Rising Corporate Military Complex In India: A Critical Appraisal

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I. Introduction

India's rulers treat the country's military might as synonymous with its health and international stature. Acquisition of the latest weaponry has become such a fixation for the military establishment that a commentator recently called the new defence minister the 'minister for defence procurement.'2

A few themes keep recurring in press coverage of military procurement: that the Indian military is in dire need of modernisation (and modernisation means getting the latest weapons available internationally); that the country's production system of military hardware (consisting mostly of public sector units – PSUs) has failed to deliver on its promises and has become a massive drain of resources; hence the need to look to imports and/or foreign direct investment (FDI) and the private sector for military modernisation. Indeed a corporate military complex in India appears to be in the offing.

Beyond this, the enormous expenditure in the name of nation's security has remained opaque and mostly outside public scrutiny. Most of the data and information employed here are drawn from the print and web media, Government documents available in the public domain, and reports by consulting firms and policy institutions. One could find almost no research studies based on primary data – pointing to the abysmal failure of research institutions to study such a vital aspect of the Indian economy and polity.

This piece is an attempt to make sense of the present and changing institutional as well as policy framework regarding military acquisitions and expenditure. Specifically, it looks at:

(i) the scale of expenditure on acquiring military hardware;

(ii) the size and character of the public sector military production and research complex;

(iii) the changing nature of the corporate military complex and the increasing hold of foreign and domestic corporate interests; and,

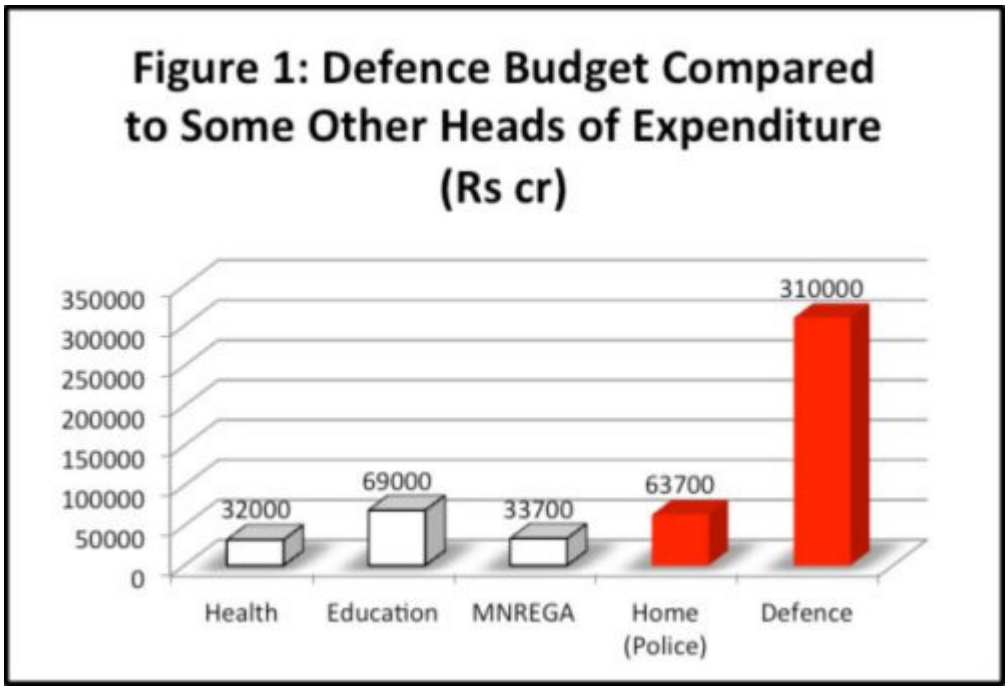
(iv) the interests of the common people and what the above tells us about the ruling establishment of the country.

II. The Present Framework for Military Acquisitions and Production in India

A. Budget Outlays

With the third largest standing army in the world, India's defence budget for 2015-16 is Rs 3.1 lakh crore ($49.4 billion at the current exchange rate).3These figures can be put in perspective by looking at some other figures in the 2015-16 budget: total budgetary expenditure is set at Rs 17.77 lakh crore; of this, the health sector got an allocation of Rs 32,000 crore, the human resources development (i.e., education) ministry close to Rs 69,000 crore, MNREGA Rs. 33,700 crore, and security-related expenditure of the home ministry (police) about Rs 63,700 crore4 (see Figure 1). Thus defence is one of the largest heads of expenditure of the central government, amounting to more than one-sixth of the total. If we take defence and police together, more than one-fifth of Government expenditure is on the military and security establishment. (Besides, a portion of spending on atomic energy, space, and science and technology should also properly be classified under defence, raising the total even further.)

Defence expenditure can be divided into two parts, revenue and capital. The first refers to recurring expenses, such as salaries and pensions, uniforms, provisions, fuel, and so on. The second refers to spending on durable assets, such as land, building, and weapons. The budgeted capital outlay for defence in 2015-16 is Rs 94,588 crore, and capital acquisition for the three services is projected to be close to Rs 77,000 crore.5According to a McKinsey report of 2013, India's capital spending on the defence sector will reach nearly $20 billion (approximately Rs 125,000 crore) by 2020.6



B. Public Sector Military Production and Research Establishment

Over time a massive military research and production complex in the Government sector has been created in the country. It consists of 41 ordnance factories, 8 defence public sector units (DPSUs) and 52 Defence Research and Development Organisation (DRDO) labs. (See Appendix I for frequently used military related abbreviations in

this article.) The ordnance factories and DPSUs together employ more than 2 lakh personnel and have annual revenues close to Rs 50,000 crore, while DRDO employs 5,000 scientists and about 25,000 supporting personnel with an annual budget of more than Rs 15,000 crore (see Appendix II for skeletal details of the public sector military establishment).

What are the actual achievements of this giant complex? Take the Light Combat Aircraft (LCA), 'Tejas', which began as a proposed replacement for the ageing fleet of MiG-21s in the early 1980s. It is still far from being delivered to the IAF, perhaps by several years, in spite of some Rs 17,000 crore having been already spent on its development. By the time all the promised 170 aircrafts are to have been delivered to the IAF and Navy (in 2021-22), it is reported that the price tag would go up to Rs 55,000 crore in present terms7. Reports suggest that Tejas has a 60 per cent indigenous content, and the project has been able to license some critical technologies. However, there have been areas of spectacular technological failure, most glaring of which is the Kaveri engine itself, on which Rs 2,800 crore has been spent. Late last year, DRDO decided to recommend to the ministry the winding up of the Kaveri engine programme, ending the project of equipping Tejas with a home-grown power system8. So, India is going to power LCAs with US GE-404 engines (for two Tejas Mark-I squadrons), and the more powerful GE F-414 engines (for Tejas Mark-II squadrons).

Besides, for developing most of Tejas's crucial technologies in avionics, airframe development, and electronic flight controls, international agencies (such as the US Department of Defense, British Aerospace, Lockheed Martin, and Dassault Systems) were roped in the early phase of the project. (The second Pokhran blast led to sanctions by the Western powers, and several such collaborations came to a standstill for some time.) The December 2014 deadline for Tejas Mark I to secure its final operational clearance (FOC) is being extended to March 2015, Defence Minister Arun Jaitley told Parliament in July last year. Senior IAF officers think that, considering the aircraft's numerous technical shortcomings, FOC could be pushed back even further.9In any case it appears that for the IAF the 'real stuff' is Tejas Mark II, but that may take another 15-20 years to build, according to Air Marshal (retd.) BK Pandey,10 as, given the significant changes in design, it may end up being an altogether a new aircraft. Left to its own devices the IAF would have preferred outright import; to date it continues to make changes in the specifications for the LCA.

Without inside knowledge, it is difficult to pinpoint the reasons for the Tejas failure. A report by Vivekananda International Foundation (a powerful think tank very close to the RSS, from which Prime Minister Modi has drawn his principal secretary and National Security Adviser), ascribes the failure of Tejas to the constantly-changing specifications11. More generally, it quotes a former chief of HAL as saying that there was a "strong 'import lobby' in the country supported by foreign aerospace and military outfits working overtime to sap the vitality of HAL and make India

dependent on imports."

Failure, however, is not restricted to sophisticated technologies, which understandably take time to master. A carbine is relatively a low-tech hardware, a lightweight weapon that is short-barrelled and automatic, with fewer than 100 metallic/plastic parts. Since 1987 the defence public sector complex has been engaged in this exercise, with repeated failures (see Appendix IV). A recent report concludes: "A recent history of our endeavours to replace the weapon, which was designed almost seventy years ago, is a testimony of systemic inadequacies in small arms design, development and production, and failings in conduct of time bound procurement from foreign sources, who are willing to offer the new generation carbines."12 Apart from the role of irrational decisions taken for narrow political considerations (e.g., locating a factory in Amethi), it cannot be ruled out that, here too, vested interests played a role in sabotaging any progress.

The Tejas and carbine projects are not exceptions; the popular press and military-related portals are full of such reports, and similar commentaries can be found about the much vaunted missile programme,13 the Arjun tank programme, submarines, the production-imports of transport vehicles,14 or even INSAS rifles.15 India is manufacturing high-end products like the SU-30 MKI fighters, Brahmos missiles and Scorpene subs, but these are licensed productions of foreign-designed weapons, and even here a reasonable assessment is that the key assemblies will be imported till the very end of the programme.16

However, contrary to the impression conveyed in most such reports, the Indian public sector is not incapable of developing indigenous technology, given the necessary environment. Indeed, it is in the very areas – space, missile, and nuclear technology – in which, due to historical reasons (such as the moratorium by the Western nations or international treaties), Indian institutions were deniedforeign 'help', that we see some success in development of indigenous capabilities during specific periods. (Here we are not commenting on the social usefulness of those technologies.) This fact may give us a clue to the real political-economic problems in the development of indigenous capabilities, even though those problems may at times manifest themselves as bureaucratic bumbling and incompetence.

C. Imports

Not surprisingly, then, India is the largest 'open' military market in the world, accounting for nearly 10 per cent of the $63 billion international armament market in 2013. It is 'open' because the other major markets, such as the US, Europe, China or Russia, tend to buy local when they can.17In the mid-1990s, a committee headed by Abdul Kalam recommended that India should increase the indigenous content of weaponry from 30 to 70 per cent by 2005. But instead India remains the world's largest armaments importer, with 70 per cent of its total requirements met by imports.18 By contrast, the US imports only 10 per cent of its weapons, and China 30

per cent. If imports by DPSUs, whose import dependence is 35 per cent to 45 per cent of their budget, are taken into account, India's total dependence on arms and component imports could be as high as 80 per cent to 85 per cent, according to Navlakha.19

Between 1950 and 2010, India imported arms worth $64.84 billion from USSR/Russia. During the same period, India imported $15.3 billion worth of arms from Britain, $4 billion from France and $1.9 billion from Germany.20According to the defence consulting firm IHS, India's imports rose from around $3 billion in 2010 to $5.9 billion in 2013 and $6.7 billion in 2014; it projects a figure of $8.16 billion for 2015. The increase in India's imports has been "spectacular," IHS senior analyst Ben Moores said in a statement.21

One of the clear winners of the recent military imports has been the US. It has become the largest source of armament imports in the last three years, surpassing Russia,22 and India has the dubious distinction of being termed the "Best Customer for America's Defence Industry".23 In 2009 India imported only $200 million in military equipment from the US; by 2013 that figure had jumped to $2 billion, and is expected to reach $3.3 billion in 2015.

Continuing with its predecessors' import-intensive policies, the Modi government has kept HAL out of the running for its Rs 28,000 crore tender for 56 medium transport aircraft. The deal involves off-the-shelf purchase of 16 aircraft, with the balance to be made in a facility in India established by the foreign vendor with an Indian private sector partner of its choice.24The tender was issued to eight foreign vendors, including Lockheed Martin (US), Saab (Sweden), Rosoboronexport (Russia), Airbus Military (Spain), Alenia (Italy) and Embraer (Brazil). The foreign vendor selected was to find an Indian partner to produce 40 aircraft within India. As yet only the Airbus-Tata combine has responded.25

The Modi government is also expected to approve the import of 262 Rafael-Israel Aerospace Industries (IAI)-designed Barak (Lightning)-1 missiles worth Rs 800-1,000 crore. Rafael-IAI had been proscribed in 2006 following allegations of having bribed senior Indian officials, including a Navy chief, in the previous NDA regime, to secure the missile tender in 2000. But the ban on Rafael-IAI and the continuing CBI investigations into their activities did not deter the UPA government from signing a $330 million collaborative agreement in January 2006 with the Israeli missile maker to develop Barak-2, the next generation ship borne air-defence missile system. In February 2009 the UPA once again secretly signed a $2.01 billion contract with IAI for a medium range surface-to-air missile (MR-SAM) system, three days before the announcement of general elections.26

D. The Changing Policy Regime

Against this background, there have been repeated attempts in recent years to modify

the policy regime with the stated aim of boosting indigenous military production. In 2001 military production was opened for the private sector, and FDI to the extent of 26 per cent was allowed as well. In eleven years 2002-13,nine revisions for the Defence Procurement Procedure (DPP) were made.

Offsets

In 2005 the Government introduced an offset policy. The idea is to force foreign suppliers to compensate for imports, at least partly, by sourcing locally and thus helping develop manufacturing and related capabilities within the country. The MoD introduced offset provisions of 30 per cent in its DPP-2005 for capital acquisition exceeding Rs 300 crore. For example, if a foreign arms vendor were to receive an order of Rs 1,000 crore from India, it would have to place orders in India for Rs 300 crore towards meeting that order.

However, the offset realisations of around $2 billion during 2005-2010 were mainly for sub-contracts of low-end products and services, maintenance, repair and overhaul (MRO) facilities, training and soft skills. Offsets did not bring in the expected inflow of FDI and joint venture (JV) arrangements, exports and long term business partnership in design, development and production of high end products.27

In 2011, the DPP made a substantial leap from the earlier stipulation of direct offsets, by including dual-use civil aerospace products, internal security, and training as legitimate offset items. Thus the whole idea that military offsets should be used for the development of the indigenous armament industry was cast aside, making the offset policy "farcical."28 Foreign arms vendors, who had lobbied for indirect offsets on the grounds that the Indian military industry did not have the capability to absorb billions of dollars worth of offsets, welcomed the liberalised policy. Vivek Lall, Boeing's vice-president in charge of defence, space and security business in India, said: "The government's release of the DPP-2011 is a very progressive step. We welcome the new revisions on broadening the aperture of offset credit to include civil aviation and internal security. The synergy of these areas will directly benefit the indigenisation of the aerospace and defence industry."29 But in the words of a commentator:

The foreign investment that offsets were to direct into the indigenous development and fabrication of high-tech radars, night-vision devices and missile seekers now seems headed for airliner seat upholstery and carpets; rubber panels for baggage claim conveyer belts; cabin crew training; and passenger management systems30.

In any case, given the expediency of buying the hardware from the foreign suppliers and complete dependence on them, the offset policy has been followed at best in letter, but not at all in spirit. A sample of gross violations:

> — In violation of multiple MoD rules, Lockheed Martin obtained clearance for its $275 million offset proposal relating to its billion-dollar sale of C-130J Super Hercules aircraft. The IAF left out a C-130J training simulator from

their list of requirements for mission training. Lockheed Martin offered, as an offset, a simulator at an exorbitantly inflated price, and the acquisition council granted them offset credit for doing so.

— The French company Thales got away with an equally ridiculous offset proposal relating to its supply of radars to the IAF. While sourcing the radar equipment from France, Thales discharged its offset obligations by buying accommodation tents (including toilets, kitchens, air-conditioners and microwaves) from a Gurgaon-based company, and by purchasing motorcycles and vehicles for the radar crews.31

— Navlakha also reports that the offset policy has 'come unstuck' as the CAG found that Boeing, Lockheed Martin, and Russian and Israeli firms had violated the laid down norms. In the 16 offset contracts concluded between 2007 and 2011, valued at Rs 18,440 crore, off-the-shelf equipment without any value addition worth Rs 3,410 crore was procured from Indian offset partners. What is significant is that the MoD allowed 100 per cent owned subsidiaries of foreign vendors also to be treated as Indian offset partners.32

By the next year 2012, a whole set of further relaxations were brought in the offset policy allowing transfer of technology as an offset item, relaxation of the period in which it has to be done, possibility of passing off the offset commitments to sub-vendors, and even relaxation in the 30 per cent requirement of the total value of offset.33

'Indigenisation'

In further efforts towards indigenisation, in 2013, the UPA government proposed additional changes in the policy regime, according first priority to the Indian public and private sector for military procurements. Preference for indigenous procurement has been made a part of DPP through an amendment that provided for a preferred order of categorisation, with global sourcing being a choice of last resort.

The first option is 'buy from India' followed by 'buy and make India'. Under the second category, private and public sector firms can tie up with foreign vendors and produce the equipment required by the armed forces within the country. It needs to be noted that for the purpose of indigenous sourcing, most of the dividing lines between public and private sector have been removed and for all practical purposes the policy regime is supposed to be the same for the two sectors as long as it is being sourced from a vendor within the country.

The DAC has also made it mandatory for the armed forces to explain to the Ministry when they do not prefer to buy from Indian sources or are excluding the higher category. The other three categories include 'Buy and make with Transfer of Technology', 'Make' and the last option of buying the equipment from foreign vendors

directly under the 'Buy (global) category'. In the new policy paper the government also was at pains to emphasise that the armament procurement plans would be made well in advance, for something like 15 years, so that plans for infrastructure, R&D capabilities and capital investment could be made accordingly.34

US-India strategic ties and defence production

Despite such a stated policy of indigenisation, the actual thrust is on foreign tie-ups. Historically India had close military ties with the erstwhile USSR and now Russia, due to the two countries' strategic relations and India's past experiences during the wars with Pakistan, as well as the deadlock with the US due to India's nuclear experiments. But in recent years, there have been concerted attempts to forge close ties with the US and Israel in armaments acquisitions, and this is part of the present policy package. As a result, in recent years the US has become the most important source for import of armaments, and Israel too has emerged as a large supplier. During his recent visit to the US, the Indian Prime Minister invited "US defence firms to participate in our defence industry." Both sides decided to enhance cooperation in joint production and development of military equipment and renewed the 10-year Defence Framework Agreement during the recent Obama visit to India. The US has been pushing armament deals with India worth over Rs 20,000 crore, including the sale of Apache attack choppers, Chinook heavylift helicopters and the Javelin anti-tank guided missiles.

The approval of the Apache and Chinook deals has come about a month after US Defence Secretary Chuck Hagel arrived in Delhi promising joint development and local manufacture of top-end US kit such as the Javelin antitank missile, and access to electromagnetic catapult technology for India's next generation of aircraft carriers. According to Frank Kendall, the Pentagon's chief weapons buyer, the joint Defence Trade and Technology Initiative with India has identified 17 specific armament projects for close Indo-US defence ties.35 Referring specifically to the possibility of Javelin co-development, Hagel said: "This is an unprecedented offer that we have made only to India."36

Similarly, immediately after the visit of the National Security Advisor Ajit Doval to Israel, the Defence Acquisition Committee (DAC) cleared purchases worth over $525 million from Israel in October last year.

E. Emerging Corporate Military Complex in India

Against the background of the failure to stem the tide of imports and to develop indigenous technology, the Government, experts, and think tanks are increasingly turning to their final solution for all problems – the private corporate sector! A legion of foreign or domestic think tanks, business associations, and corporate consultants have come up with reports on the armament industry. Thus, since 2012, ASSOCHAM, Boston Consulting Group, CII, Deloitte, Ernst & Young, Frost & Sullivan, ICRIER,

KPMG, McKinsey, Observer Research Foundation, PricewaterhouseCoopers, Vivekananda International Foundation, etc. have all produced at least one report each on the armament industry. McKinsey37 begins a report on Indian military industry with a caption that "the stars are aligning for India's defence sector" and exhorts the interested parties to "seize the moment"! Though currently the presence of the private sector in Indian military industry is minuscule, there is huge anticipation, and plans and capacities are being created by the big business houses and even foreign players. Defence could be the "sunrise industry" of the next decade for Indian companies, according to a report released by Edelweiss Securities in July 2014.

Though the public sector predominates, India's 'military industrial complex' also includes 140 private armament companies and 5000 small and medium enterprises (SMEs) involved in production of around 450 items.38 Some of the key big business houses of the country, such as the Tatas, L&T, Reliance, and Mahindra, are investing in the sector and have made big plans to get a substantial chunk of the military pie. Recently, the government cleared 19 proposals from several large Indian corporate houses – including the Tatas, Mahindra, Reliance, Punj Loyd, and Bharat Forge – for military manufacturing.39 However, as yet total military-related orders (including exports) for the Indian private sector were below $2 billion last year – less than 6 per cent of India's total defence spending.40 What we see at present are preparations by the corporate houses for rapid scaling-up. Some skeletal details of the activities of the Indian big business houses in this sector have been provided in Appendix III. What emerges from the details in Appendix III, as well as other reports, is that the Indian firms operate as junior partners of the foreign firms. It is doubtful that they bring significant know-how of their own to the collaborations.

From the above discussion, we can say that:

(i) The military establishment's demand for sophisticated weaponry is large and growing.

(ii) The country's huge, largely public sector, military production and research establishment, has not been able to keep pace with the ambitions of the Indian armed forces and the country's rulers. One reason may be that those ambitions are bloated, beyond the actual strength of the Indian economy and industrial capability. Another factor may be the indirect intervention by various vested and foreign interests to prevent indigenisation.

(iii) As a result, import dependence for military procurements has remained high despite Government adopting policies supposedly intended to promote domestic production.

(iv) So far, the participation of the Indian private sector, in scale and scope, has been minuscule. However, as policies like 'offset' and 'make in India' are

brought in, the Indian private sector is making hectic preparations to scale up its presence in defence production.

(v) Most of the domestic participation so far and the plans by the Indian private sector indicate that it will ride piggyback on the knowhow and capabilities of the foreign (mostly Western) corporate giants.

III. Corporate Military Complex: Where are we headed?

A. Increasing Sway of Special Interests

Special interests predominate in the whole defence decision making and policy making process. Even the then Heavy Industries and Public Enterprises Minister Praful Patel, no foe of the corporate sector (see, for instance, his role as the minister for civil aviation in compromising the interests of the public carrier41), was forced to raise questions on the move to bar PSUs from participating in the tender for supply of 56 transport aircraft (as discussed in II.C above). Patel wrote to the PM and defence minister in 2013: "There are many PSUs who meet all the prescribed criterion for participating in this tender, but are being denied the opportunity to participate… only because they are PSUs."42 At that time the process was stalled because of the protests of Patel, but in the tender issued by the NDA government in May 2014, the defence ministry has bypassed PSUs like HAL and decided that the aircraft will be produced by the Indian private sector firms in collaboration with foreign vendors.

Amid these special interests, it is very hard to discern the real efficacy of any of the procurement decisions, even within the framework of the present system.43]Given the strong vested interests involved, it is difficult for one to assess the validity of such claims; what needs to be noted is that these vast sums are spent without serious public scrutiny or debate.

With so much at stake, the allegations of 'corruption' are omnipresent in the military deals involving the highest and the mightiest. The Bofors deal under Rajiv Gandhi in the 1980s is well-known, but a Wikileaks report suggests that he was involved in promoting a Swedish fighter during the Emergency in the mid-1970s itself, when his mother was at the helm.44 Recently, the Italian Agusta Westland helicopter deal worth Rs 3600 crore had to be cancelled on suspicion of a Rs 300 crore bribe. Similarly, the defence ministry has also put on hold purchase of all-terrain army transport vehicle Tatra truck following allegations that top officials of BEML siphoned off at least Rs 750 crore in bribes and commissions over the past 14 years in the purchase of components for the trucks. The HDW Submarine scandal (1981), the Scorpene submarine scandal (2005), the Barak missile scandal (2000), the ordnance factory scandal (following which certain firms from Israel, Germany, Russia, Singapore and India were blacklisted in 2012) are prominent instances. The widely-publicised journalistic sting "Operation West End" in 2001, claimed to have identified 15 deals involving kickbacks. So endemic are the ties between senior officers and arms agents

that the erstwhile chief of naval staff, the late Admiral S.M. Nanda, who had been at the helm at the time of the HDW scandal, became an executive of Crown Corporation on his retirement from the Navy. (Crown is a notorious arms trading firm headed by his son Suresh Nanda, who was raided in connection with the Barak missile scandal.) Similar instances of corruption can easily be multiplied for all three services.45

In the 1980s, when private agents were banned from military deals, for all practical purposes, defence PSUs filled in the role of the front for the agents or doubled up as agents themselves for the foreign suppliers.46 Being State-owned, the DPSUs were immune from any ban and so, over the 1990s, became importers and manufacturers of military equipment worth billions. As the Soviet-equipped Indian military began looking westwards in the early 1990s to replace and replenish military equipment, the role of the DPSUs in brokering this switchover steadily increased. Since the early 1990s, PSUs such as BEL, Bharat Dynamics, BEML, Electronic Instrumentation India, Hindustan Machine Tools, HAL, Mazagon Docks, and the Garden Reach Shipbuilders profited considerably in procuring military equipment, often accompanied by a transfer of technology for local manufacture, usually to other DPSUs. Bharat Heavy Electricals (BHEL), for example, brokered deals worth over $1 billion for Armoured Recovery Vehicles from Czechoslovakia, 76 mm guns from Italy for the navy, naval simulators, armour plating for T-72 tanks and Arjun, India's indigenously developed Main Battle Tank. "By acquiring defence equipment through DPSUs, the MoD has been legitimising agents through the back door," said a MoD official. In a majority of contracts, the DPSUs do little other than deal primarily with local agents representing foreign manufacturers of military equipment. And, having negotiated purchases almost exclusively through these agents, the DPSUs then enter into a contract with the MoD to supply the equipment. In short, the DPSUs end up playing the role of sub-brokers for the foreign vendors, sharing the commission in one form or the other with the local representative – all in the name of indigenisation and plugging corruption!

The latest development is that the new government has decided to 'review' all cases of blacklisted armament firms on 'merit', and has partially lifted a ban on Tatra trucks. It is preparing a new policy that will allow foreign armament firms to legally hire agents, defence minister Manohar Parrikar said on the last day of 2014. On lifting the ban on Tatra, which was proscribed after the scandal during UPA, Parrikar said, "We have lifted the restricted ban for technical and purchases of spares from the original company provided they… should not have relations with questionable individuals" (once again 'corruption' is being attributed to some sundry dispensable official, while 'business as usual' can continue). He added that this is being done as Tatra trucks have "become critical for certain applications." The interesting part is that Tatra was banned in March 2012 after the then Army Chief General (retd) V K Singh, now a minister in the NDA cabinet, had alleged that he was offered bribe to clear "sub-standard trucks" supplied by the company to the Indian Army.47

B. Further Entrenchment of Foreign Interests

Not only do special interests seem to be influencing the armament procurement process, the real levers of control appear to be increasingly in the hands of the foreign vendors. For instance, reports suggest that the French firm, Dassault Avions, originally offered the Rafale combat aircraft with comprehensive transfer of technology (ToT) for $10 billion. But after winning the tender, it increased the cost to over $30 billion and the "MoD did not even blink"!48

Navlakha49 cites several examples of such remote control and the helplessness of the Indian military establishment. He quotes former Naval Chief Arun Prakash's statement that every imported piece of military hardware, spare part, or component means that "we are at the mercy of the seller nation for 30-40 years thereafter" (Times of India, March 14, 2013). Sixteen of the 66 Hawks aircraft of the IAF were grounded, according to the then Minister of Defence A K Antony, because BAE Systems failed to deliver spares and components. Even after imposing a fine in 2010 "gaps remain", he said (Indian Express, December 18, 2012).

Or take the upgradation cost of 51 Mirage 2000 aircraft. It was officially said to cost Rs 167 crore for each jet fighter. But Antony told Parliament in March 2013 that "an escalation of 3.5 per cent per annum…to the contracted cost of the year 2000…works out to be Rs 195 crore at 2011 levels. Thus the upgrade has been undertaken at 85 per cent of the aircraft's escalated cost." However, Rs 167 crore per aircraft works out to Rs 8,517 crore for 51 aircraft, and does not include the Rs 2,430 crore being spent for "other" items, which takes the total cost to Rs 10,947 crore. This does not take into account the two separate contracts signed by India with Dassault Aviation and Thales for Mirage 2000 weapon systems integration at a cost of Rs 6,600 crore. Thus, the total cost of upgradation becomes Rs 17,547 crore, or Rs 344 crore for each aircraft, more than double of what was cited by the defence minister, Navlakha points out.

The 14th report of the Standing Committee of Parliament on Defence (2011-12) noted that there had been a fourfold increase in the initial estimated cost of the aircraft carrier, Project 15 (destroyer), Project P-15A (war ship), and Project P-17 (warship). It observed, "Russian equipment initially estimated to cost about Rs 93 crore per ship finally cost Rs 707 crore per ship".

Take especially the import of the trainer aircraft, put on hold by the MoD in November last year. India was to buy 106 PC-7 Mark II basic trainer aircraft from Pilatus to supplement the fleet of 75 trainers already contracted for, at a price of Swiss Francs 577 million (Rs 3,727 crore). The defence ministry was not convinced by the IAF's reasons for abandoning a 2009 decision to buy 75 trainers from the international market in the "Buy Global" category, while HAL built 106 in the "Make Indian" category. With 53 aircraft already delivered and more on the way, a Business Standard report claimed that Pilatus was shrugging off direct responsibility for their maintenance, repair and overhaul (MRO).50 This after Pilatus charged 80.25 million

Swiss Francs (Rs 515 crore) for maintenance knowhow to HAL in the contract signed in May 2012. This so-called "Maintenance Transfer of Technology" (MToT) was to be formalised in a separate contract within three years.

With just six months left for that deadline, there was no contract in sight towards the end of 2014, only uncertainty about how the PC-7 Mark II trainers would operate over decades. Pilatus has told HAL — which will eventually maintain the PC-7 Mark II fleet through its service life after receiving maintenance technology — to negotiate directly with sub-vendors for licenses to use and maintain its equipment. Reports suggest that Pilatus only assembles and integrates the trainer, using sub-systems bought from global vendors. That means HAL will have to seek licenses from sub-vendors that include Pratt & Whitney, Honeywell Aerospace, Rockwell Collins, Claverham and Ontic. Pilatus has flatly refused to be even a signatory to those licensing agreements.

According to Pilatus, the PC-7 Mark II has 159 sub-assemblies, which are called "line replaceable units" or LRUs (e.g. the engine supplied by Pratt & Whitney). The MToT contract drafted by Pilatus covers just 65 LRUs. Pilatus says 72 LRUs are non-repairable, which should just be thrown away when they go bad. Seven more LRUs are the responsibility of IAF, while the remaining 15 items are on various countries' "export control lists" and would have to be stocked in advance! Thus, Pilatus wants HAL to negotiate individually with 29 global vendors that provide the 65 replaceable items. There is no telling what price they will demand. When Pilatus charged Swiss Francs 80.25 million for MToT, it did nothing to bind the sub-vendors to conform to this price. With foreign vendors confident that IAF has nowhere else to go, they are negotiating for fees much higher than had been budgeted, the Business Standard report adds. Contacted for comments, Pilatus cited a confidentiality agreement with MoD, but stated that, "suffice it to say that we are working on this diligently to achieve an acceptable outcome for the GOI and IAF. As Pilatus does not hold authority over the individual companies regarding licensing of other vendor IP rights, it is using its best endeavours to mediate between each company and HAL to reach an acceptable position." The report further suggests mutual blaming by the three parties, Pilatus, IAF, and HAL for the mess, while very soon the country may face a situation that the equipment may not be available for use in spite of the huge price paid! Newspaper reports51 in February this year suggest that a key defence ministry official has termed the deal as "fundamentally flawed": the cost of the deal over its 30–year span will now be almost exhausted over just the first seven years of the use of the Pilatus, due to maintenance costs!

In a further twist to this tale, HAL claims that it can build the HTT-40 basic trainer aircraft, a cheaper and better trainer than the PC-7 Mark II. They further claim that it is built to Indian specifications, can be upgraded over its 30-year service life as technology advances, and maintained and overhauled at less cost than a foreign trainer. HAL also says it can fit sensors and weapons on the HTT-40 to make it a

"light attack aircraft", prohibited by the "end-use conditions" on foreign trainers like the Pilatus.52 In September 2009, the ministry decided to procure the IAF's requirement of 181 basic trainers from two sources — 75 bought off-the-shelf from the global market so that IAF training could continue; while HAL would develop and build 106 HTT-40s under the "Make" procedure. All the while it was evident that IAF was not keen on the HAL aircraft and wanted to buy the remaining supply too from Pilatus. For Pilatus, that would have amounted to a windfall of some 700-800 million Swiss Francs (Rs 4,500-5,000 crore), while it would mean curtains for the HTT-40 project. When rebuffed by the MoD for further purchases of Pilatus, IAF even considered making it on their own facilities in collaboration with Pilatus or even finding a collaborator in the private sector, but did not consider relying on home-grown trainer aircraft, for whatever reasons.

C. FDI: The solution?

In spite of such experiences with foreign vendors, there is constant clamour for increasing liberalisation of the FDI regime in the military production sector. Reports and opinions by various experts, think tanks and corporate bodies argue that FDI is at least better than imports, and since the indigenous production-research regime has miserably failed, 'there is no alternative'. Hence the spectacle of successive governments since 2001 opening the sector for FDI, with the NDA government now allowing FDI to the extent of 49 per cent. Indeed there is a persistent demand for increasing it to 74 per cent and even 100 per cent,53 and it should not be a surprise if the NDA proceeds step by step in that direction, in the name of 'make in India'. All the same it is worth noting that since liberalisation of FDI in the armament sector in 2001, and further opening up to larger percentage of FDI under the UPA dispensation, only $4.8 billion (Rs 28,800 crore) worth of foreign investment has come in to the armament sector compared to a total of $322 billion FDI in all sectors taken together.54

Since 2006 the government has permitted even 100 per cent FDI in military production on a 'case-by-case basis' for hi-tech projects, yet not one original equipment manufacturer (OEM) has responded with a proposal; nor is anyone likely to, argues Ajai Shukla.55 The primary constraint is that there are tight controls on export of proprietary technology by the parent governments, and such conditions are legislated by every major armament exporting nation through laws like the International Traffic in Arms Regulations (ITAR) for the US as well as international treaties like Missile Technology Control Regime (MTCR). Thus it is inexplicable how the 100 per cent FDI route will give access to know-how (and know-why) and lead to positive externalities merely by foreign firms setting up production shops within the boundaries of the country. How much success has such a policy had in the much-touted automobile sector, which is relatively lower-tech and involves fewer proprietary technologies than, say, the aerospace sector? Even today we continue to be held to ransom by foreign investors like Suzuki, who use mechanisms such as royalties56 to extract super-profits

while maintaining a tight control on technology. A stark case is that of the telecom sector, where, in spite of 100 per cent FDI being permitted, our hardware import bill is competing with the oil sector. In a nearly Rs 50,000 crore telecom market in 2012-13, the local industry with intellectual property rights within the country had less than 3 per cent share, while close to 90 per cent was imported.57] The point is that if the real transfer of know-how (and know-why) has not happened in relatively low-tech sectors like auto, white goods, or telecom, how will it happen in armaments production, where there is tight State control on technology transfer for most of the parent corporates?

As we mentioned earlier, it is not a coincidence that it is in precisely the areas where, due to historical reasons, the ready 'help' of the foreign sector has not been forthcoming, that we see some success in development of the indigenous capabilities.

D. Serious Violations of National Security

Control by special, particularly foreign, interests not only means drain of resources, but also serious violations of the security and strategic interests of the nation. According to a 2013 news report, Verint Systems, an Israeli cyber intelligence solutions provider closely linked to the Israeli intelligence services, was to get a contract from the Indian government to aid and abet the Department of Telecommunications in intercepting encrypted electronic communications in India.58 The Israeli daily Haaretz in February last year stated, "India is now the No. 1 export target of Israel's military industries. Both India and Israel avoid revealing details about the scale and nature of their security trade… India's share of that is probably between $1 billion and $1.5 billion. And the potential for growth exists."59

According to another report last year, MongoDB (formerly called 10gen), a technology company from the US that is co-funded by the Central Intelligence Agency (CIA), entered into a contract with Unique Identification Authority of India (UIDAI), the apex agency for the Aadhar card. Similarly, former CIA chief George Tenet was on the board of L-1 Identity Solutions, a major supplier of biometric identification software, which was a US company when UIDAI signed a contract agreement with it. This company has now been bought over by Safran group, a French armament company. The subsidiary of this French company in which French government has 30.5 per cent shares, Sagem Morpho, has also signed a contract agreement with UIDAI.60

So not only are we sharing our citizens' private information with foreign firms but also indirectly with Israeli, American as well as French intelligence agencies! If telecom and IT companies with apparent civilian applications have such intimate ties with intelligence agencies and military establishment of their parent countries, we can imagine the strategic ties enjoyed by the likes of Lockheed Martin, BAE Systems, Dassault Aviation, or Israel Aviation, and the implications of their hold here for our national sovereignty. Admiral Vishnu Bhagwat, former chief of the Indian Navy, asserts61:

One of the primary means of SUBVERSION of the new nation states is through the arms trade. I would say corporations in the advanced capitalist nations have not only installed their men in leading positions in the state apparatus, they have also taken an increasing share of the orders for new military acquisitions, logistics contracts and R&D budgets and now use the local companies who have deep linkages with them to monopolise the new JVs and FDI route and to dominate. It is they who have a major say in a number of key appointments in the MoD and the Services headquarters through the big arms firms (emphasis in original).

E. Sell-out of Public Assets, Provision of Subsidies

What is likely to follow with the current noise of 'make in India' is the selling out of the public assets. One can now hear regular chatter recommending 'privatisation' of ordnance factories and defence PSUs. For instance, Bharat Karnad, senior fellow at the Centre for Policy Research, recently proposed,62

Keeping in mind the need to amortise sunk costs in building up impressive laboratories and physical facilities for R&D and weapons testing under DRDO (whose "chalta hai" attitude was decried by the PM) and production facilities in innumerable DPSUs and ordnance factories, I proposed that all these installations, some 50-odd, be divided into two nearly equally capable defence R&D and manufacturing combines and be led as commercial enterprises by two of the most ethical and industrially versatile business houses—Larsen & Toubro and Tata.(emphasis added)

One need not further dignify the idea of 'ethical business houses' in a system in which corporate houses and their managers are accountable primarily for immediate profits and stock prices! Had the scandals of the past decade regarding 2G spectrum, coal mine allocations, KG-D6 gas, iron ore mining, and innumerable other cases not sufficiently laid bare the sordid practices of all the major business houses, fresh evidence has been provided by the latest revelations regarding systematic corporate espionage in various ministries. Of course, when 'ethical' corporate houses are caught in wrongdoings, those wrongdoings are attributed to 'questionable individuals' by the likes of our defence minister (as in the Tatra case above).

In anticipation of private investments in the military sector, there is the usual talk of further incentivising them. A recent such suggestion to the defence ministry is for "championing the establishment of military production ecosystems within National Investment and Manufacturing Zones", a whole new regime of sops for the domestic manufacturing sector on the lines of SEZs (SEZs themselves have hardly been able to take off in spite of almost a decade of massive subsidies in the name of incentives). There is talk of additional incentives for foreign investments in the armament sector by further liberalising the offset policy!63

Nevertheless, news reports simply ignore this truth, and keep touting the potential of the Indian private sector, which has nothing to show for itself but riding piggyback on

the global giants. As Premvir Das, who has been a member of the Task Force on Higher Defence Management constituted by the government in 2000 and has also served on the National Security Advisory Board, says64 about 'make in India' for the military:

Desirability aside, there are few private sector entities in India, including the bigger and better-known names, which have the ability to produce much more than sub-assemblies or the less sophisticated equipment. To hope that any one of them will be able to manufacture major platforms in the foreseeable future is to live in a dreamland.

In the face of this, all the woes of the military production apparatus are now being put squarely at the door of the public sector, and an array of consulting groups and reports are arguing that if only things are left to the private sector, they will magically turn around.

IV. Conclusion

In conclusion, while the people of this country are incessantly told that there is no money for their basic necessities, such as food, shelter, and health care (that is why, we are told, that India needs to get foreign capital), a colossal amount of money has been spent on creating and sustaining a huge military production-research complex. However, this complex has little to show in terms of accomplishments. While the people are getting ever more immiserised, the nation's strength is being increasingly equated with its military might, justifying the State's spending ever more resources on it. The military establishment is the focus of attention, whether as part of the 'make in India' campaign, the Vibrant Gujarat summit, or recent visit of President Obama.

Some may argue that the real way to secure a society is healthy and educated citizens who are provided the basic amenities and rights. Others may even contend that, given that the Indian military may be used against the Indian people themselves, the more potent its armaments, the greater their danger. We have not examined these propositions here. Our question here is, what perpetuates such a wasteful system and whose interests does it serve? Perhaps in light of the discussion here, we can make four tentative propositions:

Whatever has been built up in terms of indigenous capabilities, whether in space, nuclear, or missile establishments due to specific geopolitical or historical reasons, or even other aspects of military production and research, has been at an enormous cost to the exchequer in an impoverished country like India. Much of this is now ready to be palmed off to the Indian private corporate sector, which has little to show in terms of building its own competence.
More significantly, much of this will come under the influence and control of the international corporate military establishment, as most of the Indian big business has only plans to ride piggyback over the former's capabilities and strengths.

What the corporate sector most desperately need is assured and continuous demand in current times of ever-deepening global economic crisis. In fact this is one of the key attractions of the military sector, besides of course padded profits due to complete lack of accountability in the name of security of the nation and oligopolistic nature of the industry. And thus as a nation's military establishment is increasingly corporatised, military tensions and even war may suit vested interests, domestic and foreign. Despite the end of the Cold War in the early 1990s, the US military industry has perpetually found new outlets for its wares, and the US seems to be in never-ending wars across the globe.

And finally, the logic of war does not stop at the border but is extended within the country as well. This is a bonus for the ruling dispensation in one more way: as the security concerns take a centre stage, the dissenting voices can be silenced with so much more impunity. Witness the recent case of a Greenpeace activist being stopped from going to the UK to depose to the British MPs on Essar's human rights violations in India in the name of 'national interests' – note that Essar Energy is a UK registered corporation. Thus while foreign corporates are welcome to supply and invest in Indian military and other key sectors, the citizens of the country are not welcome to dissent when these corporations violate their rights, either within or outside the country!

Thus, military procurement has become an ever more closed loop system created in the name of security and nationhood that has little to do with the larger population of the country and their needs. For instance, the bauxite or iron mines are opened up in Jharkhand, Orissa or Chhattisgarh by grabbing people's lands and homes against their will, in spite of their great resistance, and UAVs and increasingly sophisticated weapons are used to quell their resistance. The corporate sector is the beneficiary both of mining the ore, and of the demand for weapons, demand which is independent of the vagaries of the market system.

Eisenhower (the only general to be elected US president in the 20th century) had warned in his 1961 farewell speech of the 'military-industrial complex'.65 We have sketched above the outlines of India's new corporate-military complex. Of the consequences of such phenomena French litterateur Anatole France66wrote a hundred years ago:

A people living under the perpetual menace of war and invasion is very easy to govern. It demands no social reform. It does not haggle over expenditures for armaments and military equipment. It pays without discussion, it ruins itself, and that is an excellent thing for the syndicates of financiers and manufacturers for whom patriotic terrors are an abundant source of gain.

The question the ruling elite may have to confront is: is such a closed loop system, where the overwhelming majority is out of its very logic, sustainable?

Kanpur, March 2015

Appendix I: Some Military Related Abbreviations Used

BEL Bharat Electronics Ltd.

BEML Bharat Earth Movers Ltd.

CQB Close Quarter Battle

DAC Defence Acquisition Council

DPP Defence Procurement Procedure

DPSU Defence Public Sector Undertaking

DRDO Defence Research and Development Organisation

FOC Final Operational Clearance

HAL Hindustan Aeronautics Ltd.

IAF Indian Air Force

IAI Israel Aerospace Industries

INSAS Indian Small Arms System

LCA Light Combat Aircraft

MoD Ministry of Defence

MMRCA Medium Multi-Role Combat Aircraft

MRO Maintenance, Repair & Overhaul

NSA National Security Advisor

OEM Original Equipment Manufacturer

OFB Ordnance Factories Board

RFP Request for Proposal

SIPRI Stockholm Peace Research Institute

TAS Tata Advanced Systems

ToT Transfer of Technology

UAV Unmanned Aerial Vehicle

Appendix II: Framework of Public Sector Military Production & Research

The oldest of the three is the network of 41 ordnance factories spread far and wide across the country. Ordnance Factories Board (OFB), consisting of the Indian ordnance factories, functions under the Department of Defence production of Ministry of Defence (MoD). It is supposed to be engaged in research, development, production,

testing, marketing and logistics of a comprehensive product range in the areas of land, air and sea systems. OFB is the world's largest Government-operated production organisation, and the oldest industrial organisation run by the Government of India, with its beginnings in later part of the 18th century. It has a total workforce of about 164,000, and is amongst the top 50 armament manufacturers in the world. Its total sales were $2.7 billion (Rs 16,246 crore) in 2011-12. It manufactures all kinds of regular needs of the three military wings: small arms, ammunition, artillery, clothes, vehicles, armoured vehicles, engines, missile launchers, aircraft, and naval armaments, etc.67

The next are the eight PSUs under the Ministry of Defence, with a combined turnover of Rs. 33,000 crore and direct employment of 72,000 persons.68 The largest is Hindustan Aeronautics Ltd (HAL), with a turnover of more than Rs 15,000 crore and close to 33,000 employees. HAL is the only domestic producer of any significance in the aerospace industry in the country and manufactures a range of aircrafts, helicopters and related avionics and spare parts for the needs of the air force and the other military and security needs. Started under private sector during the Second World War, it was quickly taken over by the British government. More than 40 per cent of HAL's revenues come from international deals to manufacture aircraft engines, spare parts, and other aircraft materials. HAL has a long history of collaboration with several international aerospace agencies such as Airbus, Boeing, Lockheed Martin, Sukhoi Aviation Corporation, Israel Aircraft Industries, RSK MiG, BAE Systems, Rolls-Royce, Dassault Aviation, Ilyushin Design Bureau, Dornier Flugzeugwerke, etc. The second most important player in this group in terms of size is Bharat Electronics Ltd. (BEL) with a turnover of Rs 6,500 crore and employment of 12,000 persons. It primarily manufactures advanced electronic products for the Indian Armed Forces.

Bharat Earthmovers Ltd (BEML) commenced operations in 1965 and is Asia's second-largest manufacturer of earth moving equipment to mining, military and railways, and controls 70 per cent of India's market in that sector. Its turnover is Rs 3,300 crore, and it employs more than 10,000 persons. Then there are three units catering to the needs of Indian Navy with a combined turnover of more than Rs 5,500 crore and more than 13,000 employees. Mazagon Dock Limited (MDL) is India's prime shipyard. It manufactures warships and submarines for the Indian Navy, and offshore platforms and associated support vessels for offshore oil drilling. It also builds tankers, cargo bulk carriers, passenger ships and ferries. Garden Reach Shipbuilders & Engineers Ltd (GRSE) is the premier warship building company in India; since 1960, it has built 91 warships for various roles, starting from frigates & corvettes to fast patrol boats.In addition to warships, GRSE has also built and supplied close to 600 vessels to carry men and materials for surveillance of the coast line by the police forces. Goa Shipyard is the third PSU primarily catering to the needs of navy, but has relatively smaller operations. Bharat Dynamics Limited (BDL) manufactures ammunitions and missile systems with a turnover of Rs 1,800 crore, and employs close to 3300 persons. Mishra

Dhatu Nigam Limited (Midhani) is a specialised metals and metal alloys manufacturing facility making a wide range of super-alloys, titanium, special purpose steels and other special metals and alloys for aerospace, military, atomic energy, power generation, and chemical industries. It has a turnover of Rs 560 crore with 900 employees.

The Defence Research and Development Organisation (DRDO) is the third leg of the public sector military production-research complex and is primarily engaged in applied R&D and the development of technology for military use. With a network of 52 laboratories spread across the country, which are engaged in developing military technologies covering various fields, like aeronautics, armaments, electronics, land combat engineering, life sciences, materials, missiles, and naval systems, DRDO is India's largest and most diverse research organisation. The organisation includes around 5,000 scientists belonging to the Defence Research & Development Service (DRDS) and about 25,000 other scientific, technical and supporting personnel. Its present annual budget is more than Rs 15,000 crore. The primary task of DRDO is to develop indigenous capabilities, modify the imported hardware for the needs of the Indian defence forces and provide support systems for the military hardware.69

Appendix III: A Brief Outline of Indian Big Business Houses in the Armament Sector

Perhaps the house of Tatas has been moving the fastest in anticipation of the windfall. It has as many as 14 armament related companies with Rs 1,700 crore turnover from this sector, and projects a 40 per cent jump in military sales in 2014. The Tata Group is engaged in the production of sub-systems of missiles, launchers, radars, artillery systems, air defence systems, military vehicles, military electronics systems, UAVs, aero structures and electronic warfare systems, and is attempting to become a global single-source supplier and full-fledged military systems integrator.70Tata Advanced Systems (TAS) has entered into tie-ups with several international enterprises including manufacturing of components for aerospace and military giant Boeing. Further, it has taken a one-third stake in Italy's Piaggio Aero while it has signed a Memorandum of Understanding (MOU) with Israel Aerospace Industries for a joint venture that would develop, manufacture and support a wide range of military and aerospace products including missiles, unmanned aerial vehicles (UAVs), radars, electronic warfare system and homeland security systems. On another front TAS is already manufacturing Sikorsky helicopter cabins from its facility in Andhra Pradesh. TAS has also joined hands with the US aerospace and military giant Lockheed Martin to manufacture structural assemblies for C-130 aircraft.71

Engineering and construction conglomerate Larsen & Toubro has invested close to Rs 5,000 crore in its military and nuclear business and its presence in military is spread across several specialised areas and includes joint ventures and partnerships in ship-building, field guns, missile launchers and weapon systems. However, few projects are

as visible (or capital intensive) as its ambitious goal to become a warship builder. Recently L&T was the only private player to be shortlisted and said to be the frontrunner for a Rs. 50,000 crore order to build six submarines for the navy72. It is also targeting at least Rs 25,000 crore from defence electronics contracts over the next five years and up to Rs 3,000 crore from the field gun programme.73

The big business house of Mahindra & Mahindra has been manufacturing armoured vehicles, sea mines, surveillance solutions, weapons, ammunition, etc. It has been exploring joint ventures as well as possible collaboration on technology for military sector and has linked up with UK's largest (and the world's fourth largest) military manufacturer, British Aerospace, for land-based armament systems, and with a subsidiary of Italian Finmecanica for underwater systems.

Mukesh Ambani's Reliance, the country's largest private sector conglomerate, which is prominently into oil and gas, had set up Reliance Aerospace Technologies and Reliance Security Solutions in 2011. In 2012, Reliance Industries partnered with Dassault Aviation to enter the military and homeland security sectors in India. It also applied for the licence to design, develop and manufacture equipment and components for military and civilian aircraft. The accord came less than two weeks after Dassault's Rafale warplanes emerged as the preferred bidder in a contest to supply India with 126 fighter jets (at the time the deal was said to be $15 billion; now it is said to be double that size). Taking its military strategy forward, Reliance recently signed such a pact with Boeing too. Both these agreements are aimed at getting a pie of the projects these global majors are likely to start in India as part of their offset work. As per the report, Mukesh Ambani is planning to invest about $1 billion in aerospace over the next three years and plans to recruit 2,000 engineers.74

Not to be left behind, in March 2015, the Anil Ambani group company Reliance Infrastructure struck a deal to acquire a controlling stake in Pipavav Defence and Offshore Engineering for Rs 2,083 crore. Ambani intends to soon purchase another Rs 1,263 crore of shares from the open market, taking his holding to 44 per cent. Addressing the Pipavav employees, he declared he would "leave no stone unturned to make it India's largest defence manufacturing company".75

There are other important players in the private sector, such as Ashok Leyland and Bharat Forge, who plan to gain a significant share of the military market. The former is engaged in supply of military vehicles, while the latter in arms and armaments. Leyland has signed an agreement with Sweden's SAAB to deliver high mobility vehicles for SAAB's short range surface to air missile system to compete for the Indian Army's air defence programme, while Bharat Forge is collaborating with Israel's Elbit Systems to build advanced artillery guns and mortars.76

Appendix IV: Failure to Develop an Indigenous Carbine Firearm77

Armament Research and Development Establishment (ARDE) and Small Arms

Factory (SAF) Kanpur attempted to develop and produce the 5.56 mm INSAS Carbine. However, due to repeated failures, the Army foreclosed the requirement in 2000 after 13 years and the expenditure of Rs 22 crore. This was followed by the development of the Amough, a 5.56 mm carbine, by the Ordnance Factories Board (OFB), but this was rejected by the Army several times between 2006 and 2009. The DRDO-designed 5.56 mm modern sub machine carbine (MSMC) was also found unfit for induction. The trial team recommended that the development agencies should undertake a 'de-novo approach' (i.e., from scratch), breaking free from the unsuccessful design. In February 2009, the OFB and DRDO decided to develop and produce the Protective Carbine jointly, which has had some success in trials in 2013.

Meanwhile, in 2005, the Army projected an urgent requirement for new generation carbines at the cost of Rs 2,524 crore, and the Government accepted the acquisition plan for the period 2007-12. In 2006, the Defence Acquisition Council approved induction of Close Quarter Battle (CQB) carbines through import followed by Transfer of Technology (ToT) and indigenous production of Protective Carbines, as their user trials had commenced by then. A greenfield project was also sanctioned for production of CQB carbines in the country at an estimated cost of Rs 408 crore. In December 2007, the foundation stone of the forty-first ordnance factory for manufacture of new generation carbines was laid at Korwa in Amethi Tehsil of Sultanpur District in UP (now part of Amethi district, represented largely by the Nehru-Gandhi family in the Lok Sabha). Rs 120 crore was spent on the factory up to March 2012. The Request for Proposal (RFP) for procurement of CQB carbine along with ToT was first issued in April 2007, and subsequently withdrawn in Dec 2007. A fresh RFP was later issued in April 2008, which was also withdrawn in June 2009 on account of inadequate competition, and since it did not meet user's requirements. After a lapse of nine years and more than a couple of RFPs, the Army has just reached the confirmatory trials stage. Assuming that the trials are completed expeditiously, the delivery of carbines and ToT can take place only after the commercial bids are opened, commercial negotiations are completed with the lowest bidder and a comprehensive contract is concluded. Even by the most optimistic estimates, receipt of the carbines by the combat units is a couple of years away.

Commencement of production at Ordnance Factory Korwa after absorbing the transferred technology will be much further away, and the brand new facility in all probability will remain unutilised for a while. The CAG in its audit report of 2010-11 observed that the sanction of the forty-first ordnance factory was ill-conceived for a variety of reasons. The factory's construction had commenced without any knowledge of the intended product's design. The Ordnance Factory Korwa was to be completed by 2010 but even till then, neither was the CQB carbine selected nor had the indigenous Protective Carbine qualified in user trials. The CAG also observed that the factory was being accommodated in 34 acres land of Hindustan Aeronatics Ltd (HAL) at Korwa, against the requirement of 60 acres. The CAG questioned site selection, since 118

acres of surplus land and residential buildings were available at Field Gun Factory Kanpur. Similarly, Ordnance Factory Tiruchirapalli had 1,300 acres of surplus land. The OFB decision to set up a new factory was particularly irrational considering that three of its small arms factories at Tiruchirapalli, Kanpur and Ishapore near Kolkata operate at less than half their capacity. The CAG in its report opined that the project needs to be reviewed urgently by the Ministry of Defence (MoD), and a pragmatic decision taken by looking into the cost and benefits of setting up a new factory vis-à-vis the augmentation of the facility in any of the existing ordnance factories.

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Notes:

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