

Aircraft Engine Corporation of China

The aero-engine industry, often used to gauge a country's manufacturing level, has been the "Achilles' tendon" of China's defense industry for decades. Indeed, China's current defense industry lacks the ability to develop or produce state-of-the-art military and civilian aero-engines. Insufficient research and development (R&D) funding and the China's current aircraft development system are the two primary constraints to China's aero-engine industry. Under the current development system, the development of a new type of aero-engine can only be initiated with the development of new aircraft. However, as the development cycle of aero-engines within China is longer than that of the aircraft, engine development always lags behind the development of aircraft. It is also heavily affected if R&D funding for aircraft development is blocked.

Many concerted attempts have been made to develop a Chinese domestic engine in the past, but it is only recently that the Chinese government has determined to concentrate investments to truly boost the domestic engine industry, thereby relieving the nation from its enduring pain in the "heart of airplane" and setting a new growth driver to offset downward economic pressure. A major step in this effort is the consolidation of aero-engine entities within the defense sector into a national engine corporation.

News about the establishment of a national engine corporation first appeared in October 2015. On October 14, 2015, AVIC Aviation Engine Corporation Plc., AVIC Aero-Engine Controls Co., Ltd., and Sichuan Chengfa Aero Science & Technology Co., Ltd.—all three listed companies affiliated with Aviation Industry Corp. of China (AVIC)—made announcements that restructuring and integration plans for AVIC aero-engine related enterprises and entities were being developed and that AVIC might be not be their de facto controller. According to <u>Shanghai Securities News</u>, a new corporation on the same level as AVIC would be established to represent the aero-engine sector.

More details about this corporation were reported by <u>Bloomberg</u> early in 2016. According to Bloomberg, China plans to merge more than 40 entities working on plane engines into a group holding 145 billion RMB (\$22 billion) in assets, as part of a broader push into advanced industries to propel its economy. Under the plan, the entities have combined assets of about 110 billion RMB, and the Chinese government and companies including AVIC will invest an additional 35 billion RMB.

The Aircraft Engine Corp. of China, the country's eleventh defense conglomerate, made its official debut on May 31, 2016, when it was incorporated in Beijing with a total registered capital of 50 billion RMB (\$7.62 billion). Unlike other state-owned enterprises with only one shareholder, the Aircraft Engine Corp.

Analysis by the Study of Innovation and Technology project team at the University of California Institute on Global Conflict and Cooperation. This material is based upon work supported by, or in part by, the US Army Research Laboratory and the U.S. Army Research Office under Award No. W911NF-15-1-0407. Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the US Army Research Office.

of China has four shareholders: The Commercial Aircraft Corporation of China Ltd., the Beijing Stateowned Assets Operation & Management Center, the State-owned Assets Supervision and the Administration Commission, and AVIC. Its leadership is split between senior AVIC and China Aerospace & Science Industry Corp. (CASIC) managers. Cao Jianguo, the former general manager of CASIC has been appointed as chairman, and AVIC deputy general manager Li Fangyong has been appointed general manager of the new conglomerate (see Figure 1).



Figure 1. Tentative Organization Structure of Aircraft Engine Corp. of China

It is unclear what the structure of this new conglomerate will be, since which entities will be incorporated has not been announced. However, the air power division in AVIC is widely believed to be a primary component of the new conglomerate. In addition, entities in basic engine manufacturing of CASIC and China Aerospace Science and Technology Corporation will also be merged. Figure 1 shows a tentative organization structure of the Aircraft Engine Corp. of China based on available information.

The establishment of Aircraft Engine Corp. of China shows China's resolve to support its domestic aircraft industry and overcome obstacles to create an indigenous aero-engine. Experts widely believe that a separated engine corporation is the best way to resolve issues within China's aircraft development system and guarantee efficient use of funding appropriated to engine development. The aero-engine is highly anticipated to help pioneer China's mid-and-long term development and technical innovation. Furthermore, the establishment of the eleventh conglomerate may indicate a new round of creation of functional monopolies in the defense sector.