



DeepSeek's success challenges assumptions about Chinese tech companies – and the US-China competition



Wanning Sun and Marina Yue Zhang January 29 2025

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The release of the new DeepSeek-R1 artificial intelligence (AI) model has shocked the tech world.

Launched on January 20 with little fanfare, the Chinese Al model was reportedly developed at only a fraction of the cost of OpenAl's GPT-4o, and over a much shorter period of time. One Chinese commentator has called its release a 'Pearl Harbor attack' on the Al world.

Though the reference to an 'attack' may be a strong word, it alludes to the growing competition between the United States and China over dominance in the Al sphere, which the US had been leading thus far.

Indeed, people across China were celebrating a homegrown success story on Wednesday, as DeepSeek's Al app soared to the top of the Apple and Google stores in the US.

So, what does the emergence of DeepSeek's model say about US-China competition in this space?

Chinese government control

First, DeepSeek's success is undoubtedly sending a message to the Chinese government that excessive control kills innovation.

Until mid-2023, enthusiasm for innovation in China's tech companies had been stifled by increasingly restrictive regulations. The Chinese government had embarked on a sweeping crackdown of tech companies like Alibaba and others in order to prevent the spread of rampant entrepreneurial capitalism in China.

The launch of ChatGPT in 2023 promised to open up exciting new frontiers for the development of Al in the West. But it must have come as a rude shock to China's tech companies. The Chinese government changed tact and reassured them that it recognised the crucial role of the digital economy as a key driver of economic growth. It soon began to relax its tight grip over the sector.

But the elephant in the room is how DeepSeek – and China's Al companies in general – will deal with censorship.

As it stands, politically sensitive words and questions seem to be no-go areas for DeepSeek. When asked what happened on June 4 1989 in Tiananmen Square (the site of the government's crackdown on democracy protesters), the chatbot's answer was along the lines of, 'Sorry, that's beyond my current scope. Let's talk about something else.'

This raises the question: can a Chinese Al tool be truly competitive in the global tech race without a solution to the challenge of censorship?

US efforts to contain Chinese tech development

Meanwhile, the US has adopted a wide array of measures aiming at curbing China's Al development over the past few years. These included the Biden administration's attempts to restrict China's access to the advanced chips needed for Al, as well as the export of chip-making equipment and other technology to China.

The US has also blacklisted a large number of Chinese entities that it has identified as having both military and commercial technology.

The launch of DeepSeek raises questions over the effectiveness of these US attempts to 'de-risk' from China in relation to scientific and academic collaboration.

For one, DeepSeek was able to evade US restrictions on advanced chips by stockpiling downgraded chips made by Nvidia before the Biden administration moved to ban them.

Western observers have often portrayed China's Al initiatives as limited due to these US controls. However, these observers have somehow failed to take seriously the emergence of a new generation of Chinese entrepreneurs who prioritise foundational research and long-term technological advancement over quick profits.

DeepSeek is a good example of this approach. It has embraced open-source methods, pooling collective expertise and fostering collaborative innovation. This approach not only mitigates resource constraints, but also accelerates the development of cutting-edge technologies.

Another common assumption in the West is that Chinese companies are mere followers or imitators. DeepSeek's achievements likewise challenge this perception. As the company's chief executive, Liang Wenfeng, said to one Chinese media outlet:

Innovation such as ours happens all the time in the US. The Americans are surprised by us, mainly because we are a Chinese company, and we are entering their game as an innovator with original contribution, not as followers.

DeepSeek's success also calls into question the legislation supported by both the Biden and Trump administrations that aims to prevent Chinese graduate students from attending universities in the US.

The assumption behind what researchers call 'STEM talent de-coupling' is that the Chinese government may use some of these students to engage in knowledge and technology transfer when they return to China.

Liang, however, never studied outside China. And he recruited graduates and students from top Chinese universities to staff his research team. None studied overseas.

These developers belong to a generation of young, patriotic Chinese who harbour personal ambition, as well as a broader commitment to advancing China's position as a global innovation leader.

What does this mean for Australia?

In Australia, the initial reaction to DeepSeek's Al chatbot has been one of caution, even concern. Clare O'Neil, the former cyber security minister, said the government would examine more closely how the app works before providing guidance to Australians on potential data security concerns.

But DeepSeek may also be a reminder that Australia's scientific collaborations should be guided primarily by research excellence rather than geopolitical considerations. To stay competitive and reduce its reliance on

external technology providers, Australia needs to invest in its own Al research infrastructure and build its own talent pool.

A narrow focus on political alignments and a growing paranoia about partnering with Chinese researchers means that Australia risks missing out on the next wave of breakthrough technologies.

Professor Wanning Sun is Deputy Director at UTS:ACRI and a Professor of Media and Communication in the Faculty of Arts and Social Sciences at UTS.

Dr Marina Zhang is Associate Professor – Research at the Australia-China Relations Institute, University of Technology Sydney.