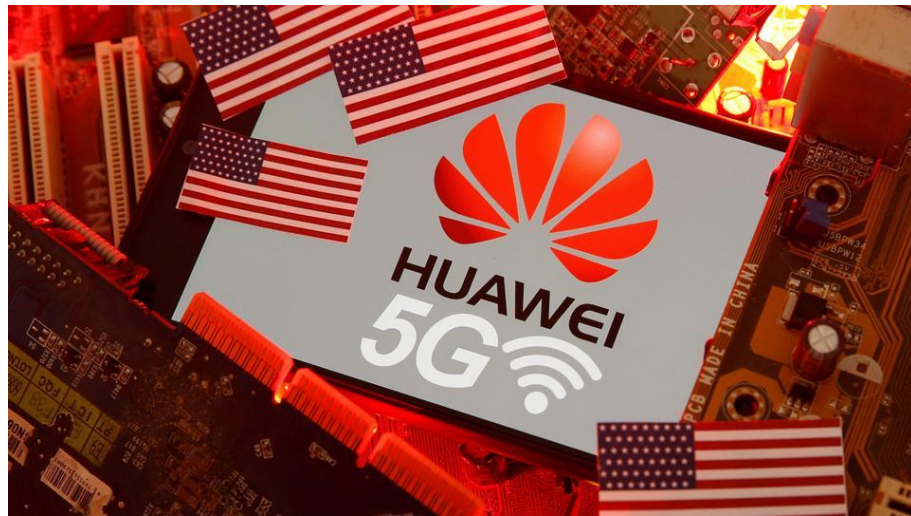




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The Huawei and 5G Issue: Crisis in US-Chinese Relations



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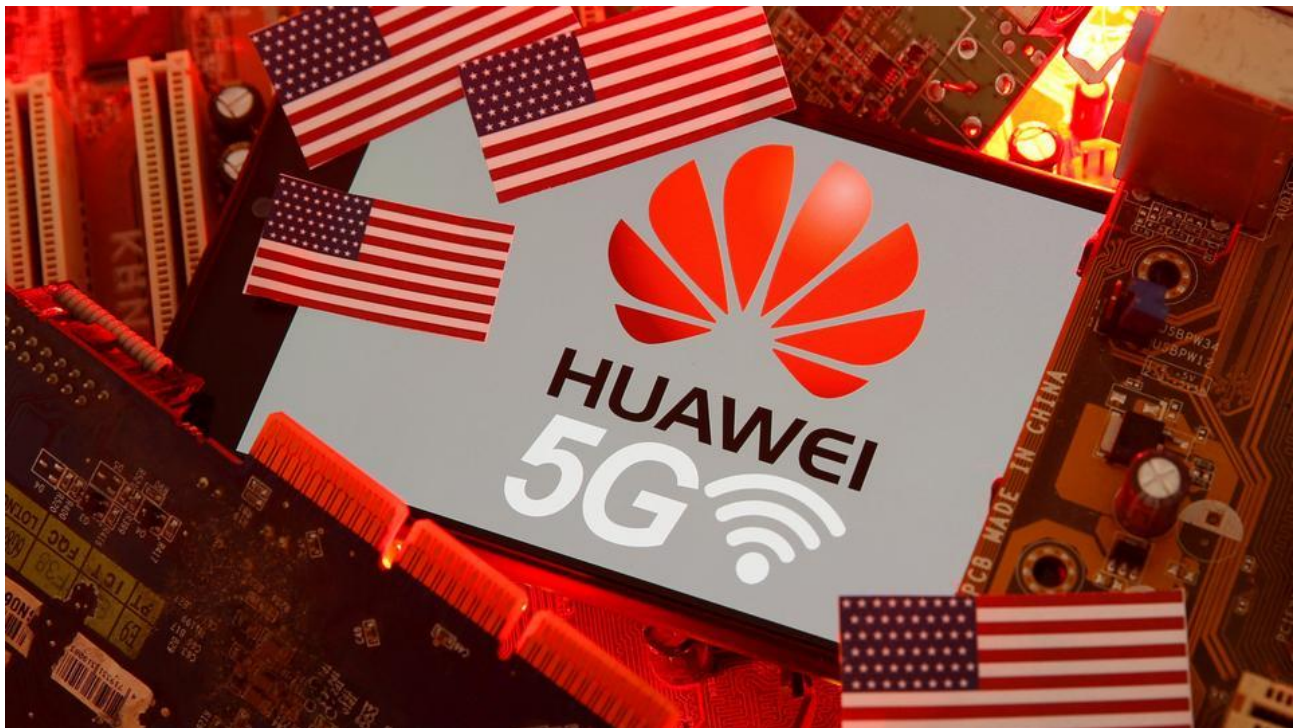
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Introduction: 5G and its Proposed Impacts on Society

5G is the next generation of telecommunication networks and promises higher speeds with lower latency. This network will provide a drastic change in Internet connectivity and allows for improved digital performances for technology for manufacturing, videoconferencing, and transportation. This new technology can also provide advantages to rural communities or developing countries in improving their information sharing and data processing abilities. The application for a new telecommunications network requires a large-scale installation of new technologies into existing infrastructure to maintain the same level of coverage. Although there are some companies who have the resources to implement 5G technology in some parts of the United



States, there is a need for high quality, affordable products that can be implemented nationwide and internationally.

U.S. flag and Huawei logo with 5G ¹

Huawei

The Chinese telecommunications company, Huawei, is the dominant in the field of technology. Huawei is currently the most affordable option for installing high quality 5G telecommunication technology and can offer low prices due to generous subsidies from the Chinese

¹ TRTWorld, US companies allowed to work with Huawei on 5G networks. TRT World, June 16, 2020. <https://www.trtworld.com/business/us-companies-allowed-to-work-with-huawei-on-5g-networks-37312>.

Communist Party. Given this close relationship, the United States is wary of the potential influence the Chinese government can have over the implementation of 5G networks. In an increasingly digital global environment, conflicts between states can be dealt through cyberspace with malware instead of the physical battleground and weaponry seen in previous wars. The United States is falling behind in having qualified professionals in cybersecurity and with cyberspace emerging as the new domain for inter-state conflicts, there is a need to maintain a secure cyberspace to allow the country to function as normal.

Emergence of Huawei as a National Security Threat

In 2017, China imposed a National Intelligence Law in which Article 7 stated all organizations or individuals must support or assist the Chinese government in its intelligence operations. The United States government has expressed concern over the cybersecurity risk of Huawei installing backdoors in its networking to abide by this law and provide the Chinese government with surveillance technology. In the years leading up to this law, Huawei has also been accused of stealing intellectual property from U.S. companies such as Cisco, T-Mobile, and CNEX Labs. The U.S. Intelligence Committee investigated Huawei's potential national security threat and concluded that due to Huawei's inability to fully answer questions related to its affiliation with the Communist Party and China's People's Liberation Army, as well as questions regarding its operations in sanctioned countries such as Iran, Huawei is unable to abide by international guidelines and should be seen as a security threat.²

The possibility of a future with one company that operates under a foreign adversary's government and dominates the global market for a new generation of telecommunications technology is worrisome and has implications for international security. With increasing attacks in cyberspace, nations must prevent cyber espionage that may extract intellectual property from businesses or infiltrate networks containing the nation's classified information. There is also an increased risk of cyber-attacks against a nation's critical infrastructure. An attack on the energy sector, healthcare facilities, transportation, or communication systems can be just as detrimental to the security of the state as the use of traditional weaponry can be.

² "Investigative Report on the U.S. National Security Issues Posed by Chinese Telecommunications Companies Huawei and ZTE." *U.S. House of Representatives*, October 8, 2012. Permanent Select Committee on Intelligence. [https://republicans-intelligence.house.gov/sites/intelligence.house.gov/files/documents/huawei-zte%20investigative%20report%20\(final\).pdf](https://republicans-intelligence.house.gov/sites/intelligence.house.gov/files/documents/huawei-zte%20investigative%20report%20(final).pdf).



U.S. National Security Advisor Robert O'Brien warns the UK about Huawei.³

Implications of U.S. Opposition of Huawei 5G

The U.S. has pressured its allies to ban Huawei and its 5G networks and announced that essential intelligence sharing with its allies may be disrupted if they do not comply. Allies such as Australia and the UK heeded the United States' warning and decided to ban Huawei, with the UK agreeing to phase out all Huawei technology from its networks by 2027. Britain also announced that it will phase out Huawei equipment from its 4G networks by 2021 and will not utilize Huawei's 5G cores.⁴ Since the 5G network will be essential for national infrastructure as well as other infrastructure that rely on a secure and transparent network, these bans are due to national security concerns and to ensure information sharing between the allies will continue. Although international security issues have been addressed, banning Huawei will result in financial implications on the telecommunications sector.

Huawei currently offers products with superior quality and affordability due to its government subsidies. Due to 5G's limited coverage, network providers will not only need to upgrade their existing cell towers with 5G hardware, but they will also be required to build additional cell towers to ensure coverage. Companies do have the option of switching to a competing vendor, such as Nokia or Ericsson, but competing hardware will not be compatible with the current 4G system in

³ Inc., Reuters. "U.S. National Security Adviser Warns UK about Allowing Huawei in 5G: FT: Cape Breton Post." World | News | Cape Breton Post, December 24, 2019. <https://www.capebretonpost.com/news/world/us-national-security-adviser-warns-uk-about-allowing-huawei-in-5g-ft-391610/>.

⁴ McCaskill, Steve. "Huawei 5G Ban Could Be Brought Forward, Say MPs." TechRadar. TechRadar pro, October 8, 2020. <https://www.techradar.com/news/huawei-5g-ban-could-be-brought-forward-say-mps>.

place. Network providers will have to bear the costly consequences of switching vendors which can prove difficult for smaller vendors operating in rural communities. This resulted in the Trump administration approving a \$1 billion fund to help small telecommunications group to phase out Chinese technology.⁵

Although many western countries have recognized the United States' authority on this matter, many countries, like India, cannot follow the lead by western countries since Huawei can contribute to its national infrastructure development. To stay connected and remain competitive in an increasingly digital world, a nation must have modern, high quality telecommunications. Banning Huawei also has consequences for companies within the countries that cannot rely on government support. While India has also banned Chinese software and blocked Huawei's 5G trials from continuing in its country after the border dispute and rising anti-Chinese sentiments in the country, the country is in need of an affordable and reliable network in order to remain competitive and emerge as an economic power. Bharti Airtel and Vodafone Idea, two of India's largest telecom companies, are customers of Huawei and are currently in debt to the government after taking out adjusted gross revenue (AGR) with the Indian government. The two companies have asked for 15 years to clear the loans. Shifting to another telecommunications network vendor may prove financially improbable for the two technology companies. The only company that can provide a solution is Jio Platforms, which has created its own 5G network.⁶ While India may have a solution to the ban on Huawei, other countries without the financial or technological resources may not be able to turn to another vendor that can beat the affordability and quality Huawei offers. Many countries in Southeast Asia, such as Malaysia and Singapore, are also unwilling to get involved in the geopolitical affairs between the U.S. and China and declare technological development is the nation's first concern.⁷

⁵ Miller, Maggie. "Trump Signs Law Banning Use of Federal Funds to Purchase Huawei Equipment." The Hill. The Hill, March 12, 2020. <https://thehill.com/policy/cybersecurity/487266-trump-signs-into-law-bill-banning-use-of-federal-funds-to-purchase>.

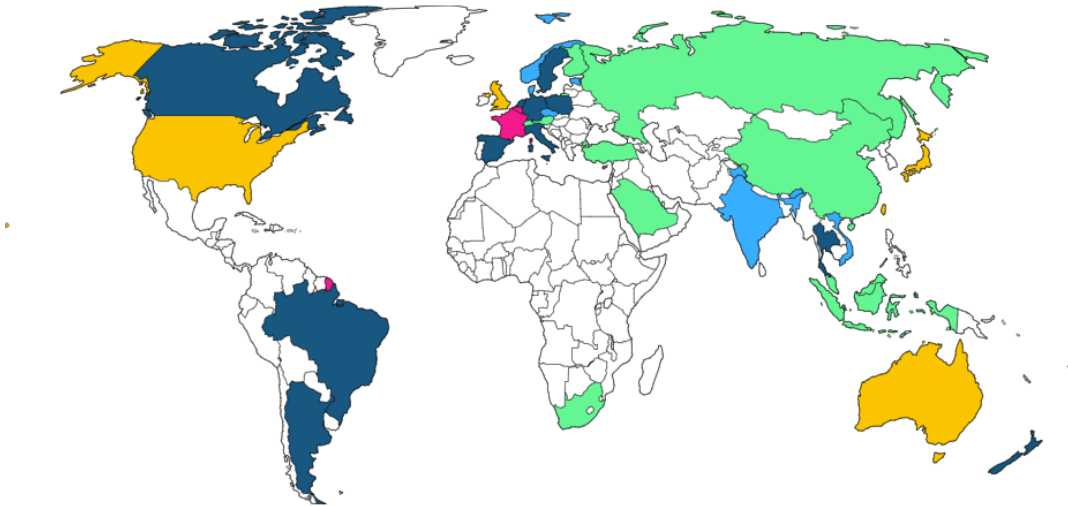
⁶ Sharma, Niharika. "Banning Huawei Won't Be a Viable Choice for India despite National Security Interests." Quartz India. Quartz, August 26, 2020. <https://qz.com/india/1895866/india-banning-huawei-will-hurt-airtel-vodafone-idea-help-jio/>.

⁷ News, Kyodo. "U.S. Ban on Huawei Being Largely Ignored in S.E. Asia." Kyodo News+. KYODO NEWS+, August 16, 2019. <https://english.kyodonews.net/news/2019/08/840ce682b432-focus-us-ban-on-huawei-being-largely-ignored-in-se-asia.html>.

The Huawei Barometer

Policy on use of equipment from China's Huawei in 5G mobile networks

■ Allowed ■ On the fence ■ Unlikely to use ■ Restrictions ■ Ban in effect



Note: As of Sept. 4, 2020

Huawei Barometer showing each country's views on Huawei from the Bloomberg website.⁸

Conclusion

Countries have already begun distancing themselves from the tech giant, Huawei, to protect their national security interests and prevent cyber espionage from the Chinese government. While some countries have the financial means to move away from Huawei technology, it is difficult to find another vendor that is as affordable and reliable as Huawei. Smaller companies may be left behind if they are not able to afford the switch and construction costs of additional technological infrastructure to accommodate for the compatibility of a new 5G network with their 4G systems. The United States has urged its allies to prevent Huawei technology from dominating their networks in fear of surveillance, but while countries such as Australia or the UK have agreed to turn away from Huawei, many countries, especially developing countries, do not have the resources to change to another vendor. The key is to find a balance between protecting a country's national security and developing a country's existing infrastructure to ensure competitiveness in a digital environment.

⁸ Seal, Thomas. "Huawei Barometer Shows Political Pressure on 5G Rollout: Map." Bloomberg.com. Bloomberg, September 4, 2020. <https://www.bloomberg.com/news/articles/2020-09-04/-huawei-barometer-shows-political-pressure-on-5g-rollout-map>.

