

## **A Study on Opportunities in Defence Manufacturing Sector**

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### **Introduction: Make in India**

Make in India is an aspiring campaign launched by the Prime Minister of India, Shri Narendra Modi on 25th September 2014 in New Delhi at Vigyan Bhawan. The purpose of this campaign is to invite the top business investors across the globe to invest in India. This campaign aims to provide India a global economic recognition. It also aims to renew the Indian economy from services-driven growth model to the labor-intensive manufacturing driven growth. In order to make this campaign a successful one, the PM of India met to the top 40 CEOs of several Fortune 500 companies. This campaign has not only targeted the top companies of well-known countries, but has also selected domestic companies who are passionate in learning and implementing new technologies, leading in the field of innovation are also invited. A successful implementation of this campaign will lead to employment opportunities for more than 10 billion people in India.

Almost 25 key sectors (such as automobiles, aviation, biotechnology, chemicals, construction, defence, electrical machinery, electronic systems, food processing, IT & BPM, leather, media & entertainment, textiles & garments, ports & shipping, pharmaceuticals, hospitality, tourism & hospitality, thermal power, wellness, railways, renewable energy, roads & highways, space) have been identified by the government.<sup>[1]</sup>

Invest India is promoted by the Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce and Industry, Government of India which helps in guiding all the top foreign investors in terms of regulatory and policy issues as well as assists in obtaining the regulatory clearances. In order to reduce any type of burden on the investors there is an arrangement of a dedicated team ready to answer all the queries from business entities through the web portal ([makeinindia.com](http://makeinindia.com)). Also, a back-end support team is available in order to response specific queries within 72 hours of duration.<sup>[1]</sup>

### **Make in India: Defence Manufacturing**

India has the third largest military in the world and is the sixth biggest defence spender. India is one of the largest importers of conventional defence equipment and spends about 31.1% of its total defence budget on capital acquisitions.<sup>[1]</sup>

About 60% of its defence requirements are met through imports. The allocation for Defence in the Union Budget 2016-17 is approximate USD 34.53 billion. The Defence Acquisition Council (DAC) under Ministry of Defence, cleared defence deals worth more than INR 82,000 crore under 'Buy and Department of Industrial Policy and Promotion Make (Indian)' and 'Buy Indian' category.<sup>[1]</sup>

Opportunities to avail defence offset obligations to the tune of approximately INR 250 Billion during the next 7-8 years. The country's extensive modernization plans, an increased focus on homeland security and India's growing attractiveness as a defence sourcing hub.<sup>[2]</sup>

### **Literature Review**

Azhar Shaikh, Dr. Uttam Kinange and Arthur Fernandes (2016) in this research study observed to ascertain the challenges and opportunities in defence sector because of the Make in India campaign. The study attempts to give a present state of affairs of the Indian Defence, then depicts the global scenario relating to defence and attempts to identify the opportunities and the challenges waiting for the Make in India campaign for defence sector. The study conducted reveals that India's planned budget for the defence is \$ 38 billion which is about 10% increase from its previous year's budget. The study also reveals that the increase in the defence budget of Asia-Pacific region is highest. Further, the study reveals that the opportunities what small and medium scale enterprises (SMEs) will have is umpteen. The SME have been the subcontractors to many of the Public sectors as well as private sector players undertaking the projects of the defence. The study reveals that a strong research and development is another challenge to the Indian firms who are interested in being the part of Make in India. The private sector gets to know once the government issues request for proposal (RFP). The study concludes that India needs to develop a macro vision for promoting 'Make in India' in defence sector to attain the level of developed countries in defence manufacturing. It should not only have Make 'In' India approach but also Make 'For' India. It should first satisfy the domestic market and then look for the exports. Present approach is more of export oriented than for the domestic market. The government should rather focus on creating an environment where all sorts of enterprise can flourish, and then leaving entrepreneurs to choose what they want to do. The gap in the study shows that the private sector's participation so far has been mistrust. When it comes to big contracts, procedural hurdles come in the way, making it virtually impossible for the private sector to get into complex defence manufacturing. Also, Government should make either the RFP known in advance so that the domestic players can invest their time and money in developing the requirements to should establish research centers which involve in research and development in regular basis and suggest the defence to include any innovative product in the force.<sup>[3]</sup>

### **Objective of the Research**

The objective of this research is to study the impact of Make in India initiative on the Defence Manufacturing Sector.

The primary focus of this research study is to identify the opportunities and initiatives in the Defence Manufacturing Sector. The research also ascertains to find out the new initiatives in the Defence Manufacturing Sector after the Make in India campaign. Lastly, the research paper deals with the scope for Defence Manufacturing in other sectors.

## Analysis

### Opportunities in Defence Manufacturing Sector

The opportunities what small and medium scale enterprises (SMEs) will have is indefinitely many. This is because since many SMEs were the supplier for equipment's which were required in the defence manufacturing. The SME market has always constituted a significant component of the Indian economy, accounting for 40% of employment and making an almost equivalent contribution to India's GDP.<sup>[3]</sup>

India's focus on indigenous manufacturing in the defence space is paying off as the Ministry of Defence over the last few years unveiled several products manufactured in India like the HAL Tejas Light Combat Aircraft, the composites Sonar dome, a Portable Telemedicine System (PDF) for Armed Forces, Penetration-cum-Blast (PCB) and Thermobaric (TB) ammunition specifically designed for Arjun tanks, which is a heavyweight torpedo called Varunastra manufactured with 95% locally sourced parts and medium range surface to air missiles (MSRAM).<sup>[4]</sup>

The main reason for getting foreign companies in India for setting up their business is not because India wants to avoid the cost of imports. This is because it will bring foreign investments in the country, along with it the domestic industry will flourish and there will be healthy competition. Along with investments, India will also get access to new technology in defence manufacturing sector. All these factors will help strengthen the economy of the country.

The Government of India has allowed 100% FDI in defence sector: Up to 49% under automatic route; FDI above 49%, through Government route where it is likely to result in access to modern technology, many foreign players would set up their businesses with the help of Indian companies. Along with the technical help, these foreign companies will update the technical capabilities of the Indian manufacturing sector.<sup>[5]</sup>

### New initiatives in the Defence Manufacturing Sector

Name of the entities	Nature of transaction	Value
Pipavav Defence & Offshore Engineering Co Ltd. & JSC Ship repairing center	Pipavav Defence & Russia based JSC Ship Repairing Centre entered a 51:49 JV for medium refits & life certification of 877 EKM submarines in India. JSC will provide complete technical assistance & support, including for enhancement of infrastructure at the Pipavav Defence facilities & training of engineers to the JV.	INR 11,000 crore
Astra Microwave Products Ltd & Rafael Advanced Defence Systems Ltd	Astra Microwave formed a 51:49 JV with Israel based Rafael Defence to focus on building tactical radio communication systems, electronic warfare systems & signal intelligence systems in India.	INR 120 crore
DRDO & Bharat Dynamics Ltd	DRDO & Bharat Dynamics Ltd have signed a MoU for joint development of third generation Man-Portable Anti-Tank Guided Missiles (MPATGM) for the Indian Army.	NA

HAL & Bharat Electronics Ltd	HAL & Bharat Electronics Ltd signed an agreement to share their competencies in manufacturing advanced airborne communication systems (avionics) for the armed forces.	NA
HAL & Turbomeca	HAL & France based Turbomeca, has signed a MoU to establish a JV to provide maintenance, repair & overhaul of the Shakti engine & Turbomeca TM333 engine installed on HAL's helicopters.	NA
Mahindra Defence Systems Ltd & Airbus Helicopters	Mahindra & Airbus Helicopters have signed an in-principle agreement to set up a JV to manufacture helicopters in India for the Indian Air Force.	NA
Mahindra Defence Naval Systems Ltd & Ultra Electronics	Mahindra Defence System & UK-based Ultra Electronics have signed a MoU to manufacture & supply specialized underwater warfare equipment for the Indian Army & technologically advanced ratios for the Indian Army.	NA
Mahindra Defence & US Telephonics Corp	US Telephonics has increased its stake to 49% to 26% in its JV Mahindra Telephonics with Mahindra Defence. US Telephonics is the first company to increase the stake after the government raised the FDI limit & is expected to invest 60 crore rupees in India.	NA
Reliance Unmanned Systems Ltd & Augur Overseas Operation (Singapore)	Reliance Unmanned Systems has entered a 51:49 JV with Augur Overseas Operation for development, production, sales, modification & life support for different sizes of aerostats & airships for the Indian as well as the global market.	NA
Tata Advanced Systems Ltd & Boeing	Tata Advanced Systems & Boeing signed a framework agreement for collaborating in manufacturing defence equipment including unmanned aerial vehicles, in India.	NA

Source: <http://www.livemint.com/Politics/PS0tG3joZKsa6OkCiUwVFM/Defence-could-be-sunrise-industry-for-Indian-firms-in-the-ne.html> [6]

### **New initiatives taken in Defence Manufacturing Sector after Make in India**

1. Indian conglomerates such as Tata Group, Reliance Industries Limited (RIL), Larsen & Turbo (L&T), and Mahindra Group are increasingly forging partnerships with global defence companies.
2. The Tata Group, L&T, Pipavav Defence & Offshore Engineering Limited, have tied up with the global defence companies & created infrastructure required to take on bigger roles in the defence space.
3. Tata & Boeing have already signed for a joint venture. Rafael of Israel has started a joint venture with Kalyani Group.<sup>[7]</sup>
4. Reliance Aerospace Technologies & Reliance Security Solutions in 2011 was set up. The group is set to enter the defence space by investing & signing new deals with OEMs primarily towards offset arrangement of defence equipment.

5. Companies such as Reliance, a newcomer to defence, had laid out ambitious plans to build anything from submarines to helicopters and missiles.<sup>[8]</sup>
6. Tata Advanced Systems Ltd (TASL) has scaled up operations across its seven lines of manufacturing and was preparing to bid for building full aircraft in the next three to five years.
7. DRDO signed a technology transfer agreement with L&T for commercial production of the Pilotless Target Aircraft (PTA), Lakshya.<sup>[9]</sup>
8. The K9 Vajra-T-Howitzer developed by Larsen&Toubro and Samsung Techwin is likely to bag over INR 5,000 crore orders for the 1,000 such tracked self-propelled 155mm artillery guns.<sup>[10]</sup>
9. L&T also sees huge scope in areas like submarines, nuclear power equipment and artillery guns.
10. Tata, Mahindra and Reliance have all invested money in building helicopters.
11. Reliance Infrastructure announced that its subsidiary Reliance Defence and Engineering Limited (RDEL) has commenced the steel cutting of 14 fast patrol vessels and undertaken the keel laying of the training ship for the Indian Coast Guard at their shipyard.

### **Scope for the Defence Manufacturing Sector in other Sectors**

The defence manufacturing sector in India requires the SMEs to think not only for the shorter time frame, but to think in a long-term perspective. The other sectors in which defence manufacturing has scope are as follows:

1. Naval systems with its subsystems and accessories
  2. IT
  3. Hardware
  4. Electronics
  5. Maintenance, Repair & Operations (MRO)
  6. Casting, forging and metal works
  7. Research & Development
  8. Software
  9. Aerospace which includes sub systems and accessories, ground equipment and tooling
- If these areas are covered they will not only of strategic importance to India, but will also bring India ahead on the technological forefront. <sup>[11]</sup> <sup>[12]</sup>

### **Future Technology: Defence Manufacturing Sector**

Looking at the future and in order to protect India from any external threats it is necessary to upgrade our existing technology in the following areas:

1. Thermal imaging
2. Infrared based equipment

3. Sensors, detectors, radars and early-warning systems
4. Wireless and mobile surveillance systems and IP surveillance solutions
5. GPS and GSM-based tracking systems
6. Trajectory correction system and missile guidance
7. Advanced rocket technology
8. Active tank protection systems
9. Metallurgy and forging techniques for guns
10. Automotive technologies
11. Surveillance, communication and navigation technologies
12. Networking technologies for seam-less integration<sup>[13]</sup> [14]

### **Conclusion**

The private sector participation in defence manufacturing is increasing because of the Make in India initiative. This has led to increase in domestic demand for defence manufacturing equipment's over the past few years. In other words, the private sector has given a re-birth to the defence manufacturing sector in India. Thus, to make India a global hub for defence manufacturing, we need to invite more of foreign investments in India for defence manufacturing.

As the defence manufacturing sector is getting a boost because of Make in India, this will also facilitate growth of the SMEs in India. The SMEs will definitely visualize growth in the Make in India initiative. The role of the SMEs will be forefront as they will assist the growth of defence manufacturing in India, right from procuring up to delivering the best source of components and equipment's required for manufacturing. The SMEs focus will be more on IT and long-distance communications equipment's/ components. The role of SMEs in the Make in India initiative is more of a supplier and this is going to increase in the coming years. Also, the Ministry of Defence has issued tender for over 200 naval helicopters. Thus, the SMEs should focus in OEMs in the aerospace sector too. Hyderabad is also becoming India's aerospace and defence hub. Hyderabad has presence of about 1,000 aerospace and defence related SMEs.

The defence manufacturing sector in India which require huge inflow of capital, thereby forcing the government to think in broader and long term rather than thinking in short term perspective. Thus, the government needs to make changes in the procurement of components and equipment's for SMEs, changes in the FDI policy to attract more foreign investments in to the country. The defence sector is dependent more on technology. This will require upgradation of our existing technology to the latest technology available which will again require more capital.

Telecommunications and IT will play a very important role in the defence manufacturing sector in the years to come. Thus, the focus should be on IT enabled defence components with high tech engineering capabilities. This is necessary in order to protect India from any external threats. The defence manufacturing sector in India should be strong enough in such a way that India should emerge as a source of defence manufacturing components in the years to come. The business

environment should be conducive enough to support the growth of defence manufacturing sector in India. This is possible with refinement in the policies and regulations.

Finally, for India to emerge as a global hub for defence manufacturing equipment's it is necessary to carry out extensive research in this sector. Here comes the role of SMEs, private sector as well as the public sector to carry out research and develop new equipment's for defence manufacturing. All three of them should work together to make India a global hub.

Thus, by enhancing the Defence Manufacturing Sector, India will improve its defence readiness which will thereby boost the nation's economy as well as create employment.

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