



## **China's push for technological dominance: a worry for the West**

In previous instalments, we discussed at length the unfolding trade war between the U.S. and China. This instalment in our series of geopolitical essays on China discusses how the global technological race between the United States and China ties into the trade conflict between the two countries and, more importantly, into a larger battle for global geopolitical dominance.

The December arrest of Huawei CFO Meng Wanzhou in Vancouver - followed by the detention of multiple Canadians in China, in what appeared to be a retaliatory move - garnered a lot of media attention. It also occurred on the same day Donald Trump and Xi Jinping announced a temporary truce to the trade war. Huawei had allegedly bypassed American sanctions on Iran, an accusation the U.S. similarly made against [Chinese tech giant ZTE](#) in April of last year. The U.S. banned ZTE from doing business with its American suppliers, a move that almost bankrupted ZTE. The issue was only resolved after direct talks between President Xi and President Trump.

Is there a link between the West's grievances against these companies and the trade war negotiations, or is the timing of the arrest of the Huawei CFO just a coincidence? And, regardless, why are the Americans so preoccupied with Huawei and ZTE?

In the midst of their highly mediatised trade war, the U.S. and China are also engaged in a fierce, yet less visible, technological race. The latter will likely have significant repercussions for businesses, trade, as well as national security in both countries for years to come. For the first time, thanks to the media scrutiny around the arrest of the Huawei executive, the public is increasingly aware of a less known feature of the battle for global dominance between the United States and China.

In 2015, the Chinese government announced [Made in China 2025 initiative](#), the objectives of which are to catch up to the West by challenging American technological dominance in several key industries.<sup>1</sup> Sensing the threat, the Americans are now starting to react. One can therefore interpret the nature of the current trade negotiations and the recent actions taken against Huawei and ZTE in that context. As the geopolitical scene has become a global chess

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1. The Made in China 2025 Initiative outlines the 10 industries it aims to focus on developing; information technology, numerical control tools and robotics, aerospace equipment, ocean engineering equipment and high-tech ships, railway equipment, energy saving and new energy vehicles, power equipment, new materials, medicine and medical devices and agricultural machinery.



board, it is reasonable to suspect that the Trump administration pretexted violations on freshly re-imposed sanctions on Iran to undermine China's technology agenda.

The most significant feature of this stage of the technological race is the development and deployment of the 5G telecommunication technology, which is the newest generation of mobile internet connectivity. Spearheaded by Japan, 3G (third generation) technology supported the wide adoption of the smartphone, while 4G technology, deployed by the U.S. in 2011, allowed streaming on mobile connections and faster connectivity, which led to the rise of companies such as Uber and Instagram. China and the U.S. thus both see the development of 5G technology as a way for their country to lead a new generation of mobile connectivity and thus gain business advantage.

While Huawei has surpassed Ericsson as the world's largest telecom infrastructure provider, it has come under fire in several U.S. government reports for being in breach of national security. The breakthrough in 5G technology will make cellphones powerful enough to connect with the Internet of Things, linking vital infrastructure into the same network, i.e. automated cars, natural resources infrastructure, health care devices, etc. The companies of the country which will win this race will likely benefit disproportionately from opportunities to sell their own technology (China 2025) and eventually to deploy it globally for asymmetric commercial gain and geopolitical dominance (One Belt One Road).

The U.S. has therefore briefed allied countries such as Japan, Germany, France and Italy, on the national security dangers pertaining to acquiring Huawei's hardware in building their own 5G networks. The U.S. has thus exposed the increased threat of spying, intellectual property theft, illegal data acquisition, and cyberattacks by the Chinese government if the Huawei technology is adopted in the West. The Americans may have a conflict of interest in pointing out these dangers as they are currently in the race to develop their own 5G technology that would give them commercial advantages and allow them to maintain their global geopolitical situation. Although Huawei denies it, the fear is that the company could act as an agent of the Chinese government and could be used as an instrument of the State.

In August, Australia announced a ban on Huawei technology for its 5G infrastructures – it had already been banned from Australia's National Broadband Network in 2012. New Zealand announced in November that it would follow Australia's lead. Australia, New Zealand and the U.S. are all part of the Five Eyes alliance which cooperate on questions of national security, namely cybersecurity and cyberespionage. This leaves Canada and Britain as the only two members still doing business with Huawei in regards to 5G technology. The Chinese company is already [present in Canada](#) and the government has yet to make a definitive decision regarding the use of Huawei's technology in the deployment of their 5G networks.



It is difficult to know exactly how much Huawei is hurting from America's protectionist tactics since the company is private, however some of [Huawei's suppliers](#) in Asia have started to take a hit: -5% for lens-maker Sunny Optical and -8% for optical-component manufacturer Accelink Technologies. Large corporations, such as Qualcomm, also derive a significant share of their revenues from sales to Chinese companies like Huawei. Huawei's top executives are claiming that [the only harm done will be to consumers](#) who will pay a higher price for their products.

While the importance of Huawei for the Chinese economy must not be understated, this current crisis goes far beyond the company. As already mentioned, for China, [winning the race](#) over 5G technology would most likely provide a major competitive edge. This competitive edge would be achieved by giving Chinese companies a head start on developing products adapted to the new technology, just as Silicon Valley companies had with 4G a few years ago.

While massive state funding for research and infrastructure helps to push China's tech development, the remarkable willingness of the Chinese to embrace new technologies and to support the global deployment of a Chinese-based technological platform is also playing an important role. There is a sense of national pride in China related to the fact that the country may become the world leader in such a strategic sector. Moreover, personalities like Jack Ma, founder of Alibaba (nicknamed Ma Baba - Daddy Ma - and seen as a great paternal figure of Chinese innovation) are often cited as role models, helping to put the country at the forefront of global changes. Finally, over one billion Chinese citizens are now connected to the Internet and use it more frequently than users in the West, making the amount of data collected by Chinese companies a very effective tool in accelerating the development of artificial intelligence and deep learning technologies.

At the same time, China is being fiercely criticized in the West for its industrial and commercial practices. In order to catch up to the West, as we discussed in [earlier instalments](#) of this series, it has adopted what many would consider "unfair trade practices", such as copyright infringement, technology theft and forced technology transfers. The term ["Copy to China"](#), which describes the practice of copying successful ideas or technologies from the West and bringing them to the Chinese market, has proved immensely profitable for some Chinese companies.

A great example is the car sharing app Didi, the "Uber of China". The company imported the concept to China with little benefits for its original developers. Uber China, acknowledging defeat, was eventually bought by Didi, practically leaving the Chinese company with a monopoly over Chinese streets. Baidu and WeChat, the "Google and Facebook of China", for their part, have taken advantage of the Chinese bans on Google and Facebook to copy their model and become immensely successful companies.

However, these companies have since independently developed their own original technology and services. [WeChat](#), for instance, has the features that include, apart from classic instant messaging, hailing a Didi car, shopping for food



or clothes, making reservations for hotels, trains and planes, providing news as well as the ability to be linked to your bank account in order to easily make payments online. Despite not being well known in other parts of the world, this seven year old app has more than one billion active monthly users and has become an indispensable tool for many Chinese.

A new trend has therefore stemmed from the successes of these Chinese companies: “Copy to China” practices are now hoping to gradually evolve towards “Copy from China”. For instance, WeChat’s payment feature is a genuine homegrown innovation that other countries have yet to adopt. These innovations are part of a real technological revolution that has brought China to the brink of a [cashless society](#), especially now that business giants [Alibaba and Tencent](#) both offer digital payment platforms, both integrated into the WeChat app.

Even though this payment revolution still poses serious concerns for [marginalized groups](#), any traveller to China will witness how this major technological shift is already well integrated in the country. Such a traveller may wonder when such technologies will spread to the markets in the West and whether it is a Chinese tech giant that will take over these markets.

Even though it is likely that for the time being China will likely keep on “borrowing” technologies from the West, the increase in the number of homegrown Chinese innovations to eventually export outside of China ties perfectly into the Chinese government’s “Made in China 2025” initiative. The policy is precisely what has led to the development of a proprietary [5G technology](#) as the first step: producing and selling Chinese made cutting-edge communication technology (Made in China 2025).

The further step is the global deployment of its communication infrastructure, through its comprehensive One Belt One Road Initiative, a long term strategic policy whose ultimate deployment should support for many years the adoption abroad of home-grown technological innovations. This being said, China is already trying to secure global markets by creating technological and economic dependencies in some African and Asian countries.

Recognising this scheme and perceiving it as a serious threat, the American government is now vigorously denouncing China’s “unfair trade practices”. The ultimate target however is the “Made in China 2025” initiative and ultimately “One Belt One Road”. Americans want to obtain concessions on both. Beyond Donald Trump, who appears to mistakenly remain focused on the size of the American bilateral trade deficit with China, the current trade negotiations are placing these initiatives at the center of their grievances. Because both are deemed instrumental to China’s economic development and geopolitical dominance, even if we get some short-term compromise, the current trade negotiations between the two countries risks dragging for years.

Some views in the [Western media](#), expressing how the Chinese policy is a failure and how China should instead remain open to foreign competition, illustrates how some Western media outlet can also be pushing a biased political



agenda. However, most Western media is now starting to understand that the current trade negotiations are not mainly about further opening markets to foreign competition but rather about the deployment of a global Chinese infrastructure, the next telecommunication technology being only one aspect of it. Underpinning this conflict is a battle for a significant share of international trade in the near future and global dominance down the road. In other words, losing the technology battle may well signify losing the trade war and the position as the global hegemon. The current trade war can thus be interpreted in a context of a current technological clash occurring between the U.S. and China which will eventually feed into broader geopolitical confrontations.

Even though Chinese tech giants like Alibaba, Baidu and Tencent don't yet compare to Google, Amazon and other powerful American businesses, China's size, its global initiatives ("Made in China 2015" and "One Belt One Road") and its growing geopolitical footprint are intimidating enough to spark a conflict with the West. In hindsight, this conflict was bound to occur, and its eventual resolution will likely not be done the way many in the West would like it to be; going forward, it is unlikely to remain business as usual for the West.

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