THE CHALLENGE OF SELF SUFFICIENCY

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IT is the industry and the people which ultimately contribute to the strength of a nation. We are fortunate, thanks to our Great Nation Builders, that this land has a firm industrial base reinforced by excellent Scientific and Technological talent. But, in a serious emergency we may not be in a position to mobilise our Industrial Capacity and develop our full potential to be self-reliant with our present set-up in the field of defence production. This study highlights the necessity of utilisation of our industrial potential for defence. In doing so, reliance has been placed on recent history. It will be helpful to us since we are still far from the goal of self sufficiency in the design and production of armaments.

In most of the advanced countries like USA, UK, France and Germany, the bulk of Armament and Defence Industry is in the Private Sector. Even after independence, we continued following the British policy of keeping defence production exclusively in the public sector, which even the British at no time followed at home. It is only comparatively recently that the private sector has been permitted to make inroads into this exclusive field in a rather small and insignificant way. We have been purchasing equipment manufactured by private sector abroad. We have even invited private foreign firms to collaborate with us in our defence production. It is time, we invite our own private sector to collaborate in our defence production efforts.

Collaboration between industry and Government in England, in the sphere of design, development, and production of armaments stood the test of time during the worst crisis that England faced during World War II. An insight into this could lead us to useful clues which could be adopted by us, with or without suitable modifications depending on the peculiarity of circumstances.

HISTORICAL

[1]Soon after 1918, in UK in the case of weapons and tanks of the Army, peace time research had to be maintained artificially since there was virtually no international armament trade and the private manufacturer of armament declined almost to the vanishing point in an atmopshere of public suspicion. Army could pursuade only a very few firms to undertake research

[1]History of the Second World War—Design and Development of Weapons by MM Postan, D Hay & JD Scott.

and development activity on its behalf. Contraction of the Army in twenties and its subsequent expansion in the thirties only aggravated this weakness. Army equipment ceased, by and large, to be manufactured by specialist firms, since it was becoming uneconomical. The tank, for example, proved to be distinctly unlike the products of any of the British heavy engineering firms with the lone exception of one firm engaged in the production of armament. At one stage, the motor industry appeared to be suited to tank development and production. It was later on found to be highly unsuited for either and the unsuitability increased as tanks grew bigger and heavier. This was possibly a time when peace-time military expenditure was regretted, if not frowned upon, and the technical officer within the army was despised, which was nothing unusual even in our own country more than a decade ago. Britain being on the winning side, probably did not realise at this stage that it will have to fight a major World War within two decades, not of its own choosing. From this state of unpreparedness in the early twenties, the Industry was geared up to successfully face an emergency forced upon a nation by outside aggression. The industrial organisation prevailing then is studied further.

GOVERNMENT AND INDUSTRY

It is not easy to pick out a simple pattern from the complicated relationship prevailing between the Government establishments, and Industry during the pre-war and war-years. Competition amongst themselves was almost the corner stone of policy in the design and production of arms. The most important Army establishment was the Armaments Design Department. The normal process for the Ordnance Board was to prepare a specification for a new weapon in considerable details, with the next step of sending this specification not only to the design department but also to a commercial firm for the production of a comparative design. Competition between such Government firms e.g., Woolwich and Enfield and private firms like Vickers and BSA was an established practice, fully approved by the Ordnance Board and the higher authorities throughout the pre-war and war-years. As a result of this were produced a number of successful Army and Naval guns like 4.5", 4.7", 5.5", the 25 pdr and so on, where one or the other party was the successful competitor. There were however certain spheres in which, one or the other had a monopoly. Private sector contributed towards the development of other non-lethal equipment also. The best example of this is the development of a high power light weight compression ignition marine engine. From the considerable number of engines and proposals examined, including designs put forward by several British firms and the Admiralty Engineering Laboratory, the committee finally selected a design by Ricardo & Co. Engineering Ltd.

Next, consider trade monopoly. Design and production of certain equipment, particularly used by the RAF, was the virtual monopoly of the private sector, where Government participation in a commercially profitable

field was viewed with disfavour. Even a proposal to include a certain amount of production work among the functions of the Royal Air Craft Establishments had to be dropped since the proposal appeared to trespass on the sphere of Industry. The Air Ministry refused to provide itself with Royal Air Craft Factories. Instead, the Ministry tried to the best of its ability to keep in being a group of established firms making air craft and engines. To quote Air Chief Marshall Sir Hugh Dowding in an article published on 8 April 43, in the Evening Standard;

"The derisory sums voted for the technical equipment of the RAF produced types of aircraft and engines which compare favourably with those of other nations———. One of the basic causes of this comparative efficiency was, in my opinion, the fact, that Government departments took no positive part in the design and production of air craft and engines".

A similar point of view was propagated by Lord Beaver Brook, in Air Ministry, who on 27 Jan 43 announced in a debate in the House of Lords, that "he based his entire exposition of the Air Craft Industry on the proposition that His Majesty's Government depended for quality of air craft on the firms producing them. Beginning with the design of the air craft, the responsibility of the firm prevails there." "In fact", he continued, "the aeroplane depends on the work of the firm".

Thus, relations varied greatly at different times and in different sectors. At their points of greatest contrast, they ran from direct competition to close collaboration. Where the industry had a long tradition of autonomy and success, or even autonomy alone—the Government establishments never found it easy to extend their influence on design. On the other hand, rivalry between Industry and Government could be friendly too. Outstanding examples of the same are the successful collaboration between Armaments Design Department and Vickers and also between the Central Metallurgical Laboratory and the Imperial Chemical Industries.[2] 'Tube Alloys' was a code name for nuclear energy for which the Imperial Chemical Industries placed at the disposal of the British Government the services of their specialists in this field.

FEAR OF MONOPOLY

The relationship elaborated above leads us to two distinct conclusions:

(a) Many private firms had a history of monopoly in the field of Defence Production. How far the individual firms tried to exploit this monopolistic situation to achieve individual and selfish gains cannot be stated with clarity or precision. But corporate profit motives were never allowed to eclipse national goals. To quote one such occasion of service in a super emergency, was the crisis in the spring of 1938, which followed Hitler's march into Vienna,

[2]Second World War—Churchill, Vol. IV, Chapter XX.

which led to the emergency air craft programme of 12,000 aircraft by April 1940, when sweeping away all financial impediments the Government decided to place as many orders as the Industry could undertake to fulfil by the spring of 1940. Why are we so obsessed by the real or imaginary fears of the trade acquiring a monopoly in any field? Are we less patriotic? In fact FN of Belgium and the Zbrojovka BRNO plant of Czechoslovakia had the World's MAUSER Military Rifle market to themselves to a great extent during the period 1924-38[3].

(b) Industry got associated with Defence Production from the stage of the drawing board which is very different from the practice followed in India. Even the way for issue of the official specification and for the submission of preliminary designs was paved by constant and informal collaboration between Government officials and private designers. Thus the Industry and the state were partners in the business of design and development, from the earliest stages. [4]In India, 'Development', by private sector is understood to mean the 'Initial Production' of the store and not development from design stage. It will be pertinent to ask whether our Engineering Industry to-day is, even less developed than was the British Engineering Industry in early twenties? Or do we hesitate to place reliance on their skill, ingenuity, and capacity to design even simple equipment? Or is the Indian Engineering Industry simply not interested in development work? We should at least make an effort to associate industry in development work under the guidance of Resident Technical Officers from the Armed Forces. The joint efforts will give our design services a wider base and the benefit of expertise hitherto unutilized.

RECENT TRENDS

Reliance on the private producer of armament as far as known has not reduced in any country so far. It is perhaps greater today. FN Belgium is the most prolific designer and producer of successful Small Arms in service and has probably the largest Small Arms plant in the Western World today. This organisation was founded in 1889 by a combine of Liege interests and Ludwig Loewe and Co of Berlin. The UK has adopted the 7.62 mm NATO FN automatic Rifle and is producing the same at BSA and also at one of the Royal Small Arms Factories[5]. Sterling submachine gun was developed, after World War II by the Sterling Engineering Co of Dagenham Essex. (This weapon was used extensively by the planters in Kenya during MAU MAU uprising). The USA is perhaps unique in the relatively large proportion of specialized products and services for defence, provided by its private sector.

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[3]Small Arms of the World by WHB Smith.
[4]Proceedings of Association of Indian Engineering Industries Workshop, Calcutta, November, 1975.
[5]Small Arms of the World by WHB Smith.

The defence sector of the US economy lies only partly within the realm of its public enterprise. Giant corporations like General Dynamics, Lock heed Mc Donnel Douglas, North American Rockwell and several others are the chief purveyors of arms for the Defence Forces. About two thirds of their output is ordered by the Pentagon.[6] In 1969, such orders totalled 39,000 million dollars. These firms specialise in the production of supersonic air-crafts, Missiles, radars, computers and electronic equipment.

CONCLUSION

Ideological considerations must not hold us back. Evidence is already forthcoming that we are on the way to giving up our one time narcissitic adherence to it. Even China has given up its ideological inhibitions.[7] In 1975, it approached USA and West Europe with a 200 million dollar deal for acquiring armament technology. With the aero-engine technology supplied by Rolls Royce, China may soon be able to mass produce Mach 2 fighter bombers. In any case, mass furore or ideology is no substitute to technology.

The critics of the private sector are never in short supply. But to fight a major war, we have to maintain sources which have the facilities and demonstrated know-how to produce specialized military equipment. These sources have to be developed during peace time. A system which has worked so well in so many countries and has stood the test of time particularly during the crisis racked years, should be given a fair trial in our country. We have a highly organised and expanding industrial base in diverse fields like engineering, explosives, electronics, metallurgical and textile industries which can help broaden the industrial base of defence production. Let us have a mixed and diverse pattern of private and Government ownership serving the needs of defence. I see no reason why should we not start planning right now for a military industrial complex coming up in the private sector as a part answer to the challenge of self-sufficiency.

[6]Soviet Military Review 1972, Vol. 10.
[7]Amrita Bazar Patrika—11 April, 1976.