



A Study of Indian Potential in Arms Industry

Madhusoodan Tripathi^{a*}, Rupali Chaudhary^b

^aFaculty of Commerce, S.S.V. College, Hapur, U.P., India

^bS.S.V. College, Hapur, U.P., India

E-mail: madhusoodantripathi1@gmail.com^a

Abstract

India is at the top in the world having active and youth population. It contains huge skilled human resource related to culture, science, technology, medicine, agriculture and industry along with mostly natural physical resources. Country has not utilized these resources at optimum. Arms industry is among top industries in the world. India has human, non-human resources and infrastructure to grab global arms industry. If country prevails this opportunity, it will get financial resource in unexpected volume. It will compensate our imports and trade imbalance. This will also nurture in becoming superpower.

Key Words: Global Arms Industry, Indian Arms Industry, India's Arms Import & Export.

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*Corresponding Author

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1. INTRODUCTION

Every human has some basic needs i.e. eating, clothing, shelter and security etc. Need of food, clothes and shelter are manageable but for security they depend on government. Security is also had two dimensions-

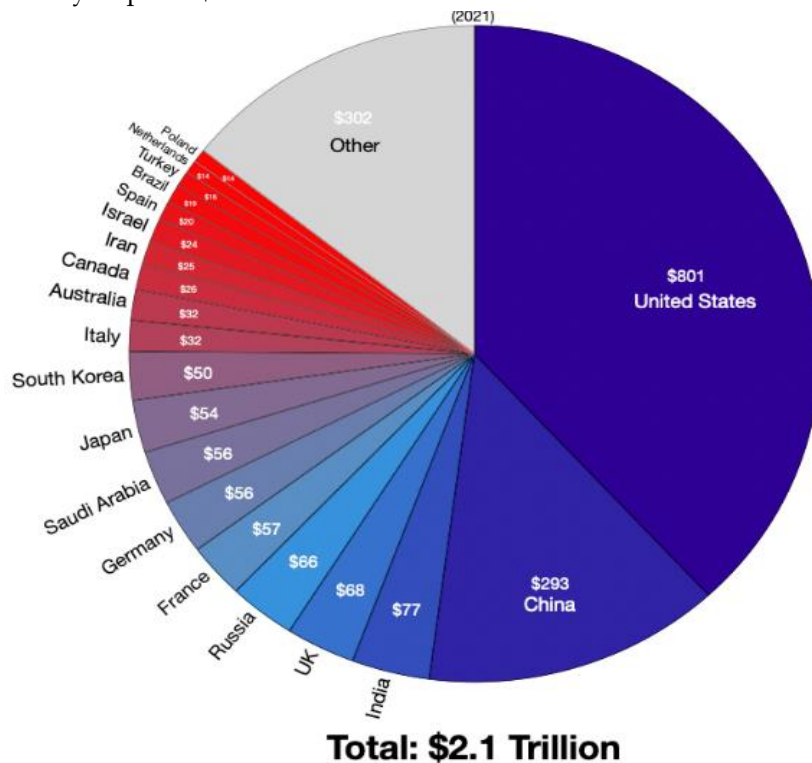
- I. Internal Security
- II. External Security

Internal security is provided by state police department. For external security every nation organises army.

Every nation faces crises. These crises can be natural or human, external security is related to crises created by human i.e. aggression from neighbouring country, infiltration sponsored by terrorist group etc. These security crises deeply affect nations welfare.

To face external crises nation raise arms industry. The arms industry includes guns, artillery, ammunition, missiles, military air machines, military vehicles, ships, electronic systems, night-vision devices, holographic weapon sights, laser rangefinders, laser sights, hand grenades, landmines and more. The arms industry also provides other logistical and operational support.

This arm industry which is created for protection now become big source of earning. At present Global arms industry acquires \$2.1 trillion.



Total: \$2.1 Trillion



Arms Industry and Revenue: *1

Rank	Company Name	Defence Revenue (US\$ billions)	% Of Total Revenue from Defence
1	Lockheed Martin	53.2	89%
2	Boeing	33.5	44%
3	Northrop Grumman	29.2	86%
4	Raytheon Technologies	25.3	87%
5	General Dynamics	24.5	62%
6	Aviation Industry Corporation	22.4	34%
7	BAE Systems	22.2	95%
8	China Electronics	15	46%
9	Norinco	14.5	22%
10	L3Harris Technologies	13.9	77%
11	United Technologies (Raytheon Technologies)	13.1	17%
12	Leonardo S.p.A.	11.1	72%
13	Airbus	11	14%
14	Thales Group	9.4	46%
15	Almaz-Antey	9.4	98%

Table shows that war industries of major countries depends on hulking corporations in size and capital.

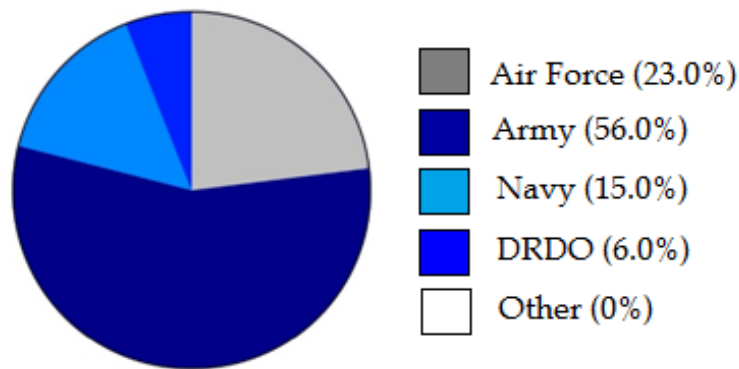
1.1 Indian Scenario

Indian military funding is the portion of Union budget of India. Union budget allocates funds for Indian Armed Forces. Indian military budget finances employee salaries, training costs, maintenance of equipment, support of new or ongoing operations, development and procurement of new technologies, weapons, equipment and vehicles.*2

Arms industry is a strategically important sector in India.*3 India has world's largest military force. It has the world's largest volunteer military of over 51 lakh (5.1 million) personnel.*4 The total budget sanctioned for the Indian military for the existent financial year is Rs. 4.78 lakh crore (US\$60 billion).*5 It has the third largest annual defence budget behind USA (US\$ 732 b) and China (US\$ 261 b). It is the second largest military importer behind Saudi Arabia making up 9.2% of global arms import. India has a domestic arms industry of which 80% is government owned. The public sector includes Defence Research and Development organisation (DRDO) and its 50 laboratories, 4 military shipyards, 12 Military Public sector undertakings (MPSUs). India has a new military procurement, acquisition and manufacturing policy to reduce imports and enhance domestic manufacturing.*6

"Defence Production Policy of 2018" (DPrP-2018) has a goal of becoming among the top 5 global producers of the aerospace and arms manufacturing with annual export target of US\$ 5 billion by 2025.*⁷ 12% (by value) of worldwide arms are imported by India.*⁸ India domestically produces only 45% to 50% of military products of its use, and the rest are imported.*⁹ India's military-industrial complex has had little success and only recently private sector was allowed to enter the military production.*¹⁰ India's military exports were Rs. 10,500 crore (US\$ 1.47 billion) in 2018-2019, of which 2018-2019 exports India's 8 Military Public Sector Undertakings (MPSU) and 41 Ordnance Factories (OF) contributed Rs. 800 crore (7.6% of total military exports). During 2014-2018 India was the world's second largest military importer.*¹¹

Share of Military Services in Defence Budget in 2020-2021*¹²



2. REVIEW OF RELATED LITERATURE

Richard, A. Bitzinger (2013) examines India's defence industry by noting that, after China, India possesses the largest and most ambitious defence industrial base in the Asia-Pacific. Yet the performance of the defence industry over the past 50 years leaves a lot to be desired. It identifies the reasons for this, which are structural, financial, and most of all, cultural.*¹³

Government of India (2016) emphasised on transformation of defence sector. Defence production, Defence reforms, Defence acquisition, Defence diplomacy etc. are its various aspects. The Government had allowed FDI in defence sector. Government allowed upto 49% FDI under the automatic route and 100% under government route on case to case basis. Foundation stone laid to Tata- Boeing joint venture production unit in Hyderabad, to produce Apache helicopter fuselages. Highest priority is given to, 'Make in India' initiative.*¹⁴

Government of India (2022), has raised weapons systems branch in Indian Air Force. Ground based and specialized airborne weapons systems will be unified under one umbrella.*¹⁵

Government of India (2022), indigenously designed and developed light combat helicopter (LCH) inducted into Indian Air Force. LCH is as much force multiplier for Indian Air Force. It is a big boost to Atmanirbhar Bharat in defence.*¹⁶

Government of India (2022) confirmed the theme of def expo 2022 as 'Path to Pride'. In coordination with government's vision to transform India into a strong and self-reliant nation by supporting, showcasing and forging partnership for the Indian aerospace and defence

manufacturing sectors with Indian as well as global customers. The aim is to showcase the might of the domestic defence industry which is now powering 'Make in India, Make for World ' resolve of government and the nation at large.*17

3. OBJECTIVE OF THE STUDY

To present the potential and present situation of Indian Arms Industry.

4. BRIEF STUDY

Indian Military Spending

Year	Billions of US \$	% Of GDP
2021	76.6	2.7
2020	72.89	2.88
2019	71.47	2.52
2018	66.26	2.43
2017	64.56	2.53
2016	56.64	2.54
2015	51.30	2.46
2014	50.91	2.54
2013	47.40	2.55
2012	47.22	2.62
2011	49.63	2.70
2010	46.09	2.89
2009	38.72	3.13
2008	33.00	2.63
2007	28.25	2.48
2006	23.95	2.53
2005	23.07	2.74
2004	20.24	2.83
2003	16.33	2.68
2002	14.75	2.83
2001	14.60	2.92
2000	14.29	2.95

Table shows that Indian military spending is increasing rapidly. It was \$ 14.29 billion in 2000 while \$ 76.6 billion in 2021. Table shows that Indian military spending is near by 3% of GDP between the period of 2000-2021.

Indian Military Import and Export

The Indian Defence Ministry has also stated that the equipment and platforms that are on the third indigenisation list, could result in state orders that are worth more than Rs. 2,10,000 crore being placed on the Indian arms industry in the next five years.*¹⁸

Arms Transfers of India*¹⁹

Exports (1990 \$ millions)		Imports (1990 \$ millions)	
2010	2019	2010	2019
5	115	2,909	2,964

India's Military Public Sector Undertaking (MPSUs) Performance at a Glance

Name	Specialization	Revenue (As of 2020, except DRDO)	Operating Income (As of 2020, except DRDO)
Bharat Dynamics	Ammunition and Missile systems	Rs. 3,095.2 Crore (US\$ 430 Million)	Rs. 2,828.8 Crore (US\$ 400 Million)
Bharat Electronics	Avionics and Radar	Rs. 32,920 Crore (US\$ 4.6 Billion)	Rs. 12,480 Crore (US\$ 1.7 Billion)
Bharat Earth Movers	Transport and Earthmoving Equipment	Rs. 3,077.4 Crore (US\$ 430 Million)	Rs. 153.20 Crore (US\$ 21 Million)
Defence Research and Development Organisation	Research and Development	Annual Budget of 2021-22 of Rs. 11,375.50 Crore (US\$ 1.6 Billion)	Unavailable
Garden Reach Shipbuilders & Engineers	Shipbuilding and Ship Design	Rs. 1,658.79 Crore (US\$ 230 Million)	Rs. 225.20 Crore (US\$ 32 Million)
Goa shipyard	Shipbuilding	Rs. 1,071.76 Crore (US\$ 150 Million)	Rs. 264.92 Crore (US\$ 37 Million)
Hindustan Aeronautics Limited	Aerospace manufacturer and Defence manufacturer	Rs. 21,522.07 Crore (US\$ 3.0 Billion)	Rs. 3,960.57 Crore (US\$ 560 Million)
Mazagon Dock Limited	Shipbuilding	Rs. 4399.16 Crores (US\$ 640 Million)	
Mishra Dhatu Nigam	Metallurgy	Rs. 747 Crores (US\$ 110 Million)	

Utkarsha Aluminium Dhatu Nigam Limited (UADNL)	Metallurgy	Rs. 2,000 Crores	
Cochin Shipyard Ltd (CSL)	Shipbuilding	Rs. 28,745 Crore (2017-2018, US\$ 370 Million)	

Table shows that Indian military public sector undertaking (MPSUs) are active in modern specialized military armaments i.e. missile system, avionics, space technology etc.

Potential of Indian Arms Industry

- (a) India has 2nd ranking in world on the basis of population and 1st rank in world in active and youth population. With a proper planning and agenda regarding human resource Indian arms industry can become among top partners in the world.
- (b) **Tactical Nuclear Weapon-** India is among few countries who have nuclear weapons. Nuclear weapons are of two kinds- wide range and limited range or tactical. India has both capacities. By developing tactical capacity India can make stronger its arms industry as well as National integrity.
- (c) **Satellites Launching Capacity-** India has experience of launching satellites in space. India launched 104 satellites at one attempt on 15Februrary 2017. This capacity empowers Indian arms industry.
- (d) **Fighter Planes-** Tejas is India made fighter jet and among the light weight war planes in the world. In future India made flying machines can become a big source of earning.
- (e) **Multi Rocket Launcher-** Pinaka is multiple rocket launcher developed by Defence Research and Development organisation (DRDO) for the Indian Army. Indian rocket launchers can be popular product for the rest world.
- (f) **Military Training-** India has a great potential in the area of army training. India can train soldiers of other countries.
- (g) **Military Infrastructure-** India has capacity to build defence infrastructure in multi dimensions i.e. land, water, sky and space. This capacity consists big potential if heed is paid.
- (h) **Cadre of Military Doctors-** India produces a very large number of high-skilled doctors every year. A survey indicates that every 7th doctor of US is Indian. India can raise a cadre of military doctors available to other countries as military doctor.
- (i) **Cadre of Military Nurses-** Military requires doctors as well as nurses. India has a very large number of highly skilled and efficient nurses. India can raise a cadre of military nurses available to other countries as military nurses.
- (j) **Military Counselling-** India retires approximately 60,000 defence personnel every year. All these personnel are skilled, well trained and experienced. A cadre of military advisers can

be raised. The expert advice is very useful to any force. With a little government support cadre of military advisers can generate a big income source for India.

- (k) **Military Vehicles-** Military floats on vehicles. Military uses many types of vehicles for man and machine. Vehicles change according to geographical diversity. India is a country with geographical diversity. India produces multiple types of vehicles for its military use. India has built capacity of multiple type of vehicles manufacturing according to its military needs. Indian vehicles are excellent in quality, durable and cheap in price. Indian military vehicles can be attractive for others.
- (l) **Military Communication-** India is holder in due course in telecommunication infrastructure including software, hardware and skilled man power. Indian military prevails all types of advanced telecommunications. Indian Military telecommunication specialization may collect funds from other countries.
- (m) **Hacking and Virus Making for Military-** Hacking and virus are the tools to ruin the opponent network. Indian software engineers protect own network and infiltrate other networks. Hacking and virus making may be useful as an area of export.
- (n) **Military Small Weaponry and Ammunition-** There is a long list of small weaponry that is manufactured in India for military use. These items can attract other countries.
- (o) **Military Intelligence-** Military intelligence contains human as well as instruments. India has an efficient intelligence network. India can provide military intelligence services to other countries on professional basis.
- (p) **Yudh Veer-** Some countries have a tradition to provide soldiers. India can provide its professional soldier to other country. Cadre of Yudh Veer may be a strong source of earning for both nation and a soldier.

5. EXTRACTS

Arms industry is among top industries of the world. The share of Indian arms industry is little at global scenario. India has advanced and established military infrastructure. India spends a vast amount on military belongings. Indian military import is 11% of global military import. India has humongous skilled human resource of all kinds, established and proven capacity of industrial manufacturing. Indian arms industry has a great potential in all dimensions of military services and products. If government pays a heed, Indian arms industry can grab a major portion of global military market.

6. SUGGESTIONS

- (a) Provisions must be made to procure equipment with enhanced performance parameters.
- (b) Quick funding be made easy to private sector designs and development project.
- (c) Special motivation must be provided to public initiative regarding Arms inventions.
- (d) Projects of very low cost be initiated e.g. Drones, shoulder driven missile, mines, machineguns, spy tools etc. easily operated by soldier or small group of soldiers.
- (e) Remote operated human less small instruments must be given special consideration for example Kamikaze drones product of Iran with price 5 lakh rupees only per unit.

- (f) Cadre of military doctors must be given special training and orientation regarding war injuries, war psycho problems of military personnel.
- (g) Cadre of nurses will given special training and orientation regarding war related care and remedy of military personnel.
- (h) Films related to Indian military achievements must be produced and circulated for global information.
- (i) Indian government and arms industry must focus its attention on research and development on weaponry of future.
- (j) Indian arms industry must give all emphasis on 'Per Head Performance' of 130 crore Indians. Unconventional small weaponry, hacking (for example a student Rituraj of Bihar, India hacked Google network), virus making, Psycho wars, propaganda, hypnotism, hybrid technique etc.
- (k) The moto of Indian arms industry must be 'AFFORDABLE SECURITY FOR ALL COUNTRIES'.

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