



India Trade Promotion
Organisation



NATIONAL APEX CHAMBER



EMERGING CONTOURS OF INDIA'S DEFENCE AND HOMELAND SECURITY

*Optimizing Make in India initiative
to make the country a major Defence manufacturing hub*



PHD RESEARCH BUREAU
PHD CHAMBER OF COMMERCE AND INDUSTRY



Emerging Contours of India's Defence and Homeland Security

Emerging Contours of India's Defence and Homeland Security

**Optimizing Make in India initiative to make the
country a major Defence manufacturing hub**

October 2019

PHD RESEARCH BUREAU

PHD CHAMBER OF COMMERCE AND INDUSTRY

PHD House, 4/2 Siri Institutional Area, August Kranti Marg New Delhi 110016

Phone: 91-11-49545454 Fax: 91-11-26855450, 26863135

Email: research@phdcci.in Website: www.phdcci.in



डि. प्रशांत कुमार रेड्डी, भा.प्रशा.से.
D. Prasanth Kumar Reddy, IAS



भारत के उप-राष्ट्रपति के निजी सचिव
PRIVATE SECRETARY
TO THE VICE-PRESIDENT OF INDIA
नई दिल्ली/NEW DELHI - 110011
TEL.: 23016344 / 23016422 FAX : 23018124

MESSAGE

The Hon'ble Vice President of India is happy to know that the PHD Chamber of Commerce and Industry, in association with India Trade Promotion Organisation (ITPO), and Ministry of Commerce, is organizing "22nd India International Security Expo 2019" from October 3 – 5, 2019 at Pragati Maidan, New Delhi.

The Hon'ble Vice President extends his greetings and congratulations to the organizers and the participants and wishes the event all success.


(D. Prasanth Kumar Reddy)

New Delhi
01st October, 2019.

राजनाथ सिंह
RAJNATH SINGH



रक्षा मंत्री
भारत
DEFENCE MINISTER
INDIA

MESSAGE

Development of Indian Defence and Homeland Security is necessary for nation building. India's Defence sector has been identified as one of the most promising sectors under the "Make in India" mission to achieve USD 5 trillion economy by 2024-25. The sector is contributing to external and internal peace and security contributing towards strong socio-economic development of the country.

The reform measures undertaken during the recent years are aimed at creating an ecosystem where both public and private sectors contribute as per their respective strengths and experiences towards strong development of domestic defence capabilities.

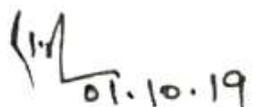
To stimulate the growth of domestic Defence sector in the country, the Government has undertaken many reformative measures which includes simplifying industry licensing process, streamlining Defence offsets policy, increasing the FDI cap to promote Defence exports.

I am confident that the 22nd India International Security Expo, 2019 will provide a focussed and effective platform to all the stakeholders for fruitful deliberations on strengthening India's Defence and Homeland Security.

I convey my best wishes to all the participants in the 22nd India International Security Expo, 2019

"Jai Hind"

Date: Oct, 2019
Place: New Delhi


01.10.19
(Rajnath Singh)

नितिन गडकरी
NITIN GADKARI



मंत्री
सड़क परिवहन एवं राजमार्ग;
सूक्ष्म, लघु एवं मध्यम उद्यम
भारत सरकार
Minister
Road Transport and Highways;
Micro, Small and Medium Enterprises
Government of India

MESSAGE

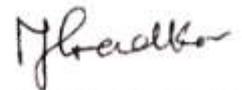
I am happy to learn that PHD Chamber of Commerce and Industry is hosting "**22nd India International Security Expo 2019**" from 3-5 October, 2019 at Pragati Maidan, New Delhi.

Peace, progress and prosperity are the three pillars of India's economic and security ideology. Over the years, India has emerged as a major manufacturing hub providing attractive opportunities for development of Defence equipments and systems not only for domestic consumption but also for export.

The Micro, Small and Medium Enterprises (MSMEs) have emerged as a dynamic sector of the Indian economy over the last five decades. The Government aims to facilitate greater participation of MSMEs in Defence sector.

I believe that the 22nd India International Security Expo, 2019 will prove an excellent platform for the MSMEs to explore areas of contribution in Make in India to promote growth of India's Defence sector in the coming times.

I extend my best wishes to all the stakeholders participating in the 22nd India International Security Expo, 2019.


(Nitin Gadkari)

Date: 25th September, 2019
Place: New Delhi

नित्यानन्द राय
NITYANAND RAI



गृह राज्य मंत्री
भारत सरकार
नार्थ ब्लॉक, नई दिल्ली - 110001

MINISTER OF STATE FOR
HOME AFFAIRS
GOVERNMENT OF INDIA
NORTH BLOCK,
NEW DELHI - 110001



संदेश

भारत एक विशाल संघीय राष्ट्र है जो अनेक संस्कृतियों को अपने में संजोए हुए है। यहाँ भिन्न-भिन्न जातियों धर्मों भाषाओं को बोलने वाले लोग निवास करते हैं। आजादी के बाद भारत एक संप्रभु सशक्त, लोकप्रिय केंद्रीय सरकार द्वारा शासित राष्ट्र है जहाँ केंद्र एवं राज्यों के मधुर संबंध से राष्ट्र की एकता को बल मिलता है।

किसी भी राष्ट्र की सुरक्षा को खतरा बाह्य और आंतरिक दोनों प्रकार से हो सकता है। लेकिन जब राष्ट्र की सुरक्षा को खतरा बाहर से होता है तो यह पूर्ण रूप से राष्ट्रीय रक्षा के क्षेत्र में आता है जबकि आंतरिक खतरा, राष्ट्रीय रक्षा एवं सुरक्षा दोनों क्षेत्रों से संबंधित होता है।

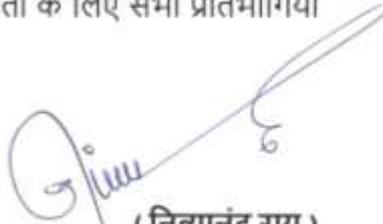
प्रौद्योगिकी की प्रगति के साथ, अंतर्राष्ट्रीय आतंकवाद ने देश की शांति, सुरक्षा और स्थिरता पर व्यापक प्रभाव के साथ अंतरराष्ट्रीय और वैश्विक आयाम ग्रहण किए हैं। अब, खतरा केवल सीमाओं तक सीमित नहीं है, बल्कि समाज के भीतर भी फैला हुआ है। इसलिए, पूरे सुरक्षा तंत्र को समय-समय पर उभर रहे विभिन्न प्रकार के सुरक्षा खतरों को संबोधित करने के लिए अधिक सतर्क और सक्रिय रहने की आवश्यकता है।

आंतरिक सुरक्षा के मोर्चे पर प्रमुख ध्यान मुख्य रूप से आतंकवाद का मुकाबला करने और देश के भीतरी इलाकों में शांति बनाए रखने पर रहा। सरकार ने हमेशा आतंकवाद रोधी अभियानों में राज्य के अधिकारियों की सहायता के लिए केंद्रीय सुरक्षा बलों की तैनाती करके आंतरिक सुरक्षा के मुद्दों से निपटने के लिए एक बहु-आयामी दृष्टिकोण का पालन किया है और खतरे के आकलन के आधार पर कमजोर संस्थानों और प्रतिष्ठानों को सुरक्षा प्रदान की है।

मुझे यह जानकर खुशी हुई कि **22वें भारत अंतर्राष्ट्रीय सुरक्षा एक्सपो, 2019** का आयोजन भारत में रक्षा और होमलैंड सिक्योरिटी की विकसित प्रकृति के बारे में उद्योग हितधारकों को जागरूक करने के लिए किया जा रहा है।

22वें भारत अंतर्राष्ट्रीय सुरक्षा एक्सपो, 2019 की शानदार सफलता के लिए सभी प्रतिभागियों को मेरी शुभकामनाएं।

01.10.2019
नई दिल्ली


(नित्यानंद राय)

डॉ जी. सतीश रेड्डी
Dr G. Satheesh Reddy

FNAE, HFCSI, FRIN (London), FMAGANUD (Russia), FAeS, FRAeS (UK),
HFPMAL, FSSWL, FIET (UK), FIE, FAPAS, FIETE, AFAIAA (USA)



सत्यमेव जयते

भारत सरकार
Government of India



MESSAGE

सचिव, रक्षा अनुसंधान तथा विकास विभाग
एवं
अध्यक्ष, डीआरडीओ

Secretary, Department of Defence R&D
&
Chairman, DRDO

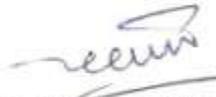
To establish a world class defence industry base in the country, the Government has undertaken diligent efforts in strengthening indigenously developed defence technologies, resources and development of state of art infrastructure. The Defence Research and Development Organization (DRDO) has been developing technologies, products, platforms and systems for promoting research and development in the Indian defence sector.

DRDO provides the relevant 'Know-hows' by way of transferring newer technologies to Indian industries that are required for the Indian Armed. Therefore, transfer of technology self-reliance, industrial growth and hence, national development.

During the recent years, the Government of India has allowed industries to value add on the technologies received and has designed an effective mechanism to protect the interest of the Indian industry in such value added products for developing domestic capabilities.

I believe that the discussions in the 22nd Indian International Security Expo, 2019 on varied themes would help in creating a vibrant defence industry base, going forward.

My best wishes for the 22nd India International Security Expo, 2019


(Dr G Satheesh Reddy)

New Delhi
24 Sep 2019



Dr D K Aggarwal

From President's Desk, PHD Chamber

Defence and Homeland Security are crucial in the area of national security. Over the years, India's Defence sector has contributed significantly towards maintaining internal peace and security.

The Government of India is continuously pursuing initiatives to achieve higher levels of indigenisation and self-reliance in the defence sector by harnessing the capabilities of the public as well as private sectors in the country.

The Government has simplified the industry licensing process, streamlined the defence offset policy, increased the Foreign Direct Investment (FDI) cap under the automatic route from 26% to 49%, and taken necessary steps to promote Defence exports.

Going ahead, I firmly believe that the Indian Defence industry will showcase its potential and reach a higher growth trajectory with contribution from all the industry segments including the Micro, Small & Medium Enterprises (MSMEs).

With this backdrop, I am hopeful that the 22nd India International Security Expo 2019 will provide a comprehensive platform to all the participants for contributing towards the nation building.

My best wishes for the successful deliberations of the 22nd India International Security Expo, 2019.



(Dr D K Aggarwal)





Shri Sanjay Aggarwal

From Senior Vice President's Desk, PHD Chamber

The Indian Defence industry has immense capabilities and the potential to export significantly in the years to come. Extensive defence modernisation plans, an increased focus on homeland security and growing attractiveness of India as a defence sourcing hub will provide a significant boost to the 'Make in India' initiative of the Government.

India has steadily walked towards its objective of self-reliance by becoming one of the few nations to possess and develop advanced weaponry. Significant reform measures have been undertaken by the Government of India to promote indigenisation in the defence sector with a vision of making India a global hub in defence manufacturing.

Going forward, the dynamic reform measures undertaken by the Government of India would go a long way to enable India's Defence sector to contribute significantly in achieving an economic size of USD 5 trillion.

I am sure that the 22nd India International Security Expo 2019 will prove to be a meaningful platform for all the participants to deliberate and discuss various investment opportunities in the areas of Defence and Homeland Security.

My best wishes for the successful conclusion of the 22nd India International Security Expo, 2019.



(Sanjay Aggarwal)



From Vice President's Desk, PHD Chamber



Shri Pradeep Multani

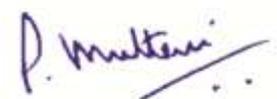
India's defence sector is one of the strategic sectors for maintaining peace, progress, prosperity for holistic development of the country. The sector has immense potential to emerge as a global industry for defence manufacturing, research, supply chain sourcing, software development, offsets, etc.

The Government is continuously pursuing initiatives to achieve higher levels of indigenisation and self-reliance in the defence sector by harnessing the capabilities of the public as well as private sector in the country.

Defence and Homeland Security have emerged as one of the significant sectors due to rapidly changing requirements of global environment. Today, the idea of national security has broadened in terms of defence and homeland security including cyber-security, emerging technologies, among others in the recent times.

The 22nd India International Security Expo, 2019 will offer an excellent platform for connecting industry stakeholders to explore business and investment opportunities in the area of defence and homeland security.

I extend my best wishes to the participants of 22nd India International Security Expo, 2019.



(Pradeep Multani)





Shri Rajeev Talwar

From Immediate Former President's Desk, PHD Chamber

The Indian defence sector has immense potential to positively alter the global defence landscape and catch up with the defence capabilities of some of the developed nations. The Government is giving full thrust to the "Make in India" initiative to give a significant boost to manufacturing.

The policies aim at achieving economies of scale, including the development of capabilities for increasing exports in the defence sector. The praiseworthy reforms undertaken by the Government in defence sector would go a long way in enhancing self reliance in defence systems and reduce dependence on imports to a great extent.

Going ahead, promotion of research & development in this sector with further facilitative measures from the Government will enable India to showcase defence capabilities and attain exponential growth.

I am sure that the 22nd India International Security Expo 2019 will provide an excellent platform for the industry stakeholders and other participants to contribute in the development of India's Defence and Homeland Security.

My best wishes for the grand success of the 22nd India International Security Expo, 2019.



(Rajeev Talwar)





Dr Mahesh Y Reddy

From Secretary General's Desk, PHD Chamber

Today, India boasts a well defined defence procurement policy that provides efficient and expedited procurement of defence technology and equipment, large incentives to the private sector and achieving self-reliance in defence equipment production and acquisition.

The "Make in India" initiative of the Government will project India's Defence manufacturing to the world and will brand India as a defence exporter of several defence components.

Enhancing the role of Micro, Small & Medium Enterprises (MSMEs) in India's defence sector is one of the defining features to promote indigenous designs, development and manufacturing of defence equipments. Further, the Government of India is committed towards strengthening internal security environment by way of undertaking timely reform measures.

PHD Chamber has always worked diligently to contribute to the growth story of defence & homeland security in India.

My best wishes for the successful conclusion of the 22nd India International Security Expo, 2019.



(Dr Mahesh Y Reddy)





Shri Rajiv Bhatnagar

From Chairman, PHD Defence & HLS Committee's Desk

In line with the Hon'ble Prime Minister of India's vision of "Make in India" to boost indigenous manufacturing and generating employment opportunities, the 22nd India International Security Expo, 2019 provides an effective platform for the industry stakeholders to explore emerging investment opportunities in Defence and Homeland Security.

Over the past few years, India has made significant contributions in the development of indigenous defence systems and technologies. Praiseworthy initiatives undertaken by the Government such as "Make in India", relaxing Foreign Direct Investment (FDI) norms and streamlining licensing requirements have fuelled the exponential growth of defence industrial base in the country.

PHD Chamber is extremely privileged to collaborate once again with India Trade Promotion Organisation (ITPO) for the 22nd India International Security Expo, 2019.

The Expo provides an effective platform for the industry stakeholders to come and deliberate about the various emerging opportunities available in Defence and Homeland Security.

My best wishes for the successful conclusion of the 22nd India International Security Expo, 2019.



(Rajiv Bhatnagar)





Lt Gen Subrata Saha

From Member-NSAB and Chief Mentor, PHD Defence & HLS Committee's Desk

An advanced domestic defence and homeland security industry is a critical component of National power, essential for the Nation's sovereignty. The Government of India has been continuously promoting an enabling ecosystem, promulgating policies, and initiating reforms to strengthen India's Defence industrial base.

Over the last five years, significant interest has been generated in the defence sector, amongst domestic and foreign companies, start-ups and academia. The armed forces and the CAPF have also initiated several outreach programmes to connect with all stakeholders, to promote awareness and understanding of their modernization requirements. Going forward, the mission is to position India as a global manufacturing hub for defence products and systems. Investing in defence R&D and developing skills should be top priority, besides creating related infrastructure. The expertise amongst the veterans of the armed forces and CAPF can be easily tapped towards this purpose with some transition training. Certainty in domestic demand, abiding timelines and process simplification would help greater industry participation.

I would urge all industry participants, policy makers, armed forces, academia and other stakeholders to take advantage of the platform provided by the 22nd India International Security Expo, 2019 to connect and create capabilities for India's Defence and Homeland Security.

I wish the 22nd India International Security Expo, 2019 a grand success. JAI HIND!



(Lt Gen Subrata Saha)





MESSAGE

I am happy to place on record my appreciation for the efforts made by PHD Chamber of Commerce & Industry towards successful organization of the India International Security Expo (IISE). IISE has been an annual mega event of India Trade Promotion Organisation (ITPO) and this year for its 22nd edition ITPO and PHDCCI have joined hands. Their joint efforts have resulted in bringing the Expo to the shape it has now attained. On behalf of ITPO, I once again would like to acknowledge the support and cooperation extended by PHDCCI and wish them success in all their endeavours.


(L.C.Goyal)
Chairman and Managing Director

Table of contents

S.No.	Title	Page No
1.	Defence and Homeland Security (DHS) Outlook	21
2.	Global Outlook of the Defence Sector	25
3.	India's Defence and Homeland Security: Policy Environment	32
4.	Structure of exports and imports of India's Defence sector	47
5.	Scope of expanding Defence Manufacturing in India	54
6.	Significance of Defence Manufacturing in achieving USD 5 trillion Indian Economy	62
7.	Role of Skill Development in India's Defence Sector	68
8.	Allocations to Defence sector in Union Budget during the last five years	73
9.	Way Forward for Defence and Homeland Security in India	75
10	Conclusions and Recommendations	78



Emerging Contours of India's Defence and Homeland Security

Executive Summary

India's defence sector is one of the strategic sectors for maintaining peace, progress, prosperity for growth and development of the country. The sector has immense potential to emerge as a global industry for defence manufacturing, research, supply chain sourcing, software development, offsets, etc. Today, the idea of national security has broadened in terms of defence and homeland security including cyber-security, emerging technologies, among others in the recent times. The Government of India has been working towards the goal of self-reliance which has propelled us to nurture and expand our defence industrial base and also successfully maintain the Indian internal security scenario. Therefore, the Government of India has introduced several reforms to boost "Make in India" in defence manufacturing, employment generation and investments for achieving strong and sustainable socio-economic development of the country.

India boasts a strong Defence industrial base, with nine Defence Public Sector Units, 41 ordinance factories, 50 dedicated research and development labs and many other establishments¹. India's defence production has increased in the recent years from about Rs. 74,121 crore in 2016-17 to about Rs.78,870 crore in 2017-18 and more than Rs. 80,500 crore in 2018-19. Significant reform measures have been taken by the Government of India to attain self-reliance in defence sector and making India a global hub in defence manufacturing.

India has made remarkable progress in terms of its ranking in the military expenditure across the world. Today, India is the 4th largest country across the world in terms of military expenditure during 2018. India's military spending has increased over the last five years from around USD 51 billion in 2014 to about USD 67 billion in 2018. While, the military spending as a % of GDP has remained more or less similar at about 2.4% during the last five years.

The Government of India has fostered a dynamic policy environment to promote defence and internal security environment. Some of the key policy initiatives undertaken by the Government to promote defence sector are introduction of Draft Defence Production Policy 2018, introducing reforms to improve ease of doing business, opening up the defence sector for foreign investments by increasing the automatic cap from 26% to 49%, liberalizing licensing and procurement processes, among others.

Exports are a vital component of a dynamically growing economy like India. The Government of India has fostered a dynamic economic policy environment during the last five years with the implementation of various notable economic reforms. India's overall defence exports have scaled up drastically from around USD 317 million in 2014 to around USD 1537 million in 2018. While, cumulative defence exports of India stands at about USD 3122 million with a share of 2.1% in total world defence exports between 2014 and 2018. Between 2014 and 2018, India was the 2nd largest importer of defence items of around USD 13876 million with a share of 9.5% in the total world imports of defence items. However, during the last few years, India's defence imports have declined from around USD 3334 million in 2014 to around USD 1539 million in 2018.

¹ Data compiled from official sources, Ministry of Defence, Government of India



Emerging Contours of India's Defence and Homeland Security

In recent years the manufacturing sector has been the major focus for the Government of India. Keeping in view the objective to increase the share of overall manufacturing in India's GDP from 16% to 25% by 2022, it becomes crucial that the defence sector should be tapped and explored as one of the major sectors contributing to the growth of manufacturing in the country. Some of the key initiatives launched by the Government to boost manufacturing of state of art defence products are introduction of innovations for Defence Excellence, policy for indigenisation of components and spares used in defence platforms, reducing entry barriers to encourage private sector participation, promoting intellectual property right (IPR), setting up of Defence Investor Cell, among others.

MSMEs have contributed significantly to defence manufacturing with thousands of quality products, mainly at sub-system and component level. The Government has introduced several measures to provide hand holding support to MSMEs to increase their participation in defence manufacturing. MSMEs across the country are supplying components and sub-assemblies to the DPSUs, Ordnance Factories, DRDO and private industries. The Government envisages to increase participation of MSMEs engaged in Defence production from over the present level of 8000 MSMEs to 16,000 in the coming times. Going forward, role of MSMEs is significant in contributing to the employment generation and achieving self-reliance in defence sector.

The strong macro-economic fundamentals and the underlying strengths are indicative of the potential of India to achieve a USD 5 trillion economy in the next few years. The current structure of the economy and the emerging dynamics provide us grounds to target achieving USD 1 trillion from agriculture and allied activities, USD 1 trillion from manufacturing and USD 3 trillion from services. Therefore, defence sector would play a crucial role in contributing to the manufacturing sector of India. Keeping in view of this, Defence sector is one of the most prominent sectors under "Make in India" programme announced by the Government to realize USD 5 Trillion Economy by 2025.

The draft defense production policy 2018 reflects the determination of the Government to achieve² USD 26 billion Defence sector with an anticipated investment of USD 10 Billion in aerospace and Defence goods and services by 2025 along with creating employment for nearly 2-3 million people. During the last five and a half years, the Government has created an ecosystem where private and public sectors are contributing together as per their respective strength and experience in the growth of defence sector.

The policy initiatives undertaken by the Government in recent times have brought about a paradigm shift in the defence sector with a renewed focus on self-reliance, import substitution, technology upgradation and indigenization. Going forward, some of the measures that can enhance the contribution of the defence sector to bolster the 'Make in India' initiative include identifying key components & systems and encourage global leaders to set up manufacturing base in India; developing critical and cutting-edge technologies indigenously; fostering innovations and technology development; strengthening university-industry linkages in defence; collaborations with colleges and Industrial Training Institutes (ITIs) to ensure that defence relevant technologies and skills are part of the curriculum; extending line of credit facility and other financing options; early rollout of the defence production policy; enhancing priority-sector funding and encouraging long-term funding mechanisms; enhancing the use of Artificial Intelligence (AI) application in Defence, among others.

² As envisaged in the Defence Production Policy 2018, Government of India





NATIONAL APEX CHAMBER

DEFENCE AND HOMELAND SECURITY (DHS) OUTLOOK



1. Defence and Homeland Security (DHS) Outlook

Peace, progress, prosperity are the pillars of achieving sustainable economic growth. Maintenance of internal harmony and a stable law and order system are essentials for achieving desired economic outcomes. Therefore, Defence and Homeland Security have been identified as one of the most prominent sectors to achieve inclusive and sustainable growth. Indian internal security is one of the prime focus areas of the Government by continuously monitoring the domestic security situation, issuing appropriate advisories, extending manpower and financial support, guidance and expertise for maintenance of peace and harmony in the country.

India is a diverse nation and this diversity poses peculiar security and defence related requirements. In this context, several proactive steps are being taken by the Government to continuously engage for taking up and pursuing a variety of multilateral and bilateral initiatives in security related areas through various instruments. Therefore, continuous and non-ending security reforms are being undertaken to achieve our Hon'ble Prime Minister Shri Narendra Modi's vision to make India a USD 5 trillion economy by 2024-25.

The Government of India has been working towards the goal of self-reliance which has propelled us to nurture and expand our defence industrial base and also successfully maintain the Indian internal security scenario. A country's internal security mechanism would only be efficient and strong if its indigenous defence sector is well equipped and sufficient to meet the desired needs of the country. Therefore, the Government of India has introduced several reforms to boost "Make in India" in defence manufacturing, employment generation and investments for achieving strong and sustainable socio-economic development of the country.

Today, our nation boasts of a well defined defence procurement policy that provides efficient and expedited procurement of defence technology and equipment offering large incentives to the private sector. Enhancing the role of Micro, Small & Medium Enterprises (MSMEs) in defence sector is one of the defining features to promote indigenous designs, development and manufacturing of defence equipment to give a boost to the Make in India initiative.

The Indian Defence industry has immense capabilities and the potential to export significantly in the years to come. The Government is continuously pursuing initiatives to achieve higher levels of indigenisation in the defence sector by harnessing the capabilities of the public as well as private sector industries in the country. The Government is fully committed to promote research and development, modernization and training of armed forces, emphasis on institutionalizing efficient systems, strengthening cyber security to meet home land security requirements of the country.

India boasts a strong defence industrial base, with nine Defence Public Sector Units, 41 ordinance factories, 50 dedicated research and development (R & D) labs and many other



Emerging Contours of India's Defence and Homeland Security

establishments³. There are about 70 license holding private companies with a dedicated workforce of 1.7 lakhs people. Under the "Make" procedure, till date 40 industry development proposals have been given in principle approval by the Government. Eight such projects would have an estimated value of Rs 2,000 crore in next five years. As against 215 Defence licenses issued till 2014, the number of Defence licenses issued increased significantly to 440 by March 2019

India's defence production has increased in the recent years from about Rs. 74,121 crore in 2016-17 to about Rs.78,870 crore in 2017-18 and more than Rs. 80,500 crore in 2018-19. Significant reform measures have been taken by the Government of India to strengthen defence and national security of the country. A number of products have been developed through enhanced focus on research and development; expanding and upgrading capabilities, adoption of technological innovations, among others.

Trend in India's defence production (Rs crore)

Defence Sector / Year	2016-17	2017-18	2018-19
Defence Public Sector Undertakings	40427	43482	44825
Ordnance Factory Board	14825	14829	12816
Other PSUs/Joint Ventures	4698	5179	5567
Defence Private Companies	14171	15380	17294
Total Production	74121	78870	80502

Source: PHD Research Bureau, PHDCCI compiled from Ministry of Defence, Government of India. Note: PSUs stands for Public Sector undertakings

The government has introduced many far-reaching reforms in the past five and a half years to create an ecosystem where private and public sectors contribute together as per their respective strength and experience. The reforms have touched almost all aspects of Defence production and procurement. Several initiatives have been undertaken to promote higher defence exports and reduce dependence on imports including revision in Defence Procurement Procedures, introduction of Strategic Partnership Model, increase in Foreign Direct Investment (FDI) through automatic route from 26% to 49%, among others.

Going ahead, with growth of the Indian economy expected to grow in a higher trajectory on account of various praiseworthy reforms undertaken by the Government, the Indian defence industry will attract large chunk of global investments. The Indian defence sector will scale to new heights with the support of all the industry segments including the MSMEs in the process of making India a major manufacturing hub, thereby, providing attractive opportunities for co-development and co-production of defence equipments and systems not only for our defence forces but also for exports to the world.

³ Data compiled from official sources, Ministry of Defence, Government of India as on 23rd September 2019



Emerging Contours of India's Defence and Homeland Security

Ordnance Factories and Defence Public Sector Undertakings along with participation from private sector have played a huge role in making our country a defence production hub. Significant players in public sector contributing in the defence production ecosystem in the country are Hindustan Aeronautics Limited (HAL), Bharat Electronics Limited (BEL), Bharat Dynamics Limited (BDL), BEML Ltd, Mishra Dhatu Nigam Limited (MIDHANI), Mazagon Dock Shipbuilders Limited (MDL), Garden Reach Shipbuilders & Engineers Limited (GRSE), Goa Shipyard Limited (GSL) and Hindustan Shipyard Limited (HSL).

Snapshot of key indicators of Defence Sector in India



Source: PHD Research Bureau, PHDCCI compiled from Ministry of Defence, Government of India. NOTE: DPSUs –Defence Public Sector Undertakings, Ordnance Factory Board (OFB), Defence Procurement Procedure (DPP)





NATIONAL APEX CHAMBER

GLOBAL OUTLOOK OF THE DEFENCE SECTOR

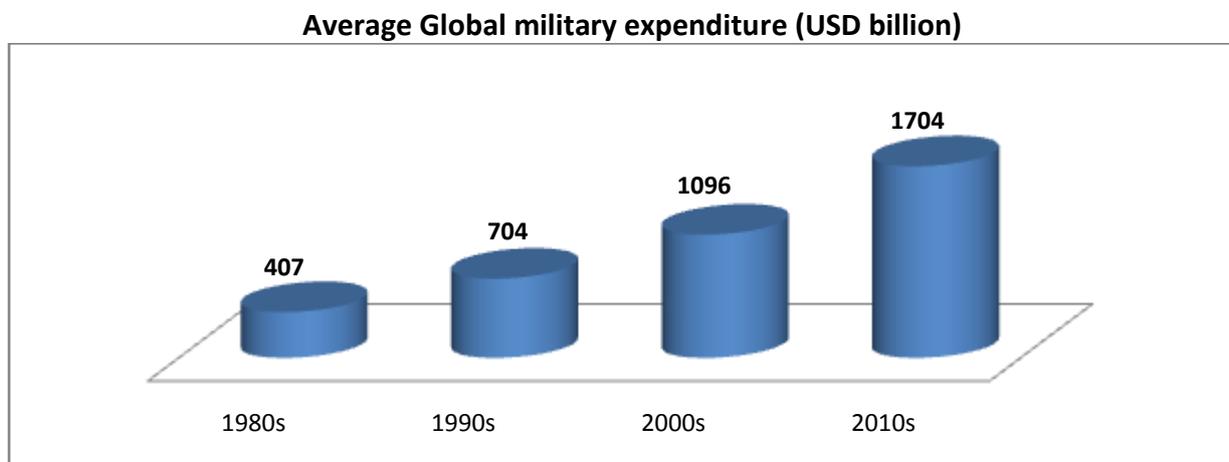


2. Global Outlook of the Defence Sector

The defence sector has emerged as one of the crucial sectors across the world keeping in view the emerging dynamic needs in the area of defence and homeland security. The world has witnessed the rising share of governments' spending on strengthening its armed forces and defence sector for achieving sustainable growth of the economies. Over the years, economies across the globe are focusing on further modernizing their defence sector with adoption of newer technologies, innovations and promoting research and development. Going forward, countries are looking to broaden their defence partnerships and cooperation for strengthening military to military engagement to attain global peace and security in the world.

2.1 Decades of growing Global military expenditure

The global military expenditure has witnessed an increasing trend over the last many decades. During 1980s, the average global military expenditure was at about USD 407 billion which scaled up to about USD 704 billion in 1990s, USD 1096 billion in 2000s and more than USD 1700 billion in 2010s.



Source: PHD Research Bureau, PHDCCI compiled from World Bank. Note: 2010s period include data from 2010 to 2018.

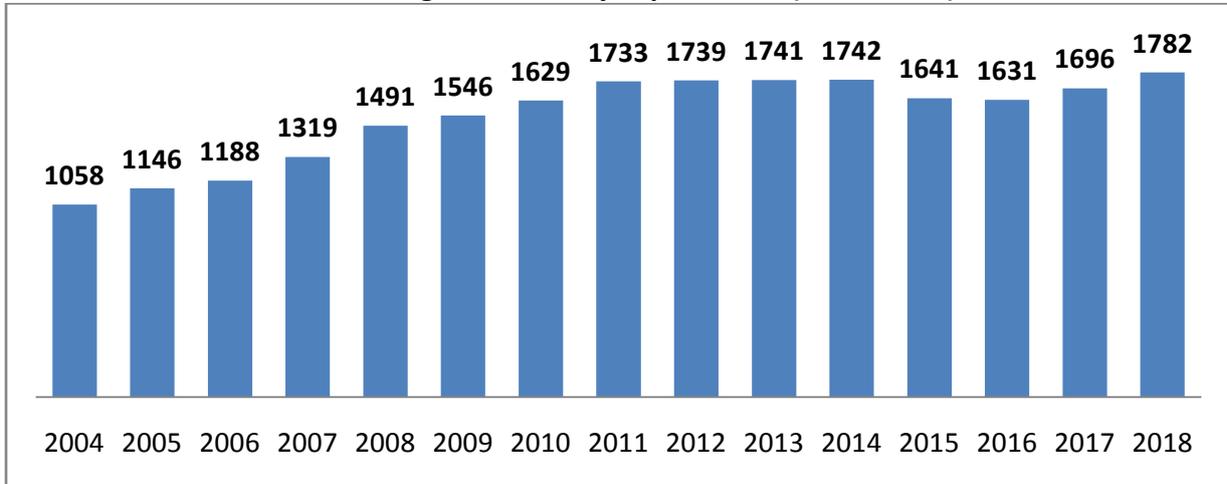
2.2 Military expenditure continues to increase across the globe

The global military expenditure was at about USD 1058 billion in 2004 which significantly increased to more than USD 1700 billion in 2018 with an average growth of about 5% during the last fifteen years. The key reason attributed to the increase in military expenditure were rising share of governments' spending on strengthening its armed forces and defence sector for the growth and development of any country.



Emerging Contours of India's Defence and Homeland Security

Trend in global military expenditure (USD billion)

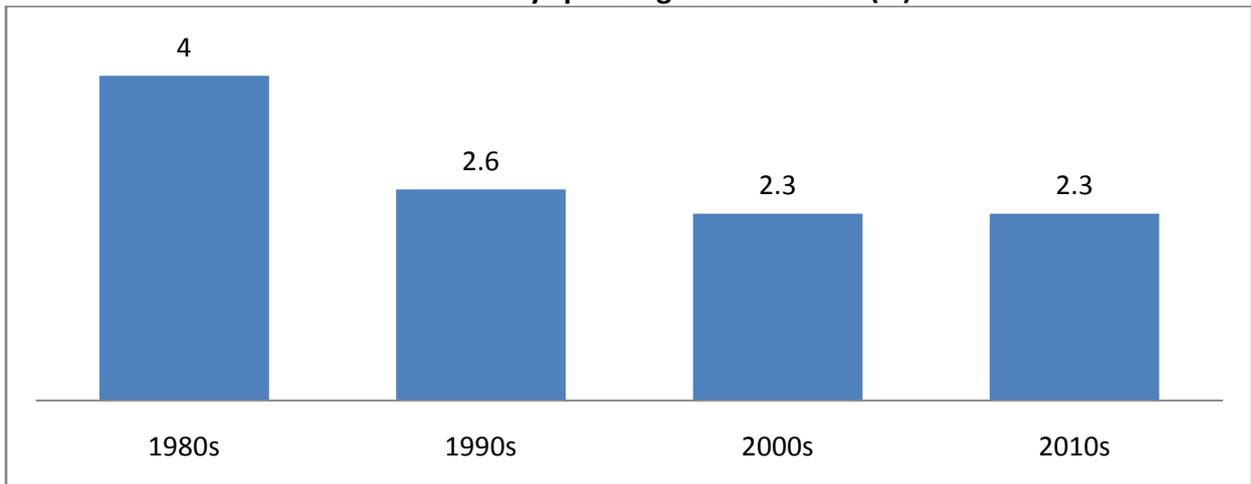


Source: PHD Research Bureau, PHDCCI compiled from World Bank

2.3 Military spending as a share of global GDP has fallen

The global military expenditure as a % of GDP has witnessed a declining trend over the last many decades. During 1980s, the average global military expenditure as a % of world GDP was at about 4% which declined to about 2.6% in 1990s, 2.3% in 2000s and 2010s each.

Global military spending as a % of GDP (%)

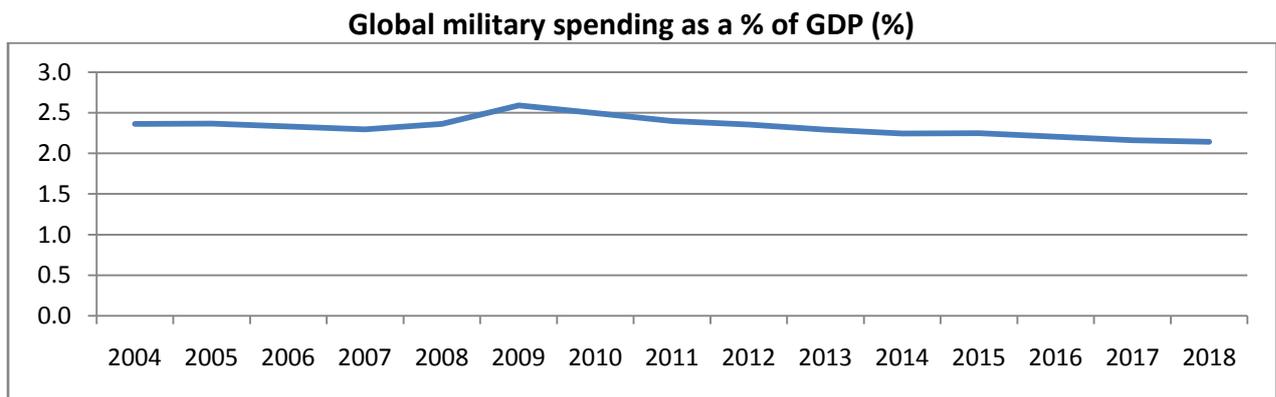


Source: PHD Research Bureau, PHDCCI compiled from World Bank. Note: 2010s period include data from 2010 to 2018.



2.4 Global Military expenditure as a % of GDP declines

The global military expenditure as a % of GDP was at about 2.4% in 2004 which declined to around 2% in 2018. The average global military expenditure as a % of GDP was at around 2% during the last fifteen years.

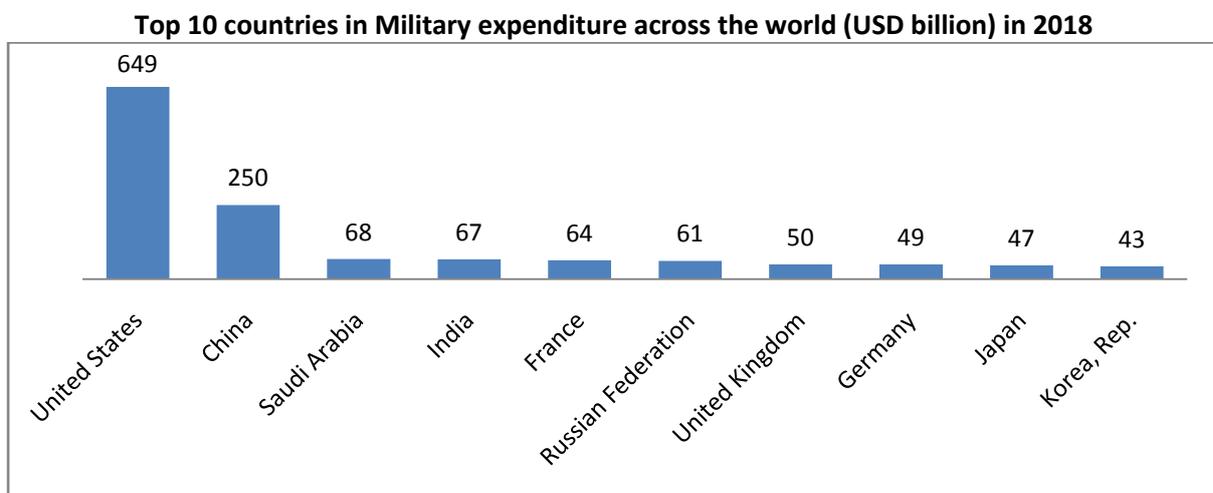


Source: PHD Research Bureau, PHDCCI compiled from World Bank

2.5 Top 10 countries in Military expenditure across the world

The five biggest spenders on the military expenditure across the world were the United States, China, Saudi Arabia, India and France; together these countries accounted for more than 60% of global military spending in 2018. USA is the largest country across the world with military expenditure of around USD 649 billion followed by China (USD 250 billion), Saudi Arabia (USD 68 billion), India (USD 67 billion), France (USD 64 billion), among others during 2018.

India is the 4th largest country across the world in terms of military expenditure



Source: PHD Research Bureau, PHDCCI compiled from World Bank

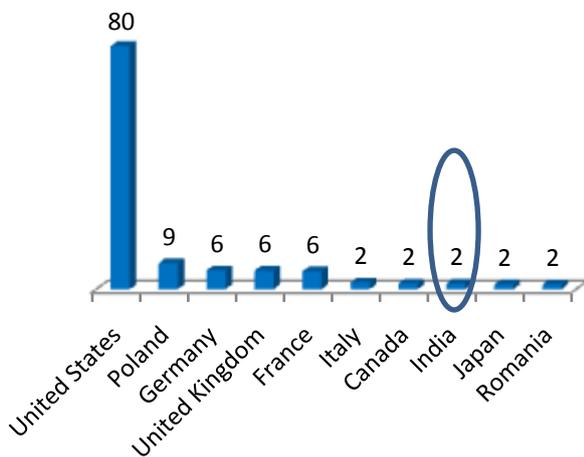


Emerging Contours of India's Defence and Homeland Security

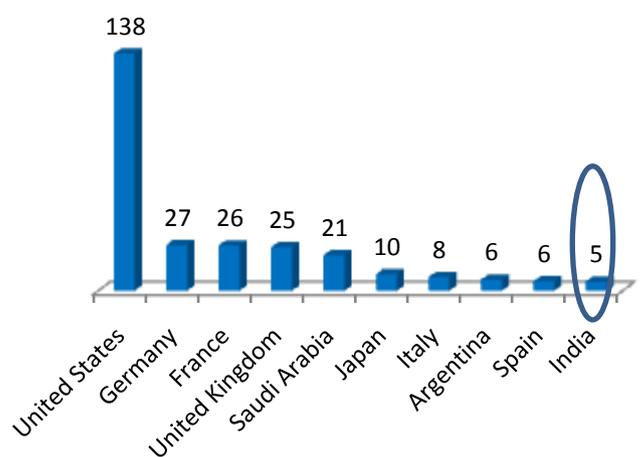
2.6 Comparative analysis of military expenditure across the top ten economies

The military expenditure by economies across the world has witnessed an increasing trend over the last many decades. From 1970 to 2018, India has made remarkable progress in terms of its ranking in the military expenditure across the world. In the year 1970, India's military expenditure was at about USD 2 billion, which scaled up to USD 5 billion in 1980, USD 11 billion in 1990, USD 14 billion in 2000, USD 46 billion in 2010 and USD 67 billion in 2018. India has improved its ranking significantly and has emerged as the 4th largest military spending economy in the world during 2018.

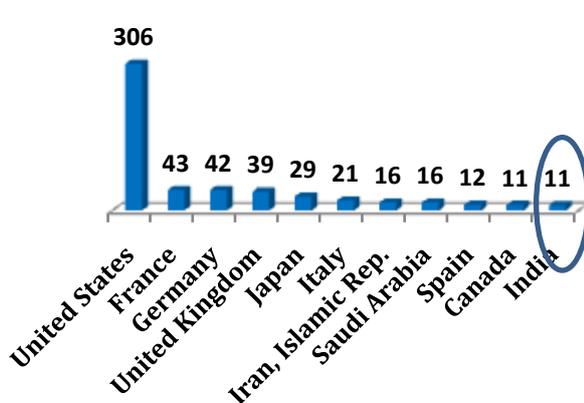
**Military expenditure for the year 1970
(USD Billion)**



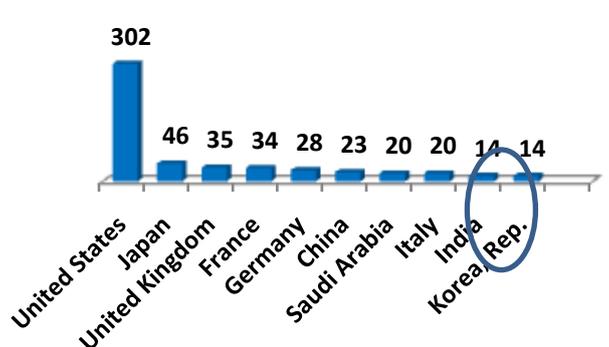
**Military expenditure for the year 1980
(USD Billion)**



**Military expenditure for the year 1990
(USD Billion)**

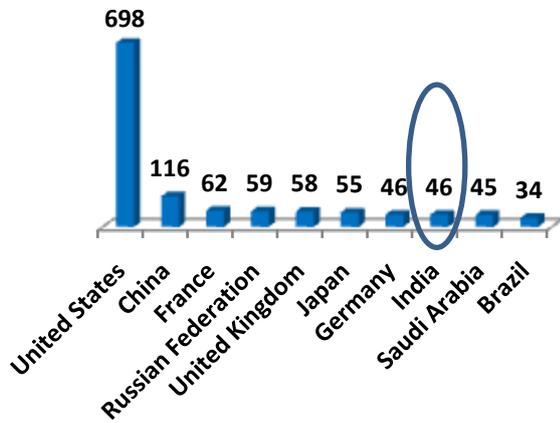


**Military expenditure for the year 2000
(USD Billion)**

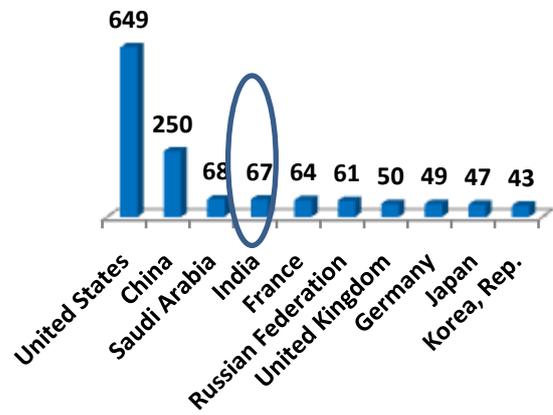


Emerging Contours of India's Defence and Homeland Security

**Military expenditure for the year 2010
(USD Billion)**



**Military expenditure for the year 2018
(USD Billion)**

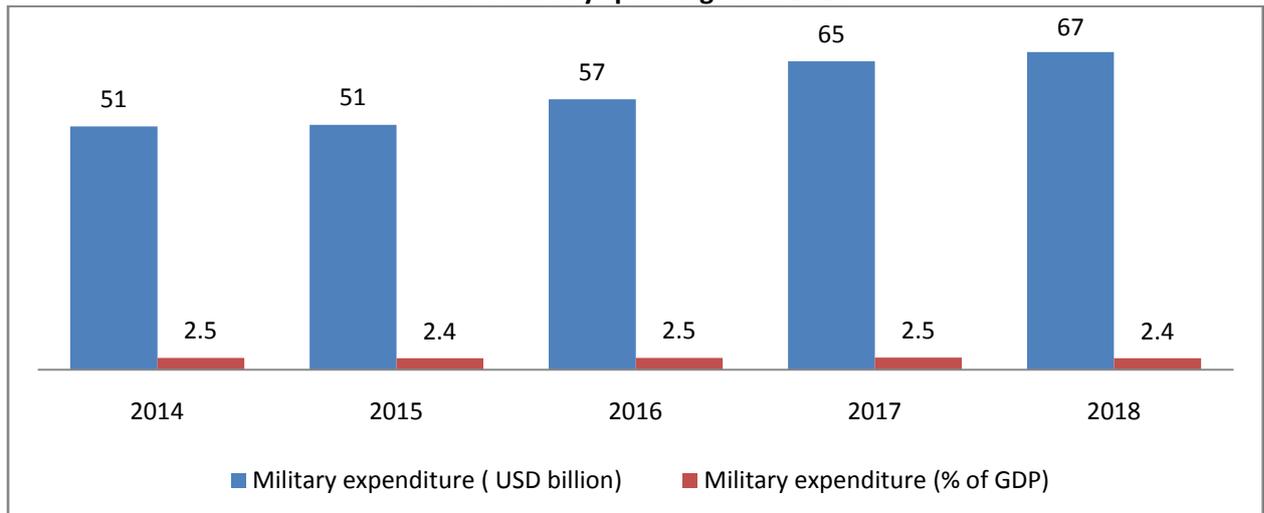


Source: PHD Research Bureau, PHDCCI compiled from World bank. Please note in the year 1990, India's rank in military spending was at 11th position.

2.7 Trend in India's military spending

India's military spending has increased over the last five years from around USD 51 billion in 2014 to about USD 67 billion in 2018. While, the military spending as a % of GDP has remained more or less similar at about 2.4% during the last five years.

India's military spending since 2014



Source: PHD Research Bureau, PHDCCI compiled from World Bank



Emerging Contours of India's Defence and Homeland Security

Snapshot of select indicators of defence sector

Rank 2018	2018				2008			
	Country	Military Expenditure (ME) USD billion	% Share in world's ME	% share in GDP	Country	Military Expenditure (ME) USD billion	% Share in world's ME	% share in GDP
1	USA	649	36.4	3.2	USA	621	41.7	4.2
2	China	250	14.0	1.9	China	86	5.8	1.9
3	Saudi Arabia	68	3.8	8.8	Saudi Arabia	38	2.6	7.4
4	India	67	3.7	2.4	India	33	2.2	2.5
5	France	64	3.6	2.3	France	66	4.4	2.3
6	Russian Federation	61	3.4	3.9	Russian Federation	56	3.8	3.1
7	United Kingdom	50	2.8	1.8	United Kingdom Germany	66	4.4	2.3
8	Germany	49	2.8	1.2	Germany	48	3.2	1.3
9	Japan	47	2.6	0.9	Japan	46	3.1	0.9
10	Korea, Rep.	43	2.4	2.6	Korea, Rep.	26	1.7	2.6
	World	1782	100	2.14	World	1491	100	2.4

Source: PHD Research Bureau, PHDCCI compiled from World Bank. Note: Rankings are as per the year 2018.





NATIONAL APEX CHAMBER

INDIA'S DEFENCE AND HOMELAND SECURITY: POLICY ENVIRONMENT



3. India's Defence and Homeland Security: Policy Environment

Today, India's credibility in the global economic system is stronger than ever. Since the launch of the "Make in India" initiative by the Government, there is visible momentum, energy and optimism in the Indian economic environment for making India a global manufacturing hub. The "Make in India" campaign aims to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country.

Self-reliance in defence production has been the goal of India's defence production strategy. In order to give a significant boost to the "Make in India" mission, the Government has given a new impetus to the development of defence production in the country both for domestic use and also for exports to the world. The Government has announced a Draft Defence Production Policy in 2018 to strengthen defence and national security. During the past few years, significant progress in domestic defence production and procurement procedures has been made.

Several defence PSUs in Aero, Naval, Land systems and Electronics have emerged as significant players in the defence production ecosystem in the country. Platforms such as Air Defence Missile System 'Akash', Light Combat Aircraft 'Tejas', Main Battle Tank 'Arjun', Ballistic Missiles like 'Prithvi', 'Agni', Multi Rocket Launcher System 'Pinaka', Central Acquisition Radar have been designed and produced indigenously and several others like Fighter Aircraft Sukhoi Su-30 MKI & T-90 Tank have been produced based on transfer of technology. Some of the key reform measures undertaken by the Government to boost defence productivity in the economy are as follows:

3.1 Draft Defence Production Policy 2018

The Government had announced that it will bring out an industry friendly Defence Production Policy 2018 to promote domestic production by public sector, private sector and Micro, Small and Medium enterprises (MSMEs). Consequent to this, a draft Defence Production Policy 2018 has been prepared by the Government which provides a focused, structured and significant thrust to development of defence design and production capabilities in the country.

Vision

To make India stand among the top five countries of the world in Aerospace and Defence industries, with active participation of the public and private sector, thereby, fulfilling the objective of self-reliance as well as exporting to other countries.



Emerging Contours of India's Defence and Homeland Security

The broad mission of the draft policy is to promote the "Make in India" initiative in the defence sector and create a world-class arms manufacturing base in the country, fulfilling not only the larger goal of self-reliance but also the requirements of foreign countries.



Salient Features of the Draft Defence Production Policy 2018

Creation of an environment that encourages a dynamic, robust and competitive defence industry as an important part of the 'Make in India' initiative.

To facilitate faster absorption of technology and creation of a tiered defence industrial ecosystem in the country.

To reduce current dependence on imports and to achieve self-reliance in development and manufacturing of following weapon systems/platforms by 2025:

- Fighter Aircraft.
- Medium Lift and Utility Helicopters.
- Warships.
- Land Combat Vehicles.
- Autonomous Weapon Systems.
- Missile Systems.
- Gun systems.
- Small Arms.

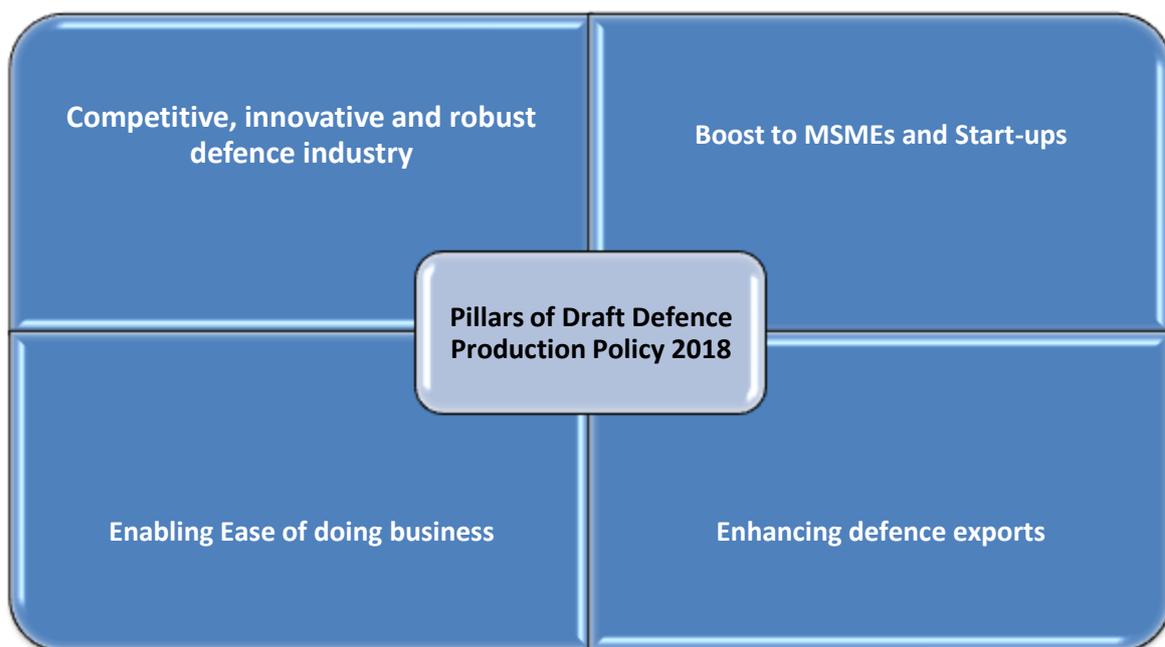


Emerging Contours of India's Defence and Homeland Security

- Ammunition and Explosives.
- Surveillance Systems.
- Electronic Warfare (EW) Systems.
- Communication Systems.
- Night Fighting Enablers.

Source: PHD Research Bureau, PHDCCI compiled from various sources

Pillars of the Draft Defence Production Policy 2018



Source: PHD Research Bureau, PHDCCI compiled from various sources

The draft policy is centered on fostering a competitive, innovative and robust defence industry. The policy focuses on to encourage collaborations for acquiring latest technology, manufacturing processes, skill-sets and R&D. It is designed to provide a boost to MSMEs and Start-ups along with strengthening of infrastructure, including Quality Assurance (QA)/ Quality Control (QC)/testing labs, both within public and private sector which will help in enabling ease of doing business. The policy also aims to enhance India's defence exports to a higher trajectory in the coming times.

3.1.1 Ease of doing business in Defence Production

The draft defence production policy 2018 aims to make it easier to do business in defence sector, particularly for innovators, micro, small and medium-sized enterprises (MSMEs) and non-traditional defence suppliers.



Emerging Contours of India's Defence and Homeland Security

<p>Promotion of Ease of Doing Business in Defence Production</p>	<p>Proposal in Draft Defence Production Policy 2018</p>	<p>Impact</p>
	<p>It is envisaged that necessary enabling provisions will be brought in for small businesses without having restrictions of turnover, prior experience as they meet technical and functional requirements.</p> <p>The stipulation that the value-addition for Indigenously Designed, Developed and Manufactured (IDDM) should be done by one unit will be done away with. The IDDM requirements of value-addition can be met if said value-addition is done within India by multiple units within India.</p>	<p>This will encourage Startups and MSMEs participation in defence sector</p> <p>This will enable Startups and MSMEs working in part of the value-chain.</p>

Source: PHD Research Bureau, PHDCCI compiled from various sources

3.1.2 Licensing Process

The draft policy aims at liberalizing the licensing process for defence industries. The list of items requiring licenses will be reviewed and pruned. Except a small negative list, other items will be taken out of purview of licensing. All applications for licenses will be disposed off in time bound manner. No Objection Certificate (NOCs)/Comments from all agencies must necessarily be received within two weeks. Favourable consideration will be given to the track record of companies for purpose of renewal or additional license.



Source: PHD Research Bureau, PHDCCI compiled from various sources



Emerging Contours of India's Defence and Homeland Security

Following are the other areas as covered under the draft defence production policy 2018:

Areas	Brief Proposal
Open Competition	The policy proposes to increase the participation of industry in order to make revenue procurement and outsourcing of services progressively competitive
Offsets	The policy envisages that the new investment linked avenues for discharge of offset obligations will be made available which will also enable certainty and quick discharge of offsets.
Tax	It is proposed that the tax regime will be rationalised to make domestic manufacturing attractive by ensuring there is no tax inversion.
Market Creation	Aggregation of demand over the medium to long term will be the accepted broad policy for attracting investment in the major defence production areas.
Vendor Development and Outsourcing	OFB and DPSUs will focus on system integration, design and development, and will actively engage domestic vendors in the private sector for other assembly work. Private defence majors will also be encouraged.
Defence Investor Cell	Department of Defence Production will provide handholding support to MSMEs and other investor in defence production to encourage their participation.
Competency Mapping	The policy aims to undertake 'Competency Mapping' of private defence industry including MSMEs, to establish their core competence/ability to absorb various technologies.
Infrastructure Development	Two Defence industry Corridors will be set up in collaboration with States to provide state-of-the-art infrastructure and facilities for setting up defence production facilities. Government will also set up testing facilities for industry use. Defence Corridors in Tamil Nadu and Uttar Pradesh have already been set up.
Boosting OFB and Public Sector	Government will support infusion of new technology/machineries in OFB/DPSUs. OFB/DPSUs will be encouraged to increase productivity and timely execution of orders. Ordnance Factories will be professionalized to make them competitive and improve their productivity. Disinvestment of minority stake in DPSUs will be



Emerging Contours of India's Defence and Homeland Security

	pursued. DPSUs/OFB will explore acquisition of technology through mergers/acquisitions globally. Cyber security framework will be put in place for DPSUs and OFBs.
Standardization and Quality Assurance	The quality control process will be reviewed and aligned with the best global practices.
Innovation and R&D	To create an active and healthy innovation and R&D ecosystem for Defence technologies in partnership with the industry while promoting the public sector based R&D ecosystem developed through DRDO labs.
Start-ups	Start-ups will be involved in the technology development in aerospace and defence sectors. Government will come up with appropriate policy for Start-ups in strategic areas to monetise the newly developed technologies.
Aerospace	Automotive component manufacturers and other similarly relevant industries will be encouraged, through appropriate skill development and technology upgradation initiatives, to transition to aerospace component design and manufacturing. Financial and fiscal incentives will be provided for promoting Maintenance, repair and overhaul (MRO) in aerospace sector.
Electronics and Cyber Space	To leverage India's strength in IT/software area and a program to incentivise development of specific technologies relating to cyberspace will be formulated. A Task Force in the area of Artificial Intelligence and Robotics has been set up by the Government. Necessary mechanism will be put in place to implement the recommendations.
Governance	The Department of Defence Production (DDP), Ministry of Defence will be the nodal department for implementation of the Defence Production Policy 2018. As far as possible, all requirements of forces will be manufactured domestically. The Government e-Marketplace (GeM) will be used for those items, which are repeatedly required for needs of the forces and for which adequate supplier base exists. State Governments will be encouraged to come up with State specific aerospace and defence related policies to attract investment in this sector.



Emerging Contours of India's Defence and Homeland Security

3.2 Defence Procurement Procedure (DPP) - 2016

The Defence Procurement Procedure (DPP) - 2016 has introduced specific provisions that acted as a growth stimulus to the domestic defence industry. The DPP is not merely a procurement procedure it is also an opportunity to improve efficiency of the procurement process, usher change in the mind-sets of the stakeholders and promote growth of the domestic defence industry. It focuses on institutionalising, streamlining and simplifying defence procurement procedure to give a boost to 'Make in India' initiative of the Government of India.

Various steps have been taken by the Government to ensure self-reliance in procuring the defence equipment include introduction of 'Buy [Indian-Indigenous Design Development Manufacture (IDDM)]' as the most preferred acquisition category in the Defence Procurement Procedure (DPP), "Strategic Partnership" model to enhance indigenous defence manufacturing capabilities through the private sector, simplification of Make-II procedure & introduction of 'Suo-Moto' proposals. DPP 2016 also provides greater impetus to the MSMEs, with certain category of "Make" projects reserved exclusively for them. There are also many provisions and procedural measures that have been introduced to make the procurement process more efficient and effective.

3.3 Foreign Direct Investments in Defence Sector

The foreign direct investment environment has been liberalized over the years to attract investments in the defence sector. FDI is allowed upto 49% under automatic route while Government route is required beyond 49% wherever it is likely to result in access to modern technology or for other reasons. The amount of FDI equity inflows⁴ stands at about USD 7.3 million during April 2000 to June 2019.

Sector/Activity	% of Equity / FDI Cap	Entry Route
Defence Industry subject to Industrial license under the Industries (Development & Regulation) Act, 1951; and Manufacturing of small arms and ammunition under the Arms Act, 1959	100%	Automatic up to 49% .Government route beyond 49% wherever it is likely to result in access to modern technology or for other reasons.

The draft defence production policy 2018 proposes to further liberalize the FDI regime in the sector. It is proposed that FDI up to 74% under automatic route will be allowed in niche technology areas.

⁴ Data pertains to Department for promotion of industry and internal trade, Government of India



Emerging Contours of India's Defence and Homeland Security



3.4 Exports

Due to several measures to enhance the ease of doing business in exports by reforming export permission processes and developing a completely end-to-end online portal for receiving and processing authorization permissions, the time taken for authorization has been reduced to less than 50% of time taken in the previous years. Also, new export offices have been opened by various Defence Public Sector Undertakings (DPSUs).

The exponential growth in India's defence exports is an exemplary success of "Make in India in defence" and is an indication of the fact that the country is moving towards becoming a net exporter of defence equipment / platforms after being one of world's biggest importers of defence equipment for decades earlier.

Some of the policy initiatives reforms/steps taken in this regard are:

- Special Chemicals, Organisms, Materials, Equipment and Technologies (SCOMET) Category 6 titled "Munitions List" that was hitherto "Reserved" has been populated and Military Stores list notified vide Notification No.115(RE-2013)/2009-2014 dated March 13, 2015 stands rescinded.
- The Standard Operating Procedure (SOP)⁵ for issue of Export Authorisation for export of Munitions List has been revised and published on the website of Ministry of Defence, Government of India. Consultation process has been done away with in repeat orders of same product to the same entity and export of items for exhibition purposes. Legitimate export of the parts and components of small arms and body armour for civil use being permitted in consultation with Ministry of External Affairs (MEA), Government of India Powers have been delegated to Defence Research and Development Organization (DRDO), Director General of Ordnance Factories (DGOF), and Chief Managing Director (CMD's) of DPSUs for exploring export opportunities and participation in global tenders.

⁵ Data pertains to Annual Report 2018-19, Ministry of Defence, Government of India



Emerging Contours of India's Defence and Homeland Security

In Intra Company business, the requirement of getting End User Certificate (EUC) from the Government of importing country has been done away with and 'Buying' Company is authorized to issue the EUC and a new provision for importing and re-exporting parts and components for undertaking repair or rework to provide replacement for a component under warranty obligation is inserted in the SOP as a subclassification of repeat orders.

- The existing online application system of export authorisation made more user friendly. New Online system for processing of export authorization applications launched. The entire process made paper less right from filing of application by the industry to issue to export authorisation, including consultation with stakeholders.
- Ministry of Home Affairs (MHA), Government of India vide Notification dated November 1, 2018 delegated its powers to Department of Defence Production, Ministry of Defence, Government of India for issue of export license under Arms Rules 2016 in Form X-A, for parts & components of small arms to ensure that Department of Defence Production remains a single point of contact for exporters.
- Scheme for Promotion of Defence Exports notified to provide an opportunity to the prospective exporters an option to get their product certified by the Government and access to the testing infrastructure of Ministry of Defence for initial validation of the product and its subsequent field trials. The certificate can be produced by the prospective exporter for marketing their products suitably in the global market. Standard Operating Procedure (SOP) for implementation of the scheme has been notified and published on the website.

3.4.1 Defence Exports Promotion

The Government of India has set a target of increasing the share of the manufacturing sector in GDP from the current level of more than 16% to 25% by 2022, as part of its flagship 'Make in India' programme. With this background, the draft Defence Production Policy 2018 envisages to achieve size of Rs 1,70,000 Crores (USD 26 Bn approx) in aerospace and defence goods and services and export target of Rs 35,000 Crores (approximately USD 5 Billion) in defence goods and services by 2025. Therefore, seminal growth of the defence sector will be critical towards achieving this target. In this regard, the Indian defence industry, especially start-ups and Micro, Small and Medium Enterprises (MSMEs) may seek to tap the potential opportunities in order to integrate themselves into the global supply chain.



Emerging Contours of India's Defence and Homeland Security

The Government has taken several steps to encourage defence exports. Some of the major initiatives are as below:-

- Formulation of a Defence Export Strategy outlining the policy and procedural initiatives to be taken by the Government.
- Constitution of a Defence Export Steering Committee (DESC) to deliberate and decide policy and procedural issues related to defence exports.
- The SOP for issue of NOC for export has been simplified and streamlined and has been put in the public domain to make the process transparent and unambiguous.
- The processing of receiving the applications for NOC for export and the process for issuing NOC have been made online.

Further, 'Defence Exports Promotion' portal under the Department of Defence Production (DDP) is a single window for submitting the application for export authorisation/license by the industry for Special Chemicals, Organisms, Materials, Equipment and Technologies (SCOMET) Category 6/ under Arms Rules in Form A X-A and processing and issue of the export authorisation by the Department of Defence Production. The portal is also a medium to receive discreet Export leads for the benefit of defence exporters.

3.4.2 Export Promotion Cell

The Export Promotion Cell has been formed to co-ordinate and follow-up on export related action including enquiries received from various countries and facilitate private sector and public sector companies for export promotion. Defence Attaches have also been mandated to provide support for defence export promotion. An Export Booklet has also been published in which products of DPSUs /OFB and private companies dealing in manufacturing of defence products have been included.

The functions for the Export Promotion Cell setup under DDP are as under:

- a) Coordinate and follow-up export activities including enquiries received from various countries.
- b) Regular interaction/ Coordination with the Defence Attaches (DA) of the potential buyer countries.
- c) Establish linkages between export promotion activities and exhibition.
- d) Interaction with potential buyer countries and setting up meetings with the industry and follow-up after the exhibition.
- e) Facilitating development of promotional materials, audio-visual films, and timely dissemination of information to respective countries.
- f) Facilitate coordination between Private Industry and Ministry of Defence (MOD) for export promotion.
- g) Interaction with different industry associations for export potential opportunities.



Emerging Contours of India's Defence and Homeland Security

3.4.3 Export Leads

Through this application Export leads are sent directly to Indian Defence Exporters registered on the site for their information and further necessary action at their end. This provides the stakeholders with the timely updates on the exports leads in the defence sector.

3.4.4 Strategy for Defence Exports

Self-reliance and indigenization in the defence sector has been an important guiding principle for the Government of India. The industrial and technological developments in the sector are contributing to achieve this objective by harnessing the potential of the Indian industry along with the technological capabilities as developed by various academic and research institutions. Although, India has made rapid strides in developing its defence technology and industrial base in the recent past, the country possesses unlimited potential in terms of development of new products and improving the scale of production.

In addition, the Ministry of Commerce & Industry, Government of India already has an overall Export Policy in the form of Foreign Trade Policy 2015-20 (FTP), which, inter-alia, includes various export promotion schemes, duty/ tax exemptions and other facilitative measures. The strategy for Defence exports may include measures required for promotion/ facilitation of defence exports through institutional mechanisms and streamlining the process of issuing NOC/ clearance for export of military stores.

In the draft Defence Production Policy 2018, following steps/measures are proposed to be undertaken:

- Defence Expo and Aero Expo will be positioned as major global events to showcase India's capabilities in defence manufacturing, as also to encourage exports.
- Subject to strategic considerations, domestically manufactured defence products of both public sector organisations and private industry will be promoted through Government to Government agreements and Line of Credit (LoC)/Funding.
- Indian Offset Partners will be encouraged to take up export of parts and accessories developed as part of offset process.
- DPSUs/OFBs will set up export offices in countries having such potential with the objective of promoting exports actively.
- Defence Export Organisation will be set up jointly with industry to promote export of Indian defence products abroad.
- The end-to-end export clearance process in the Department of Defence Production will be made online and time-bound.

Going forward, there is a need to promote investment in the defence sector, both in Research & Development (R&D) and production, thereby resulting in higher self-reliance and



Emerging Contours of India's Defence and Homeland Security

indigenization. While putting in place the policy framework and procedural mechanisms, the thrust would be on indigenous production and exploring possibilities of exports to other nations. The policy of maximizing indigenous production along with a well supported R&D policy and export strategy will yield desired results. Therefore, the defence industrial policy supplemented by the strategy for defence exports would strengthen the economic base of the defence industry to sustain the present economic competitive environment.

3.4.5 Scheme for Promotion of Defence Exports

In order to provide an opportunity for defence manufacturers to market their products globally, a scheme on Promotion of Defence Exports has been launched by the Government. The objective of the scheme is to provide options to the prospective defence exporters for improving the marketability of their products globally. The scheme proposes to provide various options to the prospective exporters listed as below:-

Certification: The procurement for Armed Forces are presently done through the Defence Procurement Process (DPP) & Defence Procurement Manual (DPM) route. Further, the procurement through DPP route, as per DPP 2016, is under 5 categories i.e. 'Buy' (Indian — IDDM), 'Buy' (Indian), 'Buy and Make' (Indian), 'Buy and Make', 'Buy' (Global) and the orders are placed on lowest bidder on L-1 basis after following the due procurement process.

In a procurement situation wherein more than one vendor is technically qualified, the scheme proposes to create mechanism to grant relevant certificates to the technically qualified bidders for their respective products and the associated specifications. A certificate would be issued by Department of Defence (DoD) and titled "Fit for Indian Military Use". This certificate can then be produced by the prospective exporter for marketing their products suitably in the global market.

Testing and Certification: In case, a particular product is not required by Indian Armed Forces while an Indian defence manufacturer has the capacity and has produced such an item which may be suitable for export or has an export potential, the scheme would provide such an exporter/manufacturer access to the testing infrastructure of Ministry of Defence (MOD) for initial validation of the product and its subsequent field trials. This facility would be subject to the following conditions:-

- (i) Based on the SQRs provided by the exporter/manufacturer.
- (ii) Item is a high value product and a system in itself.
- (iii) Item has huge potential in International market and could be exported considering the export control regulations.
- (iv) Testing could be done without any disruption to the trial platform and operational aspects of the forces.



Emerging Contours of India's Defence and Homeland Security

The test facility/ranges shall be shared/ provided on time/days basis to be decided by the Services/Test Labs specifically dedicated for testing of such products. The cost for testing and evaluation would be arrived on a 'case to case' basis and would be borne by exporter/manufacturer. The DDP shall also separately notify the internationally accredited labs/testing facilities where the exporter/manufacturer can directly approach for testing and certification of their products.

The draft Defence Production Policy 2018 envisages an export target of USD 5000 million by 2025.

Export promotion of Indian Defence equipment manufactured in India, by Indian Defence Attaches

Defence Attaches (DAs) are deputed by MOD to various Indian Embassies and are responsible for various aspects of bilateral military and defence relations between India and the respective country. The Defence Attache is expected to maintain a complete and detailed knowledge and awareness of the host country's defence requirements.

India is emerging as a manufacturing hub for defence production and the draft Defence Production Policy 2018 envisages an export target of Rs 35,000 crore by 2025 (USD 5000 million by 2025). Defence Attaches' deputed across the world, therefore, plays a crucial role in showcasing India's capabilities in defence product manufacturing and promoting export of defence products.

Defence Attache Scheme for Export Promotion envisages the promotion of Indian defence exports globally. The scheme aims to support Defence Attaches' in taking up various actions for promoting exports of Indian made defence products both of the Public and Private sector. The scheme will play a catalytic role in addressing interventions required for exploring new markets and promoting export oriented activities by Defence Attaches in the countries to which they are attached.

The scheme also aims to provide financial support to Defence Attaches for undertaking various initiatives/activities broadly delineated in the Scheme including any direct/indirect activities for marketing, market research and capacity building in importing markets.

3.5 Imports

The Directorate General of Foreign Trade (DGFT) vide Order dated May 28, 2018 delegated powers to the Department of Defence Production (DDP) to grant license for import of restricted items only for defence use. The Standard Operating Procedure for issue of Import License for import of restricted items only for defence use has been notified and published on the website. 28 Import Licenses have been issued to private defence industry during the FY 2018-19 by DDP⁶.

⁶ Data pertains to Annual Report 2018-19, Ministry of Defence, Government of India



Emerging Contours of India's Defence and Homeland Security

Self-reliance is a major corner-stone on which the military capability of any nation rests. Accordingly, the draft Defence Production Policy 2018 as promulgated by the Government, aims at achieving substantive self-reliance in the design, development and production of equipment, weapon systems, platforms required for defence. The policy aims at creating conditions conducive for the private sector to play an active role in this endeavour while enhancing the potential of small enterprises in indigenisation and broadening the defence R&D base of the country.

Defence equipment is being imported from various countries as per the operational requirements of the Armed Forces. In India, defence manufacturing is primarily driven by capital acquisition of defence equipment. Therefore, under the 'Make in India' initiative of the Government, several measures have been undertaken to promote indigenous design, development and manufacture of defence equipment in India by harnessing the capabilities of both the public and private sector.

These measures include preference to procurement from Indian vendors under the Defence Procurement Procedure (DPP), simplification of Make procedure, introduction of simplified procedure for Make II sub-category, liberalization of the licensing regime and Foreign Direct Investment (FDI) policy by way of raising the cap on FDI in the defence sector under automatic route, simplification of export procedure, streamlining of defence offset guidelines, among others. The Government has also notified the 'Strategic Partnership (SP)' Model which envisages establishment of long-term strategic partnerships with Indian entities through a transparent and competitive process, wherein they would tie up with global Original Equipment Manufacturers (OEMs) to seek technology transfers to set up domestic manufacturing infrastructure and supply chains.





NATIONAL APEX CHAMBER

STRUCTURE OF EXPORTS AND IMPORTS OF INDIA'S DEFENCE SECTOR



4. Structure of exports and imports of India's Defence sector

Exports are a vital component of a dynamically growing economy like India. The Government of India has fostered a dynamic economic policy environment during the last five years with the implementation of various notable economic reforms. As a result, India has increased its presence significantly in the world economic system. Several measures have been undertaken to boost India's exports growth trajectory especially for defence exports in the recent years.

Globally, during the period from 2014 to 2018, amongst the top ten world exporters of defence items, USA ranks the highest with defence exports of USD 52480 million, followed by Russia (USD 30064 million), France (USD 9948 million), Germany (USD 9324 million), China (USD 7633 million), UK (USD 6171 million), Spain (USD 4692 million), among others. India ranks 10th with cumulative exports of USD 3122 million and a share of 2.1% in total world defence exports between 2014 and 2018.

Top 10 world exporters of Defence items from 2014 to 2018 (USD Million)

Rank	Country	2014	2015	2016	2017	2018	Total (2014-2018)	% Share in world exports (2014-2018)
	World	27134	28791	31701	32494	29079	149197	100
1	USA	9601	9931	9955	12485	10508	52480	35
2	Russia	5387	5842	6685	5741	6409	30064	20
3	France	1643	2017	2218	2302	1768	9948	6.7
4	Germany	1790	1759	2518	1980	1277	9324	6.2
5	China	1160	1845	2360	1227	1040	7633	5.1
6	United Kingdom	1651	1179	1367	1235	741	6171	4.1
7	Spain	1050	1163	471	820	1188	4692	3.1
8	Israel	393	721	1441	1254	707	4517	3.0
9	Italy	671	664	619	802	611	3366	2.3
10	India	317	315	227	726	1537	3122	2.1

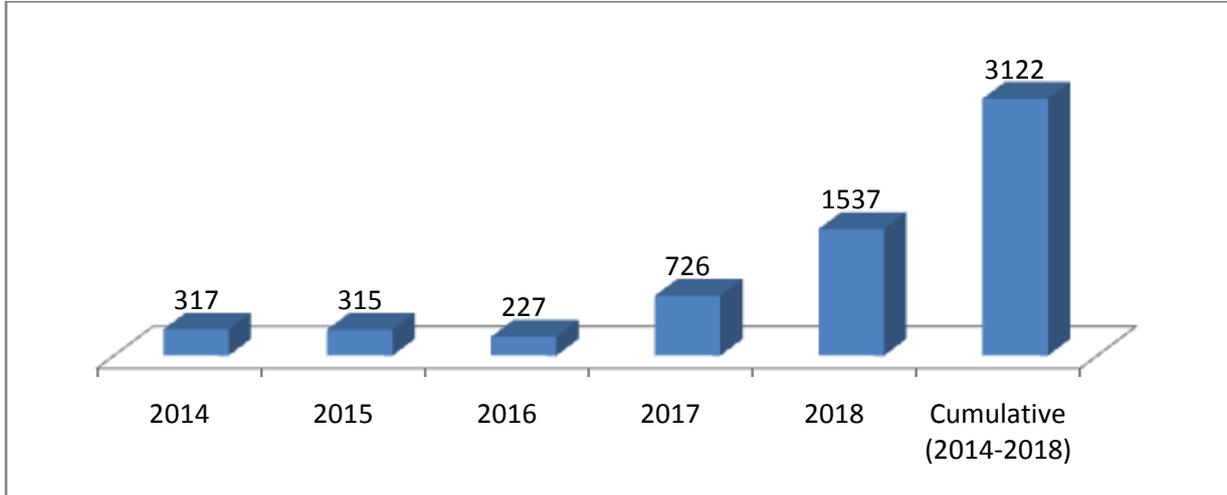
Source: PHD Research Bureau, PHDCCI, compiled from various sources. Note: 1) Data for India pertains to Export Authorizations to Private Companies, Export by DPSU/OFB, and SCOMET issued by DGFT while data for the rest of the countries pertains to aircraft, armored vehicles, artillery, radar systems, missiles, and ships designed for military, 2) Ranking of countries is done on the basis of cumulative figures from the year 2014 to 2018.

Keeping in view the vision to scale India's exports to new heights, significant reforms have been undertaken to provide a big boost to defence exports in the country. India's overall defence exports have scaled up drastically from around USD 317 million in 2014 to around USD 1537 million in 2018.



Emerging Contours of India's Defence and Homeland Security

India's Defence Exports (USD Million)



Source: PHD Research Bureau, PHDCCI, compiled from various sources. Note: Data pertains to Export Authorizations to Private Companies, Export by DPSU/OFB, and SCOMET issued by DGFT. Figures are represented as round offs.

Between 2014 and 2018, India was the 2nd largest importer of defence items with a share of 9.5% in the total world imports of defence items. Amongst the top ten world importers, Saudi Arabia ranks the highest with defence imports of USD 16869 million during 2014 to 2018, followed by India (USD 13876 million), Egypt (USD 7429 million), Australia (USD 6793 million), Algeria (USD 6441 million), China (USD 6103 million), UAE (USD 5425 million), among others.

Top 10 world importers of Defence items from 2014 to 2018 (USD Million)

Rank	Country	2014	2015	2016	2017	2018	Total	Share (%)
	World	26853	28516	31511	31824	27587	146291	100
1	Saudi Arabia	2741	3334	2923	4060	3810	16869	11.5
2	India	3334	3065	3021	2917	1539	13876	9.5
3	Egypt	420	1438	1684	2403	1484	7429	5.1
4	Australia	919	1464	1025	1813	1572	6793	4.6
5	Algeria	430	858	2873	962	1318	6441	4.4
6	China	1137	1169	1041	1190	1566	6103	4.2
7	UAE	791	1266	1193	1074	1101	5425	3.7
8	Iraq	636	1422	1730	966	596	5350	3.7
9	South Korea	721	272	1113	1068	1317	4492	3.1
10	VietNam	1218	862	858	755	546	4240	2.9

Source: PHD Research Bureau, PHDCCI, compiled from various sources. Note: 1) Data for all the countries pertains to aircraft, armored vehicles, artillery, radar systems, missiles, and ships designed for military use, 2) Ranking of countries is done on the basis of cumulative figures from the year 2014 to 2018



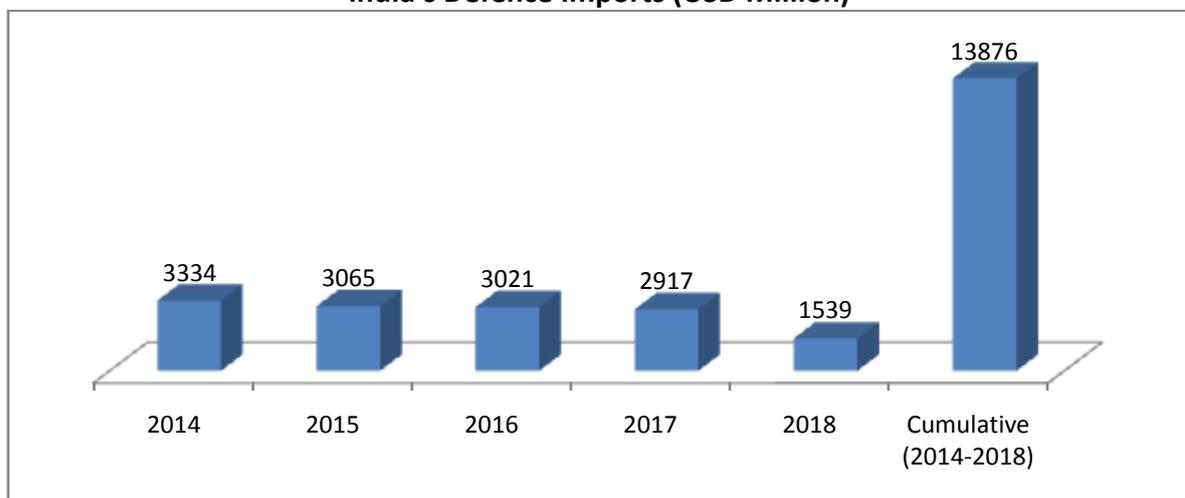
Emerging Contours of India's Defence and Homeland Security

Government as part of its 'Make in India' Programme has given impetus to development of defence products in the country both for its need and for exports to the world. In order to build up capabilities of the Indian Industry in the area of defence platforms/systems, for the purpose of development of prototypes and re-engineering of items of defence applications, there are a number of items /components that are required to be imported by the Indian industry. To facilitate the import of such items, the Department of Defence Production has issued guidelines for signing/counter signing of End User Certificate and Standard Operating Procedure (SOP).

Russia is the largest importer of India for its Defence items of around USD 8036 million during 2014 to 2018, followed by Israel (USD 2093 million), United States (USD 1711 million), France (USD 973 million), United Kingdom (USD 503 million), Ukraine (USD 116 million), Germany (USD 109 million), Canada (USD 107 million), Switzerland (USD 45 million), South Africa (USD 44 million), among others. The share of Russia in India's total imports of Defence items stands at around 58% during 2014 to 2018, followed by Israel (15.1%), United states (12.3%), France (7%), United Kingdom (3.6%), and around 1% of Ukraine, Germany, Canada each and 0.3% share of Switzerland and South Africa, among others in India's defence imports.

During the last few years, India's defence imports have declined around USD 3334 million in 2014 to around USD 1539 million in 2018. However, India was the 2nd highest importer of defence items of around USD 13876 million during 2014 and 2018.

India's Defence Imports (USD Million)



Source: PHD Research Bureau, PHDCCI, compiled from various sources. Note: Data pertains to aircraft, armored vehicles, artillery, radar systems, missiles, and ships designed for military use. Figures are represented as round offs.

Over the years, the Government of India has been undertaking several proactive measures to promote indigenous production of defence systems and products for promotion of high quality exports and reduced dependence on imports. India's defence exports have increased from around USD 317 million in 2014 to around USD 1537 million in 2018 while India's defence



Emerging Contours of India's Defence and Homeland Security

imports have declined around USD 3334 million to USD 1539 million during the same period. India's trade deficit in defence items has declined from USD 3017 million in 2014 to USD 2 million in 2018. However, the cumulative trade deficit stands at USD 10754 million for the period 2014 to 2018.

Trend in India's Defence Exports, Imports and Trade Balance

Year	Exports (USD Million)	Imports (USD Million)	Trade Balance (USD Million)
2014	317	3334	-3017
2015	315	3065	-2750
2016	227	3021	-2794
2017	726	2917	-2191
2018	1537	1539	-2
Cumulative 2014-2018	3122	13876	-10754

Source: PHD Research Bureau, PHDCCI, compiled from various sources.

4.1 Trend in India's exports, imports and trade balance of arms and ammunition

Globally, amongst the top ten world exporters of arms and ammunition⁷; USA ranks the highest with a share of around 42% in total world exports, followed by Israel (5.3%), Korea (5.2%), Italy (4.6%), Spain (4.5%), among others in 2018. India stands at 21st rank with a share of 0.9% in total exports of Arms and ammunition; parts and accessories thereof during the same period.

Top 10 World Exporters of Arms and ammunition; parts and accessories thereof

Rank	Country	Value in 2018 (USD Million)	Share in total world exports (%)
	World	13407	100
1	USA	5568	41.5
2	Israel	704	5.3
3	Republic of Korea	698	5.2
4	Italy	623	4.6
5	Spain	605	4.5
6	Germany	536	4.0
7	Czech Republic	464	3.5
8	Austria	424	3.2
9	Brazil	343	2.6
10	Norway	312	2.3
21	India	118	0.9

Source: PHD Research Bureau, PHDCCI compiled from Trademap database

⁷ Data pertains under the product group 93:arms and ammunition parts and accessories thereof



Emerging Contours of India's Defence and Homeland Security

Amongst the top ten world importers of arms and ammunition, USA ranks the highest with a share of around 28% in total world imports, followed by Korea (4.4%), Thailand (3.9%), Canada (3.6%), Turkey (3.5%), among others in 2018. India stands at 34th rank with a share of 0.6% in total imports of Arms and ammunition; parts and accessories thereof.

Top 10 World Importers of Arms and ammunition; parts and accessories thereof

Rank	Country	Value in 2018 (USD Million)	Share in total world imports (%)
	World	10501	100
1	USA	2950	28.1
2	Republic of Korea	466	4.4
3	Thailand	406	3.9
4	Canada	373	3.6
5	Turkey	365	3.5
6	Australia	327	3.1
7	Indonesia	314	3.0
8	Oman	297	2.8
9	Germany	266	2.5
10	Poland	252	2.4
34	India	60	0.6

Source: PHD Research Bureau, PHDCCI compiled from Trademap database

Over the years, India's exports of arms and ammunition have increased significantly from USD 28 million in 2011 to USD 118 in 2018. Further, India's imports have also increased from USD 29 million to USD 60 million during the same period. The trade balance of arms and ammunition has improved from USD (-) 1 million in 2011 to USD 58 million in 2018.

Trend in India's Exports, Imports and Trade Balance of arms and ammunition in 2018 (USD Million)

Year	Exports of Arms and ammunition	Imports Arms and ammunition	Trade Balance Arms and ammunition
2011	28	29	-1
2012	35	49	-14
2013	64	54	10
2014	65	16	49
2015	121	35	85
2016	87	26	60
2017	92	35	57
2018	118	60	58

Source: PHD Research Bureau, PHDCCI compiled from Trademap database



Emerging Contours of India's Defence and Homeland Security

In 2018, amongst India's top ten exporting destinations of arms and ammunition, USA ranks the highest with a share of around 38% in India's total exports, followed by Israel (26.3%), Myanmar (4.2%), France (4.2%), Czech Republic (4.2%), among others.

India's top 10 exporting destinations of arms and ammunition in 2018

S.No.	Country	Value in USD Million	Share in India's total exports of arms and ammunition (%)
India's total exports		118	100
1	USA	45	38.1
2	Israel	31	26.3
3	Myanmar	5	4.2
4	France	5	4.2
5	Czech Republic	5	4.2
6	Russia	5	4.2
7	Turkey	5	4.2
8	Philippines	4	3.4
9	Spain	3	2.5
10	Bulgaria	2	1.7

Source: PHD Research Bureau, PHDCCI compiled from Trademap database

Amongst India's top ten sources of imports of arms and ammunition, South Africa ranks the highest with a share of around 64% in India's total imports, followed by Germany (13%), Italy (5.7%), Israel (5%), Slovenia (3.2%), among others.

India's top 10 source of imports of arms and ammunition in 2018

S.No.	Country	Value in USD Million	Share in India's total imports of arms and ammunition (%)
India's total imports		60	100
1	South Africa	38.4	64
2	Germany	7.8	13
3	Italy	3.4	5.7
4	Israel	3.0	5
5	Slovenia	1.9	3.2
6	Cyprus	1	1.7
7	United States of America	0.8	1.3
8	United Kingdom	0.7	1.2
9	Czech Republic	0.5	0.8
10	Switzerland	0.4	0.7

Source: PHD Research Bureau, PHDCCI compiled from Trademap database





NATIONAL APEX CHAMBER

SCOPE OF EXPANDING DEFENCE MANUFACTURING IN INDIA

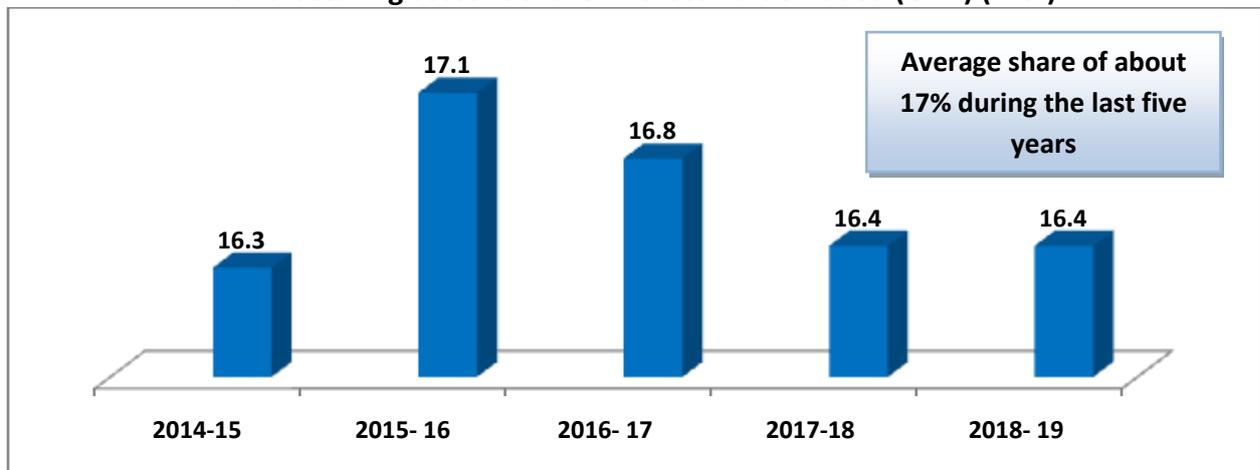


5. Scope of expanding Defence Manufacturing in India

In recent years the manufacturing sector has been the major focus for the Government of India. Realizing the importance of manufacturing sector, its contribution in employment generation and economic growth, many initiatives are being taken up by the Government to foster the growth of this sector. One of the prominent initiatives introduced is Make in India to give boost to indigenous manufacturing and attract a major chunk of international and domestic investments in the country. Startup India initiative was also launched to build a strong eco-system for nurturing entrepreneurship, innovation and generate employment opportunities. Further, the Foreign Direct Investment policy has been simplified and liberalized progressively and now most of the sectors are under automatic route. Over the last five years, the share of manufacturing has remained more or less hovering in the range of 16% to 17%. The average share of manufacturing sector in India's gross value added (GVA) stands at about 17% during 2014-15 to 2018-19.

Defence manufacturing is one of the focus sectors under Make in India programme

Manufacturing sector's share in Gross Value Added (GVA) (in %)



Source: PHD Research Bureau compiled with Office of the Economic Advisor, Government of India

The Government has introduced several reforms to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build the state of art infrastructure. Under Make in India, ease of doing business is the single most factors to promote entrepreneurship. The government has undertaken a plethora of economic and business reforms in the last five years with the objective of providing ease of doing business in the country. India has been continuously improving in World Bank's Ease of Doing Business Rankings and has jumped by 65 spots from 142nd rank in 2015 to 77th rank in 2019.



Emerging Contours of India's Defence and Homeland Security

5.1 Defence manufacturing crucial to boost manufacturing productivity in India

Keeping in view the objective to increase the share of overall manufacturing from 16% to 25% in India's GDP, it becomes crucial that the defence sector should be tapped and explored as one of the major sectors contributing to the growth of manufacturing in the country. Several reforms have been undertaken by the Government to increase the scope of defence manufacturing in India over the years. Under Make in India programme, Defence manufacturing is one of the 25 sectors identified to promote indigenous manufacturing and growth of economy.

The Government of India has undertake continuous reforms for designing, developing and leading to production state-of-the-art sensors, weapon systems, platforms and allied equipment for our Defence Services like arms and ammunition, tanks, armoured vehicles, heavy vehicles, fighter aircrafts and helicopters, warships, submarines, missiles, ammunition, electronic equipment, earth moving equipment, special alloys and special purpose steels etc. Over the years, the Government has established wide ranging production facilities for various defence equipment through the Ordnance Factories, Defence Public Sector Undertakings (DPSUs) and private defence industry stakeholders.

Some of the key initiatives launched by the Government to boost manufacturing of state of art defence product are as follows:

- **Innovations for Defence Excellence (iDEX):** An innovation ecosystem for Defence titled Innovations for Defence Excellence (iDEX) has been launched in April, 2018. iDEX is aimed at creation of an ecosystem to foster innovation and technology development in Defence and Aerospace by engaging Industries including MSMEs, Start-ups, Individual Innovators, R&D institutes and Academia and provide them grants/funding and other support to carry out R&D which has potential for future adoption for Indian defence and aerospace needs.
- **Policy for indigenisation of components and spares used in Defence Platforms :** The objective to create an industry ecosystem which is able to indigenize the imported components (including alloys & special materials) and sub-assemblies for defence equipment and platform manufactured in India.
- **Entry barriers reduced to encourage private sector participation:** The Defence Products List for the purpose of issuing Industrial Licenses (ILs) under Industries (Development and Regulation (IDR) Act has been revised and most of the components, parts, sub-systems, testing equipment and production equipment have been removed from the list, so as to reduce the entry barriers for the industry, particularly small & medium segment. The initial validity of the Industrial Licence granted under the IDR Act has been increased from 03 years to 15 years with a provision to further extend it by 03 years on a case-to-



Emerging Contours of India's Defence and Homeland Security

case basis. So far, the process for export clearance has been streamlined and made transparent & online.

- **Liberalizing FDI norms:** FDI is allowed under automatic route in the defence sector upto 49% and beyond 49% through Government route wherever it is likely to result in access to modern technology or for other reasons.
- **Promoting Intellectual Property Right (IPR) in defence sector:** Mission Raksha Gyan Shakti is launched to provide boost to the IPR culture in indigenous defence industry. Several IPRs have been filed by the innovators in the recent times.
- **Setting up of Technology Development Fund (TDF):** The Government has set up TDF to encourage participation of public/private industries especially MSMEs, through provision of grants, so as to create an eco-system for enhancing cutting edge technology capability for defence applications
- **Defence Procurement Procedure (DPP-2016):** Additionally, several enabling provisions have been incorporated in the DPP-2016 for promoting manufacture of the State-of-the-art defence products and technologies and transfer of state-of-the-art defence technology to India, which are as under :
- **Buy (Indian-IDDMM) in Defence Procurement Procedure (DPP-2016):** A new category of procurement 'Buy {Indian-IDDMM (Indigenously Designed, Developed and Manufactured)}' has been introduced in DPP-2016 to promote indigenous design and development of defence equipment. It has been accorded top most priority for procurement of capital equipment. Besides this, preference has been accorded to 'Buy (Indian)', 'Buy and Make (Indian)' & 'Make' categories of capital acquisition over 'Buy (Global)' & 'Buy & Make (Global)' categories.

BUY

Buy (Indian – Indigenously Designed Developed and Manufactured): Direct purchase from an Indian vendor whose products meet indigenous content requirements

Buy (Indian): Direct purchase from Indian vendors whose products meets minimum indigenous content requirements.

Buy (Global): Purchase of equipment from foreign or Indian vendors.



Emerging Contours of India's Defence and Homeland Security

BUY & MAKE

Buy & Make (Indian): The Buy & Make (Indian) category has a provision for procurement from an Indian vendor engaged in a tie-up with a foreign Original Equipment Manufacturers (OEM), involving Transfer of Technology (ToT) of critical technologies.

Buy & Make: The "Buy & Make" category has provision for procurement from a foreign vendor, through an Indian Production Agency (PA), involving Transfer of Technology (ToT) of critical technologies.

MAKE

Make (Strategic Partnership Model): Indian industry and foreign industry (OEMs) will be selected by the Ministry of Defense to partner with each other to produce strategic equipment in India.

- **The 'Make' Procedure in Defence sector** has been simplified with provisions for funding of 90% of development cost by the Government to Indian industry and reserving projects not exceeding development cost of Rs. 10 Crore (Government funded) and Rs.3 Crore (Industry funded) for MSMEs.
- **Separate procedure for 'Make-II' (Industry funded) sub-category** has been notified wherein a number of industry friendly provisions such as relaxation of eligibility criterion, minimal documentation, provision for considering proposals, have been introduced.
- **Defence Offsets:** Offset guidelines have been made flexible by allowing change of Indian Offset Partners (IOPs) and offset components, even in signed contracts. Foreign Original Equipment Manufacturers (OEMs) are now not required to indicate the details of Indian Offset Partners (IOPs) and products at the time of signing of contracts. 'Services' as an avenue of offset have been re-instated.
- **Strategic Partnership (SP):** Government has notified the 'Strategic Partnership (SP)' Model which envisages establishment of long-term strategic partnerships with Indian entities through a transparent and competitive process, wherein they would tie up with



Emerging Contours of India's Defence and Homeland Security

global Original Equipment Manufacturers (OEMs) to seek technology transfers to set up domestic manufacturing infrastructure and supply chains.

- **Defence Investor Cell** has been created to provide all necessary information including addressing queries related to investment opportunities, procedures and regulatory requirements for investment in the sector.

5.2 Role of MSMEs significant in Defence manufacturing

The Government has always focused on increasing the participation of MSMEs into the defence supply chain. The role of MSMEs has always remain crucial in terms of employment generation for unskilled, semi-skilled and skilled workforce. The sector facilitates socio-economic development of the country as a whole and thus is considered as a strategic asset for the Indian economy.

MSMEs have contributed significantly to defence manufacturing with thousands of quality products, mainly at sub-system and component level. As much as 50% of the manpower engaged in manufacturing in India is engaged in MSMEs⁸. The Government has introduced several measures to provide hand holding support to MSMEs over the past few years to increase their participation in defence manufacturing. MSMEs across the country supplying components and sub-assemblies to the DPSUs, Ordnance Factories, DRDO and private industries. The Government envisages to increase participation of MSMEs engaged in Defence production from over the present level of 8000 MSMEs to 16,000.

Scheme for Promotion of MSMEs in Defence launched by the Government of India to unlock the potential of the non-defence sector MSMEs located in Tier II and Tier III cities across India by providing them with relevant information about the Government of India's 'Make in India' programme in defence.

The key objectives of the Scheme for Promotion of MSMEs in Defence include the following

- Focuses on to provide a new impetus to the development of defence production in the country by involving the MSMEs in larger numbers.
- To provide know-how to Indian MSMEs active in non-defence sectors for their entry in the defence sector through workshops and conclaves.
- To tutor the MSMEs about the prospective market and business opportunities around the world.
- To enable institutionalisation of the interaction of foreign OEMs with MSMEs to encourage wider participation in the offset business industry.

⁸ Data pertains to Department of Defence Production, Government of India



Emerging Contours of India's Defence and Homeland Security

The Make in India initiative of the Government of India focuses on to enhance participation Micro, Small and Medium Enterprises (MSMEs) into the defence supply chain and thereby boost the self-reliance of the country in defence, and also contribute towards the burgeoning defence exports market. Therefore, the government has been making significant announcements to facilitate greater participation of MSMEs in the defence sector.

Enhancing the role of MSMEs in defence sector is one of the defining features of Defence Procurement Procedure (DPP) 2016. Cutting down permissible timeframes for various procurement activities and institutionalising robust mechanisms to monitor for probity at various stages of the procurement process are the cornerstones of DPP. The DPP 2016 provides greater impetus to the MSMEs, with certain category of 'Make' projects reserved exclusively for them. There are also other provisions and procedural measures that have been introduced to make the procurement process more efficient and effective.

Make I and Make II are two sub-classifications of the 'Make' provision given under the Defence Procurement Procedure (DPP).

- Make-I (Government Funded). Projects under 'Make-I' sub-category will involve Government funding of 90%, released in a phased manner and based on the progress of the scheme, as per terms agreed between MoD and the vendor. Projects involving design and development of equipment, systems, major platforms or upgrades thereof; necessitating harnessing of critical technologies and may involve large infrastructure investment for development, integration, test and manufacturing facilities. Usually, projects under Make-I subcategory will involve a development period of not less than three years.
- Projects under the Make-I sub-category, with estimated cost of prototype development phase not exceeding ₹ 10 Crores, will be earmarked for MSMEs. However, if at-least two MSMEs do not express interest for a Make-I program of less than ₹ 10 Crores, the same shall be opened up for all, under the condition that interested MSME(s), if any at that stage and meeting the eligibility criteria, will get preference over Non- MSMEs in selection of Development Agency(ies) (Das)
- Make-II (Industry Funded). Projects under Make-II category will involve prototype development of equipment/system/ platform or their upgrades or their subsystems/sub-assembly/assemblies/components, primarily for import substitution/ innovative solutions, for which no Government funding will be provided for prototype development purposes. Cases where innovative solutions have been offered, shall be accepted and progressed, even if there is only a single individual or a firm involved. Projects under the Make-II sub-category, with estimated cost of prototype development phase not exceeding ₹3 Crores, will be earmarked for MSMEs. However, if no MSME expresses interest for a Make-II program of less than ₹3 Crores, the same may be opened up for all.



Emerging Contours of India's Defence and Homeland Security

Thus, the Government has implemented time and again various measures to support the domestic manufacturing firms, particularly the MSMEs and acted as a catalyst in facilitating Indian MSMEs by creating the right ecosystem of the defence sector. Going forward, role of MSMEs is significant in contributing to the employment generation and achieving self-reliance in defence sector.

Suggestive measures to boost the role of MSMEs in defence sector:

- Increase in frequency of awareness imparting programmes and information about opportunities to MSMEs offered under Defence Procurement Procedure and new Make II procedure.
- Ease of access to adequate finance and its timely availability for initiating their projects related to defence manufacturing may be encouraged to enhance participation of MSMEs in defence sector.
- Encouraging specific training and skill development programmes for the MSMEs to know the technical know-how and attain other relevant expertise required in defence manufacturing.
- Extensive expansion of connection of non-defence sectors with OEMs, DPSUs and OFB to help them avail the opportunities under Make in India programme in the defence sector must be encouraged.
- Facilitation to MSMEs in terms ease of regulations, access to raw materials at reasonable costs, availability of quality infrastructure and adoption of research and development to innovate products may be encouraged.
- Handholding support to MSMEs may be encouraged in terms of necessary testing and certification facilities, export facilitation centres, technology transfer facilitation etc.
- Promotion of Ease of doing business in terms of flexibility to hire contract labour, indirect tax benefits, simplification of land acquisitions procedures, enhancing intellectual property rights, reduction in logistics costs, among others may be focused.
- Proactive engagement and larger involvement of the Indian private sector in design, development and manufacturing of defence equipment must be encouraged. MSMEs in this regard could contribute a long way in meeting the demand of Indian Armed force and hence steps must be taken to enhance the potential of MSMEs in indigenization of defence sector.
- Enhance the number of Outreach Programmes for strengthening Government –Industry connect where the concerns or issues of industry stakeholders are adequately addressed.
- To encourage existing industrial units in Small Scale Sector to modernize their production facilities and adopt improved and updated technology so as to strengthen their manufacturing facilities.





NATIONAL APEX CHAMBER

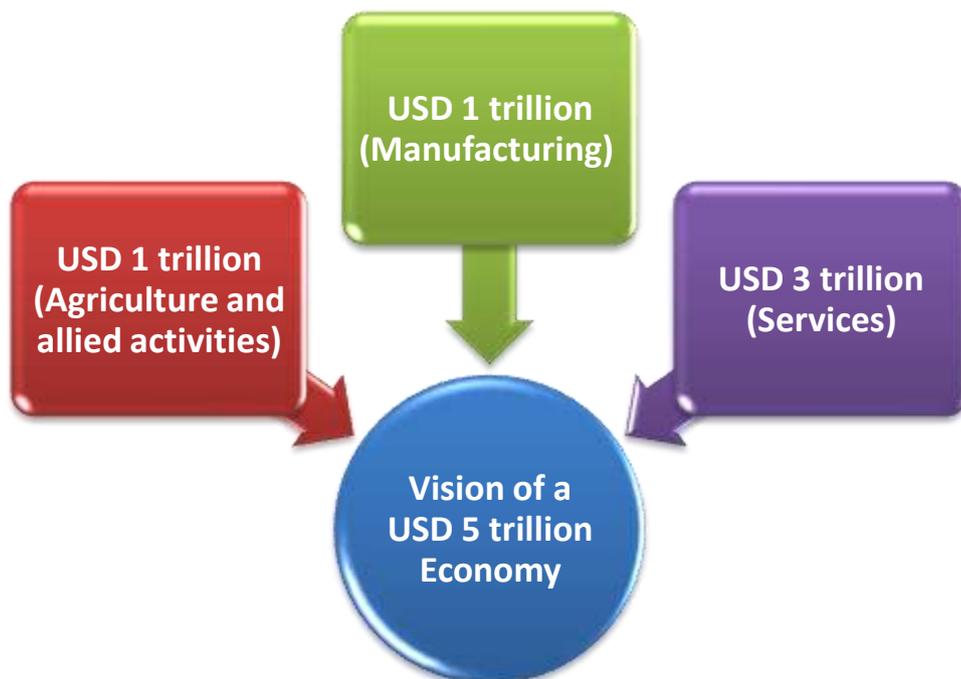
SIGNIFICANCE OF DEFENCE MANUFACTURING IN ACHIEVING USD 5 TRILLION INDIAN ECONOMY



6. Significance of Defence Manufacturing in achieving USD 5 trillion Indian Economy

Keeping in view the present world economic landscape and various geo-political developments across the globe, the recent economic reforms undertaken by the Government of India have created a strong and resilient economic ecosystem in the country. In this regard, India is on the right path of becoming a USD 5 trillion economy by 2024-25 and is going to be one of the major growth engines of the world economic growth. The Government has fostered a dynamic economic environment in the last five years with the implementation of various praiseworthy economic reforms which has increased its presence significantly in the world economic system.

The strong macro-economic fundamentals and the underlying strengths are indicative of the potential of India to achieve a USD 5 trillion economy in the next few years. The current structure of the economy and the emerging dynamics provide us grounds to target⁹ achieving USD 1 trillion from agriculture and allied activities, USD 1 trillion from manufacturing and USD 3 trillion from services.



Source: PHD Research Bureau, PHDCCI compiled from various sources

⁹ Data pertains to vision of a USD 5 trillion Indian economy, Government of India



Emerging Contours of India's Defence and Homeland Security

6.1 USD 1 trillion from Manufacturing

The manufacturing sector holds a key position in the Indian economy. It has emerged as one of the important sectors in scripting India's growth story. The 'Make in India' initiative was launched in 2014 by the Hon'ble Prime Minister of India to give an impetus to manufacturing in India and make India a Global Manufacturing Hub. Under Make in India programme, defence manufacturing is one of the 25 prominent sectors identified by the Government of India to provide boost to manufacturing sector in the country. The Government has identified sectors that have the potential to become global champion, drive double digit growth in manufacturing and generate significant employment opportunities. Since its launch, several measures have been taken to create a conducive environment for investments, development of modern and efficient infrastructure, opening up new sectors for foreign investments and forging a partnership between Government and Industry.

6.2 Focus on Defence Manufacturing under Make in India

India has a huge Defence industrial base with several Defence Public Sector Units, ordinance factories, dedicated Research and Development (R&D) labs and many other establishments along with private companies engaged in the sector. The country is making constant efforts in the development of indigenous defence systems.

Defence sector is one of the most prominent sectors under "Make in India" Initiative to realize USD 5 Trillion Economy by 2025.

Over the years, the Government has simplified the industry licensing process, increased the Foreign Direct Investment (FDI) cap and taken necessary steps to promote Defence exports. Accordingly, the Defence offset policy has been streamlined and the Government owned trial and testing facility has been provided to the private sector. In other miscellaneous developments, two Defence industrial corridors have also been launched in Tamil Nadu and Uttar Pradesh recently.

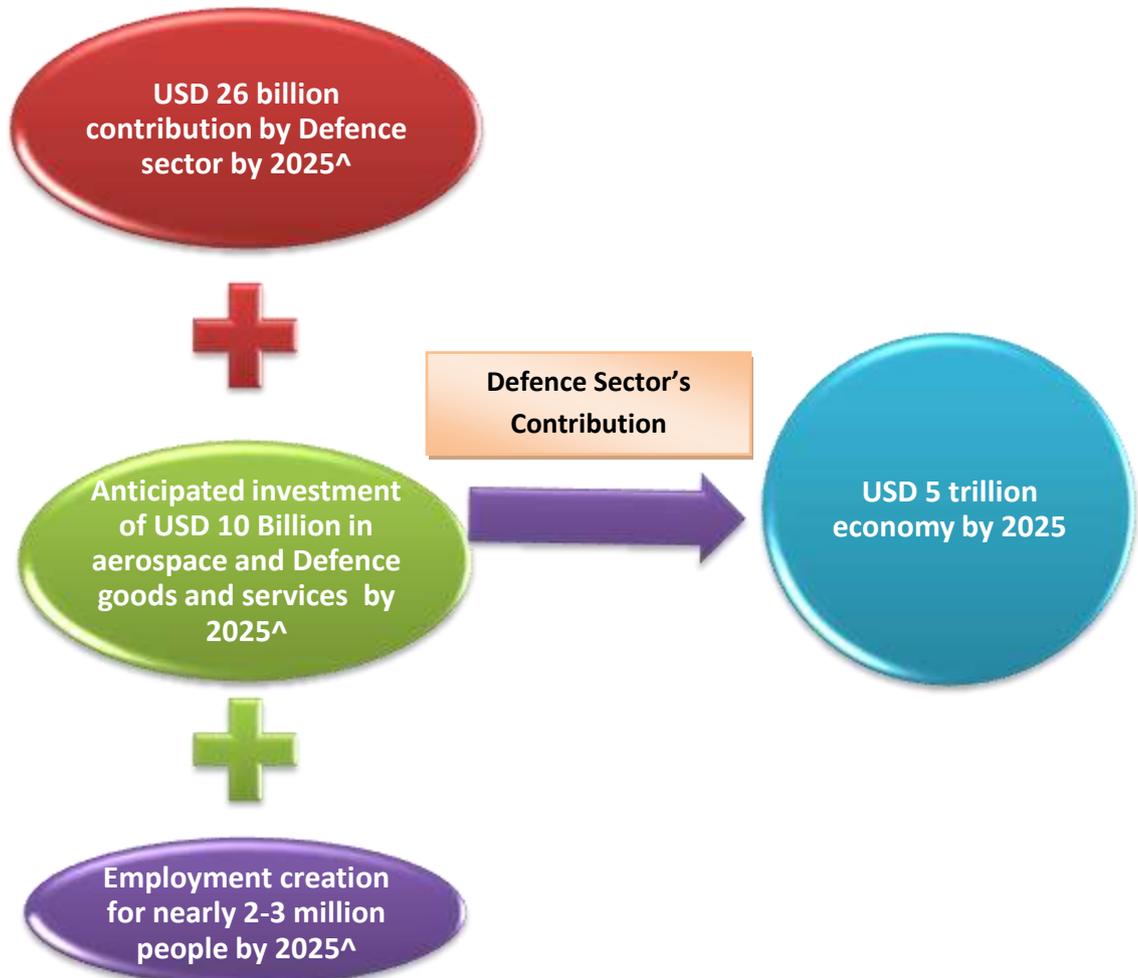
The defense production policy reflects the determination of the Government to achieve¹⁰ USD 26 billion Defence sector with an anticipated investment of USD 10 Billion in aerospace and Defence goods and services by 2025 along with creating employment for nearly 2-3 million people. During the last five and a half years, the Government has created an ecosystem where private and public sectors are contributing together as per their respective strength and experience in the growth of defence sector.

¹⁰ As envisaged in the Defence Production Policy 2018, Government of India



Emerging Contours of India's Defence and Homeland Security

Contribution of defence sector in achieving USD 5 trillion Indian economy



Source: PHD Research Bureau, compiled from various sources. Note: ^ Data estimated in the Draft Defence Production Policy 2019

The Indian defence industry has immense potential to emerge as a global manufacturing hub, however, Underlining the need to reduce dependency on arms imports, several steps have been taken under the “Make in India” initiative to make the country a major Defence manufacturing hub. Going forward, developing critical and cutting-edge technologies indigenously will make India a self-sufficient country in the defence sector. This would lead to a significant reduction in the country’s defence related imports, thus, saving the precious foreign exchange earnings that could be utilized in other socio-economic development activities in the Indian economy.

Over the years, the simplification of procedures for Defence Exports has resulted in export of USD 1537 million in 2018-19, which is nearly 7 times the export achieved in 2016-17 and a target of USD 5000 million for exports has been set till 2025:



Emerging Contours of India's Defence and Homeland Security



Source: PHD Research Bureau, compiled from Ministry of Defence, Government of India. Note- Total exports comprise of Export Authorizations to Private Companies, Export by DPSU/OFB, and SCOMET issued by DGFT. * India's Defence Exports of goods and services as per the Projections of Draft Defence Production Policy 2018.

Some of the measures that may enhance the contribution of the defence sector to bolster the 'Make in India' initiative are as follows:

- Identifying key components & systems and encourage global investors to set up manufacturing base in India by further offering more incentives.
- To leverage Government purchases (Offset Policy) particularly for technology transfer, where applicable.
- To foster innovation and technology development in Defence and Aerospace by engaging industries including MSMEs, Startups, Individual Innovators and R&D institutes.
- To collaborate with engineering/technical colleges and Industrial Training Institutes (ITIs) to ensure that defence relevant technologies and skills are part of the curriculum.
- To effectively forge industry, R&D labs, academia linkages and collaborations.
- To provide companies and R&D labs as well as academia to latest global technologies in defence.
- To encourage more investments in the existing defence corridors in the state of Tamil Nadu and Uttar Pradesh.
- To ensure high-quality anchor investors capable of spurring growth of associated suppliers (including MSMEs).
- To enhance priority-sector funding and encourage long-term funding mechanisms.
- To prepare a roadmap for making India a significant power of Artificial Intelligence (AI) application in Defence.



Emerging Contours of India's Defence and Homeland Security

Going ahead, India needs more R&D, innovation and creation of cutting-edge technologies to become self-reliant in defence production in the years to come. Continuous innovation is the key to success for any nation; therefore, technological developments must be promoted in the defence sector. To encourage innovation, the 'Make in India' initiative has ensured that opportunities are given to industries especially MSMEs and Start-up companies. The 'Start-up India' initiative of the Government is also providing a platform for conversion of new ideas into niche technology and its relevant application.

In a nutshell, several steps are being undertaken by the Government to make defence manufacturing sector self-reliant. The Government is providing all possible support to fuel Defence Manufactures indigenously through various initiatives including technology support and testing facilities to promote defence manufacturing in the country. This will significantly step up the stance of the Indian defence sector globally.





NATIONAL APEX CHAMBER

ROLE OF SKILL DEVELOPMENT IN INDIA'S DEFENCE SECTOR



7. Role of Skill Development in India's Defence Sector

Knowledge and skill development are the key driving forces of economic growth and social development for any country. A skilled and high productive manpower base is a critical enabler in the growth of manufacturing and the services sector. It is an important driver for sustainable development and inclusive growth by way of improving employability and productivity.

7.1 Skill Development Environment in India

India is one of the youngest nations in the world having a significant demographic dividend. Skill development has been one of the priority agendas of the Government during the recent times. The skill ecosystem in India is witnessing significant reforms and policy interventions that are reinvigorating and re-energizing the country's workforce today. In 2015, the Hon'ble Prime Minister of India launched the "Skill India" mission with an aim to train over 40 crore people in India in different skills by 2022¹¹. The initiatives include the National Skill Development Mission, National Policy for Skill Development & Entrepreneurship 2015, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme and the Skill Loan scheme.

Overhaul of Skill Development Environment in India in recent years

Skilling with Quality

- Common norms
- Industry connect
- Monitoring and evaluation
- Upgradation of curriculum and content

Skilling with Relevance

- Aligned with industry demand
- Enhancing State level participation
- Alignment with other ministries
- Connecting with corporates/Public Sector Undertakings (PSUs)

Skilling for Aspirations

- Skill competitions
- Academic equivalence
- State skill universities

¹¹ Data pertains to Ministry of Skill Development and Entrepreneurship, Government of India



Emerging Contours of India's Defence and Homeland Security

Skilling with Outreach

- Special schemes for specific Areas
- Enhanced women participation
- Sector Skill Councils

Skilling with Convergence

- MoUs with Central Ministries
- Skill Centres
- Re-energizing Industrial Training Institutes (ITIs)

Source: PHD Research Bureau, PHDCCI, compiled from various sources

Since youth is one of the most important agents for transformation, it is important to nurture the talent of our youth for promoting innovations. Therefore, empowering the youth by skill-building is a powerful tool in current times. It will enhance the efficacy and quality of the work for improved productivity and growth in the future.

During the recent years, the Government has been able to successfully create the foundation for skill development in the country. A large number of youth is being presently imparted skills training annually under various programmes of the Government through "Skill India" Mission. The mission envisages convergence, coordination and harmonization of the skilling efforts of various Ministries in Government of India and other key stakeholders like the State Governments, Industry, Training ecosystem, among others.

7.2 Skill Development in India's Defence Sector

India has immense potential to emerge as a global hub for defence manufacturing, defence exports, research, supply chain sourcing, among others. With ambitious plans for defence modernization, India's defence sector has an excellent opportunity to grow in exponential numbers in the backdrop of the 'Make in India' initiative launched by the Government. Therefore, defence Sector is one of the promising sectors of the Indian economy that can propel Indian manufacturing to new heights.

Many proactive steps in this direction have been undertaken by the Government in recent years such as radical changes in the defence procurement procedure, liberalization of licensing norms, increased FDI limits for investments, etc. However, for the defence sector to take off to a higher growth trajectory, it needs adequate and quality skill development. Since the defence and aerospace sector comprises of highly multifaceted systems involving number of subsystems and many technologies, availability of efficient technical talent assumes critical importance.

Due to advancing technology and productivity changes, there is a fundamental shift happening in the growing defence sector resulting in new needs for relevant and practical skills. Therefore,



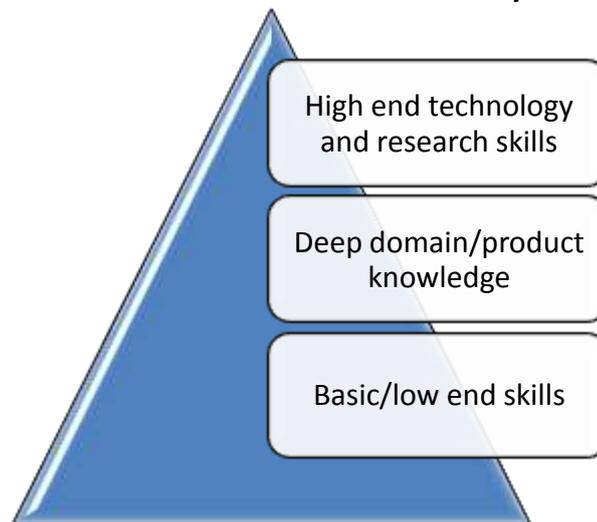
Emerging Contours of India's Defence and Homeland Security

one of the critical needs of the sector today is to attract and retain the top engineering talent that supports current goals and fuels future competitiveness.

Apart from the technical skills, there is an increasing focus on the applicable soft skills that have become invaluable for the industry. A background in mechanical/electrical/electronic engineering and system integration knowledge is important, however, there also arises a need to widen the domain knowledge and further enhance soft skills. Therefore, talent that can be readily hired and deployed on emerging needs will continue to be a long-term ambition for the growing defence and aerospace industry in India.

In this regard, the skills requirement in the sector can be visualized in the form of a three layered value addition or human capability pyramid. The bottom section of the pyramid will encompass skills to carry out large volume of low end repetitive tasks with limited focus on product /domain knowledge. The mid layer would include skills to carry out product development/product support engineering activities with excellent understanding and knowledge about the products, processes and methodologies where end user requirements are critical. Skills to carry out core and differential technology development along with research activities would be at the top of the pyramid.

Defence Sector: Skills Value Addition Pyramid



Source: PHD Research Bureau, PHDCCI

Therefore, the defence manufacturing industry is undergoing a rapid evolution spurred by technology advances, globalization and shifting demographics. To develop a sustainable ecosystem for the sector, there arises a need to work towards the development of talent to encompass these three layers of the value addition pyramid.



Emerging Contours of India's Defence and Homeland Security

A forward looking Indian defence industry must recognize that a highly engaged and talented workforce can help to gain an edge in the global marketplace as India stands on the cusp of a historical opportunity to transform the country from being the second largest importer of defence equipments to a self-reliant nation. Keeping in view the rising demand for skilled workforce in the aerospace and defence industry and improving employability is significant area in which efforts must be accelerated to help India meet its growth requirements.

Following are some of the suggestions/measures that can enhance the role of skill development in the sector, going forward:

- Analysis at the grass roots level should be undertaken to map the actual skill needs in the sector for addressing the overall skill requirements in the defence sector.
- Increased collaborations between all the key stakeholders including academic institutions, training organizations, policymakers, and the industry itself to enhance the development of skills required by the market.
- Strengthening university-industry-linkages for quality skill development in the sector.
- Engineering talent should be trained with respect to global skills that will make them receptive to international standards.
- Rigorous training across the entire value chain should be encouraged so that the workforce is up to date with technological and commercial advances as well as regulatory changes.
- Creation of more educational and research institutes with linkages to the Defence Research and Development Organisation (DRDO) since such institutes can work towards capability building of the existing workforce and developing a strong pipeline of future talent to meet the growing needs of the defence sector.





NATIONAL APEX CHAMBER

ALLOCATIONS TO DEFENCE SECTOR IN UNION BUDGET DURING THE LAST FIVE YEARS



8. Allocations to defence sector in Union Budget during the last five years

The Government has allocated significant budget allocation to defence sector over the last few years to strengthen defence and national security. The distribution of the Government of India's total spending is broadly classified in four broad heads of expenditure for defence sector i.e. allocations under Ministry of Defence (Civil), Defence Services (Revenue), Capital outlay on Defence Services and Defence Pensions. In 2019-20, the Government has allocated an amount of Rs. 4,31,011 crore for the overall defence sector which is an increase of around 6.4% over the last year's budget allocation. For securing our borders and to maintain preparedness of the highest order, the Government has provided the much needed push to Defence sector's over the last few years.

Defence Expenditure allocations in Union Budget (Rs. Crore)

Year	Ministry of Defence (MOD)	Defence Pensions	Capital outlay on Defence Services	Defence Services (Revenue)	MoD's Expenditure on defence	Total on defence
2015-16	32267	60238	71675	129740	293920	
2016-17	15014	87826	86357	162353	351550	
2017-18	15143	92000	90438	182121	379702	
2018-19 (RE)	16318	106775	93982	188118	405193	
2019-20 (BE)	13635	112080	103394	201902	431011	

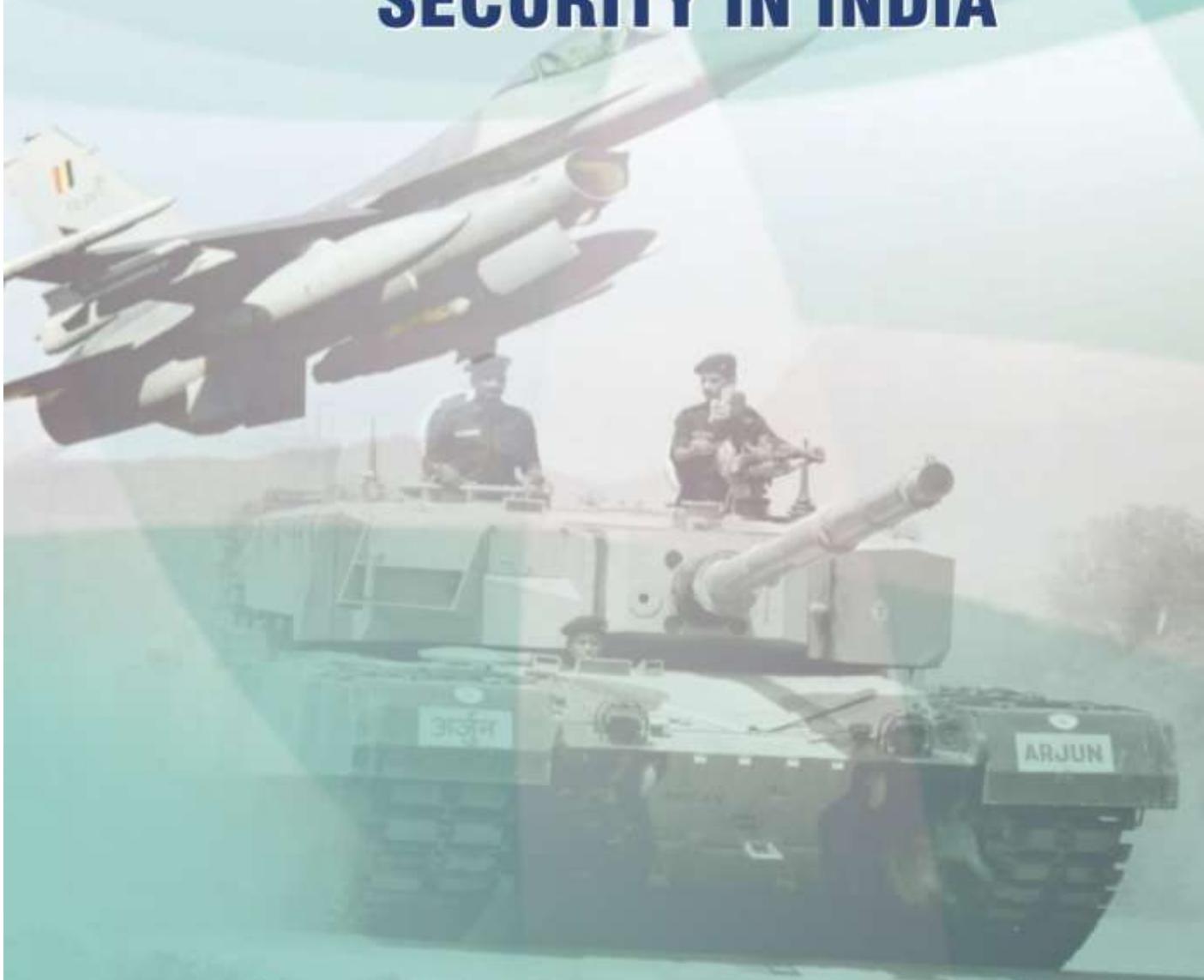
Source: PHD Research Bureau, compiled from Union Budget, Government of India. Note: Data under MOD is for Civil/ Miscellaneous





NATIONAL APEX CHAMBER

WAY FORWARD FOR DEFENCE & HOMELAND SECURITY IN INDIA



9. Way Forward for Defence and Homeland Security in India

As India is steadily moving towards transforming itself to a global economic power, the defence and homeland security sector has assumed a crucial role in the country's long term strategic planning. During the past few years, achieving self-reliance and indigenization in defence manufacturing has been one of the key objectives of the Government of India.

The policy initiatives undertaken by the Government in recent times have brought about a paradigm shift in the defence sector with a renewed focus on self-reliance, import substitution, technology upgradation and indigenization. Timely regulatory changes have created a facilitating environment for greater foreign investments and increased domestic private sector participation. Therefore, the reform measures undertaken by the Government in the defence sector coupled with the high domestic demand emanating from extensive modernization plans of the Indian defence services is set to position India as a global defence manufacturing hub in the coming times.

Going forward, following are the key recommendations for boosting India's defence sector:

- Developing state-of-the-art defence technologies and domestic production capabilities to give a significant boost to the Make in India mission launched by the Government is significant.
- Establishment of a world class defence industry base by promoting intense research & development for creating designs, systems, products and technologies is crucial to boost productivity of defence sector.
- The Line of Credit facility and other financing options should be strengthened to boost manufacturing of arms and ammunitions for generating employment opportunities and pushing technology development leading to higher defence exports.
- Ensuring early rollout of the defence production policy for promoting domestic production by public sector, private sector and micro, small and medium enterprises (MSMEs) is significant.
- To ensure flexibility in the defence procurement process considering that the needs of the armed forces are non-negotiable and uncompromising. Swift decision making, suitable timelines and delegation of powers to appropriate authorities will ensure an efficient and effective implementation of the procurement process, by all the stakeholders concerned.



Emerging Contours of India's Defence and Homeland Security

- For meeting India's domestic defence requirements as well as promoting higher defence exports, MSMEs should be involved in larger numbers to give a fresh impetus to the development of defence production in the country.
- India's defence exports should be significantly increased by providing greater trade facilitation measures and promoting ease of doing business keeping in view the immense potential of Indian exporters to export high value added defence products.
- Facilitation in terms of loans and direct financing options to Indian defence manufactures may be enhanced who are looking to export their products. Further, knowledge support must be promoted to them in expanding and exploring exporting destinations for defence items.
- Location specific problems faced by defence manufactures and their identification should be addressed timely to maintain the ongoing momentum of defence production process.
- Setting up of defence technology universities and public-private partnerships in providing test facilities to facilitate further indigenization is crucial for the defence sector.
- Quality skill development should be encouraged to meet the growing talent requirements in the rapidly evolving Indian defence sector.
- Enhancing round-the-clock monitoring of the global and regional geopolitical environment for maintenance of peace and stability in the country may be focused.





NATIONAL APEX CHAMBER

CONCLUSIONS AND RECOMMENDATIONS



10. Conclusions and Recommendations

Peace, progress and prosperity are the pillars of achieving sustainable economic growth. Maintenance of internal harmony and a stable law and order system are essentials for achieving desired economic outcomes. Therefore, Defence and Homeland Security have been identified as one of the most prominent sectors to achieve inclusive and sustainable growth. India is a diverse nation and this diversity poses peculiar security and defence related requirements. Therefore, the Government has given special impetus to upscale, promote and increase the participation of Indian companies and manufactures in the defence sector.

The Government of India has been working towards the goal of self-reliance which has propelled us to nurture and expand our defence industrial base and also successfully maintain the Indian internal security scenario. Therefore, the Government of India has introduced several reforms to boost "Make in India" in defence manufacturing, employment generation and investments for achieving strong and sustainable socio-economic development of the country.

The Government has introduced many far-reaching reforms in the past five and a half years to create an ecosystem where private and public sectors contribute together as per their respective strength and experience. The reforms have touched almost all aspects of Defence production and procurement. Several initiatives have been undertaken to promote higher defence exports and reduce dependence on imports including liberalising procurement and production procedures, introduction of Strategic Partnership Model, increase in Foreign Direct Investment (FDI) through automatic route from 26% to 49%, rationalising licensing requirements, , among others.

India boasts a strong Defence industrial base, with nine Defence Public Sector Units, 41 ordinance factories, 50 dedicated R & D labs and many other establishments¹². There are about 70 license holding private companies with a dedicated workforce of 1.7 lakhs people. Under the "Make" procedure, till date 40 industry development proposals have been given in principle approval by the Government. Eight such projects would have an estimated value of Rs 2,000 crore in next five years. As against 215 Defence licenses issued till 2014, the number of Defence licenses issued increased significantly to 440 by March 2019.

India's defence production has increased in the recent years from about Rs. 74,121 crore in 2016-17 to about Rs.78,870 crore in 2017-18 and more than Rs. 80,500 crore in 2018-19. Significant reform measures have been taken by the Government of India to strengthen defence and national security of the country. A number of products have been developed through enhanced focus on research and development; expanding and upgrading capabilities, adoption of technological innovations, among others.

¹² Data compiled from official sources, Ministry of Defence, Government of India as on 23rd September 2019



Emerging Contours of India's Defence and Homeland Security

Going ahead, with growth of the Indian economy expected to grow in a higher trajectory on account of various praiseworthy reforms undertaken by the Government, the Indian defence industry will attract large chunk of global investments. The Indian defence sector will scale to new heights with the support of all the industry segments including the MSMEs in the process of making India a major manufacturing hub, thereby, providing attractive opportunities for co-development and co-production of defence equipments and systems not only for our defence forces but also for exports to the world.

The defence sector has emerged as one of the crucial sectors across the world keeping in view the emerging dynamic needs in the area of defence and homeland security. The world has witnessed the rising share of governments' spending on strengthening its armed forces and defence sector for achieving sustainable growth of the economies. The global military expenditure has witnessed an increasing trend over the last many decades. During 1980s, the average global military expenditure was at about USD 407 billion which scaled up to about USD 704 billion in 1990s, USD 1096 billion in 2000s and more than USD 1700 billion in 2010s.

The global military expenditure was at about USD 1058 billion in 2004 which significantly increased to more than USD 1700 billion in 2018 with an average growth of about 5% during the last fifteen years. However, the global military expenditure as a % of GDP has witnessed a declining trend over the last many decades. During 1980s, the average global military expenditure as a % of world GDP was at about 4% which declined to about 2.6% in 1990s, 2.3% in 2000s and 2010s each.

The five biggest spenders on the military expenditure across the world were the United States, China, Saudi Arabia, India and France; together these countries accounted for more than 60% of global military spending in 2018. USA is the largest country across the world with military expenditure of around USD 649 billion followed by China (USD 250 billion), Saudi Arabia (USD 68 billion), India (USD 67 billion), France (USD 64 billion), among others during 2018.

The military expenditure by economies across the world has witnessed an increasing trend over the last many decades. From 1970 to 2018, India has made remarkable progress in terms of its ranking in the military expenditure across the world. In the year 1970, India's military expenditure was at about USD 2 billion, which scaled up to USD 5 billion in 1980, USD 11 billion in 1990, USD 14 billion in 2000, USD 46 billion in 2010 and USD 67 billion in 2018. India has improved its ranking significantly and has emerged as the 4th largest military spending economy in the world during 2018. While, the military spending as a % of GDP has remained more or less similar at about 2.4% during the last five years.

Exports are a vital component of a dynamically growing economy like India. The Government of India has fostered a dynamic economic policy environment during the last five years with the implementation of various notable economic reforms. Globally, during the period from 2014 to 2018, amongst the top ten world exporters of defence items, USA ranks the highest with



Emerging Contours of India's Defence and Homeland Security

defence exports of USD 52480 million, followed by Russia (USD 30064 million), France (USD 9948 million), Germany (USD 9324 million), China (USD 7633 million), UK (USD 6171 million), Spain (USD 4692 million), among others. India ranks 10th with cumulative exports of USD 3122 million and a share of 2.1% in total world defence exports between 2014 and 2018.

India was the 2nd largest importer of defence items with a share of 9.5% in the total world imports of defence items between 2014 and 2018. Amongst the top ten world importers, Saudi Arabia ranks the highest with defence imports of USD 16869 million during 2014 to 2018, followed by India (USD 13876 million), Egypt (USD 7429 million), Australia (USD 6793 million), Algeria (USD 6441 million), China (USD 6103 million), UAE (USD 5425 million), among others.

India's overall defence exports have scaled up drastically from around USD 317 million in 2014 to around USD 1537 million in 2018. While, cumulative defence exports of India stands at about USD 3122 million with a share of 2.1% in total world defence exports between 2014 and 2018. While, during the last few years, India's defence imports have declined around USD 3334 million in 2014 to around USD 1539 million in 2018. However, India was the 2nd highest importer of defence items of around USD 13876 million during 2014 and 2018.

In recent years the manufacturing sector has been the major focus for the Government of India. Realizing the importance of manufacturing sector, its contribution in employment generation and economic growth, many initiatives are being taken up by the Government to foster the growth of this sector. One of the prominent initiatives introduced is Make in India to give boost to indigenous manufacturing and attract a major chunk of international and domestic investments in the country. Startup India initiative was also launched to build a strong ecosystem for nurturing entrepreneurship, innovation and generate employment opportunities.

Further, the Foreign Direct Investment policy has been simplified and liberalized progressively and now most of the sectors are under automatic route. Over the last five years, the share of manufacturing has remained more or less in the range of 16% to 17%. The average share of manufacturing sector in India's gross value added (GVA) stands at about 17% during 2014-15 to 2018-19. Keeping in view the objective to increase the share of overall manufacturing, it becomes crucial that the defence sector should be tapped and explored as one of the major sectors contributing to the growth of manufacturing in the country. Several reforms have been undertaken by the Government to increase the scope of defence manufacturing in India over the years. Under Make in India programme, Defence manufacturing is one of the 25 sectors identified to promote indigenous manufacturing and growth of economy.

Some of the key initiatives launched by the Government to boost manufacturing of state of art defence products are introduction of innovations for Defence Excellence, policy for indigenisation of components and spares used in defence platforms, reducing entry barriers to encourage private sector participation, promoting intellectual property right (IPR), setting up of Defence Investor Cell, among others.



Emerging Contours of India's Defence and Homeland Security

MSMEs have contributed significantly to defence manufacturing with thousands of quality products, mainly at sub-system and component level. The Government has introduced several measures to provide hand holding support to MSMEs to increase their participation in defence manufacturing. MSMEs across the country are supplying components and sub-assemblies to the DPSUs, Ordnance Factories, DRDO and private industries. The Government envisages to increase participation of MSMEs engaged in Defence production from over the present level of 8000 MSMEs to 16,000 in the coming times. Going forward, role of MSMEs is significant in contributing to the employment generation and achieving self-reliance in defence sector.

The strong macro-economic fundamentals and the underlying strengths are indicative of the potential of India to achieve a USD 5 trillion economy in the next few years. The current structure of the economy and the emerging dynamics provide us grounds to target achieving USD 1 trillion from agriculture and allied activities, USD 1 trillion from manufacturing and USD 3 trillion from services. Therefore, defence sector would play a crucial role in contributing to the manufacturing sector of India. Keeping in view of this, Defence sector is one of the most prominent sectors under "Make in India" programme announced by the Government to realize USD 5 Trillion Economy by 2025.

The draft defense production policy 2018 reflects the determination of the Government to achieve¹³ USD 26 billion Defence sector with an anticipated investment of USD 10 Billion in aerospace and Defence goods and services by 2025 along with creating employment for nearly 2-3 million people. During the last five and a half years, the Government has created an ecosystem where private and public sectors are contributing together as per their respective strength and experience in the growth of defence sector. The Indian defence industry has immense potential to emerge as a global manufacturing hub, however, underlining the need to reduce dependency on arms imports, several steps have been taken under the "Make in India" initiative to make the country a major Defence manufacturing hub.

The policy initiatives undertaken by the Government in recent times have brought about a paradigm shift in the defence sector with a renewed focus on self-reliance, import substitution, technology upgradation and indigenization. Going forward, some of the measures that can enhance the contribution of the defence sector to bolster the 'Make in India' initiative include identifying key components & systems and encourage global investors to set up manufacturing base in India; developing critical and cutting-edge technologies indigenously; fostering innovations and technology development; strengthening university-industry linkages in defence; collaborations with colleges and Industrial Training Institutes (ITIs) to ensure that defence relevant technologies and skills are part of the curriculum; extending line of credit facility and other financing options; early rollout of the defence production policy; enhancing priority-sector funding and encouraging long-term funding mechanisms; enhancing the use of Artificial Intelligence (AI) application in Defence, among others.

¹³ As envisaged in the Defence Production Policy 2018, Government of India





NATIONAL APEX CHAMBER

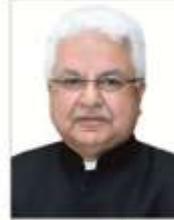
PRESIDIUM, PHDCCI



Dr D K Aggarwal
President, PHDCCI



Sanjay Aggarwal
Sr. Vice President, PHDCCI



Pradeep Multani
Vice President, PHDCCI



Dr Mahesh Y Reddy
Secretary General, PHDCCI

About Us

PHD Chamber of Commerce & Industry, a leading Industry Chamber of India, ever since its inception in 1905, has been an active participant in the India Growth Story through its Advocacy Role for the Policy Makers and Regulators of the Country. Regular interactions, Seminars, Conference and Conclaves allow healthy and constructive discussions between the Government, Industry and International Agencies bringing out the Vitals for Growth. As a true representative of the Industry with a large membership base of 1,30,000 direct and indirect members, PHD Chamber has forged ahead leveraging its legacy with the Industry knowledge across sectors (58 Industry verticals being covered through Expert Committees), a deep understanding of the Economy at large and the populace at the micro level.

At the National level, the PHD Chamber is well represented in 16 States with its own offices and MOUs with eleven Partner Chambers in different States.

At the Global level we have been working with the Concerned Ministries, Embassies and High Commissions to bring in the International Best Practices and Business Opportunity.

PHD Chamber has special focus on the following thrust areas:

- **Economic & Business Policy Advocacy**
- **Industry**
- **Infrastructure**
- **Housing**
- **Health**
- **Education & Skill Development**
- **Agriculture & Agri-business**
- **ICT**
- **International Trade**

"Towards Inclusive & Prosperous New India"

PHD CHAMBER OF COMMERCE AND INDUSTRY

PHD House, 4/2 Siri Institutional Area, August Kranti Marg, New Delhi - 110 016 (India) • Tel. : +91-11-2686 3801-04, 49545454, 49545400
Fax : +91-11-2685 5450 • E-mail : phdcci@phdcci.in • Website : www.phdcci.in, CIN: U74899DL1951GAP001947

Connect with us:





Emerging Contours of India's Defence and Homeland Security

Project Team

Dr S P Sharma
Chief Economist
PHD Chamber

Ms Surbhi Sharma
Associate Economist
PHD Chamber

Ms. Bhawna Kakkar
Research Associate
PHD Chamber

Ms. Divya Sharma
Research Associate
PHD Chamber

We appreciate the help of Mr Hariom Kuthwaria, Graphic Designer, PHD Chamber who assisted in designing the Study.

Disclaimer

"Emerging Contours of India's Defence and Homeland Security" is prepared by PHD Research Bureau, PHD Chamber of Commerce and Industry. This research paper may not be reproduced, wholly or partly in any material form, or modified, without prior approval from the Chamber.

It may be noted that this research paper is for information purposes only. Though due care has been taken to ensure accuracy of information to the best of the PHD Chamber's knowledge and belief, it is strongly recommended that readers should seek specific professional advice before taking any decisions.

Please note that the PHD Chamber of Commerce and Industry does not take any responsibility for outcome of decisions taken as a result of relying on the content of this research paper. PHD Chamber of Commerce and Industry shall in no way, be liable for any direct or indirect damages that may arise due to any act or omission on the part of the Reader or User due to any reliance placed or guidance taken from any portion of this research paper.

ISBN Number: 978 93 84145 90 3

Copyright 2019

PHD Chamber of Commerce and Industry
ALL RIGHTS RESERVED

No part of this publication including the cover, shall be reproduced, stored in a retrieval system, or transmitted by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of, and acknowledgement of the publisher (PHD Chamber of Commerce and Industry).



PHD Research Bureau

PHD Research Bureau; the research arm of the PHD Chamber of Commerce and Industry was constituted in 2010 with the objective to review the economic situation and policy developments at sub-national, national and international levels and comment on them in order to update the members from time to time, to present suitable memoranda to the government as and when required, to prepare State Profiles and to conduct thematic research studies on various socio-economic and business developments.

The Research Bureau has been instrumental in forecasting various lead economic indicators national and sub-national. Many of its research reports have been widely covered by media and leading newspapers. The Research Bureau has undertaken various policy studies for Government of India and State Governments.

Research Activities	Comments on Economic Developments	Newsletters	Consultancy
<ul style="list-style-type: none"> Research Studies 	<ul style="list-style-type: none"> Global Economic Developments 	<ul style="list-style-type: none"> Economic Affairs Newsletter (EAC) 	<ul style="list-style-type: none"> Trade and Investment Facilitation Services (TIFS)
<ul style="list-style-type: none"> State Profiles 	<ul style="list-style-type: none"> India's Economic Developments 	<ul style="list-style-type: none"> Forex and FEMA Newsletter 	<ul style="list-style-type: none"> Business Research and Consultancy: Innovative and customised research solutions for growth of Industry and businesses
<ul style="list-style-type: none"> Impact Assessments 	<ul style="list-style-type: none"> States' Economic Developments 	<ul style="list-style-type: none"> Global Economic Monitor (GEM) 	
<ul style="list-style-type: none"> Thematic Research Reports 	<ul style="list-style-type: none"> International Developments 	<ul style="list-style-type: none"> Trade & Investment Facilitation Services (TIFS) Newsletter 	
<ul style="list-style-type: none"> Releases on Economic Developments 	<ul style="list-style-type: none"> Financial Markets 	<ul style="list-style-type: none"> State Development Monitor (SDM) 	
	<ul style="list-style-type: none"> Foreign exchange market 	<ul style="list-style-type: none"> Industry Development Monitor (IDM) 	
	<ul style="list-style-type: none"> Developments in International Trade 		



Emerging Contours of India's Defence and Homeland Security

Studies undertaken by the PHD Research Bureau

A: Thematic research reports

1. Comparative study on power situation in Northern and Central states of India (September 2011)
2. Economic Analysis of State (October 2011)
3. Growth Prospects of the Indian Economy, Vision 2021 (December 2011)
4. Budget 2012-13: Move Towards Consolidation (March 2012)
5. Emerging Trends in Exchange Rate Volatility (Apr 2012)
6. The Indian Direct Selling Industry Annual Survey 2010-11 (May 2012)
7. Global Economic Challenges: Implications for India (May 2012)
8. India Agronomics: An Agriculture Economy Update (August 2012)
9. Reforms to Push Growth on High Road (September 2012)
10. The Indian Direct Selling Industry Annual Survey 2011-12: Beating Slowdown (March 2013)
11. Budget 2013-14: Moving on reforms (March 2013)
12. India- Africa Promise Diverse Opportunities (November 2013)
13. India- Africa Promise Diverse Opportunities: Suggestions Report (November 2013)
14. Annual survey of Indian Direct Selling Industry-2012-13 (December 2013)
15. Imperatives for Double Digit Growth (December 2013)
16. Women Safety in Delhi: Issues and Challenges to Employment (March 2014)
17. Emerging Contours in the MSME sector of Uttarakhand (April 2014)
18. Roadmap for New Government (May 2014)
19. Youth Economics (May 2014)
20. Economy on the Eve of Union Budget 2014-15 (July 2014)
21. Budget 2014-15: Promise of Progress (July 2014)
22. Agronomics 2014: Impact on economic growth and inflation (August 2014)
23. 100 Days of new Government (September 2014)
24. Make in India: Bolstering Manufacturing Sector (October 2014)
25. The Indian Direct Selling Industry Annual Survey 2013-14 (November 2014) Participated in a survey to audit SEZs in India with CAG Office of India (November 2014)
26. Role of MSMEs in Make in India with reference to Ease of Doing Business in Ghaziabad (Nov 2014)
27. Exploring Prospects for Make in India and Made in India: A Study (January 2015)
28. SEZs in India: Criss-Cross Concerns (February 2015)
29. Socio-Economic Impact of Check Dams in Sikar District of Rajasthan (February 2015)
30. India - USA Economic Relations (February 2015)
31. Economy on the Eve of Union Budget 2015-16 (February 2015)
32. Budget Analysis (2015-16)
33. Druzhba-Dosti: India's Trade Opportunities with Russia (April 2015)
34. Impact of Labour Reforms on Industry in Rajasthan: A survey study (July 2015)
35. Progress of Make in India (September 2015)
36. Grown Diamonds, A Sunrise Industry in India: Prospects for Economic Growth (November 2015)
37. Annual survey of Indian Direct Selling Industry 2014-15 (December 2015)
38. India's Foreign Trade Policy Environment Past, Present and Future (December 2015)
39. Revisiting the emerging economic powers as drivers in promoting global economic growth (February 2016)



Emerging Contours of India's Defence and Homeland Security

40. Bolstering MSMEs for Make in India with special focus on CSR (March 2016)
41. BREXIT impact on Indian Economy (July 2016)
42. India's Exports Outlook (August 2016)
43. Ease of Doing Business : Suggestive Measures for States (October 2016)
44. Transforming India through Make in India, Skill India and Digital India (November 2016)
45. Impact of Demonetization on Economy, Businesses and People (January 2017)
46. Economy on the eve of Budget 2017-18 (January 2017)
47. Union Budget 2017-18: A budget for all-inclusive development (January 2017)
48. Annual Survey of Indian Direct Selling Industry 2015-16 (February 2017)
49. Worklife Balance and Health Concerns of Women: A Survey (March 2017)
50. Special Economic Zones: Performance, Problems and Opportunities (April 2017)
51. Feasibility Study (socio-Economic Survey) of Ambala and Rohtak Districts in Haryana (March 2017)
52. Goods and Services (GST): So far (July 2017)
53. Reshaping India-Africa Trade: Dynamics and Export Potentiality of Indian Products in Africa (July 2017)
54. Industry Perspective on Bitcoins (July 2017)
55. Senior Housing: A sunrise sector in India (August 2017)
56. Current state of the economy (October 2017)
57. Equitable finance to fulfill funding requirements of Indian Economy (October 2017)
58. The Wall of Protectionism: : Rise and Rise of Protectionist Policies in the Global Arena, (November 2017)
59. India-Israel Relations: Building Bridges of Dynamic Trade(October 2017)
60. Role of Trade Infrastructure for Export Scheme (TIES) in Improving Export Competitiveness (November 2017)
61. India - China Trade Relationship: The Trade Giants of Past, Present and Future (January 2018)
62. Analysis of Trade Pattern between India and ASEAN(January 2018)
63. Union Budget 2018-19 – (February 2018)
64. Ease of Doing Work for Women: A survey of Delhi NCR (February 2018)
65. Restraining Wilful Defaults: Need of the hour for Indian Banking System (March 2018)
66. Impact of GST on Business, Industry and Exporters (April 2018)
67. India – Sri Lanka Bilateral Relations: Reinforcing trade and investment prospects (May 2018)
68. Growth Prospects of the Indian Economy: Road to US \$5 Trillion Economy(May 2018)
69. India's Free Trade Agreements Dynamics and Diagnostics of Trade Prospects(May 2018)
70. Growth Prospects of the India Economy: Road to US \$5 Trillion Economy(May 2018)
71. India – UK Trade Relations and Societal Links: Way Forward (June 2018)
72. Rural India: Road to US\$ 5 trillion economy (September 2018)
73. Economy on the eve of Interim Budget 2019-20 (January 2019)
74. Interim Budget 2019-20 analysis (February 2019)
75. Women Entrepreneurship: Transforming from domestic households to Financial Independence (March 2019)
76. Prospects for Exports from India: Five Pronged Strategy to Achieve USD700 Billion Merchandise Exports by 2025 (March 2019)
77. India Towards Shared Prosperity: Economic Agenda for the Next Five Years (March 2019)
78. Job Creation: A Pan India Survey of Households (March 2019)



Emerging Contours of India's Defence and Homeland Security

79. India Inc. Speaks Live: Wish List for the Next Five Years (May 2019)
80. Suggestive Roadmap for Revitalizing Economic Growth (June 2019)
81. Indian Economy on the Eve of Union Budget 2019-20 (July 2019)
82. Union Budget 2019-20: Road to US\$ 5 trillion economy (July 2019)

B: State profiles

83. Rajasthan: The State Profile (April 2011)
84. Uttarakhand: The State Profile (June 2011)
85. Punjab: The State Profile (November 2011)
86. J&K: The State Profile (December 2011)
87. Uttar Pradesh: The State Profile (December 2011)
88. Bihar: The State Profile (June 2012)
89. Himachal Pradesh: The State Profile (June 2012)
90. Madhya Pradesh: The State Profile (August 2012)
91. Resurgent Bihar (April 2013)
92. Life ahead for Uttarakhand (August 2013)
93. Punjab: The State Profile (February 2014)
94. Haryana: Bolstering Industrialization (May 2015)
95. Progressive Uttar Pradesh: Building Uttar Pradesh of Tomorrow (August 2015),
96. Suggestions for Progressive Uttar Pradesh (August 2015)
97. State profile of Telangana- The dynamic state of India (April 2016)
98. Smart Infrastructure Summit 2016- Transforming Uttar Pradesh (August 2016)
99. Smart Infrastructure Summit 2016-Transforming Uttar Pradesh : Suggestions for the State Government (August 2016)
100. Rising Jharkhand: An Emerging Investment Hub (February 2017)
101. Punjab: Roadmap for the New Government Suggestions for the Industrial and Socio-Economic Development – Focus MSMEs ease of doing business (May 2017)
102. Prospering Himachal Pradesh: A Mountain of Opportunities (August 2017)
103. Kashmir: The way forward (February 2018)
104. Analysis of State Budgets for 2018-19: Select States (March 2018)
105. Rising Uttar Pradesh : One District One Product Summit (August 2018)
106. Rajasthan Steady Strides into the Future: Emerging Growth Dynamics and the Way Forward (August 2018)
107. Jharkhand: Economic Profile (January 2019)
108. Rising Jharkhand: Skill Development to spur socio-economic growth (January 2019)
109. Progressive Haryana: The Agricultural Hub of India (February 2019)
110. Progressive Haryana: Economic Profile (February 2019)
111. Ease of Doing Business for MSMEs (September 2019)





NATIONAL APEX CHAMBER

Emerging Contours of India's Defence and Homeland Security

Notes





NATIONAL APEX CHAMBER

Emerging Contours of India's Defence and Homeland Security

Notes







NATIONAL APEX CHAMBER

PHD CHAMBER OF COMMERCE AND INDUSTRY

PHD House, 4/2 Siri Institutional Area, August Kranti Marg, New Delhi - 110 016

Tel. : +91-91-11-2686 3801-04, 49545454 • Fax : +91-11-2685 5450

E-mail : research@phdcci.in • Website : www.phdcci.in