

"NEW INFRASTRUCTURE"

Emerging Trends in Chinese Foreign Direct Investment in Latin America and the Caribbean

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Introduction

China's foreign direct investment (FDI) in Latin America and the Caribbean (LAC) has played a prominent role in sectoral growth in parts of the region over the past 20 years—especially in South America's largest markets, where Chinese companies historically focused on the region's vast agricultural and extractive resources. From 2003 to 2022, Chinese FDI totaled \$187.5 billion in LAC, still well below U.S. or European FDI flows during the same period. But Chinese companies are growing their presence in the region as they pursue targeted opportunities in nearly all LAC nations.

The nature of Chinese FDI in the region is changing in notable ways, however, and with still-unforeseen implications for the region and its many other international investors. The value of Chinese investment has dropped somewhat in recent years, as detailed in this report. On average, China's FDI reached \$14.2 billion per year between 2010 and 2019 but fell to an average of \$7.7 billion from 2020 to 2021, and then \$6.4 billion in 2022. This drop reflects a substantial recalibration on the part of China's government and its companies, however, as opposed to disinterest in the LAC region. As it stands, Chinese companies are in many cases pursuing more engagement with LAC, but through smaller deals on average—and in frontier sectors that are directly aligned with Beijing's own economic growth objectives.

Indeed, the sorts of large-scale infrastructure projects that once characterized the Belt and Road Initiative (BRI)-Chinese President Xi Jinping's signature foreign policy initiative-are no longer as emblematic of Chinese investment in LAC as they once were. In many parts of the region, Chinese interest in canals, rail, and other major transport and energy infrastructure is being replaced by a growing emphasis on innovation, whether in information and communication technology (ICT), renewable energy, or other emerging industries-consistent with Beijing's laser focus on its own economic upgrading and global competitiveness. Considerable evolution is also apparent within LAC's innovation-related industries, as Chinese companies shift their attention from ICT equipment and devices to the delivery of computing infrastructure and fintech services, for instance.

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China's traditional sectors of focus in LAC, including agriculture and energy, continue to attract Chinese companies, but interests have shifted in these industries, too—from an early focus on boosting food production to recent interest in buying agricultural chemical companies, and from a preference for equity oil to a growing focus on renewable energy deal-making. The region's minerals and metals remain of primary interest to Chinese companies, but are now largely supporting China's high-tech industries rather than the sort of domestic infrastructure development that spurred China's economic growth in the early 2000s.

This report, which draws on several statistical sources,¹ our own analysis of individual FDI transactions, and consultations with top industry experts in LAC, highlights the various trends underway in Chinese FDI in the region, at a moment of considerable transition. China's investment in LAC is growing in those sectors that many G7 nations have themselves sought to prioritize—both in support of the region's economic objectives and with their own economic security in mind.² The forms and features of these industries will be forged in the coming decade, as Chinese and other companies vie for space in innovation-related fields and access to the resources that sustain them.

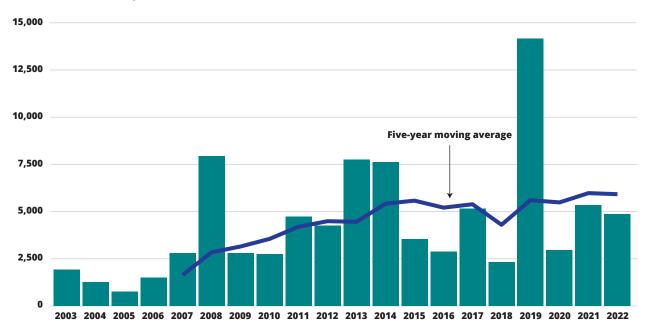
Chinese FDI in Flux

Data on Chinese FDI in the LAC region show a notable downward trend in project announcements over the past few years. This presents as a tapering in the value of greenfield FDI projects over time, and a more pronounced drop in the value of Chinese mergers and acquisitions (M&A) in the region. As shown in Figure 1, average Chinese greenfield FDI started leveling off as early as 2014, with a subtle rise on average ever since.

Rather than tapering, the value of China's M&A has declined in LAC (see Figure 2), with growth first slowing in 2014, and then steadily falling after 2020, based on a fiveyear moving average. The Economic Commission on Latin America and the Caribbean (ECLAC) similarly found that in 2022, Chinese acquisitions of LAC assets were the lowest in a decade by number of projects and, as a percentage of total M&A in the region, trailed those of U.S., Australian, European Union, Canadian, and Chilean companies.³

What remains in the way of M&A activity is mostly limited to LAC's electricity generation and transmission ("utilities") industries. For instance, in 2020, China Yangtze Power, a China Three Gorges subsidiary, announced plans to acquire Luz del Sur, Peru's largest utility company, which is

FIGURE 1: CHINA GREENFIELD FDI IN LAC BY YEAR, 2003-2022 (USD MILLIONS)



Source: Author calculations using FdiMarkets data.

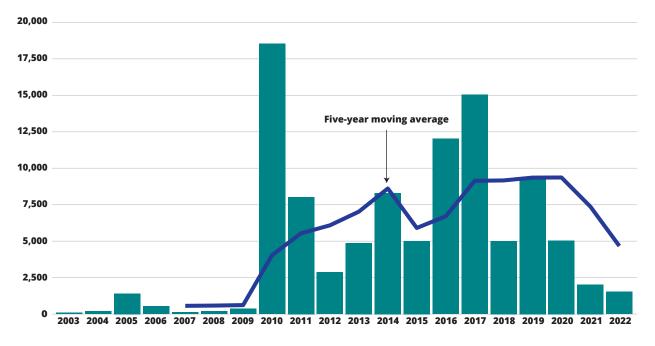


FIGURE 2: CHINA MERGERS AND ACQUISITIONS IN LAC BY YEAR, 2003-2022 (USD MILLIONS)

Source: Author calculations using Dealogic data.

responsible for delivering electricity to the south of Lima and beyond. Through that deal, China Yangtze Power also acquired interests in Inland Energy, which was involved in the Santa Teresa I dam and in the construction of the Santa Teresa II, LlucIIa, and Lluta power generation plants. China Three Gorges also holds stakes in Peru's Chaglla and San Gabán III dams. In Chile, China Southern Power Grid bought a stake in the energy transmission firm Transelec in 2018 and State Grid bought energy distributor Chilquinta Energía in 2019 and CGE in 2020. In total, electricity generation and transmission deals accounted for nearly 74.4 percent of total M&A transactions over the past five years and a significant amount (\$16.9 billion) of total Chinese FDI value in the region during that time frame.⁴

Even taking into account recent power sector deals, there is little to suggest that China's M&A will significantly rebound in the coming months. In fact, the LAC M&A trend is part of a broader, global slowing of Chinese M&A activity. In a recent study of China's outward FDI, professional services network EY estimated the value of China's total announced overseas investment in 2022 at \$29 billion, which amounted to a 52 percent drop year-onyear.⁵ Analysts attributed this slump to rising geopolitical tensions and related regulatory tightening, rising global inflation, and other factors.⁶ In the LAC region, the declining value of total Chinese investment is also seemingly related to a recalibration of investment priorities by the Chinese government and Chinese companies. Chinese companies remain interested in investing in much of LAC, but are increasingly focusing their efforts on specific industries in the region. These include services and manufacturing, where other international companies have also expressed growing interest of late,⁷ but also those industries, such as ICT, which China views as fundamental to its own domestic economic growth. As Xi Jinping has stressed to national and provincial officials alike, China is pursuing a "primary task of high-quality development" that will rely on scientific and technological innovation.⁸ This "primary task" is being carried out at home and abroad through policies promoting of priority industries.

Whether driven by company interests, Chinese government mandates, or LAC needs, China's innovation-related investment in the region has grown over time, both in value and number of projects (see Figure 3). Yet, because the dollar value of these deals is relatively small on average, their prominent role in Chinese FDI has been obscured in many cases by bigger-ticket, hard infrastructure transactions. As noted in Figure 3, ICT deals accounted for a sizable 40 percent of total Chinese FDI instances between 2018 and the first half of 2023, but only 8 percent of the total *value* of Chinese FDI during that time period,

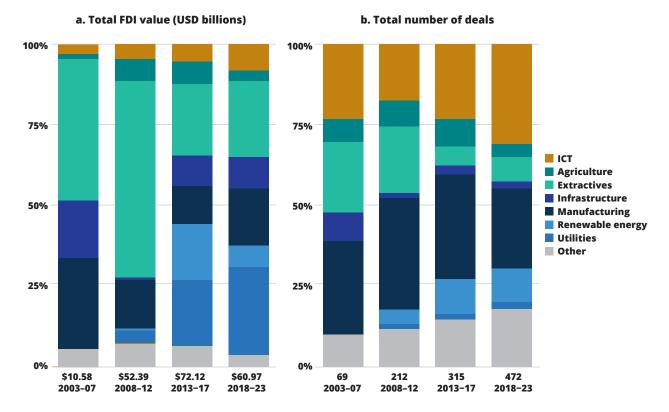


FIGURE 3: CHINA FDI (M&A AND GREENFIELD) IN LAC BY SECTOR AND TIME PERIOD

Source: Author calculations using Dealogic and FdiMarkets; includes both M&A and greenfield FDI data.

trailing Chinese investment in LAC extractives (24 percent) and utilities (26 percent) by that measure.

China's focus on renewable energy-another innovationrelated industry, by China's definition⁹-has also grown in LAC over the past decade, accounting for more than 6 percent of the value of total FDI announcements between 2018 and 2023. China's 2018-2023 renewable energy investments represented a smaller share of total project value than in the previous five years (2013-2017), however, as utilities and extractives (including lithiumrelated transactions) increasingly dominate the China FDI landscape (see Figure 3). In the LAC region, as elsewhere, China has nevertheless harnessed its competitive advantage in policy consistency and lower-cost capital to grow its presence in solar, wind, and electric vehicle (EV) technology.¹⁰ According to our data, growth in the value of manufacturing deals from 2018 to 2023 was due in no small part to growth in EV project announcements. Electric vehicle and battery manufacturing accounted for 42 percent of the total value of Chinese manufacturing investment during that time frame.

Other factors may also be impacting Chinese FDI flows in the region, of course. China's own slowing growth (estimated at 5 percent in 2023 and 4.2 percent in 2024) will have some effect on outward investment, as will China's mounting local debt, its sizeable outstanding debt in countries across the Global South, and a related rethinking in Beijing of the BRI's historical and high-risk focus on large-scale infrastructure investment.

China's interest in smaller deals in targeted sectors would seem part of a broader effort to reduce risk exposure in LAC and other regions, while also advancing Beijing's core development objectives. The National Development and Reform Commission, Ministry of Commerce, People's Bank of China, and Ministry of Foreign Affairs' "Guiding Opinions on Further Guiding and Regulating the Direction of Overseas Investment" have stressed risk mitigation while also encouraging "the export of domestic superior production capacity, high-quality equipment, and applicable technology," among other investment aims. These guidelines continue to be circulated as required reading for Chinese government bodies.¹¹ The pandemic and its effects have also dampened China's outbound FDI. China's academic, financial, and government institutions have noted the challenges associated with the post-pandemic investment environment in Latin America-to include the effects of inflation on economies in recovery and increasingly complicated fiscal scenarios. In its July 2023 "Global Economic and Financial Outlook Report," Bank of China noted growing debt pressure in parts of LAC-the result, it explained, of credit tightening in international markets.¹² As Tsinghua University's Institute of the Belt and Road Initiative and the state-owned Dagong Credit Rating Company, Ltd. also suggested in a 2022 report, "the negative impact of the epidemic on the business environment of Latin American countries cannot be underestimated."13 A 2023 Sinosure report expects Chinese overseas investment "to further expand amid higher levels of growth in 2023,"14 though much will depend on China's efforts to boost its own economic growth in the coming months and years.

As detailed in a 2022 Inter-American Dialogue and Boston University Global Development Policy Center report on trends in Chinese development finance to LAC, the recalibration of Chinese overseas engagement extends to the financial realm as well. The LAC region has experienced not just a tapering in the value of Chinese FDI, but also an abrupt drop in loans from China's top development finance institutions (DFIs), China Development Bank (CDB) and China Export-Import Bank (Eximbank).¹⁵ This was especially evident in 2020, when lending ceased altogether, amid pandemic-related challenges, and as China reconsidered its development bank functions and areas of focus.¹⁶ Between 2019 and 2022, the LAC region received a total of just over \$2.9 billion in loans from both CDB and Eximbank, as compared to peak DFI lending in 2010, when CDB alone issued over \$35 billion to the region. China is still lending, but through different financial mechanisms, and with less overall focus on major infrastructure projects.

China-LAC trade flows are dynamic by comparison. Growth in China-LAC trade slowed somewhat in 2022, after achieving a record high in 2021, but trade volume has otherwise grown at a rapid pace—from \$14 billion in 2000 to \$495 billion in 2022.¹⁷ China's intensive focus on innovation is also evident in the trade data, though mostly in Chinese exports to the region, which consist of increasingly high-tech goods and services.¹⁸ In 2022, 88 percent of China's exports to LAC were low, medium, and high technology manufactured goods.¹⁹ By contrast, China's imports from LAC still consist mostly of raw materials, just as they did over a decade ago, although tech-related metals and minerals will naturally account for a larger portion of these over time.

Regardless of the reasons for slowing Chinese FDI in LAC and other parts of the world, China is nevertheless signaling more to come across the region. Xi Jinping's November 2023 talks with Peruvian President Dina Boluarte, Uruguay's Luis Lacalle Pou, and Colombia's Gustavo Petro, and his April 2023 meeting with Brazilian President Luiz Inácio Lula da Silva, all focused on expanding already extensive trade relations, while also encouraging cooperation in mostly innovation-related sectors in these countries, including urban mobility systems in Colombia, pharmaceuticals in Uruguay, digital economy, energy, and mining in Peru, and 5G in Brazil, among other areas. These and other LAC countries should expect some degree of Chinese economic engagement in the coming months and years-though primarily in sectors that are aligned with China's own process of economic upgrading.

Chinese companies remain interested in investing in parts of LAC, but are increasingly focused on specific industries.

"New Infrastructure" in LAC

As previously noted, China's activity in LAC is shifting toward specific industries. Many of these new, priority areas are described by China as "new infrastructure" (新基建), a term which encompasses industries telecommunications, fintech, and energy transition, for instance—that are broadly innovation-related, but also key components of China's economic growth strategy. China has promoted these sectors at home in recent years, but is also shifting its technological frontier outward—to leverage its comparative advantages and expand trade and services, especially across the Global South.²⁰ According to China's Ministry of Commerce, "…'new infrastructure' has promoted Chinese companies to make great progress in infrastructure equipment, raw material production, technology, etc., leading to an increase in the number, scope, and diversification of overseas 'Belt and Road' projects."²¹

The term "new infrastructure," which emerged as a concept in 2018 and featured in China's 14th Five-Year Plan (2021–2025), is woven throughout Chinese policy documents, alongside other modernization-related lexicon. It is understood in relation to "new industrialization," for instance, which featured in the 2022 20th Party Congress, and refers to the realization of "informatization, urbanization and agricultural modernization." Both "new infrastructure" and "new urbanization" would appear to support "China-Style Modernization," which the Chinese Communist Party (CCP) aims to achieve by 2035. In China's 2022 Government Work Report, "new infrastructure" was positioned alongside "new urbanization" and "major project construction," which together were dubbed the "Two News and One Major (两新一重)."²²

China's focus on "new infrastructure" also coincides with a growing focus on "small and beautiful" (小而美; official translated as "small but smart") projects along the BRI. China has described these projects as smaller investments of a shorter overall duration, and which are better aligned with countries' social welfare needs. According to Wang Jian, director and researcher at the Institute of International Studies of the Shanghai Academy of Social Sciences, this concept gained traction as China recognized the need for enhanced "[prudence in assessing] the environmental and financial sustainability of projects... [a]gainst the backdrop of the global economic downturn, the appreciation of the US dollar, and the further shrinking of the fiscal space for some developing countries to undertake large-scale projects."²³

Chinese FDI in LAC "new infrastructure" industries is growing, with ICT, renewable energy technology, and, increasingly, electric vehicles accounting for the bulk of this activity. "New infrastructure" is still defined rather loosely, even in Chinese government publications, but has fairly consistently referred to 5G, data centers, artificial intelligence, industrial internet, ultra-high-voltage electricity transmission, electric vehicles, renewable energy, and urban rail transit (or "urban infrastructure," as in Figure 4).²⁴ Shanghai newspaper *ThePaper.cn* encouraged its readers to play an "alphabet game" to help recall the priority "new infrastructure" sectors, noting that A is artificial intelligence, B is for blockchain, C for cloud computing, D equals big data, E stands for New Energy, F for unmanned factories, G for 5G, H for ultra-high-voltage transmission, and I for industrial internet.²⁵

Based on the types of deals evident in LAC, this report defines "new infrastructure" as comprising electric vehicles manufacturing (including battery, car, and bus manufacturing), other high-end manufacturing (which includes medical and machinery manufacturing), ICT, renewable energy (including hydroelectricity), and urban infrastructure (e.g., rail and other urban transport and ultrahigh voltage transmission lines). In addition to investment in these areas, China's "new infrastructure" technology is also being exported to LAC—and built by Chinese companies, though without a China ownership component.

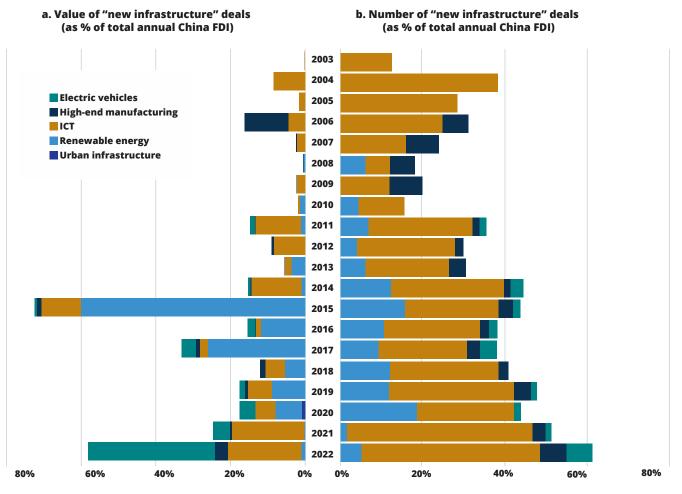
Our data suggest an upward trend for Chinese FDI in LAC "new infrastructure" industries, with ICT, renewable energy technology, and, increasingly, electric vehicles accounting for the bulk of this activity (see Figure 4). Whether in terms of value or number of deals, Chinese FDI in these industries is on the rise, accounting for 58 percent (around \$3.7 billion) of total annual Chinese FDI in the region in 2022 and over 60 percent of the total number of FDI deals announced by Chinese companies that year.

As shown in Figure 4, Chinese "new infrastructure" activity in LAC is most evident in ICT— through greenfield investment in equipment, consumer electronics, satellite, services, and computing, for instance. The conditions are relatively ripe for Chinese ICT investment in LAC, including a substantial consumer base with high levels of demand for affordable digital equipment and services. Additionally, as geopolitical conditions limit China's tech investment and trade prospects in developed country markets, many of China's ICT and high-end manufacturing companies have sought to engage more extensively with LAC and other parts of the Global South.²⁶

Our ICT data show that China's major tech suppliers are moving beyond equipment sales, which were the original basis for Huawei operations in LAC. Equipment remains a

FIGURE 4: CHINA FDI IN "NEW INFRASTRUCTURE" INDUSTRIES, 2003-2022

Source: Author calculations using Dealogic and FdiMarkets; includes both M&A and greenfield FDI data.



prominent focus for Chinese tech companies in the region, as noted in Figures 5 and 6, accounting for the bulk of ICT announcements. As it stands, Chinese companies are among the few that can sell devices at a price point that is acceptable to the region's lower-income customers.²⁷

However, Huawei and other Chinese companies are rapidly expanding their focus to include data centers, cloud computing, and other services, especially in Argentina, Brazil, Chile, Colombia, Mexico, and Peru. Victor Muñoz, former Colombian chief information officer and now partner at Argia consulting, noted that in Colombia, Chinese companies have expanded 5G infrastructure while integrating IoT technologies, cloud services, and cybersecurity solutions. Computing accounted for a sizable 41 percent of total ICT investment in the region between 2018 and the first half of 2023. Huawei is additionally developing renewable energy generation capacity to power new computing facilities in parts of the region.

The United States and some like-minded partners have cautioned against overreliance on Chinese investment and influence throughout the "digital stack" (network infrastructure, devices, applications, content, and governance), highlighting the need for interoperability and noting the prospect of repurposing digital technologies and infrastructure to enable the suppression of civil society. In LAC and elsewhere, the United States has called for robust consumer protection frameworks to reduce space for impunity and the abuse of rights, whether at the behest of state or non-state actors.²⁸ The trend thus far is toward more in the way of Chinese ICT investment, however, with engagement evident across the digital ecosystem.

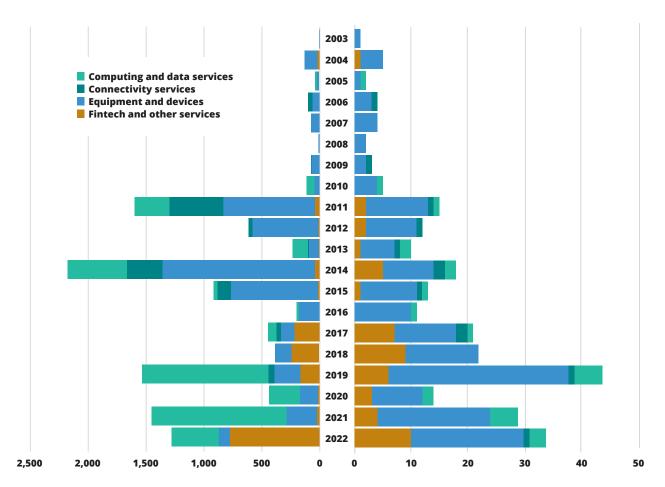
Beyond ICT-related deal-making, Chinese investment in the region's EV industry also skyrocketed in 2022 to

FIGURE 5: CHINA FDI IN LAC ICT, 2003-2022

Source: Author calculations using Dealogic and FdiMarkets; includes both M&A and greenfield FDI data.

a. Total value (USD millions)

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b. Total number of deals
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\$2.2 billion, accounting for 35 percent of the total value of Chinese FDI that year through a total of five deals. These investments included battery and car manufacturing by companies such as BYD, Beiqi Foton, and Chery, with a focus on Brazil, Mexico, and Argentina. Examples were abundant before 2022, too, including investments in the manufacturing of electric buses, mostly by BYD. Back in 2017, Buenos Aires province and Chinese company Dongfeng agreed to build a plant to manufacture EVs for public transport.²⁹ Other such deals extend back to 2011.

High-end manufacturing is another prominent area of focus, driven in large part by nearshoring trends in Mexico, but also interests in other parts of the region. For our purposes, high-end manufacturing includes high-end machinery and medical manufacturing, which are mostly evident in Mexico and Brazil, and to a lesser degree in Colombia, Ecuador, and Chile. Nearly all of China's medical manufacturing investment in LAC happened during and since the pandemic through greenfield deals, again in these five countries. Chinese medical company Sinovac has been responsible for nearly 26 percent of investment in high-end medical production since 2017.

In comparison to other "new infrastructure" industries, urban infrastructure barely features in China's investment profile in LAC. The Bogotá metro Line 1 project is among the few examples of Chinese involvement in this space in the LAC region. But that project has been in a protracted stasis amid bitter disagreement between former Bogotá Mayor Claudia López and Colombian President Gustavo Petro on metro construction. Petro preferred a more expensive, below-ground option while López sought to advance an already planned elevated rail system. In other cases, China is only involved in the construction of these projects, such as China Railway 16th Bureau Group's

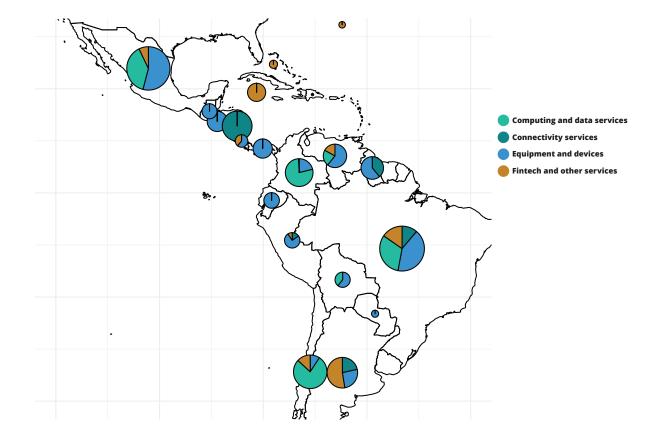


FIGURE 6: CHINA FDI IN LAC ICT BY COUNTRY AND TYPE, 2003-2002

Source: Author calculations using Dealogic and FdiMarkets; includes both M&A and greenfield FDI data.

construction of Metro Line #7 in Santiago or CRRC's rolling stock contract for Santiago's suburban railway.³⁰ China is also exporting urban infrastructure equipment to LAC. An August 2019 loan to Argentina supported the purchase of metro line A equipment from China, for instance.³¹ China's ultra-high voltage transmission infrastructure, which we classify as urban infrastructure, is present in Brazil, though not as FDI. Chinese companies were awarded contracts there to construct these long-distance transmission lines.

The multiplier effect of "new infrastructure" investments may be quite impactful for the region, leading to even more of these innovation-related projects. More data center development in LAC and other regions is likely to boost energy demand, including from various renewable sources. E-commerce development in Brazil has already prompted investment by Chinese fintech companies and those doing related storage and logistics, according to Larissa Wachholz, a partner at Brazil's Vallya Participações.

Trends in Traditional Areas of Focus

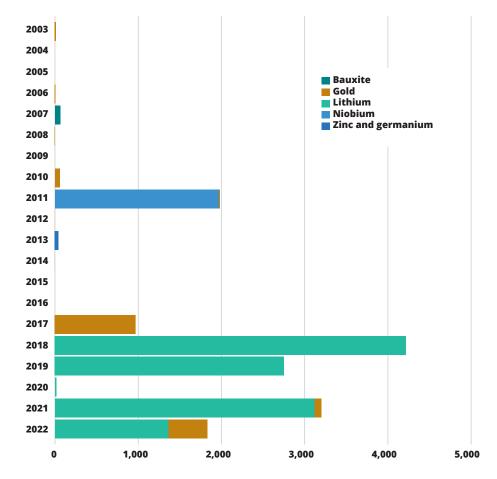
Chinese investors remain focused on traditional sectors of interest, too, including those related to China's own food and energy security. Some of these still account for a significant portion of overall investment (see Figure 3), but investment within these sectors is also shifting in ways that are consistent with China's growing focus on innovation.

Agricultural investment has been a notable feature of China's overall FDI in LAC for upwards of two decades, accounting for an average 6 percent of total Chinese investment in the region between 2003 and 2022. However, based on our data, Chinese investors have focused more intensively on agriscience in recent years, in addition to their continued and long-standing interest in facilitating food production and transport.³² This included the purchases of several agricultural science and chemicals companies in just the past two years. China's Adama bought the remaining stakes of its Chileagro Bioscience SA, a bio-stimulants business, in Chile,³³ for example, and Sinochem acquired Agro Jangada and Semillas Ceres in Brazil and Mexico, respectively. Brazil has been the top recipient of China's agricultural sector investment since 2003, including China's more recent ventures in agricultural chemicals or fertilizers, which Wachholz views as motivated by an interest in accessing agricultural technologies.³⁴

Large-scale infrastructure is also still of interest to some Chinese companies, just as it has been for years—including preceding the establishment of the BRI. Despite the risks inherent in advancing major infrastructure projects, these deals are still of some value to China, and continue to be in high demand in parts of LAC. According to Ignacio Tornero, head of the Chile-based East Consulting, Chinese state-owned enterprises (SOEs) are increasingly active in the development of Chilean public infrastructure such as highways, subway lines, ports, water reservoirs, and hospitals. At least some of China's infrastructure investment in LAC and other parts of the world addresses China's economic inefficiencies, often by exporting its excess industrial capacity. As Wachholz noted, large Chinese SOEs, such as State Grid and SPIC, have pursued infrastructure projects in Brazil, both as business opportunities and to help offload China's excess capacity.³⁵

Mining and energy continue to be high-priority sectors for Chinese investors, but company interests have shifted somewhat alongside China's evolving policy priorities. In general, interest has shifted from accessing constructionrelated materials to mining for metals and minerals with broader applications, including in technological supply chains. With these interests in mind, critical metals and minerals projects have been a prominent focus for Chinese investors since 2017 (see Figure 7), accounting for 98 percent of total Chinese mining investment (including

FIGURE 7: CHINA FDI IN CRITICAL METALS AND MINERALS BY TYPE, 2003-2022 (USD MILLIONS)

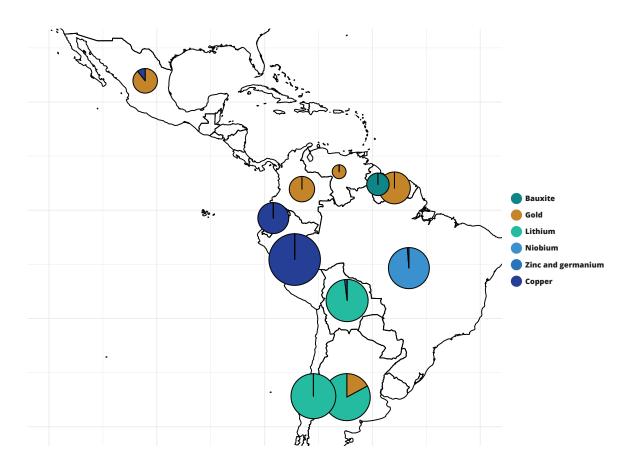


copper) in LAC, or approximately \$13 billion, from 2017 to 2022. Gold mining has grown in focus in recent years, including in Colombia and Mexico (see Figure 8).

Finally, in the energy sector, there is a notable shift in Chinese FDI from traditional energy sources to investment in renewable energy, assuming we classify hydroelectricity as such (see Figure 9).³⁶ This trend will likely continue to some degree as China pursues new opportunities in this sector, including occasions to offload green energy equipment, and as LAC governments formulate and promote their plans for energy transition. China has expressed some interest in supplying electrolyzers, equipment that splits water into hydrogen and oxygen, for the nascent green hydrogen industry in Brazil, according to Wachholz, but Chinese companies have yet to strike concrete deals. The relative drop in new Chinese investment in oil and gas is notable given that much of global FDI to LAC in 2022 focused on the region's hydrocarbons.³⁷ Amid rising energy prices, many international companies have committed to achieving energy security, including through new hydrocarbons investment. In China's case, the value of Chinese investment in LAC extractives has grown as a share of total Chinese deals over the past five years (see Figure 3), but this is explained by a rise in Chinese critical minerals and metals investment in LAC, and not a renewed interest among Chinese investors in the region's hydrocarbons.

China is nevertheless importing significant quantities of LAC crude, and China's oil-backed loans (though issued years ago, in many cases) continue to drive some of the region's extractive activity. Moreover, "new infrastructure" can technically be applied in support of oil and gas industries, as long as the focus is modernizing the sector

FIGURE 8: CHINA FDI IN CRITICAL METALS AND MINERALS (INCLUDING COPPER) BY COUNTRY AND TYPE, 2003-2022



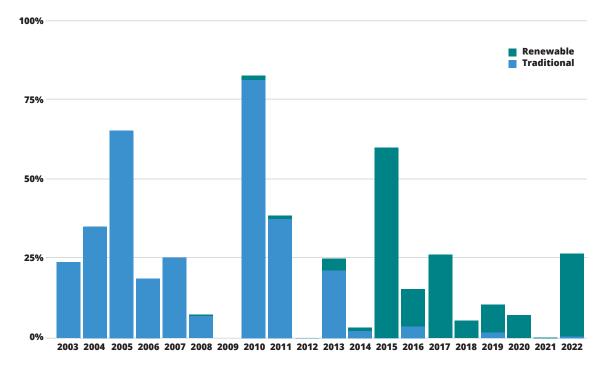


FIGURE 9: CHINA FDI IN LAC ENERGY BY TYPE, 2003-2022 (AS % OF TOTAL ANNUAL CHINA FDI)

Source: Author calculations using Dealogic and FdiMarkets; includes both M&A and greenfield FDI data.

through innovative measures and technologies. According to Zhang Yuqing, a professor at the Beijing-based China University of Petroleum, this can include innovation in systems, mechanisms, management, and technology of the oil and gas industry; improving the safety of LNG storage and transportation; and innovating the supervision methods for oil and gas industry through the use of big data and information technology.³⁸

Where Is China Investing?

China's investment remains overwhelmingly focused on the region's largest economies, but China's favored markets have shifted somewhat in recent years as Chinese companies pursue new interests and opportunities, consistent with the process of recalibration described above.

As the largest economy in the region and a top country of focus for Chinese companies in their initial (late 1990s/ early 2000s) process of "going-out," Brazil has accounted for the vast majority of Chinese FDI in the region from 2003 to 2022–\$78.6 billion or 42 percent of LAC's total

(see Figure 10). Chinese FDI to Brazil from 2003 to 2022 was more than double investment in Peru—the second largest recipient of Chinese FDI during that period. China's FDI in Brazil is also relatively diversified at this point though with a notable focus on the country's extractive sector, reflective of China's expansive and long-standing partnership with Petrobras, Brazil's quasi-state-owned oil company; manufacturing; and, again, utilities. According to analysis conducted by Brazilian diplomat Pedro Henrique Batista Barbosa, by 2020, Chinese companies owned or partially owned 304 power plants in Brazil, which total 16,736 MW, or 10 percent of the national generation capacity.³⁹ China's investment in Peru and Mexico is less diverse by comparison, with a strong focus on mining in the former and manufacturing in the latter.

Brazil's relative importance as a destination for Chinese investment has declined somewhat over the past five years, however—in favor of Chile, Peru, and Mexico (see Figure 11). This is possibly reflective of political tensions between China and Brazil under the Jair Bolsonaro administration, but may also be due to shifting investment conditions and/or projects or industries of interest in other parts of the region. The boost in Peru's overall standing was mostly attributable to continued Chinese

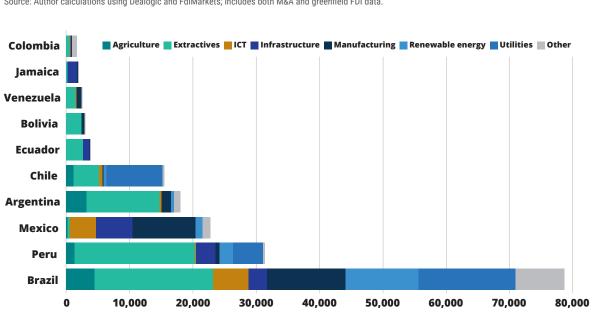


FIGURE 10: TOP 10 LAC RECIPIENTS OF CHINA FDI BY SECTOR, 2003-2022 (USD MILLIONS)

Source: Author calculations using Dealogic and FdiMarkets; includes both M&A and greenfield FDI data.

FIGURE 11: TOP 10 LAC RECIPIENTS OF CHINA FDI BY TIME PERIOD

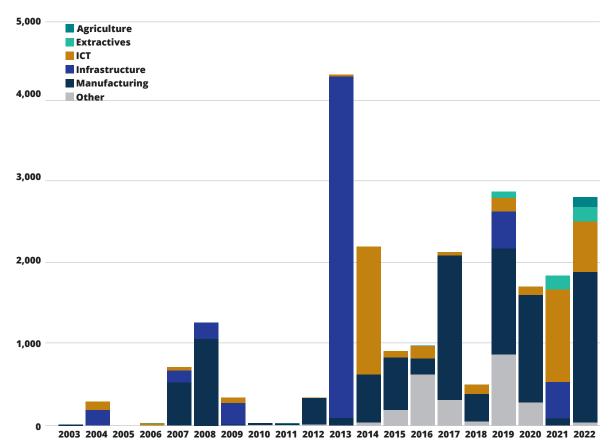


investment in the country's mining sector and the 2019 \$3 billion Chancay port project.⁴⁰ Ecuador dropped off the map, so to speak, during the Rafael Correa administration (2007–2017), and only recently climbed back onto the list of top 10 LAC recipients of Chinese FDI. Ecuador was the recipient of many billions in loans during Correa's presidency, however.

Chile has been a top destination for Chinese investors in recent years even though it barely factored as an investment destination from 2003 to 2016. Chile's lithium is of interest to wide-ranging investors, and China's Tianqi Lithium maintains a 25 percent stake Chile mining conglomerate SQM to be able to extract Chilean lithium, but Chinese investors have also focused on electricity generation and transmission projects in Chile to date, in addition to a handful of agricultural deals and some ill-fated data projects. Investment in mining and power accounts more than 90 percent of the China's FDI stock in Chile. Chile's government welcomed a wider range of Chinese investment in the country around the same time that Tianqi Lithium acquired part of SQM, according to Tornero. Chile has experienced a relative boom in Chinese company activity ever since, with China becoming Chile's top investor in 2019. However, in terms of total FDI stock, China falls well behind Canada and the United States. Each accounts for nearly double China's total FDI stock in Chile.

In Mexico, where Chinese FDI is also expanding (see Figure 12), high-end manufacturing and ICT stand out as priority sectors for Chinese investors. Mexico has grown in importance to Chinese companies as they and others seek access to Mexico's well-established industrial base in pursuit of supply chain diversification and access to the North American market. The major exception to China's overwhelming focus on Mexican manufacturing and ICT was a port project announced in 2013. In an interview with the authors, *Bloomberg News* managing editor for economics and government in Latin America Juan Pablo Spinetto expected China's focus on manufacturing and ICT

FIGURE 12: CHINA FDI IN MEXICO BY SECTOR, 2003-2022 (USD MILLIONS)



to continue, including after the June 2024 Mexican general elections.

It is important to distinguish between the various types of companies that are investing in Mexico at present, according to José Burnes, a former shelter company executive in Mexico, who was also interviewed for this study. There are new arrivals, those that are expanding their Mexico operations, and those that previously manufactured in China and are moving all or some of those operations to Mexico. Chinese activity is currently dominated by companies in the third category, Burnes suggested, with a focus on auto parts and electric components manufacturing in the Mexican states of Nuevo Leon and Coahuila. Moreover, because many Chinese companies (including some large SOEs) invest through shelter companies, their investments are not tallied in official reports of inward FDI. As a result, the extent of Chinese and other investment in Mexico is at least somewhat underrepresented in official statistics. Our Mexico data are also subject to this limitation.

Although "new infrastructure" is a major focus for Chinese companies across much of LAC, investors have yet to significantly pivot to innovation-related industries in all parts of the region. This includes in some of the region's smaller economies, or else those where Chinese investment represents a larger share of countries' gross domestic product (GDP). Of the top 10 recipients of Chinese FDI over the past 20 years (see Figure 10), Chinese FDI accounted for a comparatively large share of GDP in Peru (0.9 percent), Jamaica (0.7 percent), and Bolivia (0.6 percent). Extractives, rather than innovation, are a primary focus of Chinese companies in Peru and Bolivia, although China's investment in Jamaica has largely focused on transportation infrastructure development, including a series of highway projects. In those countries where Chinese FDI accounts for the greatest share of GDP, extractives have featured prominently (see Figure 13). Chinese investment in Guyana, which is focused nearly entirely on the country's oil resources, represented nearly 1.73 percent of Guyana's nominal GDP between 2003 and 2022.

Looking Ahead

Data on Chinese FDI to LAC during the first half of 2023 would appear to suggest more of the same—that is, a growing Chinese focus on innovation-related investment in LAC (though with less attention paid to ICT over these few months), and a continued focus on acquisitions of electricity generation and transmission assets in certain parts of the region. Utilities deals comprised 40 percent of the total from January-July 2023, and manufacturing (much of it high-end) accounted for 28 percent (see



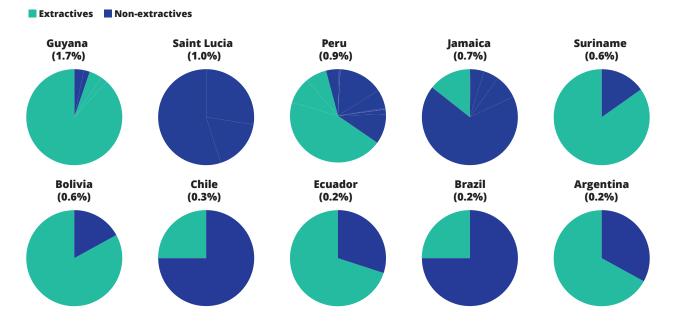


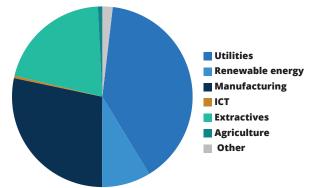
Figure 14). Investment in renewable energy represented another nearly 9 percent.

The composition of this investment has meant a growing presence for Chinese companies in the region's emerging industries. Moreover, China's persistent focus on innovation will ensure more involvement with LAC emerging industries in the coming years—through FDI, certainly, but also in the trade and financial realms, as China exports ever-higher-value-added goods and services, and as China's banks back "new infrastructure"-related projects in LAC and other regions.

To maximize the benefit of Chinese and other engagement with "new infrastructure" industries, foundational legal and regulatory frameworks and mechanisms for consumer protection and privacy should be adopted and fit for purpose. Continuous updates to the regulatory landscapes across the region will be critical to mitigating the possible social, environmental, and political risks related to the rapid development of innovation-related and other sectors.

FIGURE 14: CHINA FDI IN LAC BY SECTOR, JANUARY-JULY 2023

Source: Author calculations using Dealogic and FdiMarkets; includes both M&A and greenfield FDI data.



As China increasingly dominates the technological landscape in many parts of the Global South, LAC nations will also need to take into account the implications of a possible "digital iron curtain" amid ongoing technological competition between China and United States.

Indeed, the United States and key partners, such as the European Union and Japan, have all committed—through legislation, policy, or pronouncements—to enhanced engagement with LAC in support of digital transformation and energy transition. Europe is looking to be LAC's "partner of choice" in building local capacity for making batteries and final products like electric vehicles, for instance, as European Commission President Ursula von der Leyen noted in 2023.⁴¹

Interestingly, recalibration of China's investment in the region—and the related drop in Chinese FDI value in LAC— are happening at a moment when FDI from non-Chinese companies is booming, comparatively. As Chinese flows declined in 2022, other-than-Chinese FDI inflows to Latin America and the Caribbean grew by over 55 percent in 2022 compared to 2021, reaching a record high of over \$224 billion according to ECLAC.⁴² This was a notable milestone for LAC given that annual FDI inflows to the region had remained below \$200 billion from 2013 to 2021. The share of acquisitions by U.S. companies increased to 43 percent in 2022, compared to an average since 2011 of 20 percent.⁴³

Yet, ensuring competitiveness in "new infrastructure" and related industries will require a near-constant commitment by partners to building and supporting project pipelines, and to delivering products and services at price points that can compete with China's subsidized offerings. Whether in LAC or other regions, the coming years will be decisive for the world's top providers of emerging technologies.

ENDNOTES

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