# Foreign Direct Investment (FDI) in the Defence Sector of India : A Review of the Policy Framework

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## Abstract

**This research paper provided an overview of the existing policy of FDI in the defence sector. It analyzed the effect of liberalization of FDI on the defence sector and examined the benefits India has derived in terms of technological advancements and employment generation. With opening of the defence sector, the Indian government sought to attract major defence players and acquire new technology. India is the third largest military and sixth biggest defence spender and one of the largest importers of conventional defence equipments. The 'Make in India' initiative by the Modi government has focused its efforts on increasing indigenous defence manufacturing and to become self-reliant. The study examined the existing framework of FDI in India for the defence sector, its strategic partners, and the collaborations under the 'Make in India' programme. It also looked at the pros and cons of the existing policy and discussed their implications and suggested policy recommendations for the future. India aims to be among the top five countries in aerospace and defence, for which it is desirous of reducing dependence on imports and focus on development of indigenous weapon systems. The paper looked at the progress made through the FDI in defence route.**

***Keywords :*** **FDI, defense, defense growth, technological advancement, economic growth, policy effectiveness**

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Over the last three decades, there has been a tremendous rise in foreign investment inflows around the world. The wave of new industrial revolution, largely driven by digitization and robotization, has resulted in increased investments in India. It also led to better and cost-effective methods of production, thus leading to better prospects for economic growth and development as pointed out by Singh (2019). There is a

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remarkable change in the investment climate around the world benefiting fast developing economies like India. In 2018, the global FDI was on a declining trend by nearly 23%, that is, $1.43 trillion. But even with this decline, the developing countries were still in a better position with $671 billion inflows in 2017. Asian economies surpassed all other economies and were the major recipients of foreign investment inflows in the world, receiving a total of $476 billion inflows in 2017 as stated by UNCTAD report (2018).

Amongst the top emerging markets of the world, the Indian economy has an important position. Only a few years back, it was considered as part of the fragile five, but no longer. Since 2015, it has surfaced as one of the leading foreign destinations in the world with a considerable rise in FDI (Gupta & Jaiswal, 2017). The journey started nearly 29 years back in 1991, wherein the Indian economy faced a severe balance of payment crisis during the early 90s and it became excessively important to throw open the economy to the rest of the world for attracting major investments ; thus, foreign direct investments (FDI) came into force, and India slowly started becoming a hub. Over the years and especially during 2000s, FDI helped the Indian economy to attain higher levels of economic growth, financial stability, and technological expertise along with employment generation in various sectors of the economy (Singh, 2009). At the same time, there were continuous concerns about the other spillover aspects of FDI (Forte & Moura, 2013) on micro, small, and medium enterprises (MSME) and their parallel sustainability along with multinationals (Srinivasan, 2010). There were even concerns about monopoly creation as well as lack of development of new technology within India across different sectors. However, during the last 29 years, economic and structural reforms in the economy along with changes in the FDI policy have helped the Indian economy to scale new heights in attracting FDI across various sectors of the economy.

Defence, as a sector in India, is of highest importance and priority owing to its geographical location. As a nation, India stands tall in the South Asian region, covered with mountains in the north and oceans in south. On the north eastern end, China has established its power and on the western end, the prime antagonist, that is, Pakistan has a contentious stand with India. Two enemies on two ends and four major wars, a dented public image in 1962, and a victorious surrender of 1971, all cover India's defence strategies. Thus, the evolving geopolitics on borders and strong economic growth required and resulted in increased spending in the defence sector. However, the defence outlay for the budget 2018–19 was only 1.58% of the projected gross domestic product (GDP). The defence outlay has been decreasing over the years, especially at a time when the economy is expanding and there are collusive threats from the above - mentioned neighboring countries.

The defence sector in India was 100% opened in 2016 by the government to attract major defence firms to come and produce goods in India and acquire new technology from the world. The government's decision to liberalize FDI rules for defence sector forced Indian companies to strategize their plans. This was necessary in order to decrease dependence on domestic equipment manufacturers. The policy decision for allowing 100% FDI in the sector was a much-needed policy change in order to bring relief to the Indian Armed Forces along with better access to technology. The reason happens to be the underperforming state-run military complexes that include Defence Research and Development Organization (DRDO), Hindustan Aeronautics Limited (HAL), and others. Indigenous defence projects like Tejas and Arjun MBT have taken decades to complete. Also, due to technological limitations caused by the sanctions after Pokhran tests, India often ended up spending more to acquire components from other countries than building them up. Taking the present geopolitical scenario in the Indian subcontinent, India cannot simply afford to spend more and wait endlessly expecting the public sector undertakings to produce the arms the country needs. The constant tensions on the borders with Pakistan and China make it a necessity to upgrade the technology and acquire new weapons in case a full-fledged war happens. Chinese forces stand way ahead of India in terms of the military prowess and modernization. Not only the above factors, but coming of FDI in India is expected to generate employment and prevent brain drain. Military modernization is the need of the hour and the forces need to modernize with the changing global dynamics and

adjusting to the technological upgradation happening at a fast pace. As per DIPP & DDP report (2017), the Indian economy has the third largest military in the world and is the sixth biggest defence spender. The country is also home to one of the biggest importers of conventional defence equipment. Almost 30% of the total defence budget was spent on capital acquisitions. Majority of demand (60% approx.) for defence related requirements was met through imports. The 'Make in India' initiative by the government is focusing its efforts on increasing indigenous defence manufacturing and to become self-reliant.

Against this backdrop, this research paper aims to provide a detailed overview of the existing policy of FDI in the defence sector, analyze the effect of liberalization of FDI for the sector, and the ways in which it can be beneficial for technological advancement and generating employment in the country. There is a lack of research papers in this area, particularly for FDI in the defence sector of India. Hence, this provided motivation to study the existing framework and suggest policy changes thereof.

## Literature Review

Each country is unique, and the drivers of investments vary at different phases of development of a country. Outward FDI has shown a positive impact on investments of all the BRICS countries, especially India (Mathad & Kumar, 2019 ; Singh, Chauhan, & Pandey, 2012). Many progressive countries in Asia like China, South Korea have seen higher economic growth in their economies due to inflow of FDI (Saini, 2015). At the outset, Malhotra (2014) studied the impact of FDI inflows on the Indian economy in the last two decades and found that FDI had not only supplemented domestic capital and existing technology, but had helped in setting up of new industries. Today, India is recognized as one of the leading global destinations by international bodies like the World Bank. Further, Singh (2019) stated that governments across the world are making substantial changes in their investment policies to make them viable and acceptable by foreign investors.

Gori (2015) explained that different governments in India from time to time have relaxed FDI norms across different sectors like telecom, defence, retail, etc. as foreign companies showed eagerness to invest in various sectors of India because they wanted to take benefit of lower wages and tax exclusions offered by the government in order to create an investor friendly environment. Behera (2013, 2016) pointed out that the defense – industrial complex of India is largest amongst other developing countries in the world. There are nearly 40 ordinance factories, around 150 companies in the private sector, and nearly 10 under public sector. The Defense Research and Development Organization (DRDO) merely has 50 research laboratories under it. He further stressed that the Indian economy is one of the economies that have designed and produced fighter aircrafts, battle tanks, nuclear submarines, etc. However, India still is not self-reliant ; it is heavily dependent on the import of arms and equipment imports.

Mohanty (2004) highlighted the stark imbalance in arm imports (70% of the requirement) and domestic arm production (30%) while India's defence industrial strategy was propelled by the idea of self-reliance, and the Indian government allowed the participation of private partnership in the defence industrial sector to open up to external market and give a boost to domestic production. Behera (2013, 2016) stated that from 2010 – 2014, India was the single largest importer of arms and equipments in the world. In order to reduce this high dependency on arms imports and revitalize the declining defence industry (especially with private manufacturers since last 15 years), the NDA (National Democratic Alliance) government launched the 'Make in India' programme. Under it, many reform measures were introduced including the hike in FDI cap from 26% to 49% through automatic route. Adhana and Saxena (2017) stressed the need to boost the Indian defence forces through 100% FDI in defence and explained the need for liberalization from 49% to 100% in FDI through the government approval route that would help the domestic defence industries and international OEMs. This could also enhance and improve the R&D mechanisms and help develop advanced security solutions for India.

However, Mahajan (2016) brought out the issues and benefits related to national security with respect to FDI in defense such as intellectual property rights, quality of work force, risk in selecting private partners, and perception of viability. He also highlighted the possibility of joint ventures for manufacturing hubs, aircrafts, submarines, transfer of technology, etc. and in the process, make India self-reliant by reducing arms imports. Khachoo and Sharma (2017) reviewed the FDI in the manufacturing sector of India using panel data from 2003 – 2013. The study indicated that research and development (R&D) intensity of Indian firms was impacted in a positive manner post the FDI in the country. The Ministry of Defence, Government of India (2013) report stated that defence acquisition is a difficult process, and the Ministry of Defence has been working continuously for a faster procurement and development of the sector. The Ministry developed a new set of defence procurement structures and procedures in 2001. These amendments have led to cases where the government is now focusing on "buy and make through TOT" and "buy and make (Indian)." The Government of India has been giving a lot of preference to the above-mentioned categories in public and private sectors. Furthermore, as rightly stated by Singh (2019), government policies since 2014 can be applauded for understanding the global economic landscape well in advance and making deep structural changes in the economy. The investment climate has changed in the country. India's rank has moved by 53 positions in the World Bank's annual 'Ease of Doing Business Index'. The country is now ranked 77th in the list of 190 countries.

## The Defence Sector in India : An Overview

With a strong defence industrial base, judiciously allocated budgets, continuous deals with global defence giants, speedy reforms in the economy, is the Indian defence industry fully ready and equipped with the latest technology? Nishith Desai Associates (2018) explained that the 1962 war with China provided the much-needed impetus for the Indian defence industry. The government made efforts to increase the allocation for defence expenditure to 2.3% of the nation's GDP. In 1965, with the India-Pakistan war and embargo by USA on India, the country was headed for an era of strong defence ties with Soviet Union. In this way, the journey of Soviet Union providing a lion's share of defence equipments to India started. Soviet Union helped us with advanced weapons and manufacturing of MiG - 21 fighter aircraft by Hindustan Aeronautics Limited (HAL), Bangalore started. Over the years, Soviet Union helped India to develop the supersonic missile system, The BrahMos. In the 1980s, the country made efforts to give a boost to its domestic defence industry, and this led to large investments in the DRDO sector and development of missiles like Prithvi, Akash, and Nag.

With liberalization and economic reforms era of 1990s, the private sector was given complete entry into the defence industry. The defence procurement policy of 2006 allowed the private players to manufacture defence equipment with advanced technology and government support for maximum part of the development costs. Until 2000, FDI in the Indian defence sector was not approved as a government policy. In 2001, 26% privatization was permitted by the government through the government approval route. In 2016, the Department of Industrial Policy and Promotion (DIPP) notified through a Press Note that FDI in India has been revised to 100% (FDI up to 49% through the automatic route and above 49% to access modern technology through the government route) [1].

Table 1 indicates the distribution of defence budget from 2016–17 to 2019–20. The budget allocation increased

[1] FDI can be received by any Indian company by any two routes either automatic or approval route. Under the Automatic Route, the sectors falling don't need any government approval for receiving any kind of foreign investment, given the proposed foreign equity is within the specified limit, and the required documents are deposited to the Reserve Bank within 30 days of transfer of funds. Under this route, 100% FDI is allowed. Under the Approval route, government approval from the Foreign Investment Promotion Board (FIPB) is mandatory for receiving the foreign investment.

**Table 1. Distribution of Defense Budget in India from 2016 – 17 to 2019 – 20**

| Defence Budget Distribution (in cr.) | | | | | | |
|---|---|---|---|---|---|---|
| | 2016–17 | | 2017–18 | | 2018–19 | |
| Army | 1,29,000 | 50% | 1,45,200 | 53% | 1,54,000 | 55% |
| Airforce | 51,600 | 20% | 57,540 | 21% | 64,591 | 23% |
| Navy | 38,700 | 15% | 35,620 | 13% | 40,420 | 15% |
| Miscellaneous | 38,700 | 15% | 34,640 | 13% | 19,392 | 7% |

Source : Department of Industrial Policy and Promotion (DIPP) (n.d.).

from INR 1.29 crores to INR 1.54 crores as far as the Indian Army is concerned. The relationship between India and China has been quite complex during the last seven to eight decades. Time and again, there have been serious stand offs related to territorial claims, thus shattering the progress towards a neighborhood full of trust and cooperation on the Indian side. With the ongoing border tensions and handling a belligerent China on LAC, these increased budget allocations are justified and are a must. Likewise, Table 1 also indicates that the government has also judiciously increased its budget for Airforce. Budget allocations for Navy remain on a stable side.

India has ambitious aims to be among the top five countries in aerospace and defence. The policy aims at reduced dependence on imports, and self-reliance in development and manufacturing of indigenous weapon systems. The Indian government planned to increase the domestic production nearly threefold to INR 1.7 lakh crores by 2025. The key focus, according to the draft, would be on: fighter aircraft ; medium lift and utility helicopters ; warships ; land combat vehicles ; autonomous weapon systems ; missile systems ; gun systems ; small arms, ammunition, and explosives ; surveillance systems ; electronic warfare systems ; communication systems ; and night fighting enablers. The Indian government looked to tap the information technology sector expertise in the area of defence to get an edge in cyberspace and artificial intelligence to have a competitive edge.

Table 2 describes the FDI equity flow in the past 18 years from 2000 – 2018. Initially, the FDI inflow was nil till 2004 – 05, when a meagre amount of USD 0.05 million equity flow came in. In the years that followed, the FDI

**Table 2. FDI Equity Inflows from April 2000 – March 2018 in the Defense Sector**

| Sl. No. | Year | FDI Equity inflow (Amount in US$ million) |
|---|---|---|
| 1 | 2000–01 | 0.00 |
| 2 | 2001–02 | 0.00 |
| 3 | 2002–03 | 0.00 |
| 4 | 2003–04 | 0.00 |
| 5 | 2004–05 | 0.05 |
| 6 | 2005–06 | 0.00 |
| 7 | 2006–07 | 0.00 |
| 8 | 2007–08 | 0.00 |
| 9 | 2008–09 | 0.00 |
| 10 | 2009–10 | 0.00 |

| | | |
|---|---|---|
| 11 | 2010–11 | 0.00 |
| 12 | 2011–12 | 3.66 |
| 13 | 2012–13 | 0.41 |
| 14 | 2013–14 | 0.82 |
| 15 | 2014–15 | 0.08 |
| 16 | 2015–16 | 0.10 |
| 17 | 2016–17 | 0.00 |
| 18 | 2017–18 | 0.01 |
| | **Grand Total** | **5.13** |

Source : Department of Industrial Policy and Promotion (DIPP) (n.d.).

equity flow was nil. In the year 2011–12, a major rise in FDI of USD 3.66 million was received as FDI inflow. The story changes here as every year hereafter, a minimum FDI equity flow was observed except in the year 2016 – 17.

Greater FDI inflow in the defense sector provided substantive economic advantages. Other than the increased flow of funds from a foreign source, greater FDI led to more employment opportunities for the local population. It also meant that taxes and other revenues flowed back to the local economy. With India becoming the world's second largest buyer of defence equipment, Indian policies in defence manufacturing, including the FDI cap, have attracted widespread international attention. Table 3 shows that foreign firms are now keen on joint ventures with Indian private companies for setting up development and manufacturing facilities. This change has also been accelerated by defence offsets policy.

The subject of higher FDI cap in the Indian defence industry remains one of the hotly contested issues in the country. The case for raising the cap primarily rested on increasing investment and the transfer of foreign

**Table 3. Statement on Remittance-Wise FDI Equity Inflows from April 2000 – March 2018 : Defense Sector Industries**

| Sl. No. | Name of Indian Company | Country | Name of Foreign Collaborator | RBI Regional Office | Item of Manufacture | Amount of FDI Inflows (in US$ million) |
|---|---|---|---|---|---|---|
| 1 | Bel-Thales Systems Limited | France | Thales Air Systems SAS | Bangalore | Defence activities | 0.08 |
| 2 | L&T MBDA Missile Systems Ltd. | France | MBDA Sas | Mumbai | Manufacture of weapons and ammunition | 0.00 |
| 3 | Bel-Thales Systems Limited | France | Thales Air Systems SAS | Bangalore | Defence activities | 0.10 |
| 4 | BF Elbit Advanced Systems Pvt. Ltd. | Israel | Elbit Systems Land and C4I Limited | Mumbai | Manufacture of weapons and ammunition | 0.00 |
| 5 | Alpha-ITL Electo-Optics Pvt. Ltd. | Israel | ITL Optronics Ltd. | Bangalore | Optical Instruments | 0.05 |
| 6 | M/S Adani Elbit Advanced Systems India Ltd. | Israel | Elbit Systems Ltd. | Ahmedabad | Defence Activities | 0.00 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7 | BF Elbit Advanced Systems Pvt. Ltd. | Israel | Elbit Systems Land and C41 Ltd. | Mumbai | Manufacture of Weapons and Ammunition | 0.00 |
| 8 | Defence Land Systems (I) Pvt. Ltd. | United Kingdom | BAE Systems Plc | Mumbai | Manufacture of Arms & Armaments | 0.41 |
| 9 | Defence Land Systems (I) Pvt. Ltd. | United Kingdom | BAE Systems Plc | Mumbai | Manufacture of Arms & Armaments | 0.82 |
| 10 | Defence Land Systems (I) Pvt. Ltd. | United Kingdom | BAE Systems Plc | Mumbai | Manufacture of Arms & Armaments | 2.95 |
| 11 | Defence Land Systems (I) Pvt. Ltd. | United Kingdom | BAE Systems Plc | Mumbai | Manufacture of Arms & Armaments | 0.71 |
| 12 | Fk Vajra Pvt. Ltd. | Jordan | Faisal Assad Mohammed Kedairy | Mumbai | Manufacture of weapons and ammunition | 0.00 |
| 13 | Fk Vajra Pvt. Ltd. | Jordan | Faisal Assad Mohammed Kedairy | Mumbai | Manufacture of weapons and ammunition | 0.01 |
| | | | | | **Grand Total** | **5.13** |

Source : Department of Industrial Policy and promotion (DIPP) Website: http://dipp.gov.in.

technologies, which kick-started the development of the Indian defence sector. In contrast, those arguing for maintaining the FDI cap at 26% base their arguments on sovereignty and security of supply issues and promoting organic industry development, although all these objections can be overcome by strong government regulation.

The evidence from this experience clearly suggests that foreign investment has transformed technological sophistication, generated employment, built local expertise, and improved the reach and effectiveness of the services.

## India's Strategic Partners in the Defence Sector

This section reviews the strategic partners of India in the defence sector. Three major partners have been highlighted here. India deals strategically with three countries for defence related equipments. They are France, Israel, and Russia. Table 4 gives a brief of the bilateral strategic tries, the kind of defence equipment India buys or deals with these countries, etc.

### *India – France Defence Relations*

The three services, that is, Army, Navy, and Airforce have regular defence exercises with France, including Exercise Shakti (Army), Exercise Varuna (Navy), and Exercise Garuda (Air Force). The two sides have a High Committee on Defence Cooperation (HCDC) which meets annually at the level of Defence Secretary and the French Director General of the Directorate of International Relations and Strategy (DGRIS). India has strategic tie-ups with France on procurement of Rafael aircraft in flyaway condition with France and P-75 Scorpene submarines, which would be built by Mazagaon Dock under full technology transfers. The initial agreement signed with the French government allowed for supply of 36 Rafael aircrafts, initial consignment of weapons, long-term maintenance support through performance-based logistics, simulators with annual maintenance, and associated equipment. The deal was signed for a total of ₹ 58,000 crore. The commissioning of the first Scorpene

**Table 4. India and its Strategic Partners in the Defence Sector**

| S. No. | Relations | Bilateral Strategic Ties | Defense Equipment | Manufacturer | Deal | Cooperation | Highlights |
|---|---|---|---|---|---|---|---|
| 1. | **India - France Defense Relations** | Technological and Defence Cooperation | Rafale aircraft | Dassault | INR 58,000 crore | High Committee on Defence Cooperation (HCDC) | The Rafale Deal is inclusive of long-term maintenance support through performance-based logistics, simulators with annual maintenance, and associated equipment. |
| | | | P-75 Scorpene submarines | Mazagon Dock Shipbuilders Ltd. & Naval Group (France) | | | P-75 Scorpene submarines would be built in the Mazagaon Docks under full technology transfers. |
| 2. | **India - Israel Defense Relations** | Missile Defence Contract | Barak 8 Missiles (MRSAM) | Israel Aerospace Industries (IAI) | $2.5 billion | Joint Development of IAI and DRDO | The Barak-8 will vastly improve India's ground based air defence capability. |
| | | | Addl. Barak-8 Missiles - INS Vikrant | Israel Aerospace Industries (IAI) | $1.6 billion | | Indian Navy has decided to equip all its naval ships with Barak-8 missiles. |
| | | | Heron TP Drones | Israel Aerospace Industries (IAI) | $400 million | | Talks on the possibility of local manufacture of the Heron TP as part of the "Make-in-India" programme. |
| 3. | **India - Russia Defense Relations** | Defence Manufacturing Cooperation | KA-226T Twin-Engine Utility Helicopters | Joint Venture (JV) | 60 in Russia ; 140 in India | Make in India - Defence Manufacturing Agreement | Russia has been the major arms suppliers to India (2012 – 2016). Value of the deal of USD 1 billion comprises of 200 Kamov 226T helicopters to be produced ; 60 will be supplied to India in fly condition and 140 choppers will be manufactured in India. |
| | | | BrahMos Cruise Missile | Joint Venture (JV) | 50.5% to be manufactured by India ; 49.5% to be manufactured by Russia. | | India and Russia have several major joint military programmes like BrahMos missile programme, Sukhoi Su-30MKI programme, etc. |

submarine on December 4, 2017 by Mazagon Dock Shipbuilders Ltd. in partnership with Naval Group (France) is a shining illustration of the exemplary nature of the technological and defence cooperation between the two countries. So far, only the first boat – INS Kalvari – has been inducted into the Navy's fleet, while two more – INS Khanderi and INS Karanj – are undergoing sea trials.

### *India – Israel Defense Relations*

India has signed a $2.5 billion contract with Israel. It is for supplying 40 units (Barak-8) of advanced medium-range surface-to-air missile systems (MRSAM). These will be used by the Indian armed forces. The system is under joint development of Israel Aerospace Industries (IAI) and the DRDO in India. The Barak-8 is expected to improvise India's ground-based air defence capacity. By 2023, the first unit for deployment in the field would be ready. Another contract worth $1.6 billion has been signed with IAI for additional Barak-8 missiles for the under construction indigenous aircraft carrier INS Vikrant. These Barak-8 missiles could be used by Indian naval ships. The Indian government has also approved IAF's request to purchase 10 Heron TP drones from IAI. The deal was estimated at $400 million. As part of the 'Make in India' programme, the Indian defence ministry was trying to work out a possibility of local manufacture of the Heron TP under the guidance of IAI.

### *India – Russia Defense Relations*

Since 2012 – 2016, Russia has been a major arms supplier to India. Their relationship further deepened with the "Make in India" programme, wherein both countries have signed agreements for the construction of naval frigates, KA-226T twin-engine utility helicopters. Likewise, there is also an agreement to make BrahMos cruise missile in a joint venture between both the countries. The strategic relations between the two nations date back to 1971 when Treaty of Friendship was signed between the two nations. The Indian Air Force uses the MiG - 21, MiG - 27, and MiG - 29 – all procured from Russian manufacturers.

**Table 5. FDI and Collaborations Between Indian and Foreign Firms**

| S. No. | Name of the Firms | Defense Equipment to be Procured/Manufactured | Highlights |
|---|---|---|---|
| 1. | Mahindra Defence & Aerospace | M777 Ultra Lightweight Howitzer | • M777 has an estimated budget of $700 million for 145 Howitzers.<br>• It is the first new artillery gun bought by India since 1980s.<br>• 120 Howitzers would be assembled in India by Mahindra Defence Systems Ltd. |
| 2. | Tata Advanced Systems | Lockheed Martin C-130J Empennage & Center Wing-Box Assembly | • Tata Lockheed Martin Aerostructures Limited (TLMAL) manufactures 24 C-130J Super Hercules empennages every year.<br>• Over a 100 empennages for C-130Js have been manufactured and delivered to a number of countries across the globe. |
| | | Boeing AH64 Apache Fuselage and Secondary Structure | • Boeing and Tata Advanced Systems have started a joint venture company called Tata Boeing Aerospace (TBAL).<br>• TBAL produces secondary structures and vertical spar boxes for the combat helicopter. |

| | | | |
|---|---|---|---|
| | | Boeing CH47 ChinookAft. Fuselage Panels | • Production of components for the Indian configuration of the CH-47F Chinook helicopter.<br>• Chinook is an advanced multi-mission helicopter, which is being operated by about 20 countries. |
| 3. | Kalyani Rafael Advanced Systems (KRAS) | | • A joint venture between Kalyani Strategic Systems and Israel's Advanced Defense Systems Ltd.<br>• They would produce sophisticated weapon systems such as Spike anti-tank guided missile (ATGM) for the Indian armed forces.<br>• KRAS has created about 500 jobs directly and 100 indirect jobs. |
| 4. | Anil Ambani Reliance Group | | • Dassault Reliance Aerospace Limited (DRAL) is a joint venture between the French aerospace giant and Anil Ambani owned Reliance group.<br>• Dassault will invest 100 million euros in India.<br>• DRAL has set up assembly lines and facility which would create employment opportunities in India. |
| 5. | Hindustan Aeronautics Limited | Rosoboronexport (Kamov 226T helicopters ) | • Formation of joint venture between the two countries for manufacturing 200 Kamov helicopters for India.<br>• The total deal is worth about $1 billion and would see the transfer of technology and skills to the state owned Indian manufacturer, HAL. |
| | | Sukhoi 30MKI | • The procurement of 240 HAL assembled Su30MKI fighter jets cost India ₹ 57, 000 crores. |
| 6. | Ordnance Factory Board | AK - 203 Rifles ( JSC Kalashnikov Concern ) | • Joint venture between Ordnance Factory Board (India) and JSC Kalashnikov Concern (Russia).<br>• The Indian government is aiming at 100% Indian made rifles, starting from the raw material to the finished product.<br>• The JV led to an investment of about ₹ 900 crores and employment in the town. |

Under the FDI policy, there have been major collaborations between Indian and foreign firms. The Make in India programme has been instrumental in getting these collaborations for improving the sector. Table 5 is a summary table prepared by us to give an overview of the collaborations between Indian and foreign firms.

## Discussion, Policy Recommendations, and Conclusion

The defence sector in India would surely see a surge in investment with liberalized FDI. A genuine demand for the modernization of one of the third largest armed forces along with growth-oriented policies by the government created a favorable business environment and hence catalyzed the defense sector. Armed with enhanced budget, flanked by quick procurement processes for the best in class equipments, the Indian defence industry would be treading on the path for growth and best state of an art defence production. It is also likely that the country may emerge as an exporter of military equipment with the government's focus on building an incredible military industrial zone in the future. Rather than focusing on various legal and regulatory issues, the original equipment manufacturers for defense in India can lay more focus on research and development for further improvements. Sector reforms would not only facilitate the foreign manufacturers for setting up large plants, which would provide jobs for millions in India, it would also benefit the defence sector with the transfer of latest technology. The liberalized FDI would not only encourage modern technology and promote healthy competition, it would scourge value for money and enhance the trade for domestic ancillary amongst various companies from different domains. The sector reforms may also be appreciated for investment, public-private sector intersection, and providing a relaxed environment for doing business. There would be scope for India to emerge as a defense manufacturing hub instead of just being an assembler of imported kits.

However, the flip side is much darker. Not only would this reduce the self-reliance of local players like DRDO and other defense public sector undertakings (PSUs), it would make us totally reliant on the foreign players. Moreover, there is no guarantee of quality products always from them, since their motive would only be money. Most importantly, national secrecy and thus our security may be compromised as our complete defense secrets would be known by the foreign companies. These weaknesses can be mitigated, to some extent, if the Government of the day ensures that confidentiality clauses and transfer of technology with updates are strictly implemented.

Undoubtedly, by introducing foreign competitors in the market, India will be able to drive the prices of expensive imported weapons down. As of today, India does not have the capability to compete with foreign firms, and it will take a lot of time and money to develop the technology and capability. With the entry of foreign firms, Indian companies won't be able to stay smug, and the entry of foreign players will definitely give Indian companies a run for their lives.

Also, these foreign companies, who have started manufacturing weapons in India, are not indebted to share the technology and can keep it securely guarded. Currently, this is a tough call to take, but then, the amount of money spent on defense is very high and this is something the government has to go ahead with. The government has also made provisions that any foreign company can come and start making defence products in India if it has maximum 49% share in the company and rest 51% is held by an Indian company. This will ensure that Indian companies are able to sustain themselves in the competition as well as take some technological inputs from these foreign players. It is understood that no company will share the latest technology for free and for this case, the government allowed 100% FDI if a foreign company is bringing 'modern technology' to India. Now, there is ambiguity around how one decides whether the technology is modern or not and how 100% FDI will be implemented.

According to Junior Defence Minister, Subhash Bhamre in a written reply to Lok Sabha during March 2018, Mr. Bhamre said that India had attracted just ₹ 1.17 crore as foreign direct investment in the defence production sector under the “Make in India” framework during the last 4 years despite the NDA government liberalizing the FDI policy and abolishing the Foreign Investment Promotion Board. FDI of amount $ 0.18 million was

received in the defence industry sector from April 2014 – December 2017. However, between 2014 and 2017, India signed 70 "capital procurement" contracts worth over ₹ 1.25 lakh crore with foreign armaments to acquire radars and missiles from Israel, aircraft and artillery guns from the US, fighters and ammunition from France, and rockets and simulators from Russia. Out of these, nearly 18 cases of JVs in FDI are listed, but the fact remains that the measly FDI amount actually received is a dismal reminder of the country's continuing failure to build a robust defence – industrial base (DIB). The Indian armed forces are still sourcing 60% of their hardware and software requirements from abroad, so as a country, don't we still remain vulnerable ? Is it not upsetting to be still one of the world's largest arm importer ? A re-thinking is required here ! Are we ready to handover "management control" for the military technologies of the joint ventures to global and strong arms countries? Majority of the countries in the world have stringent export control laws in sensitive military technologies. Isn't it ambitious of India to think it will get what it wants from these firms to produce in India? In fact, no major "Make in India" defence project has seen the light of day so far. There is a lot ambiguity along with bureaucratic bottlenecks. The procedures are long-winded and have technical and commercial squabbles, some of which have been mentioned earlier.

Another argument worth mentioning here is that are the Indian defence firms ready to outlive the competition from global companies ? Whether our defence firms are ready for the unrestricted entry of the global arms giants into the domestic defence market of the country ? The Indian government must do a tight rope walk balance to see that the domestic players thrive and get the best of technology from their strategic partners.

## Recommendations

Given the current ambiguity in the Press Notes releases by the government, it is recommended that the government should set up a task force to engage with potential investors and investees and evolve a simplified FDI policy that has different slabs for different kinds of activities and is free from terms and conditions that are difficult to understand and implement. It will also make for better coordination if permission for FDI (wherever required) and grant of industrial licenses are handled by the same ministry. The proposed dismantling of the Foreign Investment Promotion Board opens a window for this reform. This will go a long way in making it easier to do business in defence.

Institutions like DRDO have become white elephants in India. Though these institutions were started by and for the defence forces, defence personnel over the years have been marginalized in these institutions as the civilian scientists have climbed the echelons. Furthermore, as the inputs from the defence forces are barely taken, customer satisfaction for the user is at the lowest. Defence personnel need to be actively involved in research activities and not reduced to administrative and security roles to be able to understand the needs and serve the defence forces in institutions like DRDO.

Get the experts from ISRO who are excellent at project management and technology to also instill their competencies in domestic defence organizations such as DRDO, HAL, etc. and trim the manpower and funds available to these organizations if they are unable to deliver the goods.

## Limitations of the Study and the Way Forward

The paper follows a general descriptive-analytical approach ; however, the scope is rather limited to policy analysis due to constraints in the availability of information. For a long time, India's defence industry was a "closed" sector and thus was under government control. Now that it has opened, availability of information is still in low to medium scale. Literature on the subject is scarce, so the paper relied heavily on secondary sources for its inputs.

The paper examines aspects of defence - industrial policies adopted by India and the results that have accrued in terms of performance. It also looked at the various factors that have had influence on India's defence production and how the policies and decision making have impacted this sector. It also looked at the contemporary scenario and the future problems and prospects. This needs to be understood from India's defence - industrial strategies given the intricacies of its relationships with its geographic neighours. India has adopted far reaching institutional and policy-oriented changes since the early 1990s, and private participation has significantly increased in recent years. It is important to understand the complex linkages that have impacted the defence - industrial sector and policies by looking at the past, the lessons to be learnt in the present, and plan for the future accordingly.

## Authors' Contribution

Dr. Shikha Singh conceived the idea of writing the paper on FDI in the defence sector after a thorough literature review. There is a dearth of papers on the above-mentioned topic. She developed the descriptive design to undertake the research paper. She extracted government reports on the defence sector and set the outline. Ridham Verma started preparing the initial draft of the paper. He worked on the introduction and getting a few tables ready and started investigating the defence relationship of India with Russia, Israel, and France. Dhruv Shrivastav carried forward the work done by Ridham Verma and further found information related to FDI and collaborations between Indian and foreign firms. He also investigated India's strategic partners in the defence sector along with additions to literature review.

Dr. Shivdasini Singh Amin reviewed the work done by Dhruv Shrivastav and Ridham Verma and applied her defence knowledge (as she is from an Army background) to take the paper further. She further investigated the literature, discussion, and helped to refine it with her inputs. She worked on creating a structured abstract, scope, and limitations of the research work. Further, Dr. Shikha Singh worked on the information gathered through various articles, newspapers, DIPP data, etc. as well as her co-authors and conceptualized the data related to FDI. She structured the entire data collection into comprehensive tables indicating the FDI inflow, FDI, and collaborations between Indian and foreign firms and India's strategic partners in the defence sector. She also worked on the introduction, literature review, analyzed the tables, and wrote the discussion in consultation with a few ex defence personnel. The paper took its final shape with contributions from all authors.

## Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest, or non-financial interest in the subject matter, or materials discussed in this manuscript.


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## References


Adhana, D., & Saxena, M. (2017). Foreign direct investment in defence sector : Security concern or strengthening India's defence. *International Journal of Management, IT & Engineering, 7*(5), 218 – 232.

Behera, K. L. (2013). *Indian defense industry : Issues of self-reliance*. IDSA Monograph Series, No. 21, 52. Delhi, India: Institute for Defence Studies and Analyses. Retrieved from http://arks.princeton.edu/ark:/88435/dsp01pr76f582b

Behera, K. L. (2016). *Indian defense industry: An agenda for making in India.* New Delhi, India : Pentagon Press.

Department of Industrial Policy and Promotion (DIPP) & Department of Defence Production (DPP), Government of India (GOI). (2017). *Defence manufacturing sector: Achievements report*. Retrieved from https://invest-india-revamp-static-files.s3.ap-south-1.amazonaws.com/s3fs-public/2018-07/Defence%20Manufacturing%20Sector%20-%20Achievement%20Report.pdf

Department of Industrial Policy and Promotion (DIPP). (n.d.). *Data.* Retrieved from http://dipp.gov.in

Forte, R., & Moura, R. (2013). The effects of foreign direct investment on the host country's economic growth: Theory and empirical evidence. *The Singapore Economic Review, 58*(03), 1350017. https://doi.org/10.1142/S0217590813500173

Gori, S. (2015). Globalization of economy and the impact of foreign direct investment on sustainable growth : An Indian perspective. *International Journal of Development Research, 5*(03), 3908 – 3912.

Gupta, H., & Jaiswal, K. K. (2017). An empirical investigation of changing trend patterns of foreign direct investment (FDI) in India. *Indian Journal of Finance, 11*(12), 43 – 59. https://doi.org/10.17010/ijf/2017/v11i12/119941

Khachoo, Q., & Sharma, R. (2017). FDI and incumbent R&D behavior : Evidence from Indian manufacturing sector. *Journal of Economic Studies, 44*(3), 380 – 399. https://doi.org/10.1108/JES-10-2015-0188

Mahajan, D. (2016). Foreign direct investment in defence sector in India : Problems and prospects. *Journal of Commerce and Trade, 11*(1), 77 – 84.

Malhotra, B. (2014). Foreign direct investment : Impact on Indian economy. *Global Journal of Business Management and Information Technology, 4*(1), 17 – 23.

Mathad, K., & Kumar, D.N.S. (2019). Impact of domestic investment, market size, and trade openness on outward FDI: A panel data analysis on BRICS. *Indian Journal of Finance, 13*(12), 7 – 18. https://doi.org/10.17010/ijf/2019/v13i12/149265

Ministry of Defence, Government of India (GOI). (2013). *Defense procurement procedure (DPP) 2013 : Capital Procurement.* Retrieved from https://cgda.nic.in/pdf/DPP2013.pdf

Mohanty, D. R. (2004). *Changing times ? India's defence industry in the 21st century* (Paper No. 36). Bonn International Center for Conversion, Germany. Retrieved from https://www.bicc.de/uploads/tx_bicctools/paper36.pdf

Nishith Desai Associates. (2018). *The Indian defence industry : Redefining frontiers.* Retrieved from https://nishithdesai.com/fileadmin/user_upload/pdfs/Research_Papers/Indian-Defence-Industry-Redefining_Frontiers-web.pdf

Saini, A. (2015). FDI in India. *International Research Journal of Management Sociology & Humanities, 6*(9), 236 – 244.

Singh, S. (2009). Foreign direct investment (FDI) and the growth of states of India. In H. J. Baxi. (ed.), *Regional disparity in India : Issues and perspectives* (pp.221 – 238). Hyderabad, India : The ICFAI University Press.

Singh, S. (2019). Foreign direct investment (FDI) in India : A review. *Journal of General Management Research, 1*(6), 41 – 56. DOI: 10.13140/RG.2.2.14492.44161

Singh, S., Chauhan, A. K., & Pandey, N. (2012). Foreign direct investment (FDI) in BRIC countries: A panel data analysis of the trends and determinants of FDI. *European Journal of Economics, Finance and Administrative Sciences, 53,* 48 – 58.

Srinivasan, P. (2010). Causal nexus between foreign direct investment and economic growth in India. *Indian Journal of Finance, 4*(5), 3 – 9.

United Nations Conference on Trade and Development (UNCTAD). (2018). *World Investment report: Investment and new industrial policies.* United Nations, Geneva : UNCTAD. https://doi.org/10.18356/8a599f63-en

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