## The Truth about Military Hardware in our Armed Forces

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While military experts have been pre-occupied with the deficiency in manpower, particularly the officer cadre in the Armed Forces, it is the poor state of military hardware that should cause greater concern. Modern warfare is all about weapons, equipment and support systems. Indian history is full of instances where our brave soldiers were defeated in battles because the enemy had the advantage of superior horses, rifles and guns. In the field of military hardware the state in the three Services today calls for urgent corrective action.

Dependence on a foreign power for military hardware can be as lethal as the weapon system itself. Foreign governments and arms manufacturing companies consider sale of arms a vital source of income. Sale of weapons and equipment forms an important part of their foreign policy initiatives. To make the deals attractive, terms and conditions are sugar coated with phrases like technology transfer and setting up facilities for production in our country. Thus, they not only sell weapon systems, they also make additional profits by providing production and repair facilities. There is hardly ever any mention of them buying back the weapon systems or equipment thus produced, at market prices. Normally, in the contract the first hundred numbers are bought outright and subsequently production facility and transfer of technology is included. By the time the whole process of setting up facilities for production is completed, the system is on the verge of becoming obsolete. The whole process begins again for the next generation weapons. We are thus caught in an endless cycle of purchasing weapons and equipments from abroad repeatedly.

An ambitious project of making Light Combat Aircraft (LAC) was undertaken by the Defence Research and Development Organisation (DRDO) long time back. They did not have the capability of making a combat aircraft then and they also do not seem to have the capability now, though it is said that the project will fructify in five years. Meanwhile the Air Force, compelled to phase out MIG 21 air craft in large numbers, have fallen dangerously short of their authorised strength. This has necessitated in MoD floating a global tender of Rs 40,000 crores for buying 126 medium multi-aircrafts post haste. Despite the urgency, this contract will pass through many phases; trials, negotiations, acceptance in service and production etc. Therefore, the Medium Multi-role Combat Aircraft may not be inducted into the Air Force for another 3 to 4 years.

Navy and Army are also no better off. A deal of Rs 6,000 crores was signed with Russia in 2004 to supply Indian Navy with a refurbished aircraft carrier 'Admiral Gorshkov'; with 16 MIG-29K 'supersonic fighters and a mix of Ka-31 and Ka-28 helicopters to operate from the carrier's deck. This aircraft carrier is already over age. Navy has been wanting to acquire Gorshkov for a very long time and it was scheduled to join the Indian Navy by August 2008. Presently, there is no information as to when the Navy will get this aircraft carrier. At the same time an indigenous 37,500 tons aircraft carrier is not likely to be in service before 2015. Meanwhile, the only aircraft carrier Viraat is also ageing.

The saga of an indigenous tank for the Army is well known. More than 25 years ago, a project was started to make an Indian tank named 'Arjun', which would match the lethality, protection and sustained mobility of a modern tank on the battlefield. Though a few tanks have been inducted into an armoured regiment, after an agonisingly long period, the Army is not satisfied with their performance. And in these 25 years, more than 100 times the original projected cost has been spent.

These are only three examples, one each from Army, Navy and Air Force; mentioned to show how inadequate deficient our weapons and equipment management is today. Numerous such examples can be quoted which when taken together make the picture extremely dismal. It is now sixty years, since Independence, that the management of military hardware became our own responsibility. Israel also gained their independence about the same time as our country. While we had Ordnance factories and other infrastructure already in place, Israel had none. Yet in the last sixty years, Israel has developed a capacity to export sophisticated weapons and equipment of about the same value as we have been importing. What are the reasons that have prevented us from becoming self sufficient and self reliant in military hardware?

Is our infrastructure faulty? In the MOD, the DRDO is responsible for assimilating the weapons or equipment requirement of the Services through a qualitative requirement floated by the latter. Thereafter, the DRDO prepares a project report obtains government sanction and the budget. The DRDO is then supposed to fabricate a prototype of the system, offer it to the concerned Service for trial, obtain their approval, make industrial drawings and transfer the system to Defence Production for meeting Service requirements.

Unfortunately, this arrangement has not worked at all. DRDO is headed by an eminent scientist, who also wears the hat of Scientific Adviser (SA) to the Defence Minister. DRDO has excellent laboratories in various disciplines like armament, vehicle, instruments, radio etc. The organisation also has excellent scientists. However, they do not have much practical knowledge about the battle field requirements of the weapon systems that they are engaged in fabricating. There is not much interaction with the Services. Also, the DRDO do not realise their limitation realistically. Taking on the project for Light Combat Aircraft (LAC) is a case in point. No aircraft have been fabricated in the country and to think that a LAC can be made which will match the technical specifications of modern combat aircraft seemed unrealistic. We have seen the result in this project.

The department of Defence Production is headed by a Secretary who is an IAS officer and all the top level decision makers in the department are from Civil Services. This department also works in isolation from the Services and has done very little either to improve the structure of Ordnance factories or modernise their facilities. Though coordination meetings are held to monitor the projects there is a lack of focus. The allocation of responsibility at the various stages of the project is not clearly defined. The DRDO has been unable to produce prototypes in time. Almost all the projects get delayed. Along with the work of DRDO the department of Defence Production should get involved in making industrial drawings of the system and setting up production facilities. Though coordination meetings are held frequently the expected results are not forthcoming.

Loss to the exchequer in these projects is enormous and calls for introspection to set things in the right perspective to safeguard National security interests. Indigenous manufacture will also cost money but foreign exchange will be saved and the infrastructure will be better utilised. More important, our defence forces will not be dependent on foreign manufacturers in times of emergency. Self-reliance is, therefore, a military necessity. However, except for missiles, our country has been unable to develop any major weapon systems without foreign components. For most of the weapon systems very large number of important components are imported from aboard. So, if we are not importing a weapon system as a whole we continue to import costly critical items like engine, fire control system etc.

The country cannot afford to continue paying large sums of foreign exchange year after year. Therefore, we have to shore up our indigenous capability. The need is to look at the whole system and make urgent changes. Mere patch work will not do; there has to be a total re-think on the whole subject, which may include major structural as well as procedural changes.

The Services have to reconcile to the fact that DRDO and department of Defence Production are not yet geared to produce modern weapons and equipment that are displayed in glossy magazines. Also, the technical expertise and the latest gadgets that include a wide range of facilities will take time. Therefore, the criticality of operational efficiency over mere sophistication is what the Services should look for. For example, the Fire Control System (FCS) in tank and naval ships have become very sophisticated. Having got an efficient stabilisation in the tank, the maximum errors occurred due to faulty range estimation. For a very long time the Israeli Army used hand held range finder and conveyed the target range verbally to the gunner. Till they were able to develop a computer driven fire control system, a hand held range finder was accepted by the Israeli tank men. On the other hand from the day project 'Arjun' was launched, our Armoured Corps insisted on a latest fire control system. The DRDO was in no position to fabricate such a system. While the DRDO was in the process of developing a modern FCS, the Armoured Corps should have accepted a simpler system.

So where do we go from here? First, we have to set our aim right. Not only should we aim to equip our Armed Forces with modern equipment, made in India, but we should also aim to enhance exports of our military hardware and earn valuable foreign exchange. The private sector can play a very important role in research, development and production of military hardware. Our country has reached a stage where the private sector can complement the Department of Defence Production in producing the most sophisticated weapons and equipment and indeed take off much weight from their shoulders. The MoD on behalf of the Armed Forces is considered one of the biggest arms buyers in the world market. This is a stigma that must be removed.

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