

Latin America's 5G construction in the context of the Sino-US technology game: challenges and prospects

Wang Huizhi Fu Liyuan

Abstract: Latin America's 5G construction is still in its infancy, and its 5G technology development has certain advantages. However, because Latin America lacks the ability to independently develop 5G technology, relying on foreign investment and foreign technology has become a key path for Latin America to fully realize the development potential of 5G technology. However, As the 5G dispute between China and the United States becomes more and more protracted and intense, the 5G issue in Latin America has also become politicized. Faced with the interference of the United States in China-Latin America 5G cooperation from the political, economic, rules and security dimensions, Latin American countries are in a dilemma. Signs of differentiation in regional 5G technology development are becoming more and more obvious. Most Latin American countries have adopted a delaying strategy of exchanging time for space in response to US pressure. Some Latin American countries have resisted US pressure, insisted on proceeding from their own national interests, and continued to promote market-oriented pragmatic cooperation with Huawei. A few countries have succumbed to the United States on some related matters. Generally speaking, although the delaying strategy is a helpless move in a dilemma, its negative impact is obvious. The positions of other countries will become an important reference for making decisions on key 5G issues in Latin America in the future. However, There is no realistic possibility for Latin American countries to completely turn to the United States on 5G issues. Although China-Latin America 5G cooperation has suffered short-term setbacks, there is still ample room for cooperation, and cooperation prospects are promising.

Keywords: China-US game, China-Latin America cooperation, digital technology 5G About the author: Wang Huizhi, Ph.D. in history, Assistant Researcher, Institute of World History, Chinese Academy of Social Sciences, Fu Liyuan, Research Intern, Institute of Latin America and Caribbean, China Institutes of International Studies

CLC number: TN929.5 Document identification code:

A Article number: 1002 - 6649 (2022) 02 - 0064 - 17

To open 5G commercial networks, Argentina, Chile, Dominica, Mexico and Uruguay have launched plans.

From a regional (national) comparative perspective, the proportion of the population using 4G networks in Central America is 35%

4G technology accounts for only 5% of all mobile connections in the region, 1/6 of South America's countries in Central America

The average spectrum allocated by governments for 4G services is 100 MHz, which is lower than the Latin American average of 163 MHz and accounts for only

The International Telecommunications Union (ITU) estimates that 21% of the spectrum is required to effectively provide mobile services Guatemala,

The situation in Panama and El Salvador is particularly lagging. Furthermore, there is a strong relationship between online penetration and inequality

Related relationships. For example, in Colombia, 75% of the richest 1/10 households have access to food at home.

Internet access, while only 11% of the poorest tenth of households have access to the Internet. In Brazil, less than

29% of students surveyed said their school had access to the Internet (compared to 55% in OECD countries). And all

Like other regions, Latin America's poor, elderly and rural populations still have difficulty accessing the Internet, mainly due to

The cost of mobile phone services is very high, and broadband penetration is limited.

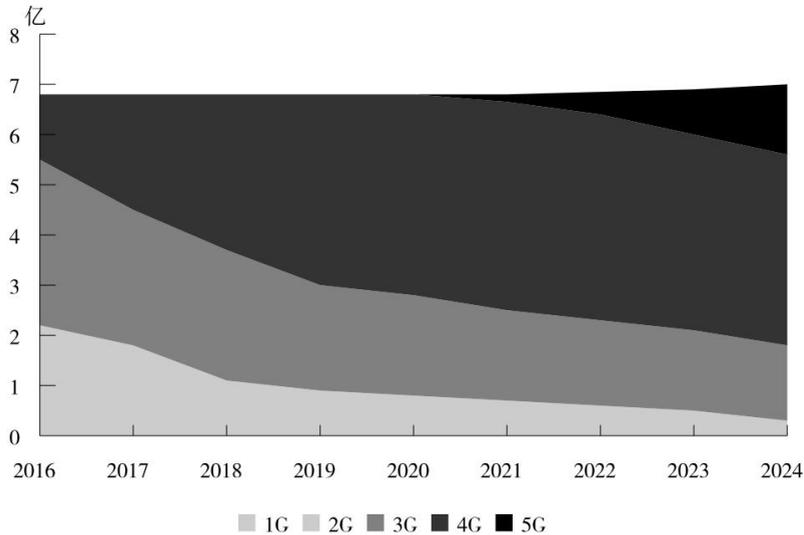


Figure 1 Mobile subscriptions in Latin America by technology generation (2016-2024)

Source: Wally Swain, Ari Lopes and Sonia Agnes y 5G in Latin America? August 2020

Source: Wally Swain, Ari Lopes and Sonia Agnes y 5G in Latin America? August 2020

“The proportion of the population using 4G networks in Central America is 35%”

“4G technology accounts for only 5% of all mobile connections in the region, 1/6 of South America's countries in Central America”

“The average spectrum allocated by governments for 4G services is 100 MHz, which is lower than the Latin American average of 163 MHz and accounts for only 21% of the spectrum required to effectively provide mobile services Guatemala,”

“The situation in Panama and El Salvador is particularly lagging. Furthermore, there is a strong relationship between online penetration and inequality”

(Indotel) Auctioned 700 MHz spectrum and 35 GHz spectrum to operators Claro and Altice. The proceeds from this auction are expected to reach US\$73.7 million.

November 2021 The long-delayed 5G spectrum auction in Brazil has also been officially launched. Main operations Claro, TIM and Vivo respectively obtained the resources of 100 MHz, 23 GHz and 26 GHz frequency bands in the 3.5 GHz band, Algar and Serco. Regional operators such as Tel Resources

(3) International cooperation is the only way to advance 5G technology in Latin America. Although Latin

America has huge potential for 5G technology development, it does not have the ability to independently develop 5G technology. Relying on foreign investment and foreign technology is a necessary option for the future development of 5G technology in Latin America. 5G in Latin America The

relative lag in technology is not only a direct result of the imperfect regional ICT industry chain, low operating efficiency, and high terminal prices and tariffs, but is also closely related to the lack of a suitable environment to encourage innovation in the region, which to a large extent limits the independent development of Latin American countries. The ability to develop 5G technology. In order to maximize profits, Latin American governments are accustomed to choosing to increase exports of raw materials and primary manufacturing products, while ignoring their own high-tech products that are less competitive in the international market and supporting local innovative enterprises. Encouragement is actually very limited and lacks continuity. Taking the proportion of government R&D expenditure in GDP as an example, from 2000 to 2018, the proportion in Latin America and the Caribbean has always hovered between 05% and 08%, while the Economic Cooperation and Development The average level of organized countries is 24%, and Israel is 43%. In this context, although there are Brazilian financial technology company Nubank, Argentinian e-commerce platform Mercado (Mercado Libre) and Colombian food delivery service company Ra's success stories. However, the performance of Latin American countries in the Global Innovation Index has been unsatisfactory for a long time. Although Chile maintained the highest score in Latin America in 2021, it ranked only 53rd. Specifically in the field of digital technology, although Latin American governments have formulated a series of policies to promote their country's digital transformation. However, due to the failure to take necessary incentives to promote and support private investment, coupled with the government's weak execution, the plan is difficult to implement and the future is unclear. In addition, expensive spectrum, excessive regulatory fees and cumbersome and outdated Regulatory policies that hinder the development of ICT, such as local laws and regulations, still exist, which also pose constraints to the stable development of Latin America's digital technology industry.

“The 5G technology development in Latin America is facing many challenges. In order to promote the development of 5G technology, governments need to take effective measures to improve the regulatory environment and encourage private investment.”

“However, the performance of Latin American countries in the Global Innovation Index has been unsatisfactory for a long time. Although Chile maintained the highest score in Latin America in 2021, it ranked only 53rd. Specifically in the field of digital technology, although Latin American governments have formulated a series of policies to promote their country's digital transformation. However, due to the failure to take necessary incentives to promote and support private investment, coupled with the government's weak execution, the plan is difficult to implement and the future is unclear.”

See relevant data from the World Bank and OECD. <https://data.worldbank.org/indicador/yy> / www.yyy.org/yy/yy / [yy - yy nding - on - r - d htm \[2022 - 02 - 21\]](#)

“The 5G technology development in Latin America is facing many challenges. In order to promote the development of 5G technology, governments need to take effective measures to improve the regulatory environment and encourage private investment.”

5G in Latin America has just started. Most countries have not yet formulated a specific 5G development plan. Most of the relevant content is in the ICT or data centers of each country. Reflected in digital transformation planning

In fact, there are only telecom operators in Latin America and there are no 5G suppliers. To seize the opportunity of the fourth wave of technological revolution and achieve overtaking in corners, the only way is to rely on foreign capital and foreign brains. Currently, there are only Huawei (China), Huawei (China), Five companies, Ericsson (Sweden), Nokia (Finland), Samsung (South Korea), and ZTE (China), provide 5G radio hardware and complete systems. Among them, Nokia and Ericsson in the EU own about 50% of the global telecommunications equipment market and some core patents. Chinese companies rank first in the world in terms of 5G patents and account for half of the world's communication equipment. Global wireless access technology is mainly provided by China's Huawei and Europe's Ericsson and Nokia. This determines the position of global 5G "pioneers" such as the European Union and China. Funding and technology are crucial to the development of 5G in Latin America. In fact, the Latin American countries that are currently the first to enter the 5G era are inseparable from international cooperation. For example, as the first country in Latin America to realize 5G commercialization, Uruguay's 5G technology is provided by the country's operators Antel and Nokia completed the cooperation. Chile's 5G deployment is inseparable from Ericsson. Suriname, Trinidad and Tobago, and Dominica have entered the 5G era with the help of Huawei.

2. Challenges to 5G construction in Latin America from the technological competition between China and the United States

As the importance of digital technology becomes increasingly prominent, China's development trend as a latecomer in the field of digital technology has aroused anxiety and concern in the United States. In 2018, the United States imposed sanctions on ZTE, marking a new round of U.S. Sanctions on China's science and technology have begun. Advanced telecommunications technology with 5G technology as the core has become the focus of the United States' containment of China. China's top telecommunications companies represented by Huawei have been subject to continued high pressure from the United States. Although Latin America is not a leader in the field of digital technology, The countries at the forefront are not the highest priority areas for the US diplomatic strategy. However, it is an indisputable fact that the technological game between China and the United States has extended to Latin America. This means that the 5G issues in Latin American countries are no longer purely technical issues, but have become ideological and ideological. Politicization, increasing uncertainty about promotion prospects.

According to statistics, there are currently 36 major companies active in the 5G market in Latin America and the Caribbean, including Huawei (China), Telefonica (Spain), Fon (Spain), Orange (France), S iradel (France), Vodafone (UK), Virginmobile (UK), bango (UK), Sky (UK), TIM (Italy), Verizon (USA), AT &T (US), Cisco (US), NEXTEL (US), 5Gamericas (US), CenturyLink (US), Seventeen international companies, including Facebook Connectivity (USA), account for almost half of the market. The remaining companies are from Latin America and the Caribbean, such as Embratel, Cablevisión, Claro, Viva, Oi, ANATEL, Algar, Tele com (Argentina), Inatel, Entel, VTR, Tigo, Sercomtel, Telesur, Indotel, Digicel, Telecom, Movistar, as well as market research company Omdia and consulting company Teleco (Brazil). Zhang Li, Hu Dayi: "On

"Choosing Sides" in the International Game", Published in "Contemporary Asia-Pacific", 2021 Issue 5 of the year

(1) The United States has taken multiple measures to obstruct China-Latin America 5G

cooperation. The United States has taken a multi-pronged approach from the political, economic, rules, security and other dimensions to obstruct China-Latin America 5G cooperation in all aspects.

As a result, it has become the biggest external interference factor in the current advancement of 5G technology in Latin America.

Politically, senior U.S. government officials and many ambassadors to Latin American countries have personally hyped up the "Huawei 5G or China technology threat theory" and frequently slandered Huawei and ZTE Corporation as being controlled by the Chinese government, saying that their "equipment is unsafe and their operations are opaque" and "will Affecting the sovereignty, security and democratic freedoms of regional countries" and "threatening the way of life of local people". For example, in April 2019, during his visit to Chile, then-U.S. Secretary of State Pompeo made groundless accusations that "China is doing business in Latin America and other places and transferring corrosive capital to the country." Injecting it into the blood of the economy, causing economic corruption and the erosion of good governance." It also pointed out that "Huawei's 5G equipment has brought risks to the citizens of the country" and asked the Chilean government to cancel the 5G contract signed with Huawei. In 2020, Brazilian President Jair Bolsonaro During his visit to the United States, then-President Trump publicly stated that Brazil wants to limit China's influence in Latin America, and it is crucial to curb the spread of Huawei technology in the region. The U.S. Embassy in Argentina stated that if Argentina adopts Huawei or other Chinese suppliers' telecommunications infrastructure, the personal freedom and privacy of Argentine users will be threatened, and it will also pose a threat to Argentina's national security. The United States has also stopped purchasing "products from Latin American companies that have business dealings with Huawei" and "interrupted disaster relief assistance". "If you don't listen to the advice, you will face serious political consequences." "political crisis or lowering the level of cooperation" and other means to coerce Latin American countries to stop cooperation with Chinese companies in 5G and other related

fields. Economically, the United States uses increasing investment in 5G construction in Latin America or increasing other financial assistance as a bargaining chip to lure regional countries away from Huawei 5G. During his term of office, Trump will promote investment cooperation in the field of information and communication technology into the "Growth of the Americas" initiative, expand the "Digital Connectivity and Cybersecurity Partnership Program" (DCCP) to Latin America, and also try to expand cooperation through the Export-Import Bank of the United States, the United States International The Development Finance Corporation (DFC), the Trade Development Agency and other relevant departments provide financing or loan guarantees for Latin America's 4G and 5G network infrastructure. Among them, the U.S. State Department Office released a checklist to support digital transformation implementation in Latin America and the Caribbean in November 2020, providing It has been decided to raise US\$10 million under the DCCP framework to promote the digital transformation of the Western Hemisphere. The US International Development Finance Corporation is financing communication projects in Ecuador and Peru, aiming to build 500 base stations and expand the scope of 4G mobile broadband access. The United States also announced that it will Egu

He Shuangrong and Wang Juexin: «China and Chile join hands to create a model of China-Latin America "Belt and Road" cooperation in the new era», published in «Latin America Research

Study » Issue 5,

2020

Study » Issue 5, 2020

Study » Issue 5, 2020

Study » Issue 5, 2020

The Inter-American Counter-Terrorism Committee of the National Organization supports Latin American countries in taking cyber confidence-building measures, such as funding the Legal Cooperation Department under the Inter-American Conference of Ministers of Justice or Attorneys General (REMJA) to organize regional training workshops on combating cybercrime.

(2) Latin American countries are in a dilemma

The science and technology game between China and the United States has just begun in 2019. Latin America is on the periphery of the global technology game. Look at the technological game between China and the United States in Europe from a "stay-out" stance and look forward to its prospects. As China and the United States technologically The game is getting more intense, and Latin America is forced to get involved. Compared with Europe, Latin America is less resistant to pressure from the United States and less able to bear the cost of losing China. Latin America's dilemma between China and the United States is both universal and special. Sexy

On the one hand, Latin America does not dare to easily disobey the United States. The United States has always regarded Latin America as its "backyard." Preventing foreign countries from interfering in Latin America and maintaining the United States' influence and control in Latin America are the fundamental purposes of the United States' Latin American policy. The Biden administration Although Trump has abandoned Trump's unilateralism and tough Latin America policy, it has continued Trump's series of policy ideas to hedge China's influence in Latin America, including "exclusion of China" in the 5G field. Latin America will surely become the country that the United States wants to visit. They are the targets of the Biden administration's alliance in promoting the development and application of emerging technologies that are so-called "in line with democratic values." In the context of the United States' policy of luring Latin America and will not let up, the fundamental reason for the weak resistance of Latin American countries lies in the geographical, historical, and The reality is that the economy, security and other fields are highly dependent on the United States. Taking security as an example, the United States has been the security guarantor of the Western Hemisphere since the beginning of the 20th century. Although many Latin American countries have differences with the United States, they hope that this arrangement will remain unchanged. Latin America currently benefits from U.S.-backed security initiatives and does not want to arouse U.S. hostility in the region, especially since other countries (such as China) have little direct support in this regard.

On the other hand, Latin America cannot resist the high cost-effectiveness of Chinese technology and bear the huge losses caused by the ban on Huawei 5G equipment. All walks of life in Latin America are fully aware of the cost-effective advantages of Huawei 5G. Some people

“The United States has always regarded Latin America as its 'backyard.' Preventing foreign countries from interfering in Latin America and maintaining the United States' influence and control in Latin America are the fundamental purposes of the United States' Latin American policy. The Biden administration Although Trump has abandoned Trump's unilateralism and tough Latin America policy, it has continued Trump's series of policy ideas to hedge China's influence in Latin America, including 'exclusion of China' in the 5G field. Latin America will surely become the country that the United States wants to visit. They are the targets of the Biden administration's alliance in promoting the development and application of emerging technologies that are so-called 'in line with democratic values.' In the context of the United States' policy of luring Latin America and will not let up, the fundamental reason for the weak resistance of Latin American countries lies in the geographical, historical, and The reality is that the economy, security and other fields are highly dependent on the United States. Taking security as an example, the United States has been the security guarantor of the Western Hemisphere since the beginning of the 20th century. Although many Latin American countries have differences with the United States, they hope that this arrangement will remain unchanged. Latin America currently benefits from U.S.-backed security initiatives and does not want to arouse U.S. hostility in the region, especially since other countries (such as China) have little direct support in this regard.”

“On the other hand, Latin America cannot resist the high cost-effectiveness of Chinese technology and bear the huge losses caused by the ban on Huawei 5G equipment. All walks of life in Latin America are fully aware of the cost-effective advantages of Huawei 5G. Some people

The U.S. Council on Foreign Relations believes that more than 2/3 of the countries in Latin America and the Caribbean have used or plan to use Huawei's 5G technology. They have a clear leading position in the global distribution map of Huawei's 5G technology use. David Sacks "China's Huawei is Winning the 5G Race Here's what the United States should be pond" a - huawei - 5g [2022-02-10] According to the Brazilian National Association for the Construction of Telecommunications and Information Technology Infrastructure It is estimated that if Huawei is excluded from participating in 5G construction, Brazil will pay an additional cost of 100 billion reais, local 5G network development will be delayed for three years, and 2.2 million jobs will be lost.

We also have a clear understanding of Latin America's low position in the U.S. diplomatic layout and the fact that the United States cannot provide Huawei 5G equipment substitutes. A Brazilian diplomat bluntly said that China has invested a lot of money in Brazil, which is something the United States will never do. It will be extremely difficult for the government to prevent Huawei from operating in the country. Another business person said that even if Huawei is excluded, the popularity of TikTok and other cost-effective mobile phones from China will not disappear. Rubens, former Brazilian ambassador to the United States Barbosa also pointed out that although the Western Hemisphere Strategic Framework Document issued by the United States places Latin America at a strategic high level, Latin America's geopolitical priority in US foreign policy is still very low. Latin American countries should insist on putting national interests before geopolitics and consciousness. Above the form. In fact, Brazilian Vice President Mourao and many senior officials from the pragmatic faction have repeatedly emphasized that excluding Huawei will double the cost of 5G construction in Brazil. Brazil ABC Federal University (Universidade Federal do ABC) Professor Sérgio Amadeu also pointed out that Huawei's market share in Brazil is as high as over 50%. If it is excluded, it will slow down the promotion of domestic 5G technology and significantly increase consumer costs. (3) There are early signs of differentiation in the development of 5G technology in Latin American

countries. Given the importance of China and the United States to Latin America and the deterioration of Sino-US relations, Latin American countries generally tend to remain neutral in the Sino-US game in order to maximize interests and strive to position themselves outside of conflicts. They keep a low profile and consolidate relations with China and the United States. Relations and seeking benefits have become a successful strategy for Latin American countries for some time. For example, Chile's right-wing former President Piñera tried to portray himself as the most trustworthy interlocutor between the United States and China. Argentina's center-right former President Macri and his center-left successor Fernandez is also keen on maintaining constructive relations with both the United States and China. Even Brazilian President Jair Bolsonaro, who has always claimed to be an ally of Trump, has tasked Vice President Hamilton Mourao, who has long advocated neutrality, to maintain relations between Brazil and China. However, as the technological war between China and the United States continues to escalate and the 5G construction of some Latin American countries enters a critical period, the neutral space in Latin America has been severely compressed, and the pressure to choose sides has increased significantly. At present, Latin American countries are not satisfied with the United States' "combine pull and fight" strategy. There are mainly three types of reactions:

First, most Latin American countries adopt the delaying tactic of exchanging time for space against the United States. For example, Ecuador

It is necessary to understand that the United States' "combine pull and fight" strategy is a double-edged sword. On the one hand, it can help the United States to maintain its global leadership and influence, but on the other hand, it can also lead to the fragmentation of the international system and the rise of regional powers. In Latin America, the United States' strategy has led to a series of problems, such as the deterioration of Sino-US relations and the rise of China's influence in the region.

Second, some Latin American countries have chosen to align themselves with the United States against China. This is mainly due to the fact that the United States has provided them with economic and technological support, which has helped them to develop their economies and improve their living standards. However, this strategy also has its own risks, such as the loss of national sovereignty and the deepening of the divide between the United States and China.

Third, some Latin American countries have chosen to remain neutral between the United States and China. This is mainly due to the fact that they want to maintain their national independence and autonomy, and avoid being caught in the middle of the Sino-US game. However, this strategy also has its own risks, such as the loss of international support and the deepening of the divide between the United States and China.

It is necessary to understand that the United States' "combine pull and fight" strategy is a double-edged sword. On the one hand, it can help the United States to maintain its global leadership and influence, but on the other hand, it can also lead to the fragmentation of the international system and the rise of regional powers. In Latin America, the United States' strategy has led to a series of problems, such as the deterioration of Sino-US relations and the rise of China's influence in the region.

It is necessary to understand that the United States' "combine pull and fight" strategy is a double-edged sword. On the one hand, it can help the United States to maintain its global leadership and influence, but on the other hand, it can also lead to the fragmentation of the international system and the rise of regional powers. In Latin America, the United States' strategy has led to a series of problems, such as the deterioration of Sino-US relations and the rise of China's influence in the region.

Ecuador officially joined the U.S. "Clean Network" program and also reached a framework agreement with the U.S. International Development Finance Corporation, which included the U.S. helping Ecuador repay billions of dollars in loans from China in exchange for excluding Huawei from Ecuador's telecommunications network. However, Ecuador has not officially announced that it will exclude Huawei from 5G, and Ecuador is also a signatory to China's "Global Data Initiative". Although Brazil has officially joined the "Clean Network" plan, Huawei has not been excluded from Brazil's 5G spectrum auction. Colombian President Du Iván Duque has maintained close security cooperation with the United States, but also made it clear that his government has no plans to exclude Huawei from the country's 5G network construction.

Second, some Latin American countries have resisted U.S. pressure, insisted on proceeding from their own national interests, and continued to promote market-oriented and pragmatic cooperation with Huawei. For example, Suriname took the lead in entering the 5G era with the help of Huawei equipment in the context of the Sino-US game. Dominica, Trinidad and Tobago has also cooperated with Huawei to lay out part of its 5G network. The US government's proposal to exclude Huawei from 5G has been refuted by relevant companies in the country and criticized by the public.

Doubt

Third, a few countries have succumbed to the United States on some related matters. For example, under pressure from the United States, former Chilean President Piñera modified his visit to China and canceled his visit to Huawei's Shenzhen factory. Under the pressure of the United States' "Operation Clean Network" and Under the inducement of promising to provide funding for Chile's Pacific submarine cable, Chile announced that it would abandon the Chinese plan for the Pacific submarine cable project and adopt the Japanese plan from Japan to Valparaíso, Chile via Australia and New Zealand. The Prime Minister of Antigua and Barbuda updated It rejected Huawei's US\$4 million loan and bluntly stated that it did not want to get involved in the geopolitical conflict between China and the United States. El Salvador also did not send people to participate in activities related to Huawei's "Seeds for the Future Project" in 2020 as usual.

Three Latin American 5G technology development prospects

In the face of the escalating digital technology dispute between China and the United States focusing on 5G, Latin American countries mostly respond with a delaying strategy. Although this is a helpless move under a dilemma, it has an obvious negative impact on the development of regional countries. Although U.S. interference has a negative impact on China Latin America's 5G cooperation has caused a blow, but it is unlikely that Chinese technology companies will be completely excluded from the Latin American region.

He Shuangrong and Wang Juexin: "China and Chile join hands to create a model of China-Latin America "Belt and Road" cooperation in the new era", published in «Latin America Research» Issue 5, 2020

He Shuangrong and Wang Juexin: "China and Chile join hands to create a model of China-Latin America "Belt and Road" cooperation in the new era", published in «Latin America Research» Issue 5, 2020

He Shuangrong and Wang Juexin: "China and Chile join hands to create a model of China-Latin America "Belt and Road" cooperation in the new era", published in «Latin America Research» Issue 5, 2020

Tracking, he believes that the current Sino-US technology dispute focuses on 5G technology and the role of Huawei, because whoever sets global standards and controls these new technologies is expected to have a huge strategic advantage in global affairs in the next few decades.

Some Latin American scholars further pointed out that the real reason why China's cutting-edge technologies (new generation wireless networks, quantum computing and communications, artificial intelligence) alarm the U.S. government is that they may mean dangerous geopolitical changes: China is not only trying to formulate the 21st century It will also give the "China Model" new financial and technological connotations. The United States requires countries to abandon the use of Huawei's 5G equipment

on the grounds that Huawei's technology poses security risks. Most countries in Latin America do not accept this logic of the United States. It is not recognized. The reasons are as follows. First, not only Huawei, but global technology companies and Internet application providers may in principle be required to cooperate with national intelligence and security agencies when national and public security are at risk. Moreover, compared with China, Latin American countries are more worried about U.S. intervention, because the U.S. has bad precedents of spying on leaders of Latin American countries and intervening in the internal affairs of Latin American countries. Second, the U.S. concerns about the security risks of Huawei technology do not apply to Latin America, because most Latin American countries do not understand Industrial secrets, and these fields are highly regulated, there is nothing wrong with China entering the Latin American market in accordance with Latin American rules. Third, as some Latin American scholars bluntly said, Chinese companies mainly meet the needs of developing countries for faster and cheaper telecommunications infrastructure. It is not building a 5G network to spy on other countries. 6 Some Latin American scholars have expressed doubts about the ability of the United States and its allies to provide alternatives to China's 5G technology. They believe that although the United States has proposed initiatives such as the Blue Dot Network, it is hedging against China.

The influence of digital technology has limited effect (3) There is still room for

China-Latin America 5G cooperation. Although the

US interference has laid a stumbling block for China-Latin America 5G cooperation, it is not enough to force a halt to the China-Latin America 5G cooperation process, such as Suriname, Trinidad and Dominica. Latin American countries such as Argentina and Brazil have resisted U.S. pressure and continued to promote practical cooperation with Huawei. The heads of Latin American countries such as Argentina, Chile, and Uruguay met with President

Some Latin American scholars further pointed out that the real reason why China's cutting-edge technologies (new generation wireless networks, quantum computing and communications, artificial intelligence) alarm the U.S. government is that they may mean dangerous geopolitical changes: China is not only trying to formulate the 21st century It will also give the "China Model" new financial and technological connotations. The United States requires countries to abandon the use of Huawei's 5G equipment

on the grounds that Huawei's technology poses security risks. Most countries in Latin America do not accept this logic of the United States. It is not recognized. The reasons are as follows. First, not only Huawei, but global technology companies and Internet application providers may in principle be required to cooperate with national intelligence and security agencies when national and public security are at risk. Moreover, compared with China, Latin American countries are more worried about U.S. intervention, because the U.S. has bad precedents of spying on leaders of Latin American countries and intervening in the internal affairs of Latin American countries. Second, the U.S. concerns about the security risks of Huawei technology do not apply to Latin America, because most Latin American countries do not understand Industrial secrets, and these fields are highly regulated, there is nothing wrong with China entering the Latin American market in accordance with Latin American rules. Third, as some Latin American scholars bluntly said, Chinese companies mainly meet the needs of developing countries for faster and cheaper telecommunications infrastructure. It is not building a 5G network to spy on other countries. 6 Some Latin American scholars have expressed doubts about the ability of the United States and its allies to provide alternatives to China's 5G technology. They believe that although the United States has proposed initiatives such as the Blue Dot Network, it is hedging against China.

The US National Security Agency (US National Security Agency) monitors Brazilian state-owned oil companies and monitors former Brazilian President Deere The scandal over Dilma Rousseff's phone call has exposed the United States' credibility on international supervision issues is limited.

Some Latin American scholars further pointed out that the real reason why China's cutting-edge technologies (new generation wireless networks, quantum computing and communications, artificial intelligence) alarm the U.S. government is that they may mean dangerous geopolitical changes: China is not only trying to formulate the 21st century It will also give the "China Model" new financial and technological connotations. The United States requires countries to abandon the use of Huawei's 5G equipment

on the grounds that Huawei's technology poses security risks. Most countries in Latin America do not accept this logic of the United States. It is not recognized. The reasons are as follows. First, not only Huawei, but global technology companies and Internet application providers may in principle be required to cooperate with national intelligence and security agencies when national and public security are at risk. Moreover, compared with China, Latin American countries are more worried about U.S. intervention, because the U.S. has bad precedents of spying on leaders of Latin American countries and intervening in the internal affairs of Latin American countries. Second, the U.S. concerns about the security risks of Huawei technology do not apply to Latin America, because most Latin American countries do not understand Industrial secrets, and these fields are highly regulated, there is nothing wrong with China entering the Latin American market in accordance with Latin American rules. Third, as some Latin American scholars bluntly said, Chinese companies mainly meet the needs of developing countries for faster and cheaper telecommunications infrastructure. It is not building a 5G network to spy on other countries. 6 Some Latin American scholars have expressed doubts about the ability of the United States and its allies to provide alternatives to China's 5G technology. They believe that although the United States has proposed initiatives such as the Blue Dot Network, it is hedging against China.

During the phone call or phone call, both expressed their hope to strengthen cooperation with China in the fields of technological innovation and 5G construction. Argentine President Fernandez said in his speech at the 2020 China International Trade in Services Conference that Argentina and China are seeking to create emerging fields centered on 5G. Growth Points of Cooperation ̃ In fact, China-Latin America digital technology cooperation has strong momentum. The United States also knows that it is difficult to completely eliminate Huawei's presence in Latin America. This is the fundamental reason why China-Latin America 5G cooperation

can break through the US barriers and achieve greater achievements. China-Latin America Digital Technology Cooperation has come from behind, showing strong vitality. Compared with European and American countries, Chinese digital technology companies are latecomers to the Latin American market. However, Chinese companies continue to expand markets and develop in Latin America with their high-quality products and services in 5G, security and other fields. Among them, Huawei has been deeply involved in Latin America for more than 20 years. Its business covers the entire Latin American region except a few small countries in the Caribbean and Central America. Its services cover 50% of the population in the region. Its business volume in Brazil and Mexico accounts for Huawei's Latin American region. More than 20%. During the COVID-19 epidemic, Huawei 5G helped local technology fight the epidemic and provided technical support for the China-Latin America video exchange meeting. Huawei also helped cultivate local ICT talents through projects such as the "Future Seeds Program" and actively fulfilled its social responsibilities. ZTE, Hainan Security equipment produced by companies such as Convision and Tongfang Vision has entered Bolivia, Ecuador, Venezuela, Chile and other countries, using digital technology to help local disaster prevention and reduction, improve public security conditions, and provide strong support for the development of digital infrastructure and digital transformation in Latin America. For example, In March 2019, the Argentine province of Jujuy signed a \$28 million contract with ZTE, covering security cameras, monitoring centers, emergency services and telecommunications infrastructure. By the end of 2019, ZTE had provided Bolivia with a total of 600 cameras equipped with facial recognition technology. The cameras, together with the 2,000 cameras that have been put into use, have become part of the country's BOL-110 urban security integrated command and control system. In September 2020, ZTE also cooperated with Omdia to release "Security Transparency and Commitment in the 5G World" The white paper points out that ZTE's existing security capabilities, experience and roadmap demonstrate a collaborative, transparent and open mechanism designed to deal with upcoming security risks and challenges in the 5G world.̃

In fact, although the pressure from the United States has caused some Latin American countries to loosen their stance, the United States is also well aware that it is difficult to completely eliminate the presence of Chinese technology. Miles, the head of the Inter-American Dialogue Organization, believes that "despite the warnings from the United States and other countries that the use of Chinese technology will pose security risks, but China's cheaper, advanced equipment is attractive to many countries in Latin America. Unless Huawei is directly involved in elections or other internal affairs in the region in the coming months, Latin American countries ban China's cheaper, higher-quality equipment. of 5G infrastructure

̃ Lu Daxin: «China-Latin America 5G cooperation has great potential», People's Daily Overseas Edition, January 26, 2021, [http:// / paper yyyyy yyy yy / yyyyy / yyy / yyy y yy / yy / yyyyy yyyyy yy \[yyy y yy y yy\]](http://paper.yyyyy yyy yy / yyyyy / yyy / yyy y yy / yy / yyyyy yyyyy yy [yyy y yy y yy])

̃ yyy yyyyy "yyy yyyyy yy yy yyy yy yy: yyyyy yy yyyyy yyyyy y yy yy yy: / / yy yy yy / yy [yyy y yy y yy]

