

Review - China Airborne: The Test of China's Future

Written by Erik Lindell

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ERIK LINDELL, MAY 28 2014

China Airborne: The Test of China's Future

By: James Fallows

New York: Vintage (Random House), 2012

Can the Chinese Communist Party's (CCP) development model move up the value chain from low-end manufacturing to developing technologically complex "apex" industries such as aerospace? The CCP leadership, having designated aerospace as a "strategic industry" in their 12th five year plan (2011), obviously think so. However, journalist James Fallows, a national correspondent for *The Atlantic*, is less certain that the ambitious aviation plans of the CCP leadership will reach fruition anytime in the near future. Fallows is well qualified to explore China's intensifying efforts to get airborne as he lived in China for several years, beginning in 2006, and is currently an active small-plane pilot. Many of his observations draw upon this rich personal experience and the narrative is further bolstered by his interviews with some of the individuals who are currently involved in China's aviation development.

The central theme of Fallows' book is that the CCP will struggle to establish a world-class aviation sector that is capable of competing with Western aviation firms. Moreover, for reasons discussed below, Fallows suggests that the Chinese aviation enterprise is hindered, in considerable part, due to the limitations of the Chinese development model, a model which favors the political interests of central planners, the military, and party cadres. Fallows also provides a concise history of Chinese aviation efforts and describes the extensive technical assistance that Chinese aviation has received from Western firms. He weaves broader political issues, such as the state of the Chinese economy and human rights in China, into his aviation discussion as well.

The aviation component of aerospace, which Fallows concentrates upon, involves a remarkably complex set of discrete challenges, yet all of them must be mastered and coordinated in order to put a passenger on a Chinese-built aircraft, and then safely and efficiently transport them from Beijing to Xian, or Shanghai to New York. After all, aircraft design and construction require cutting edge technology in materials science, avionics, and jet engines, all of which the Chinese have yet to master. Equally critical to aviation success are world-class repair and maintenance facilities, fuel supply arrangements, and radar tracking. Then there is the service sector end, which involves fare and rate scheduling and customer service. After tying all these disparate pieces of the aviation puzzle together, exacting international certification standards have to be met before a Chinese passenger jet is allowed to fly into European or American airspace.

Currently the Chinese are building a large number of new airports, as they try to increase air service to all corners of the vast Middle Kingdom. The CCP recognizes that future economic development is contingent upon a great leap forward in connecting China's burgeoning megacities to one another. Fallows describes the inherently haphazard quality of this effort, though, with waste being the inevitable result. After all, every provincial party official wants a piece of the lucrative action that new airport investment brings to their fiefdoms. In one instance, local authorities in Zhuhai decided on their own initiative to build an extravagant, state-of-the-art airport with a runway longer than anything at Heathrow in London. Yet for most of the year, the facility is virtually empty. However, establishing an airport ranks as one of the more elementary steps in aviation development, while fielding an indigenously built aircraft that foreign carriers will buy is another matter entirely. One of their first attempts, the ARJ21 regional jet, is still not considered a serious competitor to Western aircraft in its class. Richard Aboulafia, an aviation expert quoted by

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Fallows, describes it as a “random collection of imported technologies and design features flying in loose formation” (p. 158). In early 2014, Chinese authorities announced that, due to continuing problems, the date for the ARJ21 to enter service would be delayed until 2015, putting it eight years behind schedule.

Because there is no tradition of civil aviation in China – unlike in the U.S., with its rich history of flying enthusiasts and amateur aircraft builders – the CCP has forged its development from on high in the crucible of central planning. This, in turn, prefigured an oversized role for the People's Liberation Army (PLA), given its powerful representation in governing circles. Initially, it was Mao in the 1950s who was responsible for widely dispersing aviation design facilities, creating unnecessary duplication and dis-economies of scale in the process. Today the PLA, which controls most Chinese airspace, poses a major impediment to civil aviation. Aircraft are required by the PLA to fly in narrowly prescribed corridors, wasting valuable fuel in the process. The PLA also often requires civilian aircraft to fly at lower altitudes, somewhere under 15,000 feet, which also results in excessive fuel guzzling (due to greater air resistance). Only recently, and with much resistance, has the PLA allowed a greater use of helicopters, a development propelled by the dismal rescue efforts associated with the Sichuan earthquake in 2008 in which many died while waiting for assistance.

Overall, Fallows book puts forward an important argument with regards to Chinese aviation efforts. The latter represent a bellwether, a proxy, for Chinese development in general. For if the Party leadership can accomplish their ambitious goals in this area, it will further reinforce the validity of the Chinese development model, both within China and abroad. Nevertheless, it is clear that Fallows remains cautiously skeptical about the possibility of success. For the “soft infrastructure,” as he calls it, the rule of law, openness of communication, and accountability required to get China airborne are currently missing in the Chinese development model. Without these critical ingredients, Fallows argues that Chinese efforts are unlikely to produce the innovation and technology necessary to compete effectively with Western competitors. Instead, a more rudimentary and less sophisticated Chinese aviation industry is likely to emerge. However, as Fallows highlights, one cannot attribute the current failings of the Chinese aviation industry to a lack of effort. The Aviation Industry Corporation of China (AVIC), the huge state-owned Chinese company, which produces both civilian and military aircraft, has several hundred subsidiaries involved in the full spectrum of aviation research, design, and manufacturing. Among its other activities, it has established commercial deals with Airbus, Boeing, and Sikorsky to subcontract production in China, and has purchased small Western aviation firms such as Cirrus.

AVIC's leverage with Western aerospace firms derives from the Chinese Government's role as gatekeeper to the growing aviation market in China. The rules of entry to it increasingly require co-production agreements with Chinese firms. Despite this leverage, Fallows argues it is unlikely that Chinese aviation will be capable of competing with Boeing or Airbus – and their long track records of quality and safety – anytime in the near future. Nevertheless, Chinese aviation will continue to improve incrementally, as Fallows, a Rand Corporation study, and analysts such as Mark Stokes conclude. CCP efforts to attract aviation production and assembly to China have paid off in recent years. Currently the Chinese are one of only two countries that produce the entire wing for the Airbus A320 and, as a result of this and other co-production agreements, the technology and systems management skills of the Chinese will advance accordingly.

As for Fallows' conclusions, they tend to fall within the mainstream consensus on Chinese aviation prospects with one significant exception. There is currently very little debate that China's aviation sector is modernizing and advancing technologically, as noted by both Fallows and the Rand report. In addition, there is also agreement that the CCP will continue to allocate considerable resources on indigenous innovation in this sector, enhancing the Chinese presence within the global aerospace industry in the process. But at the same time, Fallows, more so than other analysts, emphasizes the powerful political headwinds (including the role of the PLA) that will impede the march to an efficient, state-of-the-art aviation sector. Fallows' important contribution is to explain why this is the case. For without the rule of law, and the predictability and consistent standards that it establishes, he believes it is unlikely that China can create a world-class aviation complex. Adding to the problem, according to Fallows' account, is the disparity between the “grandiose national planning” of the Chinese Government with regard to aviation and the “corruption and small town parochialism that give policies such a different effect in the hinterland” (p. 40). The CCP's aviation effort, he suggests, reveals the inherent limitations of the Chinese development model.

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Fallows does neglect several major issues, however. There is little discussion of how China's growing civilian aviation capabilities will translate into greater military capabilities over time. The fact that China has also lost some competitive advantage in aerospace production to countries such as Mexico, due to rising labor costs, is also not addressed. Nor is there consideration of the impact of high-speed rail development in China, which is directed by a competing group of powerful state-run agencies, upon China's aviation push. Nevertheless, Fallows has produced an insightful analysis, not only of Chinese aviation, but of Chinese politics in general, and one which should be of interest to a broad audience including academics, business insiders, and the informed public. More so than many other analysts have done in the past, Fallows explains in detail the political and cultural reasons why China's aviation sector will struggle to compete.

About the author:

Erik Lindell has a PhD in International Relations and is a former academic. His areas of specialization include International Political Economy and U.S. Foreign Policy. Some of his recent articles have appeared in the *Georgetown Journal of International Affairs*, the *Fletcher Forum* (Tufts University), and *Global Politics* (U.K.)