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India's Arm Manufacturing in Defence Sector

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Abstract: ***Over the past decade, India has become the world' s largest arms importer. During the Cold War, India bought arms mostly from the Soviet Union, but now it is increasingly buying from other suppliers. India has the 3rd largest military in the world and is the 6th biggest defence spender. India spends around 30% of its total defence budget on capital acquisition. The 'Make in India' initiative by the government is focusing its efforts on increasing in indigenous defence manufacturing and becoming self-reliant. As India grows, it wants to improve the domestic capacity, increase strategic autonomy, and be accepted as an equal player in the worldwide arena. To do so, India needs to become independent and decrease the leverage that often comes with arms supplies. Developing its own industry, diversifying suppliers, avoiding countries that trade for ulterior motives, improving multilateral relations, and joining global export control regimes are some of the strategies. Operational Research, has contributed substantially to decisions on cost-effective induction of weapon systems, evaluation of tactical plans, development of computerized war games for training, realistic formulation of General Staff Qualitative Requirements, performance and reliability evaluation of military hardware under design and development, force structure planning and other tactical and strategic issues in Indian defence.***

Keywords: DPSUs, Indegenisation, OFs, SIPRI.

1. Introduction

The defence industry of India is a strategically important sector in india with strength of over 1.3 million active personnel. India is probably the only large country in the world which is highly dependent on external sources for its defence requirements. India was the world's largest importer of major arms in the last 5 years and its overseas procurement was far greater than that of china and Pakistan, as per the latest report, of Stockholm International Peace Research Institute(SIPRI), India accounted for 13% of the total global arms import between 2012-16 which is highest among all the countries. Saudi Arabia was the 2nd largest arm importer in 2012-16, with an increase of 212% compared with 2007-11. India imports weapons from the countries like Russia, the US, Europe, Israel and South Korea.

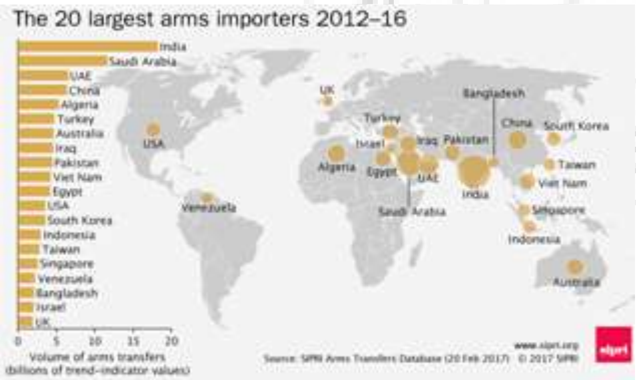

Figure 1: The 20 Largest arms importer 2012-16

The volume of major weapons imports more than double between 2004-08 and 2009-13 and India's share of the volume of international arm imports increased from 7% to 14% according to the latest report relized by Stockholm International Peace Research Institute (SIPRI). The possible reasons for this are that India lacks a defence industry of its own sufficient to meet its external challenges and to keep its pace with its expanding strategic interest. The need to modernize has indeed been one major reason for India's status as top spender of arm imports.

2. India Top Arms Acquirer compare to other Nations

The international arms trade, facilitated by increased globalization, is lucrative, owing to little legal control. The market involves the manufacture, selling, buying, and licensing of military equipment, weapons, and facilities such as small arms, armored vehicles, military ships, ammunition, and military aircraft. Importations are mainly driven by economic growth, territorial disputes, and political alignments. Most of the importing countries buy arms from more developed countries with high-tech capabilities to engineer high-quality arsenals.

World's Largest Importers of Arms		
Rank	Country	Share of arms import (%)
1	India	14.00
2	Saudi Arabia	7.00
3	China	4.70
4	UAE	4.60
5	Australia	3.60
6	Turkey	3.40
7	Pakistan	3.30
8	Vietnam	2.90

Figure 2: World's Largest Importers of Arms

India: India has experienced a surge in economic growth in recent years. Increased resources to buy arms have made it the world's largest importer of weapons taking up 14% of the world's imports. In the last three years, India imported arms worth $14 billion compared to other nations. India purchased 80 percent of weapons from Russia, during 2007-2011, according to the Stockholm International Peace Research Institute (SIPRI).

Saudi Arabia: Saudi Arabia to increase the stock of its military hardware, accounting for 7% of the world's arms imports. In 2015, the state spent $9.8 billion on arms. The primary source for its arms was the US, the UK, and France.

China: China takes its place as the third-largest importer of weapons at 4.70 % of world total imports. China has established itself as an emerging economy in Asia, becoming an exporter of global arms to poorer nations as well. Arms imported to China have been on a decrease, due to the expansion of its local industry in military capabilities and has had to rely on more developed countries for certain types of machinery such as large aircraft, submarines, and engines for vehicles and warplanes. With an increased military defense budget, China spent $2.6 billion on arms in 2014. Its largest arms supplier is Russia followed by the US.

United Arab Emirates: The United Arab Emirates is an oil rich country in the Middle-East and is the fourth largest importer of weapons taking 4.6% of the global market. The UAE spent approximately $3.13 billion to import arms in 2015.

Other Countries: Other countries taking up their fair shares in the global importation of weapons are Australia (3.6%), Turkey (3.4%), Pakistan (3.4%), Pakistan (3.3%), and Vietnam (2.9%).

3. India is still world's largest arms importer

"A major reason for the high level of imports is that India's Arms Industry has largely failed to produce competitive indigenously designed weapons said the report." India has tried, but failed, to create a sizable domestic manufacturing industry for weapons or even basic military goods, while China has increased production of defense supplies. About 75 percent of India's weapons purchases came from imports during 2007-11, said Laxman Kumar Behra of the Institute of Defense Studies and Analysis, a government-funded research organization.

3.1. Lack of a defense industry

India's defense industry has been insufficient to meet its external challenges and to keep pace with its expanding strategic interests. The need to modernize has been one major reason for India's status as top spender on arms imports. The lack of a strong DIB, unlike China, means India still continues to import over 65% of its military hardware and software, which also makes it vulnerable to supply lines being choked in times of emergency.

3.2. Struggle to upgrade the manufacturing sector

India is still struggling to upgrade its arms manufacturing sector, despite this being a priority for over a decade. Despite the rhetoric of 'indegenisation', there has been no significant systemic transformation and huge cost and time overruns in domestic defense production are commonplace.

3.3. Over dependence on Russia, and other first tier arms producing countries

India has tried to diversify its sourcing, Russia continues to be one of India's most significant strategic partners and biggest arms supplier, grabbing about 75% of its imports. Other partners are US, Israel and France. On one hand, it has ensured and enhanced India's defense capability, but on the other it has constrained indigenous research as technology has been imported rather than developed. Also, though these arms purchases are done with technology transfer and offset arrangements, India still lags behind the developed countries defense industry standards.

4. India's Defence Industry

The post-independence industrial policy placed the production of defence items in the reserve List making it mandatory for production to be taken up only by the public sector. The sector for the first time was opened up to 100 percent Indian private sector participation in 2001.Indian defence industry is dominated by Defence Public Sector Undertakings (DPSUs) and Ordnance Factories (OFs) which contribute about 90% of the total domestic defence manufacturing output. The 41 ordnance factories are spread across 26 different locations and employ close to 1,25,000 people. The DPSUs and OFs manufacture a wide spectrum of equipment including small arms and field guns, ammunitions, explosives, armoured vehicles, transport vehicles, clothing, parachutes and general stores. DPSUs account for approximately 65 percent of the total industrial output of the defence public sector enterprises.

Combined, the DPSUs and OFs have played a critical role in building a domestic industrial base in this sector as they typically outsource 20 to 25% of their production requirements to private companies. In addition to the public undertakings, there is a small but growing number of medium large private companies that have already entered, or, are seriously evaluating entry into the market.Since opening up of the defence industry for private sector participation, the Department of Industrial Policy and Promotion (DIPP) has so far issued 222 Letters of Intents (LOIs) and issued Industrial Licences (ILs) to more than 150 companies for manufacture of a wide range of defence items. 46 companies have so far reported commencement of production. The licenses have been issued to the Indian private sector for manufacture of Military Aircraft, Unmanned Aerial Vehicles, Radars, Electronic Warfare Systems, Ship borne platforms, Armoured Vehicles etc.

Figure 3: Arjun Mark II Main Battle Tank

In the recent years, many Indian private industries have been involved in a small way with several defence 'Make' projects.Larsen & Toubro, Tata group, Pipapav Defence and

Offshore Engineering Ltd., Reliance Industries Ltd., Mahindra and Mahindra, Ashok Leyland Defence Systems, Piramal System and Technologies are some of the key Indian players in the defence industry.

5. The Policy Framework

5.1. Defence Procurement Policy

Defence Procurement Procedure (DPP)-2016, which has come into effect from April 2016, focuses on institutionalising, streamlining and simplifying defence procurement procedure to give a boost to "Make in India" initiative of the Government of India, by promoting indigenous design, development and manufacturing of defence equipment, platforms, systems and sub-systems. The key features of revised DPP, promoting 'Make in India' include:-

5.1.1. A new category of procurement 'Buy {Indian-IDDM (Indigenously Designed, Developed and Manufactured)}' has been introduced in Defence Procurement Procedure-2016 and the same has been accorded top most priority for procurement of capital equipment.

5.1.2.Preference has been accorded to 'Buy (Indian)' and 'Buy and Make (Indian)' categories of capital acquisition over 'Buy (Global)' & 'Buy & Make (Global)' categories.

5.1.3. The 'Make' Procedure has been simplified with provisions for funding of 90 % of development cost by the government to Indian industry.

5.2. Export Import Policy

The Government of India, Ministry of Commerce and Industry announced New Foreign Trade Policy on 01st April 2015 for the period 2015-2020, earlier this policy known as Export Import (Exim) Policy. After five years foreign trade policy needs amendments in general, aims at developing export potential, improving export performance, encouraging foreign trade and creating favorable balance of payments position. The Export Import Policy (EXIM Policy) or Foreign Trade Policy is updated every year on the 31st of March and the modifications, improvements and new schemes becomes effective from April month of each year.

6. Make in India in Defence Sector

The 'Make in India' policy for the defence sector aims to reverse the current imbalance between the import of defence equipment and indigenous manufacture of defence equipments without adversely affecting the requirements, capability and preparedness of the user. Therefore, achieving self-reliance and reducing dependence on foreign countries in defence is a necessity today rather than a choice, both for strategic and economic reasons. The requirement for domestic production of defence equipment is more than for any other sector because it will not only save precious foreign exchange but will address the national security concerns.

Figure 4: Symbol of Make in India

'Make in India' policy aims at facilitating investments and fostering innovations for the manufacturing sector in India. Government being the only consumer, 'Make in India' in defence sector will be governed by the defence procurement policy of India. As the Indian Companies may not have adequate capabilities in terms of technology, they are encouraged to partner with foreign companies for joint ventures, technology transfer arrangements and tie-ups. The Government policy of promoting domestic defence industry is adequately reflected in the Defence Procurement Policy, wherein preferential treatment is given to "Buy (Indian)" and "Buy and Make (Indian)" categories of acquisition over "Buy (Global)".

The prime minister of India launched the Make in India campaign in 2014 with the central objective of boosting manufacturing and generating employment by focussing on 25 sectors, including A&D. The key objectives for the defence sector were promoting self-reliance, indigenisation, achieving economies of scale, developing capabilities for export, transfer of technology and domestic R&D. The government has taken a large number of important decisions to achieve the above objectives.

In the last two years, private participation in India's defence sector has been rising. Large Indian conglomerates have increased their exposure to defence manufacturing on the one hand. On the other hand, foreign defence contractors are showing their confidence in India by expanding their tie-ups with Indian companies. This is facilitated by policy support, both specifically for defence, and generally under the Make in India campaign, which was showcased successfully in the Make in India Week last month. After big foreign and Indian companies, we must ensure that medium and small Indian enterprises dramatically increase their contribution to defence production. To do so, they need both financial support and the requisite infrastructure, perhaps through a dedicated defence industrial park in two or three locations of the country.

7. Conclusion

Achieving self-reliance and reducing dependence on foreign countries in defence is a necessity today rather than a choice, both for strategic and economic reasons. Our Prime Minister has taken a very important initiative in form of 'Make in India' to promote and encourage domestic manufacturing of various items. The requirement for domestic production of Defence equipment is more than for any other sector because it will not only save precious foreign exchange but will also address the national security concerns. Government being the only consumer, 'Make in India' in defence sector will be driven by our procurement policy. The Government policy of promoting domestic defence industry is adequately reflected in the Defence Procurement Policy, wherein preferential treatment is given to 'Buy (Indian)' and 'Buy and Make (Indian)' categories of acquisition over 'Buy (Global)'. India has the potential to emerge as a global platform for defence research, manufacturing, supply chain sourcing, software development, and offsets, which will strengthen our defence capabilities and spur industrial development as well as exports in this sector.

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