



China's Huawei Is Down, but Not Out

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Today, there is a growing recognition that the U.S. has entered a new era of great power competition, primarily with China. Central to this competition is the race to achieve superiority in a range of technological areas, prominent among them developing fifth-generation wireless networks (5G). 5G has the potential to increase network processing speeds by as much as 100 times beyond currently deployed 4G configurations and will enable a multitude of technological advancements in the years ahead – including in artificial intelligence, virtual reality, telemedicine, autonomous vehicles, and the Internet of Things, among many others. It is also a domain in which China is leveraging its “national champion” technology giant, Huawei, to achieve technological dominance.

Concerns over Huawei have proliferated in recent years, and for good reason. Huawei isn't simply a technology firm; it is an arm of the Chinese Communist Party (CCP). Huawei's founder and CEO, Ren Zhengfei, is a former People's Liberation Army engineer and, by the company's own admission, is a current member of the CCP. Although Ren owns only 1% of Huawei's shares, he retains vast power and authority over the company's board and decision-making. The other 99% of Huawei's shares are owned by a government-sanctioned trade union. Huawei is also heavily subsidized by the Chinese government and is supported by Chinese state banks that issue low-interest loans on the company's behalf to other nations to use its equipment.

Over time, these ominous linkages led the U.S., under the Trump administration, to place the company on the Commerce Department's Entity List, and restrict its access to advanced semiconductors. The U.S. has also tried to convince allies and partners to block Huawei equipment from their 5G networks and to instead use 5G equipment from trusted vendors such as Nokia, Ericsson, and Samsung.

This campaign is beginning to have an impact. In the wake of U.S. prohibitions, last fall barring global chipmakers that use U.S. technology from supplying Huawei, the company's fourth-quarter revenue suffered a year-over-year (YOY) decline of 11.2% - a first for the telecom giant. Huawei also suffered YOY revenue losses in every region outside of China in 2020, in part because U.S. export restrictions prohibit the company's consumer devices from using Google Mobile Services. Huawei's smartphone business also suffered, and its market share of telecom equipment outside China dropped two percentage points, to 20%, placing it behind Western competitors Ericsson and Nokia.

Huawei has also faced political headwinds, as more and more countries have imposed restrictions on “high risk vendors” in their 5G networks – or simply banned Huawei outright. In 2020, following the Chinese government's efforts to conceal information about the COVID-19 pandemic, its assault on Hong Kong's political autonomy, and its increasingly aggressive diplomatic and military actions, American allies and partners began to sour on cooperation with Huawei. The U.K. and Sweden both decided to ban Huawei from their 5G networks, and France took action to phase out the company's 5G equipment last year. Moreover, by the end of the Trump administration, 53 countries and 180 telecom providers had signed on to the U.S. Clean Network initiative, pledging to only use 5G equipment from trusted vendors. And currently, over 60% of the global telecom market has imposed restrictions or is contemplating restrictions on Huawei equipment.

Yet, a number of pressing problems remain. Some U.S. allies and partners – including Saudi Arabia, the UAE, Bahrain, and South Korea – still allow Huawei equipment to be used in their 5G networks. This reality has important strategic implications. In the case of Bahrain, where the U.S. Navy's 5th Fleet is based, and South Korea, where nearly 28,500 U.S. troops are deployed, the use of Huawei equipment could jeopardize U.S. military operations. If a military crisis were to arise, the U.S. would need to swiftly deploy forces and equipment into the affected theater, a process known as joint mobilization. During this process, certain logistical functions would depend on unclassified networks, potentially allowing China's government to exploit Huawei equipment to undermine U.S. efforts.

Second, Huawei has gained a notable advantage in the developing world. In South America and Southeast Asia, Huawei has a telecom equipment market share of 34% and 40%, respectively, making it the top telecom equipment vendor in both regions. A number of Central Asian nations, including Kazakhstan, Tajikistan, Uzbekistan, and Azerbaijan, are also using Huawei equipment for their respective 5G networks. Huawei has also developed around 70% of Africa's 4G base stations, which will give the company an edge as the continent transitions to 5G. These lash-ups create vulnerabilities that could well impact U.S. intelligence sharing and security cooperation.

Huawei's advances, despite American pressure, highlight an important reality. The U.S. needs to provide nations, particularly in the developing world, with economic and reliable alternatives to Chinese technology. Developing countries often use Huawei because its equipment is cheaper than that of its competitors, something made possible by massive subsidies from the Chinese government. But these same dealings have allowed China's technology strategy to advance despite legitimate concerns about the consequences.

Changing the equation requires the U.S. to ramp up financial assistance to developing countries to incentivize them to use 5G equipment from trusted vendors such as Nokia, Ericsson and Samsung. The U.S. should also continue to promote the development and use of open radio access networks (Open RAN), which combine vendor-neutral hardware with interoperable software. Open RAN has the potential to provide telecom operators with greater choice, allow for new entrants into the 5G market, and reduce “vendor lock-in” due to its interoperability. Notably, this is an area in which U.S. companies already have an advantage. A number of U.S. companies (including Altostar, Mavenir, Parallel Wireless, Verizon, AT&T, among others) are heavily involved in developing and incorporating Open RAN solutions.

Additionally, the U.S. must take more of a leadership role in setting global 5G standards. China has prioritized standards setting and made notable gains in bodies such as the Third Generation Partnership Project and International Telecommunications Union. Ceding ground on this issue to China will inhibit the ability of the U.S. to both counter Huawei and compete with Beijing for technological leadership.

The results are clear. To date, U.S. export controls, as well as restrictions imposed by a growing number of countries, have begun to constrict Huawei’s global presence – and through it, China’s strategy for global technological dominance. But much more needs to be done. The U.S. needs a strategy to convince additional allies and developing countries still using Huawei equipment that doing so is hazardous to their national security and political integrity. Such an approach begins by being able to offer serious alternatives that can compete with, or at least offset, Huawei equipment.