



WORLD TRADE CENTER®
MUMBAI



MVIRDC®

Study on INDIGENISATION of DEFENCE MANUFACTURING

By MVIRDC World Trade Center Mumbai





Bharat Ratna Sir M. Visvesvaraya
(15 September, 1860 - 14 April, 1962)

FIFTY YEARS AND COUNTING

M. Visvesvaraya Industrial Research and Development Centre (MVIRDC) is a non-profit company registered and licensed under Section 25 of the Companies Act, 1956 (currently Section 8 of the Companies Act, 2013). On 26 June, 2020 MVIRDC completed 50 years of continuous service to the promotion of trade and industry.

MVIRDC became a member of the World Trade Centers Association, New York, in 1971 and established the World Trade Center Mumbai, which is the first World Trade Center in India. MVIRDC, having spearheaded the movement of World Trade Centers in India with the establishment of WTCs at Bhubaneswar, Goa and Jaipur, is assisting MSMEs in these regions through various Trade Research, Trade Promotion, Trade Infrastructure including Commercial Offices, Business Center, Trade Facilitation Services and Trade Education Programmes.

Study on Indigenisation of Defence Manufacturing

By MVIRDC World Trade Center Mumbai

CONTENTS

- Key findings of the study
- Introduction
- Acknowledgement
- Overview of defence sector in India
- Defence Acquisition Procedure (DAP)
- Challenges and policy suggestions (Primary Survey)

Disclaimer:

MVIRDC World Trade Center Mumbai has taken utmost care in the preparation of this document in terms of validity or authenticity of the information included. However, we hereby declare that we can in no way be held responsible for the legitimacy of the information. The information has been sourced from relevant stakeholders and publicly available secondary data.



Preface

Defence manufacturing is a beacon of 'Make in India' campaign as the country has made tremendous progress in indigenizing production of military hardware and software to reduce import dependence. India's Light Combat Aircraft 'Tejas', Surface to Air Missile system 'Akash', Cheetah Helicopter, Anti-Submarine Warfare Corvette (ASWC) and Lakshya Parachute for Pilotless Target Aircraft are some of the iconic products indigenized by the Indian industry in the last few years.



Yet, there is tremendous scope to localize defence manufacturing supply chain as Indian government spends 36% of its procurement expenditure on imported goods, although this ratio has declined from 46% in FY19. India is the largest importer of defence equipments and last year (Fy22), we imported Rs. 50,061 crore worth of defence stores or equipments. Even if we succeed in indigenizing 1% of this import, it can create Rs. 500 crore worth of business opportunity for local micro, small and medium enterprises (MSMEs) and large manufacturers.

Such a mammoth business opportunity will have multiplier effect on investment, employment generation and economic growth. Manufacturing of complex defence products such as submarines, advanced aircrafts and communication systems involve long supply chain of vendors and sub-vendors who put together components, systems, sub-systems and sub-assemblies. Developing such a complex supply chain requires advanced engineering skills, cutting-edge technologies, vibrant MSME vendor base and state-of-the-art manufacturing facilities, which are the hallmark of a sophisticated manufacturing ecosystem. Therefore, indigenisation of defence production will give a major boost to the advancement of India's manufacturing ecosystem and it will have a direct beneficial impact on electronic hardware, automobile and machinery manufacturing sectors that share dual use products with defence sector.

India's private manufacturing companies are emerging as significant suppliers of defence products along with Public Sector Undertakings (PSUs), which goes to prove the competitiveness of the domestic private industry. During 2018-19 to 2022-23 (upto June, 2022), government has signed 137 contracts with Indian vendors for capital procurement of defence equipments and of this 75 contracts went to private sector units, while the remaining 62 contracts were awarded to public sector units.

As India modernises its defence system, the role of innovation is crucial and the country's vibrant start-up ecosystem can contribute significantly in creating technologically superior defence equipments. The Defence India Startup Challenge (DISC) under the iDEX framework enables our defence forces to benefit from the technology solutions of start-up enterprises to address their problems.

This study is prepared at a time when Indian MSMEs, start-ups and large private companies have joined hands with DPSUs in contributing to the vision of Self-Reliance in defence manufacturing. This report identifies key challenges faced by the private and public sector units in defence manufacturing and proposes actionable policy recommendations to address these challenges. I am confident that the findings of this report will be a useful reference for policymakers and it will also stimulate further public discussion on this subject, which has a bearing on national security.

Rupa Naik

Executive Director

Key findings of the study

- In the last two decades, India has topped the list of arms importing countries 12 times [according to Stockholm International Peace Research Institute (SIPRI)].
- Establishing a block-chain based digital framework for import documentations has been suggested to facilitate imports of critical raw materials.
- A framework can be established to accommodate the higher cost of manufacturing arising out of the higher Indigenous Content (ICs) requirements under the DAP 2020.
- A policy framework has been suggested to ensure that benefits enjoyed by the bigger participants trickle down to micro, small and medium enterprises.
- A coordinating agency may be established to aggregate demand from the domestic and global markets to create an economically viable scale of production.
- Government may consider establishing a consortium of defence public shipyards to further optimize the efficient use of resources.
- Further policy refinement is suggested under the Buy (IDDM) category with regards to FDI policy and definition of "Indigenous Design".



Introduction

India has set an ambitious target of achieving a USD five trillion economy. This can only be achieved if India is able to develop a strong manufacturing ecosystem with the necessary infrastructure and technology. In 2020, there was a call for Aatmanirbhar Bharat which aimed to make India a self-reliant nation, with focus on five pillars viz. Economy, infrastructure, system, demography and demand.

The defence sector of the country has been identified as one of the key areas with major opportunities for indigenisation as India has been consistently reliant on foreign sources for its defence requirements. India is home to more than 1.5 billion people (16% of total world population), with the fifth largest economy in the world and a total output of more than USD three trillion in FY 2021-22. Geographically, India is placed at very strategic location overlooking at the vast Indo-pacific region and connecting the rest of Asia to energy rich west Asia and Africa. With its enormous economic potential, cultural and political soft power and geostrategic location, India is increasingly becoming the epicentre of the global peace and stability. To ensure the protection of its sovereignty and its economic, strategic and political interest, it's of absolute importance for a country of India's size and stature to have a strong armed forces equipped with all the necessary modern equipments and defence technology. Self-reliance in defence will not only ensure strategic autonomy but also promote the local defence industry. It will also help reduce India's reliance on imports and aid in boosting exports from the sector.

Indigenisation in the defence industry is heavily influenced by the government's procurement policy. This is because the Indian government is the sole buyer in the defence market. Thus it becomes important to study this procurement policy and its effects on indigenisation.

The study looks at defence indigenisation in India with major focus on the Defence Acquisition Procedure (DAP, 2020). It is divided into three chapters. The first chapter gives a broad overview of the Indian defence industry. This is then followed by a study of the DAP, 2020. The third chapter highlights the challenges and feedbacks with respect to the indigenisation policy as received from the primary survey conducted with various stakeholders in the sector.

Acknowledgement

MVIRDC World Trade Center Mumbai generously acknowledges the support of experts and entrepreneurs from defence and related segments whose valuable insights have enriched the content of this study.

We extend our gratitude to Shri N Ravindra, Secretary General, Society of Defence Technologists, for his views and opinions on how defence R&D activity may be promoted in India.

We appreciate Mr. S Samuel C Rajiv, PhD, Associate Fellow, Manohar Parrikar Institute for Defence Studies and Analyses, for highlighting policy gaps in existing defence procurement processes.

We are thankful to Mr. Vikram Bansal, Founder and CEO, ASATROBO, for highlighting challenges faced by drone manufacturing startups in India.

We are grateful to Col. KV Kuber, Indian Army Veteran, Director- Aerospace and Defence, E&Y, for bringing out industry perspective on indigenisation efforts and suggesting policy recommendations.

We also thank Mr. Gurudatta Prasad Voleti, Retd. Director – Production and Mr. Ch. Ramesh Babu, Retd. General Manager, Bharat Dynamics Limited for suggesting policy roadmap for defence indigenisation.

We extend our special gratitude to Mr. Amit Cowshish, Retd. Senior Official of Ministry of Defence and Former Consultant at Manohar Parrikar Institute for Defence Studies and Analyses (MP-IDSA) for his guidance, views and commentary on the subject.

We sincerely acknowledge the research and analytical work of Mr. Nilesh Dixit, Trainee- Research, MVIRDC World Trade Center Mumbai in this study.