

Xi's New State-Driven Innovation Strategy Could Be a Disaster for China



News Analysis

[China](#) is preparing to turn a nearly 40-year-old industrial development strategy on its head.

Since the early 1980s, Beijing's approach to technological and industrial progress was to import it, mainly by entering into joint ventures with foreign firms that provided high technology and startup. Eventually, the Chinese would reverse-engineer the technology and make—and export—their own competitive products or services.

Examples of such an industrial approach are numerous: Huawei, Haier, Alibaba, and COMAC (China's commercial aircraft company). Some of these ventures have been incredibly successful, transforming China into a leading subcontractor and even an original equipment manufacturer.

The success behind this strategy was an embrace of globalization and a generally hands-off policy on the part of the Chinese central government. Now, however, in line with Xi Jinping's "president of everything" style of governing, Beijing is about to nationalize and centralize the country's approach toward next-generation research and development (R&D).

According to a recent [article](#) in The Economist, Xi wants to build "an incubator state" in which the economy "relies heavily on government nourishment" to guide R&D. He wants the government, not private investors, to decide and dictate R&D priorities and funding.

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In particular, Xi and the Chinese Communist Party (CCP) are pressing the development of so-called "fourth industrial revolution" (4IR) technologies such as artificial intelligence (AI), robotics, cloud computing, and automation, as well as semiconductors and software.



The logo of the artificial intelligence (AI) startup SenseTime is seen at its office in Hong Kong, China, on Aug. 18, 2021. (Tyrone Siu/Reuters)

At the same time, Xi and the CCP are trying to shift high-tech R&D and manufacturing from the coastal cities to the interior, in keeping with Xi's larger campaign of "common prosperity"—redistributing national wealth from the richer east to the poorer hinterlands. He will do so by nurturing the creation of a "loyal cadre" of startup companies that will carry out the government's development policies.

The Economist rightly calls this strategy a "weighty bet" for China becoming the global center of [innovation](#) over the next decade. It is certainly an approach fraught with risk, especially given China's earlier, failed attempts at top-down, state-centric efforts at innovation and cutting-edge manufacturing.

China, for example, has continued to fall short in its efforts to design and fabricate high-end semiconductors, particularly microchips with process nodes of less than 5 nanometers (nm). In fact, there exists a huge gap between current Chinese chip technology and the global state of the art. In particular, China has found it hard to break the "[7-nm wall](#)," that is, being able to fabricate [chips](#) below that critical threshold.

In contrast, both Taiwan and South Korea already build chips as small as 5 nm or less.

In addition, China has had to import wafer fab technology and machinery, and it is so desperate for semiconductor foundry technology that [it even buys used equipment from Japan](#). Overall, most of China's indigenous chip-making technology is old and getting older, as the technological goalposts continue to outstrip Chinese capacities.

Even with imported technology, China can [barely supply](#) more than 15 percent of the semiconductors it needs for its high-tech infrastructure. In 2020, for example, the country imported over \$300 billion worth of semiconductors, more than it spent on imported oil. China aims to produce 70 percent of its own microchips by 2025, but it is unlikely to meet that target.

According to [a recent report](#) by the Institut Montaigne, China's inability to manufacture high-end chips "will make it difficult for China to truly dominate the digital revolution enabled by 5G infrastructure."

Commercial aerospace is another sector where China's state-heavy approach to investment and innovation has resulted in less-than-stellar outcomes. China's two largest civilian airliners, the ARJ21 and the C919, are years behind their development schedules, and both have

failed to obtain western airworthiness certification. Likely, neither will ever sell outside of China.



China's self-developed passenger jetliner Comac C919 is presented to the public in Shanghai, China, on Nov. 2, 2015. (VCG via Getty Images)

Xi's new top-down, state-driven approach to 4IR technology innovation may pay off in some instances. The Economist notes the apparently successful efforts of companies such as Baosight and Sangfor Technologies, which deliver high-tech solutions directly to the central government, as opposed to the "soft tech" of the consumer-internet sector such as TikTok or Tencent. These firms are either directly state-owned or closely linked to the CCP.

However, the more the state controls investments in 4IR R&D programs, and the more it directly picks "winners and losers," the more

chances there are for waste, abuse, and just plain bad decision-making.

In the first place, giving the CCP more control over the economy will suppress entrepreneurialism and foreign investment. Moreover, it will permit zealous party officials to regain power over economic decisions that had been previously decentralized and privatized.

Above all, CCP party hacks are probably not the best judges of where investments in next-generation innovation should go. In another article, *The Economist* [notes](#) that while tens of thousands of firms—all purportedly on the cutting-edge of 4IR technological development—have been stood up in recent years, “many are duds or frauds tolerated by officials keen to meet local development targets.”

In sum, the same article asserts that “a tech industry where the incentives are subsidies and fear, and which is separated from an increasingly globalized system of venture capital, is likely to fall behind the frontier of innovation.”

Compounding this problem is the fact that authoritarian governments, particularly ones run by increasingly personalistic dictatorships such as Xi’s, generally find it difficult to admit mistakes and change course. This tendency to double down on bad policy only further risks China’s dream of becoming the world’s center for 4IR technological innovation.

Views expressed in this article are the opinions of the author and do not necessarily reflect the views of The Epoch Times.



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