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Threatening National Security or Bridging the Digital Divide? —A Case Study of Huawei’s Expansion in Brazil¹

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Abstract

China’s digital footprint has been expanding rapidly in Latin America in the last two decades. Neither the U.S.-China tech war nor the U.S.-led global campaign aimed at Chinese tech firms seemed to be able to reverse the trend. Much of the policy discussion in the western media surrounding China’s digital expansion focuses on the supply side, emphasizing the potential risks of adopting Chinese technologies. Yet there remains scant research on the demand side—namely, how policymakers in developing countries perceive Chinese tech firms and how they maneuver amid the intensifying rivalry between the U.S. and China. Why did Chinese tech firms become key telecommunication equipment providers for Latin America despite geopolitical headwinds? To shed light on the issue, my research examines local stakeholders’ perceptions of Chinese tech firms and their choices between development and national security. Employing a case study of Huawei’s expansion in Brazil, I argue that the lack of political consensus on banning Huawei, the prohibitive costs of replacing Huawei, Brazil’s priority of development over security concerns, and China’s vaccine diplomacy enabled the Chinese tech giant to gain a firm foothold in Brazil. Instead of perceiving Chinese technologies as a security threat, major Brazilian regulators and internet service providers consider Huawei as an opportunity for them to bridge the digital divide.

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Introduction

The scale and speed of China's technological advancements in recent years have raised concerns in Washington over the implications for America's dominance in technology and its overall competitiveness. One conspicuous example is the stunning rise of China's Huawei Technologies Co.. In just over three decades, Huawei has grown from a small electronics reseller in 1987 into the world's top provider of telecom equipment with over \$92 billion in revenue and 207,000 global employees in 2022.² It has leading positions in smartphones, chip design, telecom equipment, 5G technology, artificial intelligence, smart cities, and cloud computing. Its global operations span from Asia and Europe to Africa and Latin America.

As China's Digital Silk Road expands globally, the U.S. government is increasingly worrying that telecommunications equipment from Chinese tech firms could be used by Beijing to spy and steal commercial secrets. Designating Huawei as a national security risk, the Trump administration imposed a series of sanctions on it and led a global campaign to remove Huawei from the telecom networks of the U.S. and other countries. However, the U.S.-led campaign against Huawei has only achieved limited success among its close allies. Most developing countries, including those in Latin America and the Caribbeans, are increasingly employing it.³ In its 2022 Annual Report, Huawei prided itself on providing products and services to over 3 billion people in more than 170 countries.⁴

Huawei's rapid expansion in the Latin America and the Caribbeans (LAC) region is particularly alarming to policymakers in Washington D.C.. In just over two decades, it has gone from having little presence in LAC to becoming a key telecommunications equipment provider for the digital infrastructure in the region. Despite repeated warnings from American officials about security risks associated with Huawei equipment, not a single LAC country has banned or implemented any sort of restrictions on Huawei.⁵ Instead, the China-CELAC 2022-2024 plan explicitly prioritizes China's engagement with the region in a broad range of digital sectors, including digital infrastructure, telecommunications equipment, 5G, cloud computing, Internet of Things, and smart cities.⁶ Huawei has won 5G customers in much of Latin America, built data centers in Chile, deployed a "safe cities" security camera and control system in Panama, and launched a two-year "5G city" pilot project in Brazil.

Why could Huawei become LAC's key telecommunication equipment provider despite geopolitical headwinds? Why didn't those countries follow America's lead to ban Huawei? Much of the policy discussion in the western media surrounding China's digital expansion focuses on the supply side, emphasizing the potential risks of adopting Chinese technologies. Yet there remains scant research on the demand side—namely, how policymakers in developing

² [Huawei 2022 Annual Report](#) [华为投资控股有限公司 2022 年年度报告].

³ See Roy, Diana. 2023. "[China's Growing Influence in Latin America](#)." Council on Foreign Relations.

⁴ [Huawei 2022 Annual Report](#) [华为投资控股有限公司 2022 年年度报告].

⁵ Parsifal D'Sola, "Huawei's expansion in Latin America and the Caribbean: views from the region," manuscript, last modified October 18, 2023. As of October 2023, this manuscript was under consideration for publication by the United States Institute of Peace.

⁶ "[China-CELAC Joint Action Plan for Cooperation in Key Areas \(2022-2024\)](#)". December 7, 2021. Available at the official website of Ministry of Foreign Affairs of the People's Republic of China.

countries perceive Chinese tech firms and how they navigate amid the intensifying rivalry between the U.S. and China. To shed light on these issues, I place local stakeholders (state agencies, key policymakers, local officials, and internet service providers) front and center of my analyses by examining their perceptions of the benefits and risks of using Chinese technologies and their choices between development and national security. Employing a case study of Huawei's expansion in Brazil, I argue that the prohibitive costs of replacing Huawei, the lack of political consensus on banning Huawei, Brazil's priority of development over security concerns, and China's vaccine diplomacy enabled the Chinese tech giant to gain a firm foothold in Brazil. Instead of perceiving Chinese technologies as a security threat, Brazilian regulators and ISPs consider Huawei as an opportunity for them to bridge the digital divide. This paper builds on the primary data I collected from forty semi-structured interviews with local stakeholders in 2023, as well as the secondary data from relevant government policies/rules/regulations, government publications, local newspapers, and other scholarly publications.

This paper proceeds as follows. The first section examines the geopolitical headwinds facing Huawei. The second section discusses Brazilian President Bolsonaro's attempt to ban Huawei in Brazil. The third section explains the lack of political consensus on banning Huawei among Brazilian policymakers. The fourth section discusses the prohibitive costs of replacing Huawei in Brazil. The fifth section focuses on Brazil's priority of development over security concerns. The sixth section discusses how China's vaccine diplomacy helped Huawei to gain a foothold in Brazil's 5G market. The seventh section briefly discusses the compromise the Brazilian government devised to keep both the U.S. and China happy. The paper concludes with policy recommendations for the U.S. government.

The Geopolitical Headwinds

Long before former President Trump initiated a bitter trade war with China, Huawei activities were under close scrutiny by the U.S. authorities.⁷ Huawei's troubles in the U.S. can be traced back to the early 2000s after it started competing with U.S. router firms. In 2003, router-maker Cisco accused Huawei of intellectual property theft and later dropped the suit. In 2008, Huawei's efforts to take a 16 percent stake in 3Com collapsed amid lawmakers concerns about the firm's possible ties to the Chinese military. In 2012, a Congressional Committee issued a scathing report on Huawei and ZTE, warning that the companies' ties to Beijing could pose as a national security threat to the U.S..⁸ In 2016, the U.S. Commerce Department and Treasury Department separately subpoenaed Huawei as part of an investigate into whether Huawei violated U.S. export controls.

As tensions between the U.S. and China have grown after Donald Trump took office in 2017, actions against Huawei have come fast and furious. In April 2017, a grand jury subpoena was issued to the U.S. subsidiary of Huawei, signaling that the probe into the firm had turned

⁷ Freifeld, Karen. March 6, 2019. "[Long Before Trump's Trade War with China, Huawei's Activities were Secretly Tracked.](#)" *Reuters*.

⁸ For detailed information on the timeline of the U.S. government's scrutiny on Huawei, see "[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. Skinner, Chris. June 2021. "[Huawei v USA: A Timeline.](#)" *Chris Skinner's Blog*.

criminal.⁹ In 2018, the National Defense Authorization Act barred government agencies from buying equipment or services from Huawei and ZTE. A more dramatic turn of events was the arrest of Huawei's chief financial officer and the daughter of its founder, Meng Wanzhou, in Canada on December 1, 2018. The arrest was made at the request of US law enforcement on suspicion of Huawei violating trade sanctions on Iran. In a rare public appearance following the arrest of his daughter, Ren Zhengfei, the founder of Huawei said his company has never spied for the Chinese government. "No law requires any company in China to install mandatory back doors...I personally would never harm the interest of my customers and me, and my company would not answer to such requests."¹⁰

Nevertheless, Huawei was designated as a strategic threat by the U.S. government in 2019, which banned the firm from accessing America's supply chains. Shortly afterwards, Google terminated Huawei's license to the Android OS. The move almost wiped out Huawei's global smartphone business. Another heavy blow to Huawei was from top U.S. chip companies, including Intel and Qualcomm, which cut off vital Huawei supplies in 2019.¹¹ Huawei filed a lawsuit against the U.S. government in 2019, arguing that the 2018 defense bill unfairly banned only Huawei and ZTE, while other companies that manufacture their equipment in China were not affected. It also alleged that the ban violated the U.S. Constitution's separation of powers and violated the company's rights of due process. In an effort to defend its reputation, Huawei challenged the U.S. government to provide evidence of its suspicions.¹²

Top officials in the Trump administration pointed to China's 2017 National Intelligence Law that required Huawei and other companies to provide information to intelligence officials in Beijing. They therefore argued that the Chinese government could use Huawei to spy on companies, individuals and governments—an accusation Huawei has vehemently denied. In addition, Huawei and ZTE were put on the blacklist. In 2020, the Federal Communications Commission ordered U.S. carriers to remove Huawei equipment under a federal program known as "rip and replace".

Moreover, the Trump administration has embarked on "a stealthy, occasionally threatening, global campaign" since 2018 to prevent countries from using Huawei and other Chinese telecommunications equipment in their 5G networks.¹³ According to an article in *the New York Times* (1/26/2019), "The administration contends that the world is engaged in a new arms race — one that involves technology, rather than conventional weaponry, but poses just as much danger to America's national security. In an age when the most powerful weapons, short of nuclear arms, are cyber-controlled, whichever country dominates 5G will gain an economic, intelligence and military edge for much of this century."¹⁴ "American officials have tried to pressure, scold and, increasingly, threaten other nations that are considering using Huawei in building 5G

⁹ Freifeld, Karen. March 6, 2019. "[Long Before Trump's Trade War with China, Huawei's Activities were Secretly Tracked.](#)" *Reuters*.

¹⁰ Strumpf, Dan and Josh Chin. "[Huawei's Mysterious Founder Denies Spying for China, Praises Trump.](#)" *The Wall Street Journal*. January 15, 2019.

¹¹ "[How Huawei Became America's Tech Enemy No. 1.](#)" *Quartz*. May 28, 2019. Available at

¹² "[Huawei Sues the U.S., Prodding It to Prove Suspicions.](#)" *Wired*. March 7, 2019.

¹³ David E. Sanger, Julian E. Barnes, Raymond Zhong and Marc Santora. "[In 5G Race with China, U.S. Pushes Allies to Fight Huawei.](#)" *The New York Times*. January 26, 2019.

¹⁴ *Ibid.*

wireless networks. Mike Pompeo, the Secretary of State, has pledged to withhold intelligence from nations that continue to use Chinese telecom equipment.”¹⁵ For example, the American ambassador to Germany cautioned Berlin in March 2019 that the United States would curtail intelligence sharing if Germany used Huawei.¹⁶ In the case of Poland, Trump officials suggested that future deployment of American troops—including the prospect of a permanent base labelled “Fort Trump”—could hinge on Poland’s decision to bar Huawei from its 5G network.¹⁷ However, the U.S.-led campaign faltered, “with even some of America’s closest allies rejecting the United States’ argument that the companies pose a security threat”.¹⁸ Huawei has been expanding its reach in much of the world, including countries like Brazil which plan to build ambitious 5G networks in 2021.

Bolsonaro and Huawei

Jair Bolsonaro, a former army captain, rode to the Brazilian presidency in 2019 with a brash, anti-establishment campaign modelled on Trump’s 2016 run. Nicknamed the “Trump of the Tropics”, Bolsonaro has moved quickly to ally Brazil closer to the United States, marking a distinct change in Brazil’s diplomatic priorities after over a decade of leftist party rule that had forged closer ties between Brazil and regional allies.¹⁹ During Bolsonaro’s visit to the White House in March 2019, Trump told Bolsonaro that he supported Brazil’s efforts to join the Organization for Economic Cooperation and Development (OECD), a club of wealthier nations, in exchange for Brazil giving up some benefits at the World Trade Organization. Trump also promised he would designate Brazil a major non-NATO ally, a status upgrade that gives a country preferential access to the purchase of U.S. military equipment and technology.²⁰ As later confirmed by the Brazilian vice-president, Bolsonaro was asked by US president Donald Trump to stop Huawei from developing new mobile networks in Brazil during his visit to Washington.²¹

Following closely with Trump’s sanctions on Huawei, the far-right Bolsonaro opposed the tech giant on the unproven grounds that it shared confidential data with the Chinese government. In March 2020, the Bolsonaro government set a rule that required companies to guarantee data reliability and allow their systems to be audited, but such a rule stopped short of excluding Huawei.

¹⁵ Barnes, Julian and Adam Satariano. “[U.S. Campaign to Ban Huawei Overseas Stumbles as Allies Resist](#).” *The New York Times*. March 17, 2019.

¹⁶ Ibid.

¹⁷ David E. Sanger, Julian E. Barnes, Raymond Zhong and Marc Santora. “In 5G Race with China, U.S. Pushes Allies to Fight Huawei.” *The New York Times*. January 26, 2019.
<https://www.nytimes.com/2019/01/26/us/politics/huawei-china-us-5g-technology.html>.

¹⁸ Barnes, Julian and Adam Satariano. “[U.S. Campaign to Ban Huawei Overseas Stumbles as Allies Resist](#).” *The New York Times*. March 17, 2019.

¹⁹ Ibid.

²⁰ “[Trump Bonds with Brazil’s Bolsonaro in White House Visit](#).” *France 24*. March 19, 2019.

²¹ Ibid. Colombia became in 2018 the only Latin American nation to join the NATO as a “global partner”, which means it will not necessarily have to take part in military action. “NATO Global Partnership initiative comprises 9 countries across the globe, including Australia, Japan, South Korea, New Zealand, which cooperate with NATO members to resolve emerging security challenges and contribute to the bloc’s operations either militarily or in some other way.” See “[US Eyes Brazil as Second Global Partner in Lat Am, Reports Say](#).” *TeleSur*. August 9, 2021.

²¹ Angelica Mari. “[Brazil Ignores US Pressure to Reject Huawei](#).” June 19, 2019. *ZDNet*.

Meanwhile, Brazil has been under increasing pressure from the U.S. to ban Huawei. On August 19, 2020, Keith Krach, Under Secretary for Economic Growth, Energy Security, and the Environment in the Trump administration, published an article on the website of U.S. Embassy & Consulates in Brazil, “Brazil can Join the Growing Clean Network by Banning Huawei”. In the article, he warns,²²

Huawei is the backbone of China’s worldwide surveillance state. It presents itself as a private and independent company, yet it must abide by China’s National Intelligence Law by turning over private citizen and business data to the Chinese government upon request. This means any nation that trusts Huawei with its communications networks gives the Chinese government a key that can unlock the door to any data that crosses those networks, including text messages, intellectual property, and sensitive business and government communications.

During a visit to Brazil three months later in November 2020, Keith Krach, then the State Department’s top official for economic policy, called Huawei an industry pariah that needed to be locked out of 5G networks. “The Chinese Communist Party cannot be trusted with our most sensitive data and intellectual property,” he said in a November 11 speech in Brazil. He argued that “free nations” needed to agree to coalesce around a “clean network” that excluded Huawei, because “our chain of security is only as strong as its weakest link.”²³ Shortly after Krach’s visit, Brasilia declared support for the Clean Network, a U.S. initiative to get countries on board in preventing the worldwide growth of Chinese technology in 5G networks.²⁴ In December 2020, Bolsonaro’s government was looking for a legal way to exclude Huawei from 5G networks in Brazil, including using a presidential decree.²⁵ Bolsonaro’s national security adviser Augusto Heleno and the Ministry of Communications were looking at security provisions that telecoms and their suppliers must comply with. Yet they failed to find a way to ban Huawei that legally held water without affecting other suppliers.²⁶

In December 2020, the U.S. government offered Brazilian telecom firms finance to encourage them to buy from Western providers such as Nokia and Ericsson instead of Huawei.²⁷ On his high-level visit to Brazil in August 2021, U.S. National Security Advisor Jake Sullivan raised concerns about Huawei equipment in Brazil’s 5G network. During his meeting with Brazil’s Communications Minister Fabio Faria, Sullivan discussed building 5G networks in Brazil using the U.S. Open RAN technologies. Sullivan offered Brazil the chance to become a NATO global partner in exchange for removing Huawei from its 5G network.²⁸ According to Juan Gonzalez,

²² Keith Krach. August 19, 2020. “[Brazil Can Join the Growing Clean Network by Banning Huawei.](#)” U.S. Embassy & Consulates in Brazil.

²³ Ernesto Londono and Leticia Casado. “[Brazil Needs Vaccines. China is Benefiting.](#)” *The New York Times*. March 15, 2021. The full text of Krach’s speech is available at [the official website of U.S. Embassy & Consulates in Brazil](#).

²⁴ Lisandra Paraguassu. “[Brazil Looks for Legal Options to Ban China’s Huawei From 5G: Sources.](#)” *Reuters*. December 8, 2020.

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ *Ibid.*

²⁸ “[US Offers Brazil 5G Tech to Replace Chinese Huawei.](#)” *Telecom*. August 6, 2021. Korybko, Andrew. “[U.S. Offering NATO Partnership for Banning Huawei Won’t Benefit Brazil.](#)” *CGTN*. August 8, 2021. It is worth noting that Juan Gonzalez, the National Security Council’s senior director for the Western Hemisphere later denied reports that the US had offered support for a NATO partnership with Brazil in exchange for cooperation over 5G equipment.

the National Security Council's senior director for the Western Hemisphere, Huawei was facing "major challenges" to its semiconductor supply chain that would leave international customers "high and dry."²⁹ However, Brazil made no promises about whether it would use products from Huawei, and Brazilian telecom companies have already built networks largely with Chinese components.

The Lack of Political Consensus on Banning Huawei in Brazil

Although Bolsonaro was keen to exclude Huawei from Brazil's 5G network, he faced fierce resistance from the industry and within his own government, including his Vice President Hamilton Mourao. In an interview with Reuters in 2019, Mourao said that his country would not ban Huawei from operating its 5G network despite requests to do so from the U.S. President Donald Trump.³⁰ He also pointed out that when it comes to doing business with China, a key trading partner, Brazil's position is "pragmatic and flexible."³¹ At the same time, Mourao said that Brazil "can't miss out on the 5G opportunity" and that the government would not interfere with Huawei's activities—"as long as the firm creates local jobs and plays by its rules."³² However, his comments were not well received by Bolsonaro and his Communications Minister. The very next day, Bolsonaro said he was "not open to talking about 5G with anyone who hasn't consulted with [communications minister] Fabio Faria first."³³ Faria also dismissed Mourao's warning, stressing that "he [Faria], along with the president, have the upper hand on the subject."³⁴

Faria also met with representatives of the five main telecom operators in Brazil—Vivo, Claro, Oi, TIM and Algar Telecom to address what he described as disinformation and untrue rumors, as well as the companies' concerns. He used the occasion to reiterate that 5G was to be discussed exclusively by the Communications Ministry and Bolsonaro.³⁵ Meanwhile, Brazil's telecom sector voiced concerns over the government's possible ban on Huawei. Without citing Huawei directly, the Brazilian trade body representing the telecommunications companies Conexis Brasil Digital said in a statement, "This uncertain environment can impact the sector's performance, given that restrictions may lead to potential cost imbalances and delays in the [5G roll-out] process, impacting the population directly."³⁶ The trade union also added "that pricing, global scale and innovation delivered by vendors currently present in Brazil are crucial factors for operators in ensuring service delivery at a competitive cost to consumer."³⁷

made by Huawei. See Mason, Jeff. "[U.S. Warned Brazil that Huawei would Leave it 'High and Dry' on 5G.](#)" *Reuters*. August 9, 2021.

²⁹ Mason, Jeff. "[U.S. Warned Brazil that Huawei would Leave it 'High and Dry' on 5G.](#)" *Reuters*. August 9, 2021.

³⁰ Mari, Angelica. "[Brazil Ignores US Pressure to Reject Huawei.](#)" *ZDnet*. June 19, 2019.

³¹ *Ibid.*

³² Mari, Angelica. "[5G will Cost 'A Lot More' in Brazil with Huawei Ban, Vice President Warns.](#)" *ZDnet*. December 10, 2020.

³³ *Ibid.*

³⁴ *Ibid.*

³⁵ *Ibid.*

³⁶ *Ibid.*

³⁷ *Ibid.*

Relatedly, Brazil's top four telecom companies snubbed Keith Krach (U.S. Undersecretary of State for Economic Growth, Energy and the Environment) by declining the invitation to meet with him in Sao Paulo in November 2020. Keith Krach has advocated excluding China's Huawei from the Brazilian 5G equipment market. Yet the top four telecom companies (Telefonica Brasil SA, Oi, Tim, and Claro; each controlling between 19 percent and 29 percent of Brazil's wireless market) already tested Huawei equipment ahead of the 2021 auctioning of spectrum concessions and did not support a ban on Huawei sought by the U.S. government.³⁸ They declined to meet with Keith Krach, because the invitation was "not compatible with free-market choices".³⁹ As discussed above, after Keith Krach's meeting with Brazilian foreign ministry officials in November 2020, the Brazilian government backed America's Clean Network proposal to build a global digital alliance that excludes Huawei telecommunications equipment. According to a subsequent joint U.S.-Brazil statement, "Brazil supports the principles contained in the Clean Network proposal made by the United States," and the initiative is "aimed at promoting, in the context of 5G and other new technologies, a safe and transparent environment compatible with democratic values and fundamental freedoms."⁴⁰

Despite Bolsonaro's attempts to follow America's lead, his government was divided on the Huawei ban. The enormous complexity of Brazil's domestic political system did not help him, either. "With power widely dispersed between the presidency, a coalitional congress, powerful state governors and municipalities there is as much need for diplomatic skill within Brazil as without. The public policy context is thus well suited to preparing Brazilian officials for the patient approach to negotiation and 'consensus generation' that have become the hallmark of the country's foreign policy (Burgess 2017, 18)." The shift in power and influence to the military in early 2019 further weakened Bolsonaro's power. The military composed a third of Bolsonaro's cabinet, and was more powerful during Bolsonaro's era than at any moment since the 1964-85 dictatorship.⁴¹ Headed by Vice President Hamilton Mourao and the (even more powerful) retired general Augusto Heleno, this group was pragmatic on foreign policy.⁴²

Brazil's policymaking process was characterized with fragmentation. According to Fernanda Magnotta, a Professor at FAAP, there are five influential groups in the Bolsonaro's government, which can be neatly summed up as 5Bs—Bullets (representing the military and pro-guns group), Bois (beef, representing the pragmatic agribusiness group), Bible (representing evangelicals, the more conservative religious group), Bolsonaro (representing a small, ideologically driven group which follows Trumpism), and Bovespa (the pragmatic financial sector).⁴³ When it came to issues related to China, the pragmatic approach of the groups of Bullets, Bois and Bovespa clashed with Bolsonaro's ideologically driven approach. Representatives from Brazil's powerful agribusiness sector and the financial sector sent a clear message to Bolsonaro that they did not want to mess with China, the country's biggest trading partner.⁴⁴ Bolsonaro's low popularity,

³⁸ Reuters. "[Brazilian Telecoms Snub U.S. Official over Huawei 5G Pressure—Media](#)." November 6, 2020.

³⁹ Boadle, Anthony. "[Brazil Backs U.S. Clean Network Proposal for Transparent 5G Technology](#)." *Reuters*. November 11, 2020.

⁴⁰ *Ibid.*

⁴¹ Winter, Brian. "The Tropical Trump? If He's Lucky." *Americas Quarterly*. March 20, 2019. <https://www.americasquarterly.org/article/the-tropical-trump-if-hes-lucky/>.

⁴² *Ibid.*

⁴³ Author's interview October 12, 2023.

⁴⁴ *Ibid.*

which was already down to 37 percent in early 2019, lower than any of his predecessors at a similar stage since full democracy returned in 1989, did not help him to push through any policy changes, either.⁴⁵

Facing the threat of being potentially banned from the Brazilian market, Huawei took matters into its own hands. In order to secure its position in Brazil's 5G market, Huawei hired a former Brazilian president Michel Temer as an advisor in early 2021 as the auction of 5G wireless networks approached.⁴⁶ Temer, a constitutional law professor and lawyer, was Dilma Rousseff's vice president and became head of state after Rousseff's impeachment in 2016 and remained in office until 2018. Temer was a political heavyweight in Brazil. His proximity with Bolsonaro, besides his legal advice on the implementation of 5G in Brazil, was particularly valuable to the Chinese firm. In addition, Temer had a network of allies in Brazil's Congress. He was responsible for the appointment of the president of the board of the Brazilian telecommunications agency Anatel, Leonardo Euler de Moraes, who stayed in office until November 2021. Huawei's move to influence the Brazilian policymaking has made a ban on its technology even more difficult in Brazil.

Prohibitive Costs of Banning Huawei

Huawei has been operating in Brazil for over 20 years. Most Brazilian telecommunication providers use Huawei equipment on their 3G and 4G networks. "According to lobby group Conexis, the largest cellphone company Vivo, owned by Telefônica Brasil, uses Huawei equipment in 65% of its networks. Claro's equipment is 55% from Huawei, while Oi has 60% and TIM has 45%."⁴⁷ It would have cost these companies billions of dollars to remove Huawei equipment from their 3G and 4G networks. As such, Brazil's telecom companies insisted on a free market and were reluctant to exclude Huawei from among their options.

It is worth noting that Huawei's competitive advantage is much more than low costs. It offers unrivaled customer-oriented services. Huawei's fast troubleshooting ability is remarkable. According to a Huawei staff/consultant interviewed by Parsifal D'Sola, "Troubleshooting is something that must be highlighted, it's great, it's very fast. If hardware malfunctions, they quickly replace it. Something that might take a month (with other vendors), they would solve within a week."⁴⁸ In addition, Huawei offers favorable terms of financing. According to a high-level official at Anatel, Brazil's regulatory agency responsible for approving products used in Brazil's telecommunications sector, the Chinese tech giant would provide internet service providers with Huawei telecommunication equipment for zero down payment and its customers could pay back after they start to collect revenue.⁴⁹ This financial arrangement has been

⁴⁵ Winter, Brian. "[The Tropical Trump? If He's Lucky.](#)" *Americas Quarterly*. March 20, 2019.

⁴⁶ Mari, Angelica. "[Huawei Hires Former Brazilian President to Advise on 5G.](#)" January 22, 2021. Brazil's 5G auction was originally set to be held in March 2020, but it was delayed to early 2021 due to the Covid-19 pandemic.

⁴⁷ Lisandra Paraguassu. "[Brazil Looks for Legal Options to Ban China's Huawei From 5G: Sources.](#)" *Reuters*. December 8, 2020.

⁴⁸ Parsifal D'Sola, "Huawei's expansion in Latin America and the Caribbean: views from the region," manuscript, last modified October 18, 2023. As of October 2023, this manuscript was under consideration for publication by the United States Institute of Peace.

⁴⁹ Author's interview, February 11, 2023.

especially attractive to small internet service providers who could not afford to pay a large sum upfront.

Huawei's equipment is by average 30 percent lower than its competitors. Brazil's 5G network would cost significantly more if Huawei was banned in the country. At an industry event held by the Sao Paulo Trade Association on December 7, 2020, Vice President Hamilton Mourao issued a warning, "If Huawei cannot supply the [5G] equipment, the cost will be a lot higher", adding that in the event of an infrastructure review, the additional cost would have to be relayed to consumers.⁵⁰

If Brazil banned Huawei, the broad economic and political costs could be prohibitive, as China has been the country's biggest trading partner since 2009. Over the past 20 years, trade integration has increased tremendously between China and Brazil, with bilateral trade amounted to USD150 billion in 2022, a 37-fold increase compared with trade in 2001.⁵¹ Since 2009 China has been absorbing about 27% (vs 11% for the US) of Brazil's exports. The majority of Brazil's exports to China (96%) are commodity-based (either raw materials or resource-based manufactured products). For example, China is Brazil's top buyer of soybeans (69% of exports), iron ore (61%), wood pulp (41%), oil (37%) meat (36%), and sugar (15%) according to 2021 data from ITC.⁵² China is also Brazil's main source of imports (22.3%) ahead of the US (18%) and Argentina (5%).⁵³

Losing China's export market would be devastating to Brazil's agribusiness sector and its overall economy. In 2022, roughly one third of Brazil's agribusiness exports were China-bound.⁵⁴ Unlike the chronic trade deficits it had with the U.S., Brazil has been enjoying a steady increase of trade surplus with China in the past twenty years, from USD527 million in 2001 to USD36 billion in 2021.⁵⁵ Its trade surplus with China has been critically important to Brazil as the country's economy has gone into recession since 2014. One high-level executive at a Sao Paulo consultancy firm put it bluntly, "Brazil would not be able to survive without China."⁵⁶

Under the Lula and Rousseff administrations, Brazil not only welcomed Chinese investment but saw Beijing as a more desirable ally than any of the developed countries. "While Lula did move to block big acquisitions of land by Chinese and other foreign investors, the architects of the Workers' Party's foreign policy viewed China as a valuable ally in their efforts to promote an alliance among the poor countries of the south."⁵⁷ When Jair Bolsonaro came to office in 2019, the cozy bilateral relationship between Brazil and China begun to change. Bolsonaro talked

⁵⁰ Mari, Angelica. "[5G will Cost 'A Lot More' in Brazil with Huawei Ban, Vice President Warns.](#)" *ZDnet*. December 10, 2020.

⁵¹ Salim Hammad. "[Brazil: Current Trade Patterns with China Threaten the Promise of Re-industrialization.](#)" *BNP Paribas*. April 5, 2023.

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Ibid. The data on U.S. trade with Brazil can be found from [the official website of the U.S. Department of Commerce](#). Brazil's trade deficit with the U.S. increased from USD4 billion in 2016 to USD15 billion in 2021.

⁵⁶ Author's phone interview, September 20, 2023.

⁵⁷ Lapper, Richard. 2021. *Beef, Bible, and Bullets: Brazil in the Age of Bolsonaro*. Manchester University Press. P. 208.

tough on China during his campaign. Portraying China as a predatory economic power, Bolsonaro repeated warned that “China is not buying in Brazil; it is buying Brazil.” His China-bashing rhetoric chilled a profitable economic relationship that had benefited both countries. Direct Chinese investment in Brazil fell from \$11.3 billion in 2017 to just \$2.8 billion in 2018.⁵⁸

Brazil’s Priority of Development over Security Concerns

The Covid-19 pandemic has laid bare the egregious digital divide in Latin American and the Caribbean (LAC): less than half of Latin American households (45.5 percent) have fixed broadband access, compared to 57 percent in Eastern Europe, 59 percent in the Asia Pacific region, and 87 percent in Western Europe.⁵⁹ The urban bias further amplified the gap in digital connectivity. Whereas 67 percent of LAC households are connected in urban areas, the figure is only 23 percent in rural areas.⁶⁰ The digital divide has been a major barrier for economic growth and an obstacle to development in the education, health, and financial sectors. Facing a stagnation “worse than the 1980s”,⁶¹ political leaders in the LAC region are acutely aware that investing in digital infrastructure is essential for them to leapfrog into a highly coveted digital economy. The need to bridge the digital divide in the region is greater than ever, but the U.S.-China technology competition is making the efforts more complicated. How to bridge the digital divide in LAC countries is not simply a technical issue but involves cybersecurity risks and geopolitical maneuvering.

Brazil has been in dire need of economic development after its economy went into recession in 2014, partly due to declining commodity prices, political instability and corruption scandals. The impeachment of President Dilma Rousseff in 2016, followed by the arrest of former President Luiz Inácio Lula da Silva in 2018, led to a loss of confidence in Brazil’s economy and government. The net inflows of foreign direct investment (FDI) declined from the peak of USD102.43 billion in 2011 to USD69.17 billion in 2019.⁶² The onset of the Covid-19 pandemic made things even worse. The net inflows of FDI plummeted to USD37.79 billion in 2020.⁶³ The pandemic has also brought about a hunger epidemic, leaving tens of millions of Brazilians in hunger. According to a New York Times article (April 23, 2021), about 19 million people went hungry in Brazil in 2020—nearly twice the 10 million who did so in 2018, the most recent year for which data were available.⁶⁴ In 2020, about 117 million people, or roughly 55 percent of the country’s population, faced food insecurity, with uncertain access to enough nutrition—a leap from the 85 million who did so two years previous.⁶⁵

Faced with deepened poverty and hunger, many Brazilian policymakers gravitated toward a pragmatic approach and prioritized economic development. For example, the Brazilian vice-

⁵⁸ Lapper, Richard. 2019. “Bolsonaro Took Aim at China. Then Reality Struck.” *Americas Quarterly*. April 23, 2019.

⁵⁹ See “[Latin America’s Digital Divide: Overcoming Persistent Gaps](#).” Wilson Center. May 10, 2021.

⁶⁰ Ibid.

⁶¹ The head of the UN Economic Commission on Latin America and the Caribbean (ECLAC) said that the region’s stagnation is “worse than the 1980s” due to weak investment, low productivity, and inadequate education. See “[Latin America’s Stagnation ‘worse than the 1980s’, says UN official](#).” *Financial Times*. November 26, 2022.

⁶² Data source: The World Bank. <https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?locations=BR>.

⁶³ Ibid.

⁶⁴ Londono, Ernesto, and Flavia Milhorance. “[Ravaged by Covid, Brazil Faces a Hunger Epidemic](#).” April 21, 2021.

⁶⁵ Ibid.

president Hamilton Mourao emphasized the need to bridge the digital divide. “We are a country that needs to be more digitally integrated. You only need to be 50 kilometers away from Brasilia [Brazil’s capital] to lose your phone signal”.⁶⁶

To Brazilian policymakers in the tech sector, the national security risks can hardly be mitigated in the absence of indigenous 5G technologies. They are equally vulnerable to data collection and the threat of choke points whether they choose China’s Huawei, Finland’s Nokia or Sweden’s Ericsson. A long-time professional who used to work for one of the largest telecommunications providers Claro put it bluntly,⁶⁷

Do you want to be spied by the US or China? Without homegrown technology, there is always a risk of being spied. The Snowden revelation shows that the US spied on our President Dilma Rouseff’s phone... We do not have secrets to hide. We Brazilians do not care about national security. We are pragmatic people. We will use whichever company that offers cheaper products or services.

The lack of concrete evidence on Huawei’s security breaches also made it difficult to justify a ban on the Chinese tech giant in Brazil. According to Parsifal D’Sola,⁶⁸

When it comes to hardware security breaches such as data leaks, back doors, or sabotage, it must be highlighted that the interviews did not bring to light any evidence or suspicion of wrongdoing by Huawei. Between all the interviewees, they add up to 46 years working for Huawei in 11 different countries. Furthermore, of the 7 interviewees, 5 described their overall experience working for Huawei as negative or very negative, minimizing a potential positive bias as former or current Huawei employees. The fact that there is no indication whatsoever of wrongdoing speaks well of Huawei’s equipment and services in the region.

My own interview with a high-level official at Brazil’s telecom regulator Anatel dovetails with D’Sola’s findings. When an American official tried to convince Brazilian officials of the national security threats posed by Huawei, the high-level Brazilian official asked the American official to show him the evidence of Huawei’s wrongdoings. The American official answered, “It is classified information. I cannot share it with you.” The Brazilian official responded, “We will take measures if we find problems with Huawei.”⁶⁹

China’s Vaccine Diplomacy⁷⁰

In November 2020, the Brazilian government backed America’s Clean Network proposal to exclude Huawei in its telecommunications networks. Bolsonaro’s son, an influential member of

⁶⁶ Angelica Mari. [“Brazil Ignores US Pressure to Reject Huawei.”](#) June 19, 2019. *ZDNet*.

⁶⁷ Author’s interview, February 5, 2023.

⁶⁸ Parsifal D’Sola, “Huawei’s Expansion in Latin America and the Caribbean: Views from the Region,” manuscript, last modified October 18, 2023. As of October 2023, this manuscript was under consideration for publication by the United States Institute of Peace.

⁶⁹ Author’s interview, February 10, 2023.

⁷⁰ Vaccine diplomacy is not new. It is as old as the vaccine itself. Hotez defines vaccine diplomacy as “any aspect of global health diplomacy that relies on the use or delivery of vaccines.” Hotez, P.J. 2010. “Peace through Vaccine Diplomacy.” *Science* 327 (1301): 43.

Congress, vowed to create a secure 5G system “without Chinese espionage.” Yet a few months later a complete reversal occurred. On January 16, 2021, Brazil’s government announced that it would not seek to bar Huawei from 5G network auctions slated for June 2021.⁷¹ This 180-degree policy shift caught American policymakers off guard. What caused the right-wing Brazilian President Bolsonaro to backtrack on his opposition to Huawei? Possible explanations include the financial costs potentially worth billions of dollars to replace Huawei equipment in Brazil’s current 3G and 4G network and the exit of ally President Donald Trump from the White house.⁷² Some studies point to China’s vaccine diplomacy as the direct cause of Brazil’s policy shift. According to Maj Neil Law, “It is plausible that Brazil’s receipt of COVID vaccines from China was contingent upon their acceptance of Huawei’s involvement.”⁷³ A close examination on the role played by China’s vaccine diplomacy in the sudden change of heart by the Brazilian government is therefore warranted.

The COVID pandemic took a devastating toll in Brazil. By March 2021, Brazil’s deaths from the virus exceeded 270,000, the second highest toll in the world after the U.S..⁷⁴ As Brazil was desperate for vaccines, rich countries, including the U.S., were hoarding many millions of doses for themselves. China’s ability to mass-produce vaccines and ship them to countries in the developing world offered Beijing a window of opportunity to dispel resentment and distrust as the place where the pandemic began and brand itself as a global health leader.

President Bolsonaro initially disparaged the Chinese vaccine while it was undergoing clinical trials in Brazil and shut down an effort by his health ministry to order 45 million doses from China.⁷⁵ “The Brazilian people WON’T BE ANYONE’S GUINEA PIG,” he wrote on Twitter.⁷⁶ “But with Mr. Trump gone and Brazilian hospitals overwhelmed by a surge of infections, Mr. Bolsonaro’s government scrambled to mend fences with the Chinese and asked them to expedite tens of millions of vaccine shipments, as well as the ingredients to mass-produce the shots in Brazil.”⁷⁷ The president, his son and the foreign minister abruptly stopped criticizing China, while cabinet officials worked furiously to get new vaccine shipments approved.

On December 21, 2020, Brazilian health regulator Anvisa certified the production standards of CoronaVac, China’s Sinovac-produced vaccine which was being tested in Brazil.⁷⁸ According to *Folha de S. Paulo*, Brazil’s government may adopt a more friendly tone regarding Huawei’s participation in 5G coverage spectrum sale in the country.⁷⁹ On January 25, 2021, the Chinese

⁷¹ McGeever, Jamie. “[Brazil’s Bolsonaro to Allow China’s Huawei in 5G Auctions: Newspaper.](#)” *Reuters*. January 16, 2021.

⁷² Ibid.

⁷³ Maj Neil Law. “[China’s Digital Influence in Latin America and the Caribbean: Implications for the United States and the Region.](#)” *Journal of Indo-Pacific Affairs*. September-October 2023: 84-97.

⁷⁴ Nugent, Ciara. “[Brazil’s Bolsonaro Denied COVID-19 was a Problem. Now He’s Embracing Vaccines. Here’s What Changed.](#)” *Time*. March 12, 2021.

⁷⁵ Londono, Ernesto and Leticia Casado. March 15, 2021. “[Brazil Needs Vaccines. China is Benefiting.](#)” *The New York Times*.

⁷⁶ Ibid.

⁷⁷ Ibid.

⁷⁸ Simoes, Eduardo. “[Brazil Health Regulator Certifies Sinovac’s CoronaVac Production Standards.](#)” *Reuters*. December 21, 2020.

⁷⁹ “[Brazil’s Government may Adopt A Friendly Tone About China’s Huawei 5G Spectrum in exchange of Vaccine’s ingredient.](#)” *Latin America Business Stories*. January 21, 2021.

ambassador to Brazil, Yang Wanming, sent a letter to Brazil's Minister of Health, Eduardo Pazuello, confirming the export to Brazil of inputs for the manufacture of CoronaVac. President Bolsonaro released the letter the following day.⁸⁰ On February 25, 2021, Brazil's telecom regulator Anatel approved rules for a spectrum auction for 5G networks without any curbs on Huawei as an equipment supplier.

During a meeting between Brazil's communications minister Fábio Faria and Huawei executives at their headquarters in Beijing in February 2021, the minister made a very unusual request of a telecommunication company. According to him, "I took advantage of the trip to ask for vaccines, which is what everyone is clamoring for."⁸¹ With the coveted 5G contracts at stake, Huawei was mounting a well-timed charm offensive in Brazil by supplying hospitals with software to help doctors on the front lines of the pandemic and donating 20 oxygen-making machines to the city of Manaus, where Covid patients suffocated to death as hospitals ran out of oxygen.⁸²

While the precise connections between Brazil's vaccine request and Huawei's inclusion in the country's 5G auction is unclear, the coincidence of the vaccine negotiations and the Huawei negotiations is striking. China's vaccine diplomacy appeared to have put an end to Brazil's hawkish stance on Huawei and gave the Chinese tech giant a green light to participate in Brazil's 5G auction.⁸³ But as my paper shows, the reasons for Brazil to keep Huawei in include not only China's vaccine diplomacy, but also the prohibitive costs of replacing Huawei, the lack of political consensus to ban Huawei, and Brazil's priority of development over security concerns. China's vaccine diplomacy is a contingent factor, catalyzing a dramatic policy shift in Brazil.

Brazil's Compromise

According to the Brazilian officials I interviewed, Brazil planned to build two 5G networks—a secure 5G network for government agencies without Huawei equipment, and a public 5G network for non-government agencies with Huawei equipment. The government private network is much smaller so it does not significantly affect Huawei's market share in Brazil. But the IT professionals and scholars I interviewed expressed their skepticism over the feasibility of the plan. It will be costly to build two separate 5G networks and it will be technically very difficult to keep them separate. But for the time being, it seems to be a satisfactory political compromise acceptable to both China and the U.S..

⁸⁰ The letter from the Chinese ambassador to Brazil is available at <https://static.poder360.com.br/2021/01/carta-embaixador-pazuello-china.pdf>.

⁸¹ Londono, Ernesto and Leticia Casado. "[Brazil Needs Vaccines. China is Benefiting.](#)" *The New York Times*. March 15, 2021.

⁸² Ibid.

⁸³ It is worth noting that the U.S. initiated vaccine diplomacy to claim its global leadership in the fight against the COVID-19 epidemic. "To counter China's ambition to expand both the market share and international influence via vaccine diplomacy, the U.S. partnered with Australia, India and Japan through the Quadrilateral Security Dialogue in March 2021 to finance, manufacture and distribute at least one billion doses of COVID-19 vaccines by the end of 2022. The Biden administration hosted the Global COVID-19 Summit in 2021 and 2022. China bluntly refused to attend the summit out of concern that China's attendance might consolidate the U.S global leadership in vaccine diplomacy." See Liu, Liangtao, Yongli Huang and Jiyong Jin. 2022. "[China's Vaccine Diplomacy and Its Implications for Global Health Governance.](#)" *Healthcare* 10 (1276), p. 7.

Conclusion

China's digital footprint has been expanding rapidly in Latin America in the last two decades. Neither the U.S.-China tech war nor the U.S.-led global campaign aimed at Chinese tech firms seemed to be able to reverse the trend. Employing a case study of Huawei's expansion in Brazil, I argue that the lack of political consensus on banning Huawei, the prohibitive costs of replacing Huawei, Brazil's priority of development over security concerns, and China's vaccine diplomacy enabled the Chinese tech giant to gain a firm foothold in Brazil. Instead of perceiving Chinese technologies as a security threat, major Brazilian regulators and internet service providers consider Huawei as an opportunity for them to bridge the digital divide.

The story of Huawei's expansion in Brazil may be similar in other countries and in other issue areas. It could be Chinese companies building a dam in Laos, constructing a high-speed rail in Indonesia, or building solar and wind farms in Argentina. A major reason for Chinese firms to make inroads into these markets is because the Chinese government and firms could provide solutions to the development problems these countries are struggling with. To counter the global expansion of the Chinese economic and political influence, the U.S. policymakers need to shift their focus to development issues confronting developing countries and provide feasible alternatives. As much of the Global South faces infrastructure deficits and digital divides, the American government could strengthen its global leadership by providing developing countries with the proverbial ladder of prosperity.