

# Is China Catching Up to the United States in Innovation?

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One of the most important economic questions facing advanced nations is, how innovative is the Chinese economy? For those in the "China cannot innovate, they can only copy" camp, Europe, Japan, and the United States should stop worrying about issues such as intellectual property theft, forced technology transfer, and massive subsidies to Chinese technology companies because China is not an innovation challenger. For those in the "China is rapidly following the path nations such as Japan and South Korea took to become global innovation leaders" camp, advanced economies need to raise their game, including stepping up efforts to roll back Chinese innovation mercantilism.

Whether China's economy is innovative has critical implications: If China is only a copier, then the risk to advanced economies is limited. But if China is more like the "Asian tigers" that rapidly evolved from copiers to innovators, the threat is serious. As those nations became more innovative, they took market share from leading companies in Europe and the United States. There is no reason to believe China will not follow the same path—only with significantly greater impacts because the Chinese economy is massive, Chinese policies are more aggressively mercantilist, and it is much more difficult to get China to compete fairly.

A thorough examination and answer to the question of current and future Chinese innovation capabilities is beyond the scope of this report. However, by examining 36 indicators of China's scientific and technological progress vis-à-vis the United States a decade ago versus today, it is possible to get a sense of where China is making the most progress, and to what extent it is closing the innovation gap with the United States. This analysis finds that China has made progress

on all indicators, and in some areas it now leads the United States. In fact, in an average of all the indicators, China has cut the gap to the United States by a factor of 1.5 from the base year to the most recent year. (For example, had China been 80 percent behind the United States a decade or so ago, it would be just 50 percent behind in the most recent year.) In other words, in the span of about a decade, China has made dramatic progress in innovation relative to the United States.

This report briefly highlights Chinese government goals and policies to become a world innovation leader. It then reviews the claims skeptics make about China's ability to innovate—arguing that, for the most part, their definition of the term “innovation” is too narrow—and reviews arguments and evidence supporting the claim that China is successfully innovating. Finally, the report presents the 36 indicators.

Nations that put their mind to it can move from being copiers to innovators. China has put its mind and heart and soul to not just being an innovator, but to being, in the words of Chinese president Xi Jinping, “master of its own technologies.” When that is backed up with a powerful, unfair arsenal of state policies, it is extremely irresponsible to blithely ignore this challenge under the hopeful belief that China will fail. As the saying goes, it is better to be safe than sorry.