



# MAKE IN INDIA FOR INDIAN DEFENCE

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**R**eplying to a question in the Parliament in August 2014, the Union Defence Minister informed that India spent a whopping ₹ 83,458.31 crore on arms import in a matter of three years ending 2013-14. The huge arms import dependency is in stark contrast to the objective of substantive self-reliance in defence production that the country has been aspiring since independence. However, all is not lost. The 'Make in India' (MII) initiative launched by the government of Prime Minister Narendra Modi offers a ray of hope. As per the initiative, 25 focused sectors including defence manufacturing have been identified through which the government intends to revive India's industrial growth and more importantly propel the nation as the global manufacturing hub. However to realise the cherished objective of the MII, particularly in the defence manufacturing sector, the government needs to address some of the pressing issues that have so far hindered India's self-reliance drive.

### Institutional Mechanism

The biggest weakness in India's defence manufacturing is the lack of a high-powered institution that can draw the long-term road map for Defence industry, set the target for the industry, monitor the progress and more importantly bring all the stakeholders to one platform and to a common cause of MII. In the absence of this, crucial decisions with far-reaching implications are being pursued by various stakeholders on a piecemeal fashion, often to cross purposes. Suffice to mention that while the armed forces are interested on acquiring equipment in the fastest possible time frame without bothering too much about the origin of supply, the Defence Research and Development Organisation (DRDO) is content with endless design and developmental efforts with scant respect to timeline and sanctioned budget. On the other hand, the Defence production agencies, major portion of which is owned by the government, is merely happy in manufacturing, the technology of which is not in their control.

Consequently, the focus of producing defence equipment in-house and achieve true self-reliance loses focus and India ultimately ends up importing from others.

Realising the importance of an institutional mechanism, the Group of Ministers (GoM) had recommended for creation of Defence Minister's Council on Production (DMCP) under the leadership of the Defence Minister himself. To give DMCP a dynamic look and enable it to seek ideas and experience from other sectors, the GoM had recommended that the high-powered body would draw members from not only the top leadership of the Defence establishment but also from the Space, Atomic Energy and Science and Technology departments and a pool of eminent industrialists from the private sector. As per the GoM's recommendations, the DMCP would 'lay down the broad objectives of the long-term equipment policies and planning on production, simplification of procedures' among other things. However, as the fate of key recommendations of many government appointed committees, this crucial recommendation of DMCP has so far been conveniently forgotten. Interestingly, the government was

quick to implement one of the GoM's recommendations that led to creation of Defence Acquisition Council (DAC) under the chairmanship of the Defence Minister. However, as the name suggests, the DAC is more geared towards addressing the short-term procurement-related hurdles, rather than addressing the concerns of the domestic industry for achieving self-reliance in the long-term. As a matter of fact, indigenisation is a mere by-product of the DAC's decisions rather than being the key influencer. For the MII to become a reality in Defence manufacturing sector and more importantly for the initiative to become a self-sustaining drive, the whole apathy towards indigenous Defence manufacturing needs to change for which the government should now revive the GoM's recommendation and set up the DMCP at the earliest.

### Manufacturing And R&D

The apathy toward in-house production of the Defence equipment is perhaps best amplified in the way various Defence plans are prepared and pursued thereafter. Of note is that India has a well-articulated, if not the best, system of drawing Defence plans that covers three distinct time periods: 15-year Long-Term Integrated Perspective Plan (LTIPP), five-year Services Capital Acquisition Plan (SCAP) and two-year roll-on Annual Acquisition Plan (AAP). The heart of the matter is that all these plans are prepared with an eye to acquire the best possible equipment available in the world. The

DRDO or domestic industry is completely ignored in the planning process. To make matter worse, there is no system whereby the armed forces can provide advance information to the industry so as to enable the latter to come up with detailed financial, technological and industrial plans to meet the requirements in a time frame that is acceptable to the armed forces. Suffice to mention that the Technological Perspective and Capability Roadmap (TPCR), announced in April 2013, which was expected to bridge this gap has been a big disappointment and termed completely useless by both industry and analysts for its lack of specificities and absence of any commitment from the government.

Consequently when the acquisition process begins, it is often too late for the R&D and production agencies to offer a solution. To overcome the above difficulty, the Economic Advisory Council to the Prime Minister in a report of September 2013 had recommended to the government to 'convert the LTIPP into a defence manufacturing and R&D plan'. More significantly, the advisory council had suggested that the conversion should be undertaken by a joint working group involving all important stakeholders including the Indian industry and R&D establishments. This vital piece of recommendation does not seem to have received the required attention of the policy makers. Since much of the success of MII lies in translating long-term requirement of the armed forces into technological and industrial outputs, it is high time that the government comes out with detailed plan for the industry and R&D agencies at the earliest. The plan in order to be successful must identify specific projects which would be executed by the local agencies.

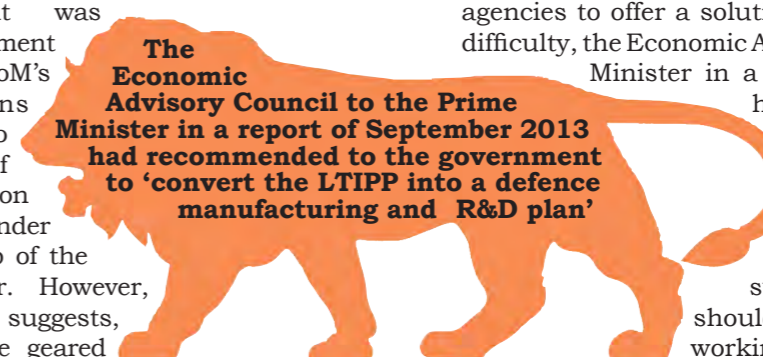
### Looking Beyond The DRDO

One of the unique features in India's defence industrialisation process has been the near monopoly of R&D by the DRDO. This began with the establishment of the DRDO in 1958 and perpetuated ever since with the growth of the organisation. The dependence on DRDO for technology has however not yielded the desired results. The DRDO despite its vast potential has been beset with many a problem leading to failures and cost and time overruns in the projects undertaken. This combined with the lack of R&D in industry and academia has compelled the country to source technology from outside, leading to a vicious cycle where initial import leads to another in successive fashion.



**Dr Laxman K Behera**

The writer is Research Fellow at Institute for Defence Studies and Analyses (IDSA), New Delhi.



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Compared to India, other advanced Defence manufacturing countries encourage R&D at diverse sources that include dedicated research institutes, universities and industry. Among the countries which are successful in cutting edge innovation, Israel offers test case worth emulating. The giant strides that a small country like Israel has made is attributed to the Office of the Chief Scientist (OCS) which was set up in 1974 under the Ministry of Industry, Trade and Labour. The OCS is responsible for executing government's R&D policy to foster innovation and promote technological entrepreneurship. It discharges its functions by way of awarding R&D contracts to diverse sources and managing them through small team that comprises of 30 full-time employees. OCA's core principle of R&D funding is not to subsidise R&D rather than partially mitigate risks through government financial assistance. Interestingly, nearly one-fourths of OCS's budget in 2011 came through the royalties paid back by companies which have successfully converted R&D funding into marketable products.

In order to expand the R&D base, India also needs to have an institution similar to OCS. For this to happen, there is need to look beyond the DRDO. The Scientific Advisor to Raksha Mantri (SA to RM) who is now wearing multiple hats (Secretary, Defence Research and Development and Director General DRDO) may be freed from his daily duties of DRDO and given a role like that of OCS with a dedicated R&D fund at his disposal. This will not only create competition between DRDO labs and other agencies but will lead to more innovation.

**Human Resource Development**

Unlike in most other sectors, Defence industry involves high skilled labour force. However, there is hardly any thinking as to how to create a robust human resource base, in terms of number and quality. A clear evidence to this effect is visible in DRDO which is supposed to be at the heart of India's defence innovation. It is of note that number of scientists at DRDO has not increased since 2001, although number of projects has been increased exponentially.

Apart from shortage of skilled labour force, an equally disturbing aspect of most of the scientific organisations like the DRDO is the low educational profile of the scientific workforce. The Rama Rao Committee which reviewed the functioning of the DRDO and submitted a report to the government in February 2008, was greatly perturbed to see the predominance of first degree holders in DRDO's scientific cadre. It had noted that only 10 per cent of the scientific manpower had higher qualification of PhD. To make matters worse, majority of the workforce were not research trained, observed the Committee.

It is however, to be noted that low education and lack of training is an aspect that is common to other high-end R&D organisations like the ISRO and Atomic Energy department and even to manufacturing establishments such as Hindustan Aeronautics Ltd (HAL). A major reason for this is classroom teaching orientation of most of Indian universities which themselves are far behind the global peers. However, to overcome the quality constraints, organisations like ISRO and Atomic Energy have devised their own methods. ISRO for instance runs a dedicated university, Indian Institute of Space Science and Technology (IIST) that taps talent at very early age and provides graduate, postgraduate and doctoral programmes in areas of space, science and technology. There is no such dedicated university for Defence, although the requirement is far greater than in

ISRO. According to the National Skill Development Council, the aerospace industry in its three verticals – R&D, manufacturing and maintenance, repair and overhaul (MRO) – alone will require an additional manpower of over 1,85,500 by 2022, justifying the necessity to set up a dedicated Defence Technology University.

**Equal Partner**

Although, Indian Defence industry was opened 100 per cent to the private sector way back in 2001, the latter is yet to contribute in any meaningful manner. The biggest hindrance in the private sector's participation has so far been the mistrust. When it comes to big contracts, procedural hurdles come in the way, making it virtually impossible for the private sector to get into complex defence manufacturing. Moreover, single source procurement from the private sector is still considered a taboo, whereas import without competition is greatly admired!

For the MII to succeed, there is a need to change the mindset and treat the private sector as an equal partner. This can only be demonstrated by awarding big contracts, preferably through the 'Make' and 'Buy and Make (Indian)' procurement categories which hold the key to success to private sector's participation in defence production. For the government, it is imperative to announce a list of contracts which can be awarded under these two categories.

**Conducive Financial Framework**

Defence is undoubtedly a strategic sector and countries all over the world accord special treatment to nurture and develop this vital sector. For instance, in the early phase of Defence industrialisation in South Korea, the government provided a wide range of financial and fiscal incentives besides raising funds for the industry through a special defence tax (a 10 per cent income and surcharge tax) which

remained in force for 15 years till 1990. Israel, a country which boasts of an advanced Defence industry, continues to incentivise the local enterprises through 15 per cent price preference.

The Indian Defence industry however operates in a hostile financial framework that tends to render it uncompetitive *vis-à-vis* the foreign manufactures. It is of note that Indian industry operates in a double-digit interest regime compared to nearly zero interest rate prevailing in Europe, US and many other countries. This increases the cost of working capital for the Indian industry which is finally reflected in the final products, making them uncompetitive *vis-à-vis* the products offered by the foreign manufactures. The Indian industry also suffers on account of the variation in exchange rates. As per the MoD's Defence Procurement Procedures (DPP), the local private companies winning contracts under the 'Buy (Indian)' category are required to bear all the risks associated with exchange rate variation (ERV). The non-protection against the ERV has however led several companies to virtual bankruptcy due to wide variation in exchange rates as has been witnessed in the recent past.

Apart from the above, the Indian industry also suffers from the prevailing taxes and duties, which offer virtually no incentive for any local company to undertake defence production. In fact, India follows an 'inverted structure' by which direct import is allowed free of duties whereas manufacturing the same attracts all possible taxes and duties. What is surprising is that there is no realisation by the concerned authority that taxes and duties can make or mar the local industry. As per several estimates, taxes and duties can raise the cost of local products by as much as 20-25 per cent. Considering that MII seriously wants to promote the local manufacturing, it is high time to create a conducive financial framework for the local industry. Among others, the government may accord the 'infrastructure status' to the defence industry which would not only take care of the taxes and duties concerns of industry but also incentivise new investments. It is also highly desirable that certain sales of the local industry may be given 'deemed export status' whenever such sales are likely to substitute direct import.



**Reformation**

It is a fact that much of India's Defence industrial woes is attributed to the inefficiency of the three major players – DRDO, the Defence Public Sector Undertakings (DPSUs) and the Ordnance Factories (OFs) – which despite having a long presence in the sector are yet to become globally competitive.



Several efforts have been made in the past to reform these organisations but failed due to the vested interests and lack of political will. Given that these are major players and their functioning will have a direct impact on the MII initiative, it is

imperative to examine afresh the recommendations given by several past committees. Among others, the OFs should be corporatised and made more accountable for their functioning. All the unlisted DPSUs need to be listed in the stock exchanges to bring in transparency and enhance their corporate governance. The recommendations of the Rama Rao Committee on DRDO, especially the one for creation of a Defence Technology Commission, should also be implemented at the earliest.

As per the official estimate of the MoD, India is likely to spend around US\$ 130 billion on Defence modernisation in the coming 7-8 years. While this makes India one of the largest Defence markets in the world, the opportunity it offers should be fully exploited to the benefit of local industry. This will not only improve India's self-reliance in Defence production but will have a multiplier effect on the wider economy. The government must ensure that the local industry is geared and incentivised enough to rise up to expectations and make the government's 'Make in India' initiative a successful story.