Technology Will Remain the Heart of U.S.-China Competition in 2024

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The year 2023 brought technological competition between the United States and China to its most intense level yet. Will 2024 bring more of the same? Probably. There is little indication that China’s views, goals, or actions will change much.

Start with China’s views. In September 2023, the head of China’s Ministry of State Security, Chen Yixin, published an article describing China’s strategic thinking on technology and national security. In it, Chen writes, “The most important competition is the increasingly fierce competition between great powers in cyberspace. . . . The most prominent [Chinese] shortcoming is that key and core technologies are controlled by others.”

In the context of Chen’s essay, “cyberspace” refers not only to cyberattacks and espionage but also to the broader industrial landscape of digital technology with all of its economic and national security implications. The “key and core technologies” are dozens of Chinese dependencies on critical foreign technologies identified by the Chinese government, seven of which directly relate to the semiconductor industry. The “others” Chen refers to are, of course, the United States and its allies, who in recent years have sought to restrict China’s access to certain advanced technologies through export controls, especially in semiconductors and artificial intelligence.

A straightforward interpretation of Chen’s remarks is that he views technology as the most important zone of U.S.-China competition. Given Chen’s position as the head of China’s most important intelligence organization and that his speech was drawing heavily from Chinese president Xi Jinping’s latest ideological treatise, it is reasonable to assume his speech reflects the broadly shared views of China’s most senior leaders.

That brings us to China’s goals. China’s most recent five-year economic plan stated China would “make technological self-sufficiency a strategic pillar of national development,” meaning it wants to free itself from foreign technological import dependencies. Many of Xi’s recent speeches have reiterated...
Gregory C. Allen

this goal, and the Chinese government is using both carrots and sticks to decouple Chinese firms from Western technology. It is easy to see why China would put technology atop its priority list. Technological advancement is among the most important inputs to the other major sources of national power, including economic and military power. In the comparison between the U.S. and Chinese economies, the simplest difference is that China has a population roughly four times larger, but the United States generates roughly six times the amount of economic output per person. The United States’ much higher economic productivity is largely due to its much higher level of technology across many more sectors of its economy. If China were to match the United States in technological sophistication, innovation, and widespread adoption, then China’s economic advantage over the United States might resemble its population advantage, meaning China’s economy would be four times larger than that of the United States.

In assessing Chinese strategic priorities, actions speak louder than words, and China’s actions provide considerable evidence that it views technological competition with the United States as its top priority. In the wake of China’s disastrous zero-Covid policy, property market crisis, and slowed economic growth, China’s local governments are facing a debt crisis so severe that some government agencies are unable to pay their employees’ salaries on time. Under such circumstances, China might have understandably cut back its investment in technological self-sufficiency. Instead, it did the opposite.

Despite the broad budget cuts elsewhere, Chinese government spending for the technology sector is skyrocketing, especially in the semiconductor sector, where U.S. export controls are most painful and threatening. In 2018, New York Times columnist Li Yuan described the first round of semiconductor export controls under U.S. president Donald Trump’s administration as China’s “Sputnik moment,” making a comparison to the Soviet Union’s 1957 satellite launch, which led the United States to establish the National Aeronautics and Space Administration (NASA) and dramatically increase spending on science and technology. Yuan’s comparison was apt. According to data collected by Chinese research firm JW Insights, China’s various local governments collectively spent nearly $65 billion in both 2021 and 2022 to support China’s semiconductor industry. If true, that amount would be more than two and a half times what the United States spends on NASA each year.

In 2023, China not only increased its already massive subsidies but also announced another $41 billion government-backed semiconductor investment fund. Amid China’s record youth unemployment, when many in China are calling for economic stimulus, Xi is advising China’s youth to “eat bitterness,” an idiom that means to suffer without complaining. Rapidly breaking free from dependence on foreign technology is evidently a much higher priority than reinvigorating economic growth or easing economic pain.

Of course, the future of the U.S.-China relationship depends upon the United States, not just China. However, U.S. officials largely agree with China about the importance of technology in the U.S.-China rivalry. In October 2022, U.S. secretary of state Antony Blinken gave a speech in which he said, “We are at an inflection point. The post-Cold War world has come to an end, and there is intense competition underway to shape what comes next. And at the heart of that competition is technology.” More recently, U.S. national security adviser Jake Sullivan’s essay in Foreign Affairs made similar points.

If the United States has the edge in its current technological level, China believes its own advantages may matter more. Xi often touts China’s “remarkable institutional superiority” and “administrative efficiency.” Recent Chinese failures, such as the zero-Covid policy, call such advantages into question, but they also highlight just how stubborn the Chinese leadership can be. In technology competition, China’s strategic focus, extraordinary funding, and stubbornness of policy direction is real and should not be underestimated. The Chinese government’s cheering of a new Huawei smartphone in mid-2023 also shows that it is now willing to openly defy U.S. law and export controls.
In terms of financial resources, the CHIPS for America fund, one of the largest U.S. industrial policy investments in recent memory, allocated more than $50 billion in semiconductor industry support, but that was spread over a five-year period.\(^7\) It is vastly less than China is spending each year for its own semiconductor industry. Even amid such incredible budgets, comparatively paltry sums needed for core elements of the overall strategy go ignored. As just one example, technology export controls are a key element of the strategy for the administration of U.S. president Joe Biden and a key source of Chinese anxiety. However, the budget for the U.S. Department of Commerce bureau charged with effectively designing, administering, and enforcing them has actually declined in inflation-adjusted terms.\(^8\) Thankfully, Commerce Secretary Gina Raimondo has recently started arguing for the need to rectify this policy incoherence.\(^9\)

In short, there is little to suggest the overall picture will change much in 2024, especially on the Chinese side. Tactics may change, perhaps with a new emphasis on import restrictions, but both the United States and China are likely to continue to desire every advantage in their deepening technological competition.\(^10\)

What might make a difference, though, is an improvement in the United States’ ability to align its many policy choices in pursuit of those desires, including choices that affect the government’s capacity to realistically execute its own policies. That will require policymakers to maintain focus not only on high-profile and politically charged issues but also on the comparatively banal steps needed to significantly improve U.S. government speed and capacity.\(^11\)

Having the right views and goals matters, but ensuring the U.S. government can effectively monitor and analyze key technology developments, as well as design and execute relevant policies, matters just as much.