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## Rise of China's Defence Industry and Lessons for India



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### Introduction

China has successfully undertaken some major defence reforms during the last three decades, which has resulted in the growth of its defence industry manyfold. It has risen from a level of a major importer to a major exporter of complex military hardware during this period.<sup>1</sup> China has emerged as the second largest economy of the world and has one of the world's fastest growing defence industries. However, if the rise of Chinese defence industry is examined closely, it emerges that there are major lessons for India to emulate. The problems being faced presently by Indian defence sector are very similar to what China faced prior to reforms of 1998,<sup>2</sup> namely, underutilised production facilities, inefficient and redundant organisational structure, outdated technology, etc.

India has the third largest armed forces in the world and has one of the largest defence industrial base among the developing countries. It primarily consists of Ordnance Factories (OrdFys), Defence Public Sector Undertakings (DPSUs) and Defence Research and Development Organisation (DRDO), all of which work under the administrative control

### Key Points

1. China started major reforms in defence industry sector from year 1998, which has led to rise of China from being a major importer to a major exporter of military hardware within a span of 25 years.
2. The total output of Chinese defence industry in the year 2016 was about US\$ 326 billion.
3. As per SIPRI report, Chinese export of major arms, which excludes light weaponry, grew by 88% between 2011 and 2015, as compared to the earlier five-year time frame. China shares about 5.9% of the global arms exports.
4. China is exporting arms to about 44 countries in the world. The sales of arms to Pakistan, Bangladesh and Myanmar account for almost 60% of the total Chinese export, whereas exports to countries in Africa account for 22%.
5. Pakistan is the largest buyer from China and accounts for about 35% of total Chinese exports.
6. China's import went down by almost 25% during the period 2011-15, as compared to the previous five years.
7. China's reform had primarily focused on two areas— one aimed at central organisation and the other at the defence industry level. The Chinese focused on four main goals, namely, Competition, Evaluation, Supervision and Encouragement.
8. At central level, it consolidated various organisations handling defence and most importantly, separated buyers from builders.
9. At defence industry level, the Chinese reforms were focused on removing government control and making the industry more competitive and independent of government subsidies.

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of the Ministry of Defence (MoD). In addition, there are some large private companies and a few thousand Medium, Small and Micro Enterprises (MSMEs), who are active partners in the Indian Defence Industry. However, India is yet to become self-sufficient in terms of advanced high-tech weapons systems and platforms and depends heavily on imports for procurement of these weapons systems.

According to SIPRI database, India is still struggling with huge military imports, primarily due to its underdeveloped defence industrial base and inadequate capabilities.<sup>3</sup> The problem is further compounded with never-ending R&D coupled with increased production timelines for most indigenous built weapons, a problem which has also been highlighted in a report recently published by Parliament Standing Committee on Defence. Indian defence sector has so far not been able to replicate the success, which has been evident in other sectors like Telecom, Information & Technology and automobile.<sup>4</sup> The strongest reflection of the failure of the Indian defence industry is the continuance of India as the largest importer of weapons, for the past couple of years. It is however surprising to see the growth of China during the same period, which has emerged as the world's third largest exporter of arms, and is now ahead of even developed industrial countries of Europe like Germany, France and the United Kingdom. The study of the rise of China's defence industry brings out some important lessons for India.

### Rise of China's Defence Industry

China undertook major reforms in the defence industry sector starting from year 1998, which resulted in its rise from being a major importer to a major exporter of military hardware within a span of 25 years. These reforms have completely transformed the Chinese defence industry and have ensured that it has the capability of producing and exporting advanced weapons systems and platforms. The total output of Chinese defence industry in the year 2016 was about US\$ 326 billion.

As per SIPRI estimates, China was the third largest military spender in the world in 2016, with an

expenditure of \$215 billion USD.<sup>5</sup> China has invested billions of dollars in developing its homegrown weapons industry over the recent years, to support its growing maritime ambitions in South China Sea and Indian Ocean.<sup>6</sup> China aspires to develop military-industrial complexes like the United States. In 2015, the Chinese industrial sector contributed about 40% of the nation's GDP and it had employed about 27% of total country's workforce. China spends about 2.09% of its Gross Domestic Product (GDP), amounting to approximately US\$ 372 billion on Research and Development (R&D), which accounts for almost 20% of global spending on R&D. In comparison to it, India's share in global R&D is only 3.6%. The new economy of China, which is based on innovation and industrial integration, contributed about 12% of the country's annual GDP.

### Arms Export by China

As per SIPRI estimates<sup>7</sup> China was the third largest weapons exporter in 2012-16 and its exports of major arms increased by 74% between 2007-11 and 2012-16. China's share of global arms exports rose from 3.8% to 6.2% in 2012-16. The majority of Chinese exports went to Asia and Oceania (71%), followed by Africa (22%) and the Middle East (1.7%). Chinese arms exports to states in Africa grew the most (122%) in 2012-16 and overall, its geographic spread and number of recipients increased. In 2007-11 China exported major arms to 38 countries, while in 2012-16 it exported to 44 countries.

China has emerged as third largest arms exporter in the world, which indicates China's growing confidence in its homegrown weaponry.<sup>8</sup> Until 10 years ago, China was able to produce and supply only low-tech equipment. During the last 10 years, there has been a significant improvement (in terms of technology, quality and quantity) in the arms and defence equipments produced by China, which has attracted substantial interest from the international market. The sales of arms to Pakistan, Bangladesh and Myanmar account for almost 60% of the total Chinese export, whereas export to countries in Africa account for 22%. Pakistan is the largest buyer from China and accounts for about 35% of total Chinese exports. It is a close Chinese ally and shares strong military ties with China.

### Arms Import by China

As per SIPRI database,<sup>9</sup> China's imports decreased by 11% between 2007-11 and 2012-16 and China was the fourth largest importer of arms in 2012-16. While China was the largest importer globally by a wide margin in the early 2000s, it has dropped to fourth place in 2012-16. This has been possible due to the ever-increasing manufacturing capabilities of China for producing its own advanced weapons systems. Consequently, China has become less dependent on arms imports and its imports primarily include some key weapons and components, large transport aircraft and helicopters, and engines for aircraft, vehicles and ships. Engines accounted for 30% of China's total imports in 2012-16. Russia was the largest supplier of China and accounted for 57% of Chinese imports, followed by Ukraine (16%) and France (15%).

### Salient Aspects of China's Defence Reforms

China's reforms had primarily focused on two areas<sup>10</sup> – one aimed at central organisation and the other at the defence industry level. At all levels the Chinese focused on four main goals, namely, *Competition, Evaluation, Supervision and Encouragement*. At central level, it consolidated various organisations handling defence and most importantly, separated buyers from builders. At defence industry level, the Chinese reforms were focused on removing government control and making the industry more competitive and independent of government subsidies. The aims of these reforms were very clear – remove government from enterprise operations, make the enterprise more sensitive to the market place and bring in quality, innovation and encouragement. These steps in addition to consolidation increased efficiency, quality and civil military integration.

These reforms have completely transformed the Chinese defence industry to a level which has silenced even its hardest critics. These reforms have ensured that Chinese defence industrial base has the capability of not only supplying its military with the indigenously developed and produced, world-class weapons and systems but also exporting them, thereby earning huge foreign revenue and boosting its Comprehensive National Power (CNP).

### State of Indian Defence Industry

India, though it does have a very vast Defence Industrial Base (DIB), its long-cherished goal of achieving minimum 70% self-sufficiency in defence procurement is still elusive. Currently, India's self-reliance is hovering much below its desired mark.<sup>11</sup> India boasts of having one of the finest militaries in the world, but it is yet to become self-sufficient in terms of advanced, modern and high-tech weapons systems and platforms to include aircraft, battleships, carriers, submarines, AFVs, etc. India, at present, depends heavily on imports for procurement of these weapons systems and equipment.<sup>12</sup>

Some of the key issues being faced by the Indian defence sector are enumerated below:

- According to SIPRI database,<sup>13</sup> India was the largest importer of major arms in 2012-16 and accounted for almost 14% of the global imports. Its imports increased manifold between 2007-11 and 2012-16. India's imports in the most recent period were far greater than those of its rivals, China and Pakistan. As per SIPRI database,<sup>14</sup> *the major reason for the high level of imports is that India's arms industry has largely failed to produce competitive indigenously designed weapons*. In 2012-16, Russia supplied the majority of India's arms imports, followed by the USA and Israel. It is estimated that these countries will remain the key suppliers to India for the foreseeable future.
- Defence related requirements are met mainly by imports which offer a huge opportunity for import substitution.<sup>15</sup> The majority of Indian tanks, ships and fighter aircraft are of Russian (the former Soviet Union) design and while some have been assembled in India, the reality is that India is yet to acquire the appropriate levels of design and manufacturing even for basic inventory like personal weapons (rifles and pistols) and artillery guns.
- India is one of the few countries to have designed and produced a fourth-plus generation fighter aircraft (Light Combat Aircraft), nuclear submarine, main battle tank and intercontinental ballistic missiles with a range exceeding 5,000

km. However, despite these achievements, India continues to be overwhelmingly dependent on imports of arms and equipment to meet the present as well as future requirements of its armed forces.

- The primary objective of creation of Department of Defence Production along with defence public sector units, ordnance factories, DRDO, Dept of Defence Acquisition, etc. (all under the government/MoD control) was to ensure self-reliance and self-sufficiency in all matters of the country's defence. However, the country is far from achieving self-reliance in defence production.<sup>16</sup> The DPSUs/OrdFys are primarily involved in the manufacture of equipment based on Transfer of Technology or their licensed production.
- The entire framework of Indian defence production including DPSUs and OFB suffer from excessive bureaucratic control, inefficiency and lack of accountability.<sup>17</sup> They also suffer from lack of fair competition and professional approach—which is reflected in the excessive time-delays, poor quality and cost-overruns in completion of most of the projects/orders undertaken by them.
- Lack of indigenous R&D and credible domestic defence manufacturing capabilities, lead to no other option with the government but to import the advanced, modern and high-tech equipment from foreign countries, which are much needed to keep our armed forces in a high state of op-preparedness. Thus, instead of reduction, India's dependence on foreign imports is ever increasing.
- Further, the high import of defence equipment is also not good for the domestic defence industry, as they lose out the opportunity for growth.
- One significant observation has emerged that the participation of the private sector in the Indian defence industry has been abysmally low, even though more than 15 years have passed since the defence industry was opened to participation by the private sector.
- The Indian private sector has already demonstrated its competence in the fields of automobile, IT and

service sectors at the global level. The government seems to be trying to replicate the same model by inducing the private sector and foreign OEMs to invest in defence manufacturing.<sup>18</sup>

- Though the government has taken a large number of initiatives for attracting foreign investments in the recent past, the flow of FDI in the defence sector so far has been subdued. As per the data revealed by MoD, a total of 36 proposals for FDI/Joint ventures have been approved for manufacturing of defence equipment (both in the public and private sectors) till December 2017. FDI amounting to Rs. 25.84 crores has been received in the defence industry sector from April 2000 to September 2016,<sup>19</sup> which is negligible in view of the total FDI coming to India during the same period.
- The present government has launched many reforms and initiatives to reverse the country's huge arms import dependency, which includes "Make in India," "Ease of Doing Business," enhanced FDI limits for defence sector, liberal grant of industrial licences for defence sector, etc. The aim of the government is to make India a lucrative manufacturing and defence sourcing hub in the region. However, positive result of these initiatives in the defence sector is yet to be seen.<sup>20</sup>
- To ensure self-reliance, no doubt the government is heading in the right direction by laying emphasis on Make in India.<sup>21</sup> However, it is the implementation of such schemes that needs to be ruthlessly ensured.

### Lessons for India

As highlighted earlier, the significant aspect of China's defence reforms has been the restructuring of its defence production organisations with the aim of achieving four main goals, namely, *Competition, Evaluation, Supervision and Encouragement*. At the central level, it has consolidated various organisations handling defence and most importantly, separated buyers from builders. At defence industry level, the Chinese reforms have focused on removing government control and making the industry more competitive and independent of government subsidies. The aim of these reforms was

to remove government from enterprise operations, make the enterprise more sensitive to the marketplace and bring in quality, innovation and encouragement. There are many lessons for India to learn from the rise of the Chinese arms industry as the problems being faced presently by the Indian defence sector are very similar to what China faced prior to the reforms of 1998,<sup>22</sup> which include—underutilised production facilities, inefficient and redundant organisational structure, outdated technology, inflexibility in hiring and firing, loss of quality manpower to private industry, incorrect pricing of inputs, poor management practices, etc.

In India, the Ministry of Defence controls all military procurements, policy formulation, budgets and functioning of all DPSUs and OrdFys (through Department of Defence Production, or DDP). It also controls R&D sector through DRDO. So, we can say that *the MoD is the builder, buyer and R&D agency—all in one, for the Indian defence sector*. In the past and especially post Kargil war, a number of changes and reforms have been done but they were limited in scope and nature. These were primarily related to the name changes, reorganisation of institutions and amendments to the Defence Procurement Procedures (DPP), and hence had a limited impact. There is however, a need to recognise the depth of the problem and carry out reforms in the fundamental structure of defence production.

Most of the Indian public defence units have hierarchical bureaucracy which stifles initiative and creativity, and thus restricts efficiency. They continue to get patronage and preference from the government through the system of nomination for award of defence contracts, which discourage them from taking steps to cut losses and also to provide incentive for efficiency and quality products. There is a need to revitalise the defence industry and make it a more vibrant, competitive, high-tech and efficient sector. The monopolistic situation enjoyed by the DPSUs/OrdFys/DRDO in the field of defence production as well as defence R&D, should be brought to an end. Further, greater participation by the private sector in the defence industry should be encouraged.

In the larger interest of the Indian defence industry, the government should ensure a level-playing field between the public sector and the private sector, which should lead to a healthy competition between the two. Needless to say, the functioning, control and decision-making process of the public sector units should be totally transformed to ensure transparency, competition, efficiency and accountability. There is an urgent need to corporatise all the DPSUs as well as Ordnance factories, with larger autonomy so that they can take their commercial and administrative decisions more freely. The role of the MoD should be limited to the regulator as well as facilitator for the entire defence industry in the country for the private as well as public sector. It is high time the government came out of the business of defence production and manufacturing. Let the public sector face the competition and survive based on its inherent core strengths, skill sets and competencies. The inefficient, unproductive, incompetent and lethargic organisations will automatically be weeded out and will be out of business in the natural process.

It is strongly recommended that the government must review and reform the whole structure, processes, procedures and organisation of the entire defence production as well as defence acquisition within the country, so that India can lay down a strong foundation for the growth of its defence industry in the coming years. Any short-term view as well as part-reforms will be inadequate and will be far from achieving the desired goal. The study of the rise of Chinese defence industry can provide us with much insight about the approach required to be taken towards reforming the indigenous defence industry, which can be further modified to suit our needs and peculiarities.

### Conclusion

It is a considered opinion that India should learn from the experience of countries like China with regard to reforms in the defence sector in order to achieve self-sufficiency and self-reliance. Our leadership has to reshape the entire framework of defence production with focus on defence R&D, defence manufacturing and raising public-private partnership. We need to provide full thrust to indigenisation and build up

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capacities and capabilities of our domestic defence industrial base, so that the requirements of defence forces for modernisation and upgradation of weapons systems and equipment can be met indigenously. In

addition, we have to review the existing government policies, procedures and guidelines to boost Make in India initiative and make it lucrative for domestic as well as foreign investments.

### Notes

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