

Defence Technology Indigenisation: Need to go beyond Lip Service

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Summary

In recent months, the Defence Minister, A K Antony, has been repeatedly exhorting the armed forces to procure their weapons and equipment from indigenous sources. It is a well-established fact that no nation aspiring to great power status can expect to achieve it without being substantively self-reliant in defence production. However, the armed forces are not the stumbling block to indigenisation. Unless the government drastically reorients its defence procurement policies, the import content of defence acquisitions will continue to remain over 80 per cent.

Introduction

In recent months, the Defence Minister, A K Antony, has been repeatedly exhorting the armed forces to procure their weapons and equipment from indigenous sources. It is a well-established fact that no nation aspiring to great power status can expect to achieve it without being substantively self-reliant in defence production. However, the armed forces are not the stumbling block to indigenisation. Unless the government drastically reorients its defence procurement policies, the import content of defence acquisitions will continue to remain over 80 per cent.

India's procurement of weapons platforms and other equipment as part of its plans for defence modernisation, must simultaneously lead to a transformative change in the country's defence technology base and manufacturing prowess. Or else, defence procurement will remain mired in disadvantageous buyer-seller, patron-client relationships like that with the erstwhile Soviet Union and now Russia. While India has been manufacturing Russian fighter aircraft and tanks under license for many years, the Russians never actually transferred weapons technology to India.

Although the country has now diversified its acquisition sources beyond Russia to the West and Israel, recent deals have failed to include transfer-of-technology (ToT) clauses. The much delayed MMRCA deal with Rafale also appears to have run into rough weather on this account. If this trend continues, India's defence technology base will continue to remain low and the country will remain dependent almost solely on imports for major defence acquisitions. Whatever India procures now must be procured with a ToT clause being built into the contract even if it means having to pay a higher price. The aim should be to make India a design, development, manufacturing and export hub for defence equipment in two to three decades.

Defence Research and Development

Though it seeks to encourage public-private partnerships, privately the government continues to retain its monopoly on research and development and defence production through the DRDO, the ordnance factories and the defence PSUs (DPSUs).

Since its inception in 1958, the DRDO has achieved some spectacular successes like the missile development programme, but also has many failures to its name. Programmes like the Light Combat Aircraft (LCA) and the Main Battle Tank (MBT) Arjun have suffered inordinate delays and time and cost overruns. However, to its credit, the DRDO worked under extremely restrictive technology denial regimes and with a rather low indigenous technology base. The DRDO is now in the process of implementing the report of the P Rama Rao committee that had asked it to identify eight to 10 critical areas that best fit its existing human resource pool, technological threshold and established capacity to take up new projects. And, it must scrupulously stay out of production. The private sector has

shown its readiness and technological proficiency to take up the production of weapons and equipment designed and developed by the DRDO and must be trusted to deliver.

The DRDO must now concentrate its efforts on developing critical cutting edge technologies that no strategic partner is likely to be willing to share; for example, ballistic missile defence (BMD) technology. Other future weapons platforms should be jointly developed, produced and marketed with India's strategic partners in conjunction with the private sector. The development of technologies that are not critical should be outsourced completely to the private sector. Also, the armed forces should be given funding support to undertake research geared towards the improvement of in-service equipment with a view to enhancing operational performance and increasing service life. Gradually, the universities and the IITs should be involved in undertaking defence R&D. This five-pronged approach will help to raise India's technological threshold over the next two decades by an order of magnitude.

Defence Procurement Procedure

The Defence Procurement Procedure (DPP) manual was introduced in 2005. Since then it has been revised and modified several times based on the experience gained during its implementation. The Defence Production Policy was unveiled in 2011. Its objectives are to: achieve substantive self-reliance in design, development and production of equipment, weapon system and platforms required for defence in as early a time frame as possible; create conditions conducive for the private industry to play an active role in this endeavour; enhance the potential of small and medium enterprises (SMEs) in indigenisation; and, broaden the defence research and development base of the country. However, the emphasis on self-reliance remains wishful thinking at present as most weapons and equipment continue to be imported.

The Defence Procurement Procedure (DPP) was amended once again in April 2013 to reflect the current thinking on 'buying Indian'. However, in effect it still favours the defence PSUs over the private sector. MNCs are allowed to bring in only up to 26 per cent FDI as against 74 per cent for non-defence sector joint ventures. Though the procurement of weapons and equipment worth more than Rs 300 crore from MNCs has been linked with 30-50 per cent offsets, it is doubtful whether the economy is ready to absorb such high levels of offsets. For example, the MMRCA contract, which is likely to worth USD 10-12 billion or more, will result in an offset obligation of USD 5-6 billion. This is much more than the Indian defence industry can possibly absorb over 10-12 years.

Indigenous Defence Production

The defence production process must provide a level playing field between defence PSUs and Indian private sector companies forming joint ventures with MNCs where necessary.

The amount of FDI that MNCs can bring in must be raised to 49 per cent immediately and to 74 per cent in due course to make it attractive for MNCs. However, no MNC that is unable to provide transfer of technology – either due to the home country's restrictive laws or due to proprietary considerations – should be considered for future defence acquisitions.

India cannot leap-frog to a higher defence technology trajectory virtually overnight. Transforming a low technology base to a higher plane will need time, patience and large-scale capital investment. It will also need strong support across the political spectrum. In the interim period, inevitably, there will be a further dip in defence preparedness. This short-term weakness in capacity building will need to be carefully weighed against long-term gains that will be strategic in nature. The risk involved will require fine political judgement backed by sound military advice.

India is a growing economic powerhouse and should no longer be satisfied with a buyer-seller, patron-client relationship in its future defence procurement planning. As the largest importer of arms and equipment in the world, India has the advantage of buyers' clout. This clout must be exploited fully to further India's quest for self-sufficiency in the indigenous production of weapons and equipment. In all major acquisitions in future, India should insist on joint development, joint testing and trials, joint production, joint marketing and joint product improvement over the life cycle of the equipment. The US and other countries with advanced technologies will surely ask what India can bring to the table to demand participation as a co-equal partner.

Besides capital and a production capacity that is becoming increasingly more sophisticated, India has its huge software pool to offer. Today software already comprises over 50 per cent of the total cost of a modern defence system. In the years ahead, this is expected to go up to almost 70 per cent as software costs increase and hardware production costs decline due to improvements in manufacturing processes. If a new weapons development project needs 500 software engineers, where else but in India can such a high quality work force be found?

The immediate requirement is to think big in keeping with the country's growing economic clout and to plan for the future with a level of confidence that policy planners have not dared to exhibit before. In 10 to 15 years India must begin to acquire most of its defence equipment needs from Indian companies – with or without a joint venture with an MNC. Only then will the era of self-reliance in defence acquisition truly dawn on the country. It will be a difficult quest, but not one that a great nation cannot realise.

Speed and Transparency in Decision Making

The defence procurement decision making process must be speeded up. The army is still without towed and self-propelled 155 mm howitzers for the plains and the mountains

and urgently needs to acquire weapons and equipment for counter-insurgency and counter-terrorism operations. The navy has been waiting for long for the INS Vikramaditya (Admiral Gorshkov) aircraft carrier, which is being refurbished in a Russian shipyard at exorbitant cost. Construction of the indigenous air defence ship is lagging behind schedule.

The plans of the air force to acquire 126 multi-mission, medium-range combat aircraft in order to maintain its edge over the regional air forces are also stuck in the procurement quagmire. All three Services need a large number of light helicopters. India's nuclear forces require the Agni-III and V missiles and nuclear powered submarines with suitable ballistic missiles to acquire genuine deterrent capability. The armed forces do not have a truly integrated C4I2SR system suitable for modern network-centric warfare, which will allow them to optimise their individual capabilities.

All of these high-priority acquisitions will require extensive budgetary support. With the defence budget languishing at less than two per cent of India's GDP – compared with China's 3.5 per cent and Pakistan's 4.5 per cent plus US military aid – it will not be possible for the armed forces to undertake any meaningful modernisation in the foreseeable future. Leave aside genuine military modernisation that will substantially enhance combat capabilities, the funds available on the capital account at present are inadequate to suffice even for the replacement of obsolete weapons systems and equipment that are still in service well beyond their useful life cycles. The central armed police and para-military forces (CAPFs) also need to be modernised as they are facing increasingly more potent threats while being equipped with obsolescent weapons.

While the need for confidentiality in defence matters is understandable, defence acquisition decision making must be made far more transparent than it is at present, so that the temptation for supplier companies to bank on corrupt practices can be minimised. For example, tenders should be opened in front of the representatives of the companies that have bid for the contract. Before a contract is awarded, the file should be reviewed by the Chief Vigilance Commissioner (CVC). If the CVC continues to have reservations about such scrutiny, either his charter should be amended or an eminent persons group should be appointed to vet large purchases. Surely, many such persons with unimpeachable integrity can be found in India.

In the past, the selective tweaking of the technical requirements during the procurement process has led to one company being favoured over another. All technical requirements must be frozen when a Request for Proposals (RfP) is issued by the MoD. GSQRs must also be frozen when the procurement process begins. Frequent tinkering with GSQRs by the Services is detrimental to the smooth flow of the acquisition process and the indigenous development of weapons systems. It may sound heretical, but the reports of user trials must be made public. This step will not only amount to a huge leap forward in transparency, but also insulate the trials teams of the three Services from being unduly influenced to stage-manage trials in favour of any of the contending parties.

The Way Forward: Systematic Acquisition Planning

During the long history of post-independence conflicts with India's neighbours and prolonged deployment for internal security, the Indian army and its sister Services have held the nation together. Dark clouds can once again be seen on the horizon, but the efforts being made to weather the gathering storm are inadequate. The government must immediately initiate steps to build the capacities that are necessary for defeating future threats and challenges. It must take the opposition parties into confidence as a bipartisan approach must be followed in dealing with major national security issues. In fact, there is a requirement to establish a permanent National Security Commission mandated by an act of Parliament to oversee the development of military and non-military capacities for national security.

A fluid strategic environment, rapid advances in defence technology, the need for judicious allocation of scarce budgetary resources, long lead times required for creating futuristic forces and the requirement of synergising plans for defence and development, make long-term defence planning a demanding exercise. The lack of cohesive national security strategy and a flawed planning process have resulted in inadequate political direction regarding politico-military objectives and military strategy. Consequently, defence planning in India had till recently been marked by *ad hoc* decision making to tide over immediate national security challenges and long-term planning was neglected. This needs to be corrected and pragmatic measures need to be instituted to improve long-term planning.

It is now being increasingly realised that a tri-Service Defence Plan must be prepared on the basis of a 15-year long-term integrated perspective plan (LTIPP). The first five years of the plan should be very firm (Definitive Plan), the second five years may be relatively less firm but should be clear in direction (Indicative Plan), and the last five years should be tentative (Vision Plan). A reasonably firm allocation of financial resources for the first five years and an indicative allocation for the subsequent five-year periods is a pre-requisite.

India is expected to spend approximately USD 100 billion over the 12th and 13th defence five-year plans on military modernisation. As 80 per cent of weapons and equipment are still imported, there is an urgent need to further refine the defence acquisition process and insulate it from the scourge of corruption that has afflicted all other national endeavours, including major development projects, while simultaneously encouraging self-reliance and indigenisation.