

FEATURE

Is China's innovation catching up to US?

Is China catching up to the United States in innovation? ITIF report holds that it is

<https://www.clustercollaboration.eu/news/china-catching-united-states-innovation-itif-report-holds-it>



The Information Technology and Innovation Foundation (ITIF) is a nonprofit and nonpartisan research and educational institute and think tank whose mission is to help policymakers around the world assess and promote policy solutions that can boost innovation, productivity and growth.

The ITIF's influence is tremendous as testifies its world leading ranking of think tank for science and technology policy, and its many publications.

The ITIF issued an interesting report on the 8th April focused on the United State-China rivalry.

Robert D. Atkinson and Caleb Foote, the two authors of this report, entitled "Is China Catching Up to the United States in Innovation? ", evaluated the progress of China regarding innovation compared to the US', and highlighted how Chinese government's goals and policies turned China from a copycat country to a world innovation leader.

To assess this shift, the report examines 36 indicators of China's scientific and technological progress vis à vis the US between a decade ago and today. These 36 indicators are divided into seven sections, seen as key markers of a country's health regarding innovation:

- *Innovation inputs (R&D, Venture Capital, etc...)*
- *University Performance (BA, Master and Doctoral degrees earned, etc...)*
- *Patents (number of patents filed internationally, etc...)*
- *Outputs (number of scientific articles & patents, etc...)*
- *Outcomes (entrepreneurial and Company performances, etc...)*
- *Trade and Industry (manufacturing, goods, services, etc...)*
- *Technology use (robot usage, broadband usage, etc...)*

If China has been considered for a long time as being uniquely an industrial copier country unable to innovate, figures show that China has succeeded to become a country of innovation.

After having reproduced the classical path of development taken by other Asian countries (transfer of foreign technologies, internal dissemination and assimilation of these technologies), the results highlight that in few years, China has been catching up the US in terms of innovation.

All of the 36 indicators have improved between 2006 and 2016, China bridging the gap by a factor of 1.5 between the first year and the last year. For some of these indicators, China even succeeded in extending its lead over the US.

If the US is still carrying the mantle of innovation leadership, the positive dynamic of China regarding innovation is urging the US to rebuild a robust national innovation and competitiveness strategy, according to the conclusions of the report.

Is China Catching Up to the United States in Innovation?

[Robert D. Atkinson](#) and [Caleb Foote](#)

<https://itif.org/publications/2019/04/08/china-catching-united-states-innovation>

April 8, 2019

[Read Report](#)

If China were only a copier, then the competitive threat to advanced economies would be limited.

But there is no reason to believe China won't follow the path of "Asian tigers" that rapidly evolved from copiers to innovators, which poses a serious threat.

Summary

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.



Employees work at a SMIC microchip plant in Beijing. The Chinese [government](#) is spending almost \$5 billion on a new fund to support the country's microchip industry. Photo: AFP