

**Defence Academy
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**Chinese Procurement
and Capabilities**

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The basic tenet of Chinese procurement policy has been and still is to combine unwavering political will to achieve the nation's military goals with the necessary large defence budget to support these goals, and long-term planning is pursued and implemented in full.

On the other hand, the principal rule of Chinese procurement policy has been and still is clearly formulated – to purchase platforms and/or systems that China is currently incapable and/or unable to manufacture on its own. However, once the equipment is delivered, the next stage in the equipment development begins, namely the aerospace and defence industry workers take it apart (reverse engineer it) and enhance its quality. Although China can find top quality fighters, diesel submarines, destroyers and surface-to-air missiles in Russia, it is unable to find the necessary command, control, communications, computers, intelligence, surveillance and reconnaissance systems that it needs to make these systems more effective. The European Union is the right source for and supplier of such systems and the government of China will continue to pursue relentlessly its policy to obtain such systems from the European Union.

At the same time, the Chinese ability to manufacture weapons systems independently means that China has almost accomplished its mission and is very close to entering the league of the leading exporters of the developed world. The next stage, namely to be acknowledged as an exporter of weapons systems will underline the position of China as a country that is no longer in the developing world. Independent production means not only achieving self-sufficiency but also decreasing substantially the financial means allocated for purchases of export systems and their reallocation for the needs of domestic industry. In addition, self-reliance means that at times of crisis domestic industry is neither a 'prisoner' of foreign experts nor of foreign suppliers. China is striving to rely on its own strength for at least 70 per cent, and to spend on platforms and/or systems less than 30 per cent of the funds earmarked for these purposes. A good example of this policy is, for instance, continuation of purchase of highly effective long-range strike weapons systems such as the X-31/P anti-ship and anti-radar missiles from Russia.

Cost-effectiveness, whether associated with purchase and/or the local manufacture, is of utmost importance. The overall cost needs to be fairly inexpensive but the final product should be of high quality. The Chinese have achieved this well-defined balance in manufacture and export of missiles. The factor of cost-effectiveness is directly linked to the availability of a large pool of well-educated and highly-skilled workers. Furthermore, financial investment in scientific, technical and technological capabilities with a special focus on their qualitative edge is encouraged and supported by the Chinese government. Undoubtedly, availability of funds for these tasks is of crucial importance. An additional important factor has been and remains co-production of components and subassemblies for Western civil aircraft manufacturers. These activities on the one hand provide a remunerative workload to help sustain the industry, while on the other hand offer a wealth of information about modern production processes, organisation, quality control, international standards and management techniques. That is the Chinese way to leap over technologically.

Focus on Aerospace and Shipbuilding Industries

The Chinese government has been paying extra attention to both industries. As a result, performance of both, particularly with production efficiency and installation of new equipment has substantially improved in the last five to seven years. These capabilities, which take years or even decades to build, are now in many respects competitive with those of Western countries. Furthermore, the performance of these industries improved substantially as a result of the companies bidding for government, non-government and foreign contracts. In the not so distant past the Chinese companies used to receive government contracts without bidding for them. A new system based on merit and not on affiliation has enhanced companies' performance and, as a result, attracted highly-skilled workers. For instance, in July 2004, information emerged that Chinese shipbuilders had created a new submarine, the external architecture of which is identical to the Russian submarines exported to China. In spite of the identical features, the submarine is a pure Chinese product since China was granted no licences or technical documentation for this craft from Russia. In addition, the People's Liberation Army Air Force has recently increased its efforts to field airborne early-warning and control aircraft and build up a domestic airborne radar industry to produce electronically scanned array radars. The same applies for the unmanned aerial vehicles. A number of technical universities are actively involved in studying a variety of unmanned aerial vehicles. This is one of the areas where the synthesis of civil and military technologies coincide. There is a clear preference in financially supporting industries that are considered of vital importance to the country's national interests and very specific technologies that the country's military so urgently need.

Particular attention needs to be paid to the defence budget. For instance, in 2003 the Chinese annual defence budget was estimated at between \$US31 billion and \$US70 billion. This staggering amount reflects the wishes of the Chinese government to be treated seriously by the international community and particularly by the countries in the Asia-Pacific region. At the same time it also reflects the explicit wish of the government to procure for the military all the hardware they require. There is a clear understanding within the Chinese government and not only among officials of the Ministry of Defence that arms procurement and the country's defence industrial capabilities are closely linked and need to be sustained in the long run. Financial resources are available but the governments insist on their rational expenditure. As a result, government operates as an account that is well aware of overhead costs. There is, however, a clear lack of transparency related to the country's defence budget and overall military expenditure.

The relationships with Brazil for satellite technology and India for computer software are also worthy of attention. Both relationships are likely to contribute to the enhancement of overall military production in China.

Lessons to Learn by the Europeans

The total cost of production and procurement, including research and development costs has been excessive. For instance, if we make an analysis of the Eurofighter programme (from the beginning of the programme and up to the procurement stage) it can be stated that the programme has been very costly, the length of time has been excessive, the final product price turned out to be too expensive and the product itself comparable to similar products manufactured by other countries has been of less than top quality.

There is a clear lesson that Europe can learn from the Chinese, namely that systems should be fairly inexpensive in price, easily integrated with non-local platforms, robust and agile in performance. One area where both sides share a similar characteristic is that the European (Eurofighter and Mirage) and Chinese fighters (J-series and FC-1) are not yet competitive internationally and at least have not won an international tender in the last five years.

Do the Chinese Have Soviet Style Design Bureaux?

The Chinese aviation strategic industrial base went through a complete reorganisation in 1993, when all the manufacturing industries and the research institutes that were cumulatively responsible for the design, development and manufacturing of both fixed- and rotary-wing aircraft (military and civil types), engines and air-to-air missiles have been consolidated in a single entity, the Aviation Industry Corporation. In 1999, the corporation was split into two groups, Aviation Industry Corporation 1 and Aviation Industry Corporation 2. Both entities include research institutes and manufacturing plants for air-to-air missiles and engines. Aviation Industry Corporation 1 positions itself as the core of the Chinese combat aircraft design and manufacturing capabilities including licensed production. Aviation Industry Corporation 2 has been specialising in design and manufacture of helicopters, trainer and transport aircraft. Until recently many design institutes have resisted integration with manufacturing enterprises, however some design facilities have been absorbed by manufacturing enterprises. In addition, many manufacturing enterprises are establishing their own integral design institutes and test facilities and some research institutes are expanding into production.

What is the Relationship Between the Army (General Staff, Navy, Air Force etc.) and the Defence Industry?

It appears that the People's Liberation Army's preferred services are the People's Liberation Army Air Force and the People's Liberation Army Navy. For instance, while the reorganisation of ground forces units has been taking place at a rapid tempo over the past several years, their equipment modernisation has been occurring more slowly because of budget constraints. Although China has its own well-developed industrial base that is capable to manufacture weapons systems for the ground forces, the domestic arms industry has not enjoyed the same status and fund allocations as the aviation and shipbuilding industries. With a vast arsenal of outdated equipment, military chiefs are seeking to maximise the effectiveness of their limited funds by selectively procuring modest amounts of new advanced weapons while devoting substantial resources to upgrading existing equipment and investing heavily in the development of next-generation weapons that are compatible with its new concept of information technology-based warfare. On the other hand, the People's Liberation Army Air Force has been at the top of the People's Liberation Army's funding allocations for much of the past decade. Undoubtedly, the domestic aviation industry enjoyed extra funding allocated for development and production of the domestically-built aircraft such as the J-10 and FC-1, enhanced armed helicopters such as the Z-9 and Z-11, and a newly designed helicopter such as the Z-10. The People's Liberation Army Navy has been rapidly transforming itself from a coastal force into a blue water naval power. The pace and extent of the People's Liberation Army Navy's expansion efforts, which has gained significant momentum in the last several years, has attracted heightened attention

and concern in the US, Japan, Taiwan and other Asian littoral states. The shipbuilding industry together with the aviation industry enjoy the Chinese leadership's full attention and financial support.

Is there any Evidence that the Chinese are Favouring the Development of Weapons (eg. Missiles) Over Platforms (eg. Aircraft, Ships)?

There is no such evidence. As long as the economy of China continues to expand both weapons and platforms continue to be developed and enhanced simultaneously. It can be suggested that even a minor shift in preference will begin to occur if economic development declines slightly. This remains the task of the analysts, to observe closely the potential changes in the Chinese economic development.

What are the Chinese's main problems and Difficulties?

They are threefold:

1. Underdeveloped avionics. For instance, J-7s and J-8s with Chinese-built engines continue to rely on the Russian avionics.

The low state of airborne radar development. For the time being Russian-built systems such as Zhuk and Zhemchug are installed on the J-10s and J-11s.

The engine sector has always been and still is the single weakest element to hamper the progress of the Chinese aviation industry. There has, however, been progress, but the pace of the progress has been very slow.

2. Lack of advanced naval weapons systems such as

shipboard air-defence systems and anti-ship missiles;

advanced electronic warfare capabilities and

propulsion systems and subsystems.

3. Lack of aviation capability such as

airborne early-warning and control aircraft;

strategic warning and real-time surveillance and reconnaissance and

heavy-lift helicopters

An insufficient number of air-refuelling and transport aircraft (such as IL-78s and IL-76s) mostly obtained from Russia. The domestic manufacture of air-refuelling and transport aircraft (such as the H-6 and Y-5/7/8) has been and still is very small.

A limited number of domestically developed and manufactured unmanned aerial vehicles and unmanned combat aerial vehicles.

Want to Know More ...?

See:

Chinese Military Power. Report of an Independent Task Force Sponsored by the Council on Foreign Relations Maurice R. Greenberg Center for Geoeconomic Studies, 2003, see [China_TF.pdf](#)

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