation for cyber security in 2019–20.((*Https://Diplomatist.Com/2020/04/13/Evolution-of-Indian-Defence-and-Security-Industry-in-These-Recent-Years/)*, n.d.)

An article published in 2020 states about the India's achievement in various development projects. The development process can be explained as:

- Creation of a variety of weapons, including nuclear weapons, fissile material production, the

Prithvi surface-to-surface missile, the Trishul and Akash surface-to-air missile, the Nag anti-tank missile, the Brahmos supersonic cruise missile, etc.

- Beginning in the 1960s, Ordnance Factories played a key role in the creation of a number of weapons, including the INSAS rifle, the Russian-made T-92 tank, the Indian Main Battle Tank, Arjun, armoured vehicles, and troop carriers, among others.
- Hindustan Aeronautics Ltd (HAL) designed and produced the basic trainer HT-2, the first-level jet trainer HJT-16, as well as numerous frontline fighter jets for the Indian Air Force, including the MiG- 21, 23, 27 and 29, the Anglo-French Jaguar, the Mirage-2000, the Sukhoi 30 MkI, and numerous helicopters, including the Cheetah, the Chetak, HAL's own Advanced Light Helicopters, and
- Creation of low-earth orbit satellites and PSLV rockets for applications and defence and technology.((*Https://Www.Newsclick.in/Post-Independence-India-Defence-Manufacturing-Achievements-Downplayed-by-Modi)*, n.d.)

India spends 2.15 percent of its GDP on defence, placing it third in the world in terms of military spending. The Indian government is emphasising the need to reduce the costs associated with its own defence purchases as well as the export of equipment made in India to other nations in order to boost this sector's GDP and generate the necessary foreign exchange.

DPP focuses on institutionalising, streamlining, and simplification of the defence procurement process in order to assist the "Make in India" objective.

Its objective is to aid domestic defence platform, system, and subsystem design, development, and manufacture.

Additionally, it seeks to strengthen the position of M SMEs in the defence sector.

Procedures for Grantingof Industrial Licenses have been Standardized: The initial term of industrial licence validity has been extended from 3 to 15 years.

It also contains a clause that allows for a three-year extension.

Procurement of domestically developed defence equipment

- **Make-I which was Government Funded:** This refers to the industry's creation and development of tools, platforms, large systems, or upgrades thereof. Ministry offers financial assistance up to INR 250 crore per Development Agency or 70% of the cost of developing a prototype (DA).
- **Make-II which was Industry Funded:** This includes design and development as well as innovative solutions from an Indian vendor, for which the government does not contribute funds but which has the guarantee of procurement upon the development of a successful prototype.
- By involving DEX (Defence Excellence) aims to create an ecosystem to foster innovation and technology development in the defence and aerospace sectors by working with sectors like giving grants/funding and other supports to MSMEs, Start-ups, Individual Innovators, R&D Institutes, and Academic Institutions to carry out R&D that may be used to meet future Indian aerospace and defence demands. For iDEX (Innovations for Defence Excellence)-related acquisitions, INR 1,000 crore has been set aside, and this amount will rise further in the future. Additionally, 500 crore INR have been set aside specifically to support new businesses over the next five years.Defence Production and Export Promotion Policy 2020 (DPEPP)
- The vision of the government is to achieve a turnover of USD 25 bn including export of USD 5 bn in Aerospace and Defence goods and services by 2025.*
- The private sector and start-ups will receive 25% of the defence R&D budget, paving the way for India to develop innovative defence technologies.
- Government has established 2 Defence Industrial Corridors in Uttar Pradesh and Tamil Nadu

India's Long Wait for Rafale

India has consistently purchased fighter aircraft from Russia.

Because they can complete multiple missions in a si ngle flight, Rafale fighters are among the best in the world. Additionally, the MiG-21 and MiG-27 squadrons were deemed obsolete in 2018. As a result, a new type of aircraft was needed. It is well known that there are now only 31 squadrons left in the Indian Air Force. However, India will need 42 squadrons by 2027–2022, in order to fight on two fronts. In a squadron, there are 12 to 24 aircraft.

Dassault's Rafale was not India's only choice.

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The first bids included the F16s from Lockheed Martin, the F/A18s from Boeing, the Eurofighter Typhoon, the MiG35 from Russia, the Gripen from Sweden, and the Rafale from Dassault. The IAF tested each aircraft, and after careful consideration of the bids, the Eurofighter and Rafale were selected as the two finalists.The fact that India last purchased a fighter plane in 1996—a Sukhoi-30—
is cause for alarm. India will soon need to add new generation aircraft to its Air Force. This is why India is in desperate need of a cutting-
edge fighter jet like the Rafale.
India can no longer rely on older technology aircrafts given that Pakistan has acquired new generation aircraft, including the JF-17 from China and the F-16 from America.
A Jaish-e-Mohammed camp in Balakot was struck by the Indian Air Force in 2019, which caused Pakistan to try to breach the Indian border with its F-16 Falcon planes. We lost one Mig-21 Bison while averting any catastrophe on the Pakistani side. "Rafale fighters could have produced even better outcomes," stated Prime Minister Modi. At the Ambala Airbase of the Indian Air Force, the first five Rafale aircraft arrived.Among Rafale's distinguishing characteristics are:
When flying at very low altitudes and firing air-to-air missiles, the Rafale is capable of
Carrying out nuclear attacks and air-to-grounds assaults. The aircraft can track numerous targets, concurrently during close battle and use3D mapping with electronic scanning radar to locate enemy positions in real-time. It is capable of flying from an extremely short runway of 1312 feet and it also reaches 50 thousand feet in 1 minute. It can cover a range of 3700 km with a top speed of 1920 kmph.

III. Methodology

- The quantitative approach of research is the foundation of the current study. It is built using secondary source statistical data, with a focus on the analysis of current defence strategy and how it affects various industries and service sectors like agriculture. The Economic Times is one of the most reliable sources of data.
- Facts for You, India Journal of Economics, Yojana, Indian Economic Review, Indian Journal of Marketing, Economics Studies, and various articles published in Employment News and Competition Success Review. These publications are the main sources of data for this study and the analysis of the government-sponsored programmes. Additionally, data from international magazines such as National Defence Magazine, Defence News, and others were also provided, greatly assisting in the road of a thorough analysis of current defence policy in the economy. However, due to a lack of information regarding specific aspects of defence policy as well as a lack of time, the compilation and interpretation of the study suffer from several limitations. The resources are gathered from library books, journals, and other sources for the same objective. In the course of study, data analysis will take a back seat. The study's research technique is based on secondary data that was gathered from the numerous sources mentioned above in order to provide a lively and unmistakable direction for the investigation.
- **Secondary Data Sources:** The following categories best describe the secondary data sources: Secondary data are gathered from published papers and publications, as well as from the records of the relevant authorities. Area of Study The study covers every aspect of India's defence policy, such as its history, introduction, literature review, significance, etc. The study will also try to determine how it affects our open/changed economy, foreign investment, and improvements to both our military strength and strategic advantage. The study also looks at some of its negative effects, particularly with regard to the number of casualties it results in.

IV. Bibliometric Analysis

When a separate department for defence production was established in 1962, India's experiment with indigenization in the defence industry began. However, the formation of a committee for self-reliance review headed by Dr. APJ Abdul Kalam in the 1990s provided the main impetus. The group drew a map showing how indigenous production would increase from 30% in 1992–1993 to 70% in 2005. This objective has not yet been accomplished after three decades. Successful governments have been taking steps to revitalise the home defence industry despite the poor indigenous growth. The initiatives include raising the FDI limit in the defence industry, revising defence procurement laws, and creating positive and negative lists.
One of the main strategic concerns in terms of national security is defence. As of 2020, according to the Stockholm International Peace Research Institute (SIPRI), India is the third-largest spender on defence. Therefore, domestic production is crucial and offers financial savings together with strategic autonomy.
In this article, we examine historical trends in defence production and procurement. We consulted the Union Budget and the Standing Committee on

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Defence Reports for the information. (2014-2015, 2019-20, 2020-21).

Defence spending has increased by 127% over the past ten years, albeit with an uneven allocation of funds.

Among all the ministries, the Ministry of Defence's (MoD) budget is one of the greatest. The budgetary allocation has steadily increased over time. The growth from 2011–12 to 2020–21 was 127%. This proportion between revenue and capital spending is unbalanced, with revenue expenditure increasing more quickly than capital expenditure. The increase in spending on defence pensions is the main cause of the higher growth of revenue expenditure.

Between 2011–12 and 2018–19, the capital spending expanded by 101%, while the revenue expenditure on defence increased by 140%. The proportion of defence spending that goes toward pensions increased from 18% to 26% during the same period.

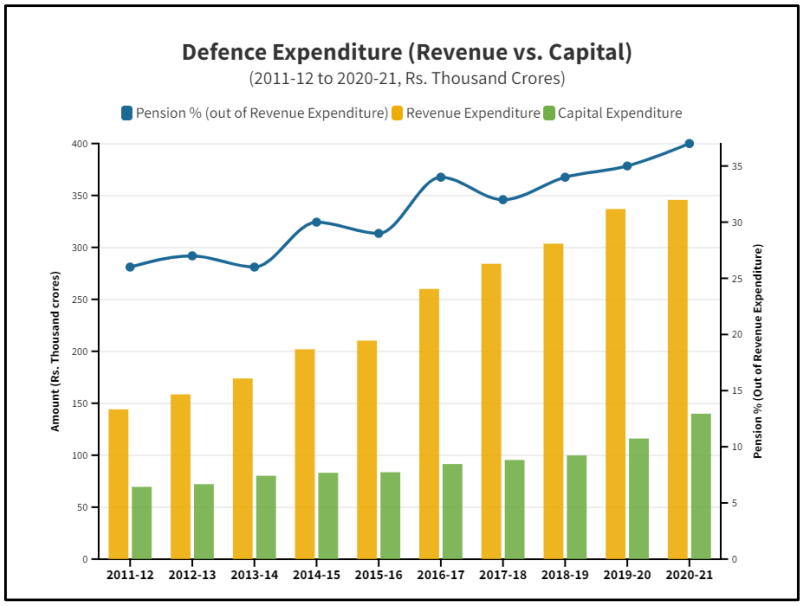

Figure 3. Defence Expenditure (Revenue vs. Capital)

Decrease in the budget for capital acquisitions' expenditures from domestic sources

Spending from the budget for capital purchases may be done in one of two ways: either through international contracts or through domestic sources. Arms, ammunition, and equipment may be purchased with funds from the capital acquisition budget.

The percentage of spending on indigenous contracts decreased between 2010–11 and 2019–20 when looking at just defence equipment spending. This immediately conflicts with the objective of increasing indigenous output. The proportion of spending that came from domestic sources peaked in 2010–11 at 69.6% before falling to 47.4% in 2013–14. A spike occurred in the years 2014–15 and 2015–16, which was followed by a fall in the years that followed. It should be emphasised that these figures only represent the MoD's budget for capital purchases, not the total amount spent on defence procurement.

Due to the fact that most contracts come from foreign sources, it is also shown how weak the indigenous defence industry is. Indigenization of this component alone might save the country a significant number of foreign reserves.

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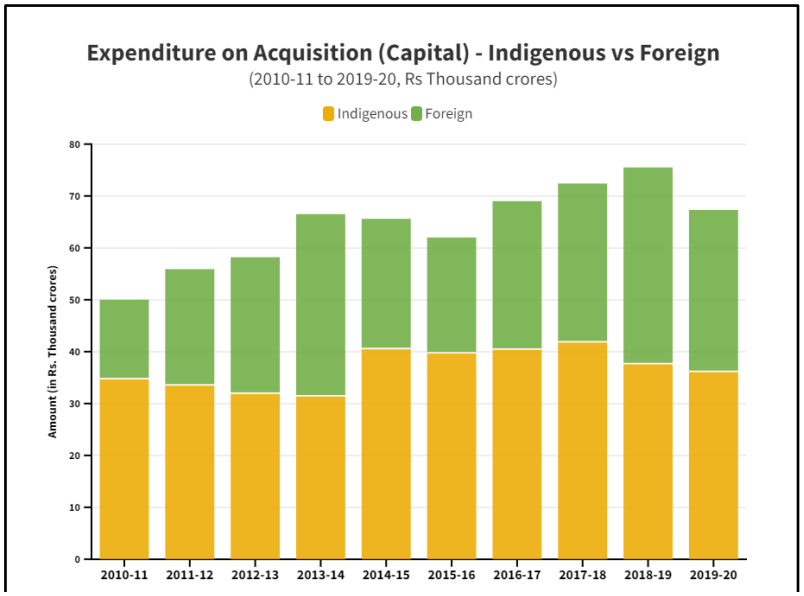

Figure 4. Capital Expenditure on Acquisition

Between 2010 and 2014, average indigenous purchases increased by 15%.

The term "indigenous procurement" refers to the complete purchase of tools, weapons, and ammunition from indigenous sources.The average amount spent on domestic purchases from 2010 to 2014 was 35,270 crores of rupees, but from 2014 to 2019, it increased to 40,712 crores. This development is in spite of a decline in the percentage of defence equipment spending on domestic sources domestic sources.

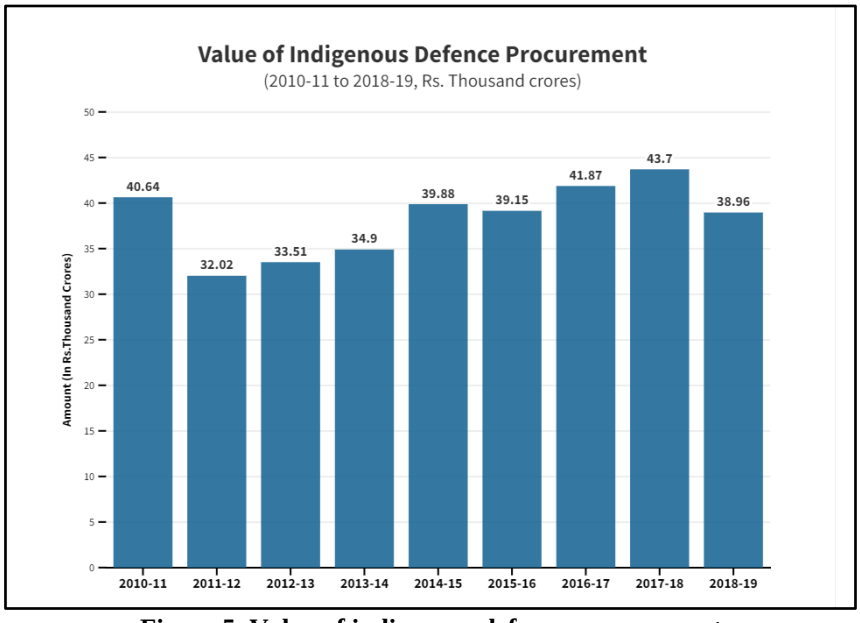

Figure 5. Value of indigenous defence procurement

Turnover at Defence Public Sector Units (DPSU) increased 63% from 2009–10 to 2020–21

The DPSUs are crucial to increasing domestic production. India, though, is caught in a peculiar contradiction. Despite having a sizable defence industry, the majority of the defence goods and services are imported. Since 1962, sixteen DPSUs have been established to serve the demands of the defence services.

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The DPSUs' average yearly revenue between 2009 and 2014, it rose from Rs. 30536 crores to Rs. 42628 crores. Between 2014 and 21 (excluding the Ordinance Factory Board). From Rs. 28653 crores in 2009–2010 to Rs. 46711 crores in 2020–21, which is a 63% growth in turnover.

Between 2009–10 and 2020–21, these DPSUs' after-tax earnings climbed by 88%, from Rs. 3478 crores to Rs. 6544 crores. From an average of Rs. 4156 crores from 2009 to 2014 to Rs. 5478 crores from 2014 to 21.

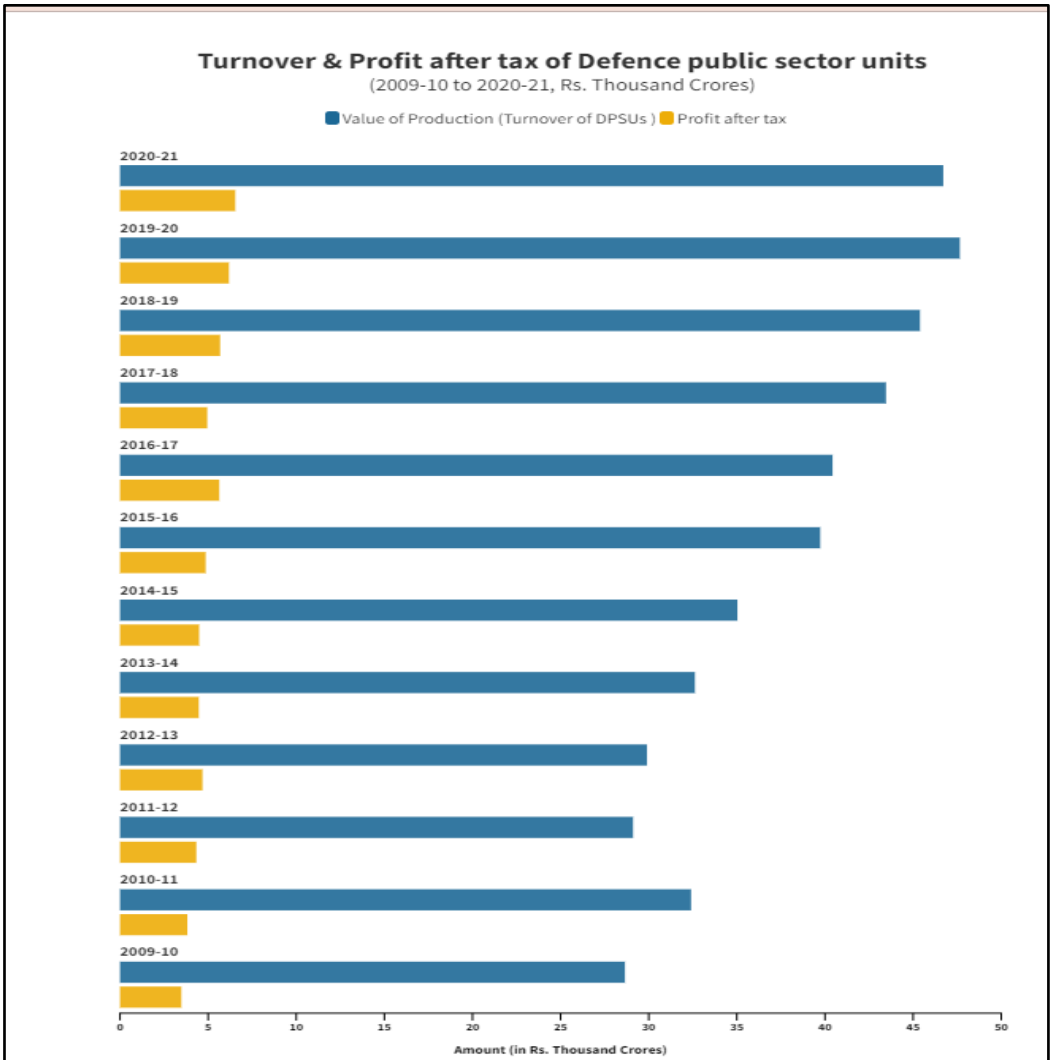

Figure 6. Turnover of defence public sector units

Despite a strong drive for indigenization, R&D funding has mostly remained flat since 2011:

Without a large investment in research and development, any policy for indigenization will be useless. Unfortunately, India's actual R&D investment as a share of total defence spending has remained steady.

During the years 2005 to 2011, the real R&D spending as a percentage of total defence budget was greater than 6%. The expenditure proportion decreased below 6% starting in 2011. This emphasises the skewed perspective, especially in light of the increased demand for indigenization. There hasn't been a noticeable increase in expenditures made in R&D despite growing international tensions and an increase in military spending by countries to strengthen their defence capabilities (2.6% real growth between 2019 and 2020, according to SIPRI).

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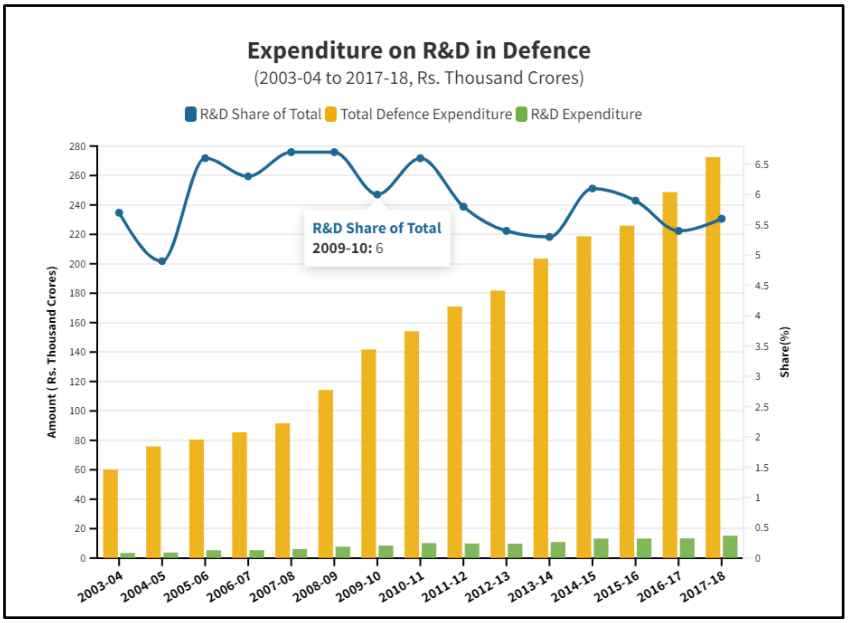

Figure 7. Expenditure on research and development in defence

Defence exports will increase in value by 450% between 2016–17 and 2020–21:

Between 2010–11 and 2020–21, India's defence exports climbed dramatically, from 290.51 crores to 8434.83 crores. In reality, the value of exports has increased by 450%, rising from 1521.86 crore in 2016–17 to 8434.83 crore in 2020–21.

The precise makeup and nature of these exports are unknown, though. This is significant since a significant portion of the capital acquisition budget's spending still goes toward contracts with overseas suppliers. It would not be wise to emphasise that self-sufficiency is attainable given the surge in exports.

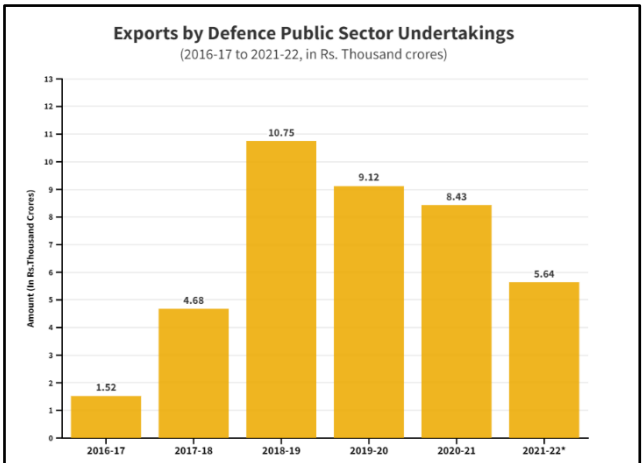

Figure 8. Exports by DPSU

While foreign contract spending is rising, the value of defence exports is rising

The patterns above show two very different perspectives on the nation's indigenous defence manufacturing. Despite a massive 450% increase in the total value of defence exports, the cost of foreign defence equipment contracts under the capital purchase budget is likewise rising. This calls for a closer look at the defence industry's indigenization process. As an illustration, the recent purchases of S-400 missiles from Russia and Rafale jets from France demonstrate how locally made goods offer economies of scale and have a significantly lower cost of production.

The government emphasised the absence of such an assessment in a response to the Parliament

regarding the savings brought on by indigenization. It should be noted, nevertheless, that not all indigenization leads to cost reductions. The government and DPSUs may be inspired to take action toward maximum indigenization if the savings associated with indigenization are properly and promptly assessed. The main priority should be on localising those areas, which inevitably results in savings and lessens reliance on imports.

V. Conclusion

The government of India is constantly taking many initiatives pressing for a better and more efficient Indian defencesector. For Youth encouragement and empowerment, about 100 new sainik schools have been inaugurated only for shortlisted candidates only to provide quality education in lin with NEP2020.Youth Exchange programmed expanded in NCC to spread greater awareness and international understanding in cadets(mostly Youth) to be placed in the army.

Introduction of technology for efficiency in back-end operations like SPARSH introduced for automation required for sanction and disbursal of pension.E-chhawani portal for providing services to more than 20lakh residents of 62 cantonment boards.Change detection software and 3d mapping made more efficient using satellite imagery developed in association with Bhabha atomic research Centre

Better infrastructure by investing in projects like Atal tunnel,etc. for creation of all-weather roads so as to ensure better connectivity at all times.The Border Roads Organization have constructed around 7000km roads including 32 Indochina border roads for boosting travel effectiveness in critically important areas.

Promotion and Propaganda of Make in India in defence sector has lowered down costs, boost manufacturing and increased exports with private players also allowed to participate with government's support of acquisition if prototype passes test successfully.

Steps and schemes similar to those listed above and many more must be undertaken by the Ministry of Defense and the Central government jointly to ensure the safety and security of our Nation.More funds should be allocated from the budget towards defence sector and it needs to be ensured that these funds are being properly utilized in the areas where they are needed the most.

REFERENCES

[1]. (https://diplomatist.com/2020/04/13/evolution-of-indian-defence-and-security-industry-in-these-recent-years/). (n.d.).
[2]. (https://www.newsclick.in/Post-Independence-India-Defence-Manufacturing-Achievements-Downplayed-by-Modi). (n.d.).
[3]. Bhoite, M. S. (2016). Women in Defence in India- a Critical Analysis with Special Reference to Gender Inequality. 1.
[4]. https://en.wikipedia.org/wiki/Indian_Defence#:~:text=Indian%20Defence%20-%20Wikipedia%20Indian%20Defence%20In%20the,characterised%20by%20the%20moves%3A%201.%20d4%20Nf6%20. (n.d.).
[5]. Organisation, D., Dib, I., Factories, O., Indian, T., Investment, F. D., & Licenses, I. (2012). India ' s Defence Industry Base. August, 67–68.
[6]. Wolpert, S., & Brown, R. (2012). E N C Y C L O P E D I A O F India. 12(03).