

Defence Production in India
(A Commercial Approach to Self-Reliance)

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Introduction

Our country India has to maintain substantial armed forces as a part of military security to enhance its national security. Self-reliance in defence production is an essential task. Thus, self-reliance, which was rightly, received in 1964 (after the humiliating defeat by China in 1962), our first five year defence plan. Today, after five decades, let us introspect – whether India is self-reliant in its defence production or still relying on arms supplier countries to meet its requirement.

First of all, let us know that forty Ordnance Factories together with nine Defence Public Sector Undertaking(DPSU) Under the Ministry of Defence(MoD) formed the largest defence industrial complex in the country, accounting for an annual production of over Rs.90,000 crores worth and employing a work force of 2.9 lakh. The product range includes, clothing, small arms, ammunitions and explosives, machine guns, artillery guns, transport vehicles, tanks, warships, fixed wing conventional and rotary wing aircrafts of subsonic, sonic and supersonic speed, missile of all range of hyper sonic speed, and sophisticated electronic and communication equipment trying to meet the international standard. Very impressive as the list is, however, it has been estimated that not less than 70% of our major weapons and equipment are still being procured from foreign sources. In addition, the materials, components and spare parts are being imported by manufacturing units themselves. With new large deals like Raffle fighter aircrafts and other weapons coming through, this percentage is likely to go up.

Aims and Objectives of the Paper

The basic aims and objectives of this paper are to understand the reasons, causes and other factors existing in India's defence production as to why it is yet to be self-reliant and commercialized.

Statement of Problem

In this paper, the problem statement is the India's defence production lacking competition in international market.

Research Methodology

Hypothesis

For academic convenience, hypotheses are as follows:

- Indigenous defence hardware is always advisable for a nation's military.
- India is not self-reliant in its defence production yet.
- India's defence production as a whole lacks the commercial approach.

Research Questions

- Whether commercial approach is necessary to compete in international arms market?
- Whether self-reliance in defence production is indispensable for military security?

Significance

India has been the world's top arms importer with a 15% global share of imports. Nearly 50% of the capital acquisition budget is spent on imports. India's march towards self-sufficiency will fetch India a global power to compete in the comity of nation.

Theoretical Frame Work

Armed forces are an important organization of nation /state system. It should do well in any eventuality of its own without depending on imports. No solution could be advocated because of lack of a conceptual framework to conduct an open discussion. If basic weapons and equipment shortfalls that the defence sectors face are to be addressed, then Indian defence planners need to use the DEFENCE ECONOMICS INFRASTRUCTURE framework to make India a self- reliant in its defence production.

Research Methods

It is a qualitative study. Historical, descriptive, subjective, empirical and analytical methods are applied to justify the study. Collection of the study material and related information and data is from primary and secondary sources like Live News Bulletin , books , journals , reports , documents articles , research paper/s of seminars and some materials have also been referred from internet.

Discussion

That any such dependence on foreign sources is detrimental and does not have to be emphasized and explained that why it is unwanted and disadvantageous from the commerce point of view. Commerce encourages self- reliance and self- sufficiency, less import and maximum export with nominal and insignificant dependence on outside. Anyone can see the danger of supplier countries, for political reasons of international politics and equation in balance of power or whatever, turning of the tap at a critical juncture, thus jeopardizing our fighting capability and compromising our freedom of military action and manoeuvres .

Security Council of United Nations may be trying to bring peace and security at international level, but the threat scenario in Indian-sub- Continent hold the saying – NO FAREWELL TO ARMS. We should not dream in the day and in turn must visualize the threats to India's National security from China and all time enemy-Pakistan. War had been and will be fought with the stockpile of weapons and ammunition already held and the very strength of our defence production line to support, arm and equip the soldiers to put his finger on trigger. Should a war get prolonged as the case was with Iran – Iraq and both the World War, it will be sustained by indigenous capability only.

I agree that no nation is completely self -sufficient in defence production. But to a large extent developed nations are self- sufficient in its defence production and almost 75% of their GDP is fulfilled by exporting the defence hardware to 'Third World Countries'. Within the very concept of self reliance, it leads to plead – **Minimize dependence on imports**. In India's situation and scenario, the combat readiness depending on imported arms and equipments, which go into indigenous defence production must be accepted and along term defence planning should be adopted to fill the gap where commercial considerations militate against it. The very problem with India's defence production is its poor level of quality control, low standard and strict tolerance deficiency. If the product is not superior from various measurements then it will not be able to commercially compete in international market. As a result our user army, navy and air force will hesitate to go with it. More or less they will be keep on applying for foreign weapons to get cutting edge over enemy in case of any eventuality, which is always in offing.

No doubt, the Ordnance Factories (OF), turn out to be an array and good range of military hardware in sufficient quantities to meet the greater part of the training and operational needs of the armed forces. But it work in a protected setting and under a cloak of secrecy which is not the case in developed countries. In developed countries, defence production unit invites the expert from time to time to modify and improve their product not only for internal defence requirement but also for external commercial requirement to export and to earn profit out of its defence product. Every taxpayer who contribute to nation building has no means of knowing whether they are professionally,

resourcefully and finally commercially run, whether the maximum output of requisite quality is being obtained from the given quantity of resources or not?

India is a developing country and still not able to compete with its defence production globally. Why? This is because of plant and machinery of widely disparate vintage, varied product mix and diverse technologies, there are bound to be production and capacity utilization problems, which the best commercial talent would find hard to overcome unless political support and will power from related ministries are extended.

The annual report of the Ministry of Defence, every year, inter alia states that vital areas as computer aided designing and related blue print, production planning and control, management information system (MIS), material management with new trends in defence material, project management, quality control and its assurance are the need of hour and it is being incorporated. The problems of Defence Public Sector Undertaking (DPSU) is better known to public. Performance of both DPSU and OF proportionately depends on the performance of Defence Research and Development Organisation (DRDO), but it has delivered duds so far.¹ Designing after well researched aspects of individual product depends on its related research and development (R&D). There are about 52 DRDO, which have not delivered the way money and time is invested on them. Whether it is DRDO, or OF or DPSU- all are far away from required track record. Presently, they are not able to meet the local requirement such as snow boot, snow clothing and other requirement of inhospitable mountainous warfare. In 1962, during Chinese aggression. Time Magazine published that Indian army is short of everything except courage.² Today, after 55 years, the situation has not improved much. If we remember, India has imported Coffin (*Taboot*) during Kargil War and it was much debated for two things. One was kickback in deals and the next was that why such Coffin can't be designed and manufactured indigenously.

Hindustan Aeronautics Ltd (HAL) and its Light Combat Aircraft (LCA): as a case study:

HAL have had its quota of problem- especially it has to live with an uneasy single customer i.e. Indian Air Force (IAF).of major significance to the future development of India's aerospace capabilities is the light combat Aircraft (LCA) project which has in the beginning of eighties entered the project definition phase. The programme is being managed by the Aeronautical Development Agency (ADA), a body, which draws engineering resources from HAL and several DRDO establishments, including the simulator facilities at Bangalore.

The requirement is for an agile 200 km – range fighter optimized for battle field air superiority in a tropical climate but capable of under taking secondary ground attack roles. This aircraft was planned to be inducted into service in the mid 90s could have bestir the giant public sector undertaking as no other project has done before. The aircraft has to have good survival characteristic and the most modern avionics utilizing advanced concepts in aerodynamics, control system and material technology. It will have beyond visual range capabilities and latest types of missiles.

LCA could not be produced according to schedule. But being claimed that it would be totally Indian light combat aircraft developed by Indian experts with marginal expertise obtained from foreign collaborators according to normal system. All eyes of aircraft designer were on the successful test flight of the Light Combat Aircraft (LCA), as much noise had been made about it since its conception. Many countries are watching its progress carefully. What is on the Indian drawing board is the world's smallest, light weight aircraft for combat. Multi-role, multi-mission and tactical features

¹ No Bang for the Buck ... <https://www.outlookindia.com/story.n>

² TheINFANTRY india, JUNE 2017 ,Page 31

have been built into the configuration. For the scientists and engineers, LCA could also stand for “learning challenging application”.

The LCA was “rolled out” on 17 November 1995.³ Much has gone into it since then. The first test flight and crossing the threshold of sound barrier has now been completed. It has also been christened as “Tejas” by our Ex. Prime Minister *Shri Atal Bihari Vajpayee*⁴ and expected to bring glory to our aero-space industry. Major features in the design are now too well known. The proof of the pudding is in the eating; proof of the LCA will be realized only when it does a successful attack mission.

This is the irony in the LCA outcome that six major systems of LCA including Power Plant (Engine) are imported from various countries. India’s Gas Turbine Research Centre (GTRE) as on today could not design a suitable power plant for its LCA. How can it be christened as indigenous aircrafts once it is assembled with imports of six major systems from abroad?

HAL’s Predicament:

It needs new understanding by the government and the HAL to take benefit of the international aerospace prospects to meet India’s strategic and commercial needs. To realize this, HAL must be unchained from the attitude of a public sector undertaking. With the theory and practice of corporate management and commercial approach, HAL should be made optimistic to put itself forward in the international market-place. If this is done then the civil and military requirement of aircrafts and avionics will automatically will materialized indigenously.

Surely, Indian leadership could not visualized and lacked dynamism in hiring the brain, whereas western nations and even Asian giant China dealt with some high-profile aircraft’s designers from Russia to enrich their aerospace industry. These designers were available at low price as Soviet Union was disintegrated and they were without job. As the IAF phases out the obsolete Soviet aircrafts (especially MiG Versions), if not today but after some time, the limited utility of the HAL will also disappear. It is well acknowledged that with waning IAF orders, there is a considerable redundant facility within HAL. Also, the very low level of production and export orders are pointer to structural weaknesses that do not augur well for HAL’s future and in turn for IAF. The Indian government while treating HAL as security related defence public sector undertaking has done nothing to prepare it as a vital industry to face emerging challenges. Unless the government evolves a strategic policy for HAL, aerospace being the most important, nothing can change. Public postures necessitating the adoption of unrealistic targets, unhealthy concern with short term results at the expense of long term, corporate and commercial goals, soft personnel policies and lack of functional autonomy are some of the factors afflicting the performance of many of these undertakings.

After independence, when India embarked on defence industrialization, it was on the basis of license production and transfer of defence science and military technology. Licenses were obtained for a variety of selected items from which ever country offered the most suitable weapons and equipment on acceptable terms and conditions. India has a good support of Sweden, Germany, Britain, France, Japan and the then Soviet Union. In many cases defence production remained dependent on imported technical know- how along with the material and component. This arrangement could not be sustained for long after the licensor country discontinued the production line owing to one or other reasons. In India Initially for a newly independent country, such support would had acted as a “WALKER” to reduce the crawling period but the lack of commercial

³ Times of India, Mumbai, dt. November 18, 1995 , Page 1

⁴ Times of India, Mumbai, dt. May 4, 2003 , Page 1

intuition in defence production has retarded the progressive defence production to take our flag in international arms market.

Findings

Long lead time for design and development and fast changing technology are the twin bug bearers of all commercial planning of defence production. By the time a new item can be productionised, the user's specifications get upgraded and related costs escalate: these in turn require technological forecasting. More effective products may meanwhile enter the armament markets and the dictates of defence preparedness would not be satisfied with what is under indigenous development without international level of commercial requirements. Unfortunately there is no short-cuts for coming to grips with the problems. According to principles of commerce & trade and if a nation wanted to stand first to dominate global arms market then it has to gather as much pace as it can till it catch up.

Suggestion

Not only military but also civil industrial base in India is also largely license ridden and keeps R&D in the bottom drawer of its table of priorities. There are two ways in which it can support defence production to compete commercially in global arms market. The first is parceling out of defence works, including development orders, to private industry in order to create secondary capacity. In this the defence ministry department of defence supplies should be able to nurture several civil manufacturers, and supplies materializing from them will contribute to nation building. Second, there is clear scope in "Start Up India" and in "Make In India" programme of BJP government for aggregation and coordination of defence and civil demand in areas like aircrafts, marine vessels, transport vehicles electronics and communication equipment. Some recent official statement and association of the *NitiAyog* with defence production planning reflect a welcome awareness of the need, so often voiced, of an integrated commercial approach to defence production and real development planning.

Any organization needs human resources for its perfection and to take the organization to compete with others. Most of India's venture towards self-sufficiency is due to the shortage of first grade technocrats, designers and related researcher. India is equipped with almost 10 Indian Institute of Technology (IITs). 75% pass out of this premier institution board the plane just after getting the degree and working in foreign civil and military sectors. Such "Brain Drain" must be stopped in national interest to work for 5-7 years in the country as their study is very much sponsored by nation and its tax payers.

Conclusion

At last it is time we revised our ambivalence towards the question of armament exports. Once India is in the arms production business then there is no need to act coy in tapping exports markets wherever this is not in direct conflicts with our national interest. As per the rule of "Trade and Commerce" by encouraging exports, India's defence production will get a boost with an internationally suitable competitive and cutting edge, Further cost consciousness will be fostered and research and development effort will automatically be stimulated. As fallout, growing pockets of dependence on the arms and ammunitions made in India will give the country a heavier clout in international market, which will substantiate India in world affairs.

Not to worry. The country can justifiably be proud of its accomplishment in defence industry and application of related civil and military or dual use technologies. An infrastructure now exists capable of now producing a wide variety of military hardware of the requisite quality and in sufficient quantities to fulfill the major requirement of our armed forces. Yet, any euphoric complacency would be unwarranted in view of the continuing dependence on imports of material, component and

accessories and of advanced and sophisticated technology. Design capability, material technology and finally well exercised commercial approach are among the challenging areas requiring special attention in our climb towards “Real Self- Reliance.”

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