

Indian Defence Industry-Is it Future Proof

Beno Jones J

Assistant Professor, Department of Defence and Strategic Studies, SRM Institute of Science and Technology, Kattankulathur

Abstract

India is considered to be one of the major players in international affairs in the 21st century. No other country in the world except India shares a land border with two nuclear armed hostile neighbours (i.e) China and Pakistan. In this case we need to have a strong and robust industry that is capable of meeting both the short term and long term requirements of the armed forces. Since India's spending on research is pegged at 0.65% of its GDP compared to 1.5-3% of the GDP spent by the other leading powers in the World. We are lagging behind not only in terms of science and technology but also in terms of planning out things as well. Also the area in defence is said to be a field where new pathbreaking technologies are developed and the spinoffs can be developed for civilian uses and vice versa as well as to how oxygen generation plants have been set up all across India using defence technology during the second wave of the pandemic. There is a need to invest in future technologies both in the civilian and defence arena to either reduce or close the technological gap with the west as India is behind the west by decades not only in terms of technological prowess but also in the area of thought process as well. This brief study is aimed at finding the ways and means to develop the scientific and industrial base in our country in order to be self-reliant and according to the 'Atmanirbhar Bharat' vision of India. The study is also aimed at exposing the fault lines briefly which will help to address the problems faced by the nation as a whole.

Introduction

Development of economy is said to be one of the utmost priority of the nations today. Due to the growth in the Indian economy, the industrial development alongside has become a cause of concern for the policymakers in the Government of India. Industries play a important role because its contribution to the overall growth is manifold as it address some of the peculiar problems faced by any country. It is also equally important for the developed countries in order to maintain their standards, efficiency and technological edge. In 1951 when former Prime Minister announced his vision that India had to become an industrialized country as fast as possible. While the policymakers and the planners have done everything they could in their capacity, India is yet to become a manufacturing powerhouses like Germany and China and some of the western countries.

Though the contribution of manufacturing sector to India's GDP is on the upward trend not to mention that some of the major

companies in the world moved their assembly line from China to India due to the former's mismanagement and lack of transparency with regarding to the Covid-19 Pandemic¹. But again India having achieved considerable progress it still has a long way to go and there is a lot of areas that need improvement to be on par with the developed nations in the world. Despite industrialization process is happening in various parts of India and the presence of premier institutes like IIT's NIT's IISC and a slew of government initiatives and there is not one product developed in India that can claim to be the world's first. India is relying upon imports for cutting edge technologies and products.

¹India Brand Equity Foundation. 2021. Indian Manufacturing sector in India Industry Report. <https://www.ibef.org/industry/manufacturing-sector-india.aspx>

India is yet to reach the target of \$500 Billion exports that it planned to achieve in the 2014². Also India is said to be the country which can act as a counterweight to China. Though India has the ambitions to become a superpower and want to be one of the major players influencing global affairs it is time that acts like one. As of now India's industries or manufacturing sector of India is plagued by poor planning, lack of roadmap, neglect of private sectors in crucial areas, poor governance and the inefficient utilization of human resource which is available in plenty in India.

Issues associated with the Defence Industry Planning

Even though India's former and present leaders calls for a Self-reliant India. Planning was not done in a meticulous way from the beginning. The erstwhile planning commission which was formed by the government of India in the year 1950 did not adequately address the ever growing needs and requirements and the competitiveness that is required for any industry to stay afloat. Planning has to be done for the long term and it should have been an co-ordinated approach both of which are missing in the planning for the development of defence industry in India.

The Planning commission which formulates plans for five years is not enough to meet an aspiring country's ever growing needs. Rather a 15-20 year plan like the Fifteen year Long term Integrated Perspective plan (LTIPP) adopted by Niti Aayog long term plan is the need of the hour where things can be finalized on various fronts. Five year period is too short for an newly independent country like India to achieve something. Also due to the fact that India adopted a mixed economy in order to not offend both the USA and the erstwhile soviet union India has adopted both the advantages and drawbacks of the system which was prevailing and harped about at that point of time. Five year plans was the first major flaw committed and it's consequences are visible even now in the form of manufacturing work

done by the Indian and global firms located in India. Instead of building things from the scratch we are importing crucial technology and assembling it in our factories all over India. Although globalization has interlinked and intertwined the under-developed, developing and developed economies all over the world, India still continues to import crucial technology for an Made in India product as well.

Each and every developed country in the world devises and follows a plan called as 'Strategic Defence Review' or SDR. These kind of planning is sorely missing in our country. The Strategic Defence Review helps a country to bring together all the ministries, departments, industries, Research and Development facilities, Academia to work under one banner to collectively improve the defence industry as well as civilian industry to make sure that country should be in a position to ward off or to deal with any threats in the present and future. In short it is a kind of forum where all the economists, financial planners, policy makers, scientists, civil servants, experts from the industry come together to devise the roadmap to make sure that everything has been taken into account to develop a robust and credible industry which serves dual purpose (i.e) Civil and Defence³.

In contrary to this there is no co-ordinated approach. In order to develop an engine the various arms of the government follow an independent approach to design, develop, testing and manufacturing the engine. Various testing regimes have been setup and there is no single testing regime to test a particular technology in India. As a result there has been numerous instances of cost overruns and time overruns and the deadlines have been rarely met. Despite facing such an issue which is of regular occurrence India is yet to get its act together and no lessons have been learnt.

Government Policies

The foreign direct investment in Defence sector has been raised to 74 percent under automatic route and remaining under

²IANS. 2012. India will achieve \$500 Billion exports target.

<https://www.businesstoday.in/latest/economy-politics/story/india-will-achieve-500-billion-exports-target-anand-sharma-29925-2012-06-08>

³SIPRI. <https://www.sipri.org/research/armament-and-disarmament/dual-use-and-arms-trade-control/dual-use-export-controls>

government route⁴. There are still some issue persists due to the nature of defence industry which is different from other industries. In India preference and priority has been given to Defence Public Sector Undertakings (DPSU). In defence arena products will be designed even before potential buyers have been found. Since India prefers DPSU's global defence manufacturing firms are not risking to set shop in India because of uncertainty. Only a handful of global firms have tied up with the Indian firms to undertake manufacturing in India for selected products for which the agreements have been signed some 5-10 years ago. Also the Defence procurement procedure prohibits companies to take part in the acquisition process as primary vendors where the foreign direct investment exceeds 49 percent. Things like this should have been meticulously planned to avoid the conflicts and issues as it will lead to more procedural delays and may not serve its purpose. Also it is the duty of the government to shed its colonial mindset in order to provide level playing field to all the players in both prudential and guarded manner.

R&D Funding

India's R&D spending in relation to its Gross Domestic Product (GDP) is relatively low. Nearly 0.7% of India's GDP is spent on R&D which is way lower than the global average of 2.04% of the GDP⁵. As a result India has been at the 46th rank in the Global Innovation Index. Innovation in India has taken a steep dive on a qualitative terms. While India prides itself to be a soft power and major Information Technology (IT) provider, it is yet to capitalize and major Indian IT firms aren't undertaking to develop high end softwares and applications. Though there have been calls from the industry and even amongst the lawmakers to increase the R&D funding, India has been unable to do so because of other pressing needs and issues which India has acquired over decades due to faulty planning.

In order to improve India's standing in global arena more funding should be allocated towards R&D as this will further encourage the private players to invest more in R&D and it is the responsibility of the government to create synergy and forge collaboration to make sure that adequate spin-offs have been identified, developed and churned out to meet both the civilian and defence requirements in an cost-effective manner.

Human Resource

India is said to be one of the youngest countries in the world. As there is a lot of young people in India and also a fact that India produces a lot of engineers per year it is not being properly channelized. Innovations and efforts of some of the brightest minds in our country have been ignored and forgotten, also there is no proper ecosystem to support the youth to encourage them to join R&D as well as to conduct the works of Research and Development. A small country like Israel has got more researchers than all of India combined is a testament on the attention that has been given to the research, and also the wide disparities in the quality of technical education in the country and the government's failure to address it. Even the recruitment process in various research institutes in India is deeply flawed. All these contribute to India's poor standing in the innovation, patents etc.

Disparities in the Indian education system needed to be fixed and there should be relook at the recruitment process followed by India. A dedicated innovation cell unlike an ad-hoc cell set up by India to encourage and nurture research should be formed. Various dedicated institutes like Indian Institute of Science (IISc) and Indian Institute of space science and technology for the study and research in various specialisations.

Augmenting Technology

In order to obtain a lead in the technological space as well as in order to close the technological gap India must use her financial muscle to go on an acquisition spree as this will help in a long run to undertake cutting edge manufacturing and testing to be brought to Indian Shores. The concept of 'reverse engineering' has to be understood clearly and practiced with a cautious approach. Mere

⁴Srivats KR, 2020. The Hindu BusinessLine. <https://www.thehindubusinessline.com/news/fin-min-nod-for-74-fdi-in-defence-sector-under-automatic-route/article33288079.ece>

⁵Department of Science and Technology, 2020. <https://dst.gov.in/indias-rd-expenditure-scientific-publications-rise>

Collaborations won't help, rather Indian Industries should purchase atleast decent stakes in any of the major technological firms will bring in advanced technologies into India to some extent.

Conclusion

This study has been focused on finding the areas where India needed improvement and reformation in the way it does things. It has been found that there were severe shortcomings right from the beginning and a radical measures has to be made in order to address the lacunae prevailing across the power corridors of India. It further stresses India needed to adopt a pro active approach to address the deficiencies it faces. In order to develop a strong defence industry a strong civilian industry is required. That has been the case with all the leading superpowers right now. First the products will be developed either in civilian or military arena and based on that various spin-offs will be made available. Overall this study highlights the need of meticulous planning and implementation as both goes hand in hand.