

GLOBAL CHINA INITIATIVE



Victoria Chonn Ching holds a Ph.D. in Political Science and International Relations from the University of Southern California. She also holds an M.A. in Economics from USC and an M.A. in Chinese Studies from the University of Michigan, Ann Arbor. She is a former Global China Initiative predoctoral Fellow at the Boston University Global Development Policy Center. Her research is at the intersection of International Relations, International Political Economy, and Comparative Politics, with a specialization in Sino-Latin American relations and economic development in the developing countries.

Butting in or Rounding Out?

CHINA'S ROLE IN LATIN AMERICA'S INVESTMENT DIVERSIFICATION

VICTORIA CHONN CHING¹

ABSTRACT

China has been a fast growing and evolving player in Latin America. The country's financing capacity and the state-led nature of its multinationals have created expectations of what doing business with China may look like. This paper examines the impact of Chinese investments on Latin America's investment diversification using aggregated investment data. Two non-mutually exclusive questions frame this paper: (1) Are China's investments "butting in" Latin America's investment landscape—are Chinese firms pushing out other investing countries? (2) Or are they "rounding out," in that they are mainly driven by the host country's demands and interests, potentially filling a void left by other partners? Thus far, China appears to be an additional source of capital and resources for Latin America.

Keywords: China; Latin America; China-LAC; investment; development; dependency

¹ Global Development Policy Center, Boston University, MA 02215, USA. * Correspondence to: chonnchi@usc.edu

A NEW PLAYER IN A TRANSFORMING GLOBAL ECONOMY

China has changed the global economy. Whether it is changing patterns in trade (Autor et al. 2016; Chen and Nord, 2017; Gallagher and Porzecanski 2010), investment (Li and Zeng 2019), or finance (Brautigam et al. 2020; Horn et al. 2019), China's impact has been felt among developed and developing countries. Particularly for the latter group, China can be a challenge, an opportunity, or both. In sub-Saharan Africa, for example, China became the largest export destination as Chinese demand for metals, fuels, and minerals from the region increased. This made trade with China an important element in sub-Saharan Africa's economic growth in the last 20 years. China also became a main source of lending, accounting for approximately 14 percent of stock of total debt in the sub-region (Chen and Nord 2017; Chen and Nord 2018). However, resource-rich sub-Saharan African countries became dependent on natural resources revenues in the short- and medium-term. With China's economic slowdown and lower commodity prices, growth in the sub-region also began to slow, highlighting sub-Saharan Africa's need for greater diversification policies in the long-term (Chen and Nord 2017). The story is not that different in Latin America and the Caribbean (LAC).²

The increased Chinese demand for primary products and commodities, accompanied with high commodity prices since the mid-2000s, provided a boost to trade between China and resource-rich countries in Latin America (Gallagher 2016; Ray and Gallagher 2015; Ray and Gallagher 2017; Ray 2018; Ray and Wang 2019). This created an opportunity for these countries to gain access to markets; however, the increase of Latin American exports in natural resources also led to concerns about potential premature deindustrialization and/or re-primarization (Gallagher and Porzecanski 2010; Jenkins and de Freitas Barbosa 2012). Moreover, volatile commodity price fluctuations have also resulted in economic slowdowns, hence heightening the risks of resource exports dependency in Latin America.

Although the impact of China's expansion in Latin America has been more visible in trade given its immediate effects (e.g., increase in export flows year-by-year), the emergence of Chinese investment in Latin America has also raised questions regarding the extent of China's influence in the region. Yet, in this latter case, the footprint has been more difficult to assess. First, recipient countries do not always report the country of origin of the investment (ECLAC 2018; Gallagher et al. 2012; Perez Ludeña 2017). In some instances, the information is not readily available as investing firms sign agreements through subsidiaries headquartered in third countries. Second, in the last 20 years, a large number of Chinese investments are in the form of mergers and acquisitions and joint ventures (Chen and Perez Ludeña 2014; Ortiz Velasquez 2017; Ray 2018; Ray and Gallagher 2015; Ray and Gallagher 2017; Ray and Wang 2019), thus making it challenging to identify the direct effect of each individual partner, or previous owner, in an investment. Relatedly, some of these investment projects are not carried out beyond the announcement phase, or they experience long suspensions or are simply cancelled, sometimes many years after the deal was finalized. Unlike trade, the effects of increased Chinese investments in Latin American countries (and elsewhere) have a more long-term horizon. Nevertheless, it is still possible to identify patterns and assess how they may be impacting the investment landscape in the region.

This paper examines the impact of Chinese investments on Latin America's investment diversification, which is mainly divided in two categories: geographical and sectoral. The former centers on the different investing countries in the region, whereas the latter refers to the main sectors and industries these countries invest in. As a region that has sought its reintegration to international markets since the 1990s (Bertola and Ocampo 2012; Coatsworth and Taylor 1998; Rojas-Suarez 2009), Latin American countries continue to seek the expansion of their economic and finance partners and

² In this analysis, Latin America and the Caribbean and Latin America are used interchangeably.

networks. China has become an active and fast-growing partner; however, the size of its economy, the pace of its growth, and the dominance of state-owned companies in sizable investment projects have underlined the possibility of unfair competition by Chinese firms and even the potential relinquishing of national resources (Perez Ludeña 2017). Two non-mutually exclusive questions frame this paper: (1) Are China's investments "butting in" Latin America's investment landscape? That is, are Chinese firms pushing out other investing countries? (2) Or are they "rounding out," in that they are mainly driven by the host country's demands and interests, so potentially filling a void left by other partners?

To answer these questions, two main datasets are analyzed. The first one is fDi Markets, which provides information about announced greenfield investments at a global level. The second dataset used for the analysis is Dealogic, which includes data regarding mergers and acquisitions. In both cases, the data ranges from 2005 to 2019, thus covering most of the China boom years (2003-2013 approximately) and the post-boom period. To note, the use of announced investments does not necessarily indicate their completion, nor does it track the progress of each development project. Only very sizeable projects that are known to be cancelled or permanently suspended are discarded in this analysis. Yet this does not undermine the value of the datasets employed, as they facilitate information that can help to identify investment patterns or behaviors from multiple countries in Latin America over time. Moreover, the usage of datasets covering two different investment categories highlights the linkages between a host country's investment policies, an investor's entry mode, and the impact these investors may have in the host countries.

Context Matters: Framing the Analysis

The impact of China's investments in Latin America has been analyzed from an economic and political perspective. The former has focused on these investments' influence on the region's macroeconomic growth (e.g., productivity, efficiency, etc.) and development (ECLAC 2018; ECLAC 2019; Chen and Perez Ludeña, 2014; Dussel Peters 2016; Dussel Peters 2020; Perez Ludeña 2017; Ray and Gallagher 2015; Ray and Gallagher 2017; Ray 2018; Ray and Wang 2019), whereas the latter has centered on the relationship between these investments and China's diplomatic goals and/or geopolitical aspirations in the region (Duanmu 2014; Jiang 2016; MacFarlane 2015; Paz 2012; Urdinez et al. 2016), which in many instances include China as a potential new hegemon or as a threat to the United States' influence in Latin America.

Other studies have highlighted the social and environmental effects of China's investments in the region and how these may influence the implementation and enforcement of international standards, both in the host countries and among Chinese firms (Gonzalez-Vicente 2012; Irwin and Gallagher 2013; Gallagher et al. 2017). Finally, some scholars have provided a more general analysis of China's economic impact in the region and its political economy implications (Dussel Peters 2018; Gallagher 2016; Myers and Wise 2018; Stallings 2020; Wise 2020; Wise and Chonn Ching 2018). Some of these works underline the development of Chinese investments as an indication of China's evolving interests in Latin America and the Caribbean. To successfully interact with China (Wise 2020) and capture the economic benefits of these business deals (Gallagher 2016), it is necessary to continue with the reforms of economic and political institutions and structures in the region.

Given this scenario, while previous scholarship has provided a wealth of information to better understand how China's foreign economic strategies have affected Latin America, not much attention has been placed to the conditions and responses of countries in the region as they engage with China. This paper focuses on the context under which Chinese firms have been entering the region. That is, how did foreign investments in Latin America look like as Chinese firms began to emerge in Latin America? Has the Latin American investment landscape changed, and if so, how? Is it due to

Chinese investment interference? Similar to global trade structures, investment regimes have also transformed worldwide. As indicated by Milner (2014), by the beginning of the 2010s, about half of global foreign direct investment (FDI) flows were directed to the developing countries and emerging economies. Moreover, relationships between international investors and host countries have also been transforming as incentives and goals have been adapted.

Then, to observe whether China has helped or hindered investment diversification efforts in Latin America, it is relevant to examine the dynamics between Chinese and Latin American incentives—that is, what the investor and host are looking for and how they may be achieving so. This means that this analysis does not only highlight economic or political motivations, but also, business motivations.

Investments as Business Transactions

Investments are competitive transactions that have medium- and long-term effects. Companies traditionally decide to become multinationals and invest abroad due to four main drivers: to look for resources, to search for new markets and increase the efficiency of the firm (i.e., reduce cost), and to gain and expand their strategic assets via technology acquisition or by becoming part of a brand name (e.g., ownership advantages) (Dunning 1982; Enderwick 2005; Park and Roh 2019). According to Perez Ludeña (2014), the motivations of Chinese FDI in Latin America can be examined using the OLI (ownership, location, and internationalization) framework. Developed by Dunning (1982), it highlights why firms become multinationals as they decide to enter foreign markets to seek for resources and reduce production costs. Four key reasons are identified: resource-seeking, market-seeking, distribution of strategic assets, and efficiency-seeking (Ashraf and Herzer 2014; Dunning 1982; Enderwick 2005; Park and Roh 2019; Perez Ludeña 2016). So in Latin America, one of the main drivers of China's interest in the region since the 2000s has been the search for natural resources and commodities to support China's industrialization (Devlin et al. 2006; ECLAC 2018; ECLAC 2019; Ellis 2009; Gallagher and Porzekanski 2010; Gallagher et al. 2017; Hearn and Leon-Martinez 2011; Sanborn and Torres 2010; Wise and Chonn Ching 2018; Wise 2020), and since the 2010s, Chinese firms began to more actively seek markets to assist their exports and complement trade ties, and most importantly, to expand their revenues and reduce the risks they faced in domestic markets. This applies especially to construction and engineering firms as well as Chinese banks in LAC.

In terms of strategic assets, Perez Ludeña (2016) indicates that these are less likely to be observed in Chinese FDI in LAC, as most of these investments target developed countries. Yet, while Latin American countries do not necessarily offer new technology for Chinese firms, they can offer what Park and Roh (2019) define as “explorative knowledge”—that is, new knowledge available in these developing economies that is not necessarily available or accessible to firms in China. This knowledge is more readily available from existing local firms in the region, hence supporting the predilection of Chinese firms for M&As. With respect to efficiency seeking, this does not appear to have been an important element in Chinese firms' decision to invest abroad in general; however, there are signs that some Chinese companies have moved some manufacturing operations to countries in Asia and Africa due to rising salaries at home (Perez Ludeña 2016, pp. 12-13). In this sense, from a business perspective, Chinese multinationals do not appear to be that much different than firms from other countries.

For the host countries, FDI is generally viewed as an important contributor to their economic development. After all, investments are not only inflows of capital that can contribute to a country's capital accumulation. They also bring other resources such that investments can enhance innovation through technology spillovers and improve productivity. Moreover, FDI can also contribute to the improvement of a country's competitiveness (Ashraf and Herzer 2014; Ashraf et al. 2016; Enderwick 2005). Just as firms decide if and where to invest abroad, host countries also create incentives

to attract FDI, but in this instance, domestic economic and political structures, as well as institutions play important roles since they can provide guarantees against expropriation and instability, for example (Enderwick 2005; Ashraf et al. 2016). In some Latin American countries, these risks remain prevalent.

As a region with lagging investment rates for the last three decades, Latin America has been active in attracting a variety of investment partners (Parrado 2019). For example, in Chile and Peru, agencies such as InvestChile and ProInversión, respectively, were created to promote each country as a desirable investment and business destination. These agencies have actively worked in coordination with their respective economic and finance ministries, including tax agencies and business associations. In comparison to their regional counterparts, both Chile and Peru are among the most open economies in Latin America. At the other end, Brazil is one of the most regulated markets in the region with high tariffs, imports restrictions, and more stringent content rules. However, Brazil is a top investment recipient in Latin America. Arguably, it is precisely because of those restrictions that some foreign companies seek to build facilities in the country to better target local markets (Perez Ludeña 2016, pp. 15-16). Similarly, Brazil is also an important producer of oil, hydrocarbons, and other energy resources, hence capturing a large percentage of investments related to this sector.

Nevertheless, the entrance of China as an additional investment partner has been mostly viewed under a positive light in LAC, as it could help in filling in ongoing investment gaps in the region (e.g., infrastructure). Yet there have also been costs. As it has been reported elsewhere in more detail (Gonzales-Vicente 2012; Irwin and Gallagher 2012; Gallagher et al. 2017), the compliance of labor and environmental standards, for example, has not been distributed equally across the region by all Chinese companies involved in investments in the extractive industries. Of course, the enforcement of regulations and policies in the host countries has also been key in ensuring good relations between multilevel actors on both sides (investors and hosts), thus indicating that this is not necessarily a concern about just China, but other country-investors as well.

Mode of Entry Matters

FDI is usually conducted in two ways. First, greenfield FDI demands establishing operations from the ground-up. Generally speaking, this type of investment is preferred by host countries as they can bring additional resources, technology spillovers, and potentially increase the country's macroeconomic productivity (Ashraf et al. 2016; Burger and Ianchovichina 2017; Enderwick 2005). Yet greenfield FDI is more costly and riskier as firms have to consider location conditions, investment structures and regulations, and even the rate of growth and development as they can be affected by economic policymaking and what governments decide to prioritize in potential investments (Enderwick 2005, p. 101).

Mergers and acquisitions (M&As), also known as brownfield investments, correspond to the second category and they mainly represent a change in ownership. Foreign firms buy or acquire the assets of an existing firm. This makes M&As less risky and less costly as companies do not have to provide other kind of resources beyond capital when entering a country (Erthal Abdenur 2017). Thus, M&As may not have the same impact in a country's growth, innovation, and productivity as greenfield FDI does. But as shown by Ashraf et al. (2016), M&As can still become an important source of external financial resources in the long term. Furthermore, the extent to which host countries can fully benefit from FDI-led development is also dependent on domestic conditions and management. As a result, host countries' domestic policies matter and they can influence an investor's entry mode (Erthal Abdenur 2017; Burger and Ianchovichina 2017; Cortés et al. 2017). While firms can offer innovation to a country, their impact can be limited if local policymakers are unable to capture and capitalize those benefits, so the impact of FDI becomes less noticeable (Ashraf et al. 2016, pp. 1749-1751).

In Latin America, investments from China have predominantly been M&As—although this type of FDI has also increased in popularity among other country-investors. A report by ECLAC (2018) indicates that changes in technology and in consumption patterns can explain this shift toward M&As, as companies try to quickly position themselves in different markets, especially those that are still transforming and expanding (ECLAC 2018, pp. 21-22). Another factor, although less explored, is that Chinese companies are still not used to the competitive bidding process many Latin American countries for large investment projects (Chen and Perez Ludeña 2014; Perez Ludeña 2016). Hence, working with local firms or other companies with more on-the-ground experience can facilitate this process. Despite more than two decades of internationalizing its companies, Chinese firms can find it challenging to navigate economic environments where the state is not the only player or final decision-maker in assigning investment deals. Nevertheless, regardless of the entry mode, FDI from China has definitely surged in Latin America—the question is how significant that surge has been for the region in comparison to other investing countries.

The More, the Merrier? Partner and Sectorial Diversification in Latin America

Since the incentives from host countries and investors can influence FDI flows in different modes of entry, it is useful to examine China's role in Latin America's investment diversification by entry mode. There are two main types of diversification this paper is considering: geographical, which centers on the number of countries investing in the region; and sectorial, which highlights the distribution of FDI by industries and sectors. Therefore, the following assumptions are formulated: If Chinese FDI is "butting in," or aggressively displacing and pushing out traditional investors in Latin America, the expectation is that these Chinese investments will grow at the expense of the other actors. Chinese firms would quickly and aggressively acquire projects such that Chinese shares begin to overtake those of existing dominant investors, making China the main, or the only, player capable or qualified to receive or win the bidding of an investment project. The shares of other dominant investing countries would remain unchanged or decrease over time.

Moreover, if China is indeed becoming the dominant investor in Latin America by pushing out other country-partners, then the concerns raised among development scholars regarding the possibility of a new dependency emerging in the region are valid and alarming under the current circumstances. Traditional dependency discourses have considered Latin America as reliant on the capital and demand from more developed external actors (Cohn 2016; Prebisch 1962). The main focus in these narratives has been the international and domestic structures that have heightened unequal trade exchanges. In terms of investments, this new dependency centers on China as the main—if not most important—source of financing for investment projects. This means that China could be repeating old dependency patterns by leaving countries in the region with limited choices for investment sources. Relatedly, China's growing dominance could also bolster the geopolitical rhetoric that identifies China as a direct threat to the United States as a hegemon in the region. Yet, despite China's increased economic presence in Latin America, the country's overall commercial and investment shares have been comparatively smaller than those of the United States. In addition, China has arguably maintained a mostly non-confrontational approach in Latin America (Azpuru 2016; León-Manríquez 2016; Paz 2012).

In terms of M&A deals, if China is assumed to hinder the diversification of investors in Latin America, it would become the main and a predatory buyer of assets. However, under this category, a more in-depth analysis of the motives of both the buyer and the seller is also needed. China could be seen as taking advantage of its economic capacity by buying out assets that may take longer to be taken off the market. The economic conditions of other investing countries can also influence their decision in competing against China in sales bids or to get involved in M&As instead. For example, China may not be the only investor for a given project, but given certain external and domestic conditions in the

host countries, Chinese firms may be better positioned to make a number of acquisitions vis-à-vis other investors.

Burger and Ianchovina (2017) show that some FDI surges and stops occur under certain market conditions, for instance. While higher global liquidity is positively associated with surges in FDI in general, an economic slowdown followed by a surge period is associated with stops in greenfield investments. For M&As, policies that aim to increase FDI flows into a country can support M&A increases, but so can domestic economic and financial instability. The latter can certainly be observed in Brazil as the country became Latin America's main divestor or seller of assets since 2015, when the Odebrecht scandal broke out.

Although this scandal began with the investigation of Petrobras—Brazil's state oil giant—for money laundering and fraud in the Lava Jato Operation, it quickly evolved into dozens of companies admitting to paying bribes for infrastructure contracts in Brazil and in many parts of the world. This was specially the case for Odebrecht, which led to international investigations involving government officials in Argentina, Colombia, Dominican Republic, Ecuador, Guatemala, Mexico, Panama, Peru, and Venezuela in Latin America, and Angola and Mozambique in Africa (Anderson n.d.; Dettoni 2018; El-Hage 2019; LatAm Investor 2018). As Odebrecht was forced to sell its assets for cheaper prices to finance its fines and increasing debt—which ultimately led to its bankruptcy in 2019—some of Latin America's traditional investment partners also experienced economic slowdown (Appendix 1). For China, despite it having to grapple with much slower economic growth since 2012, the launch of the Belt and Road Initiative (BRI) in 2013 created incentives for greater participation of Chinese firms in infrastructure investment projects worldwide.

Given this scenario, if China were “rounding out” or contributing to Latin America's diversification as opposed to limiting it, China would not only become a new additional player. China could also serve as a cushion in times of economic distraught in Latin America as other traditional partners become unable to acquire or invest in assets in the region. In other words, Chinese firms become part of the game as they now participate in the Latin American investment landscape. They are also seen as helping to lessen the impact of an investment slowdown during economic contractions among traditional players. This latter instance is better observed in M&As as these traditional partners begin to divest or sell assets and there is need for new buyers—a role that China would be expected to assume. Overall, with these types of diversification, Latin America would have greater flexibility in the distribution of its investment portfolio among a variety of partners and the potential for sectoral expansion.

The following section examines the extent to which these assumptions are observed in the greenfield FDI and M&As datasets. The period of analysis spans 15 years, from 2005 to 2019, and it is divided in three groups: Period 1 (2005-2009), which covers the initial years of the China boom until the financial crisis that hit most of the North Atlantic, including the largest economies in the world. Period 2 (2010-2014) covers the post-financial crisis years and the beginnings of China's economic slowdown as it restructured its economy. Period 3 (2015-2019) includes the post-China boom years and the start of Latin America's overall economic recession.

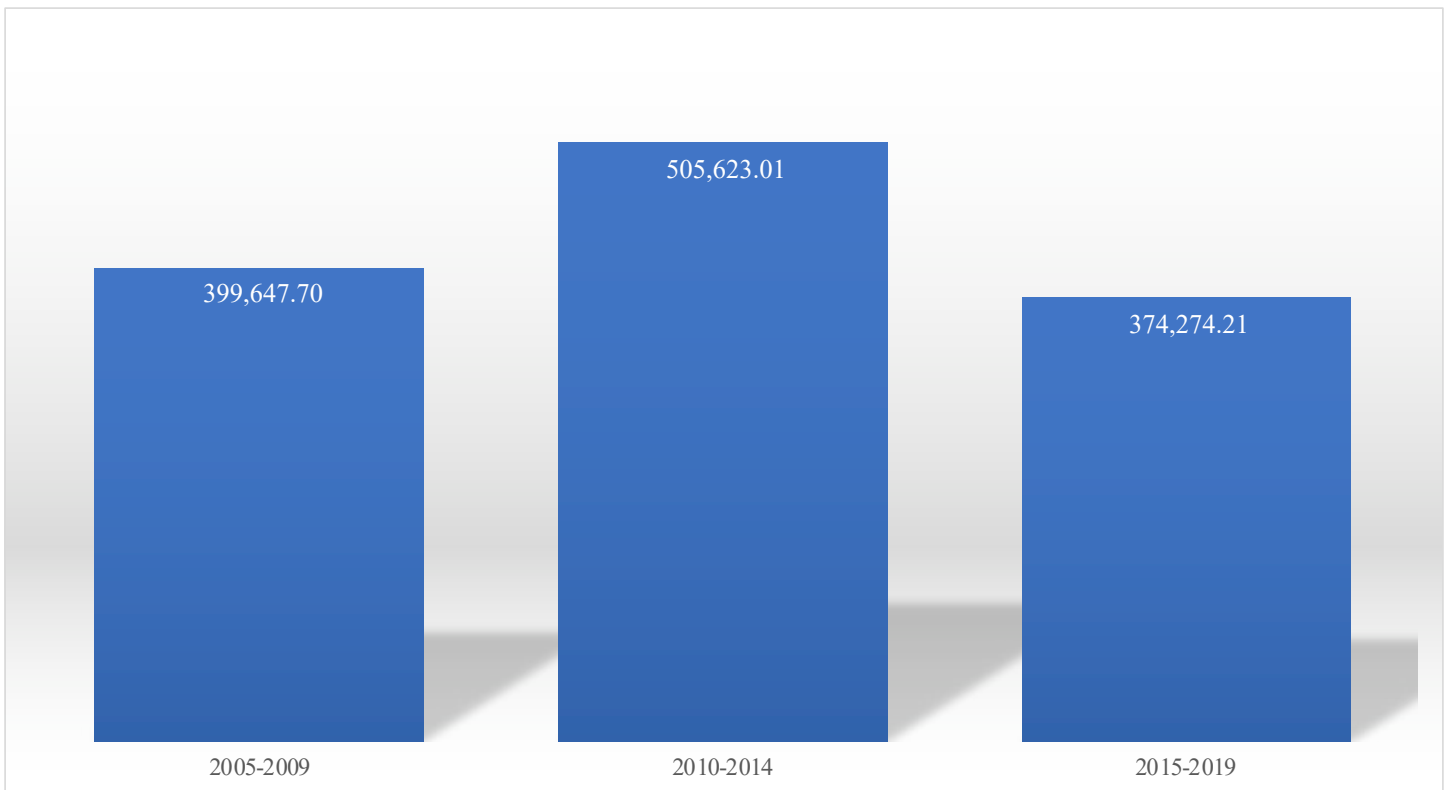
The Impact of Chinese Greenfield FDI in Latin America

As a whole, investments in Latin America have experienced a downward trend since the mid-2010s—as many large economies faced slowdowns and recessions—with signs of a slow recovery starting 2017 (ECLAC 2018; Ray and Wang 2019). These economic hiccups have been accompanied by the decrease of commodity prices (Chen and Nord 2017), the rebalancing of China's economy (Mano and Zhang 2018; Zhang 2016), and the most recent trade war between the United States and China (Canuto 2019; China Briefing 2020; Ray and Wang 2019), as well as rising tensions between the

United States and the European Union (ECLAC 2019). Although the effects of the trade imbalances did have positive short-term effects for some Latin American countries (i.e., Mexico) as it increased trade movements toward the region, they do not appear to be affecting investments flows into the region in the long-term (ECLAC 2019).

Despite the short-lived recovery in 2017, FDI inflows to Latin America experienced one of their lowest levels in 2018 (decrease of 6 percent) since 2009. This trend was also echoed in other regions, especially in those where a majority of their investment inflows were in the extractive industries (Chen and Nord, 2017). One explanation is the global movement toward sustainability and greater resources efficiency, which is changing FDI patterns so that they can target sectors like high-technology, software, services, and renewable energy (Chen and Nord 2017; ECLAC 2018; ECLAC 2019; OECD 2019). In Latin America, these trends are observed among leading partners and, while FDI may not experience the same growth rates that has been seen between 2010-2014 (Figure 2), foreign investment in the region is becoming more competitive (ECLAC 2018; ECLAC 2019; OECD 2019).

Figure 1: Total Announced Greenfield Investments in Latin America and the Caribbean by Period, 2005-2019 (US\$ million)

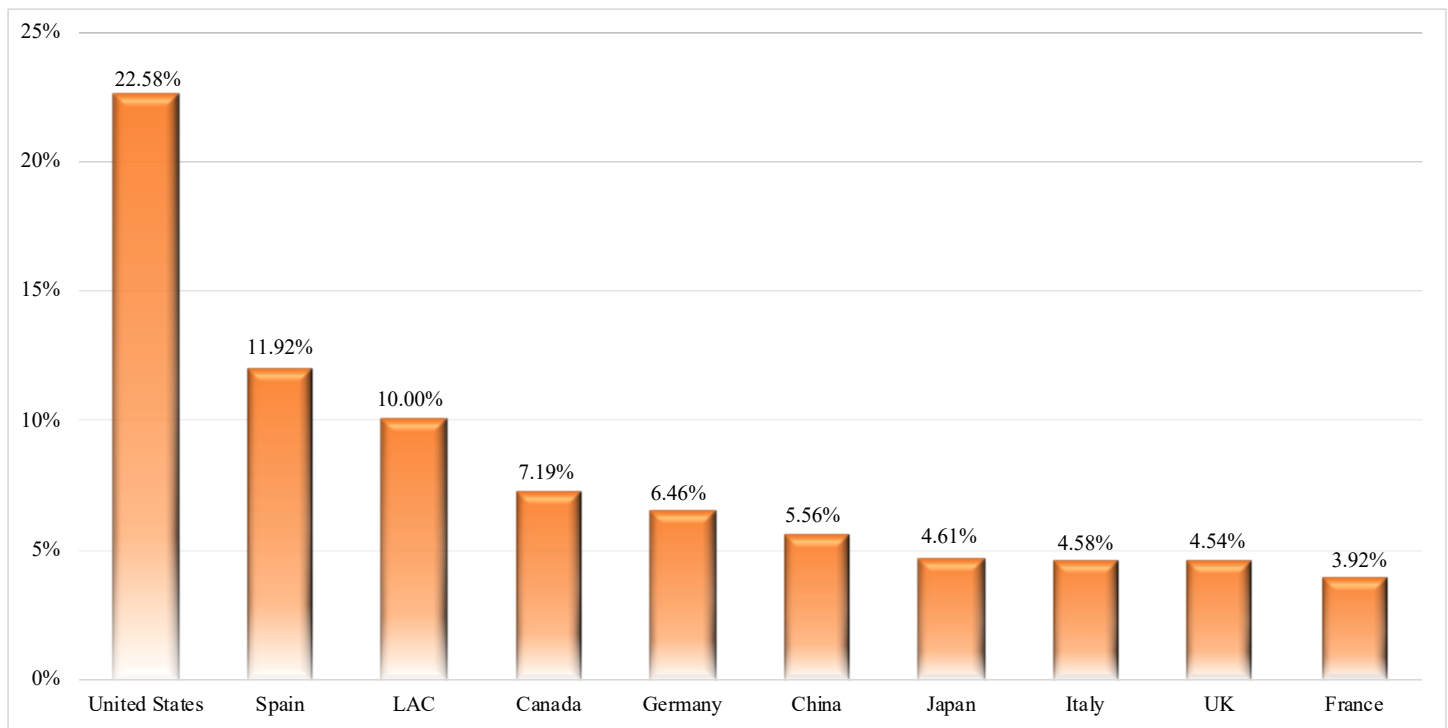


Source: fDi Markets, 2005-2019.

Notes: The data is based on announced investments. For this analysis, China's investment in the Nicaragua Canal in 2014 was taken out given its sizeable value and its status as a "zombie" investment.

What is China's impact in Latin America's investment landscape? Overall, the United States and the European Union—specially Spain—have been and continue to be the leading investors in Latin America and the Caribbean (Chen and Ludeña 2014; ECLAC 2018; ECLAC 2019; Perez Ludeña 2016). Although China became the third largest source of foreign direct investment in the world in 2015, right behind the United States and Japan, and Chinese FDI has averaged US\$ 10 billion per year from 2010 to 2014 in Latin America (ECLAC 2018), China is far from the largest source of FDI in the

Figure 2: Top 10 Greenfield Investors in Latin America, 2005-2019



Source: fDi Markets, 2005-2019.

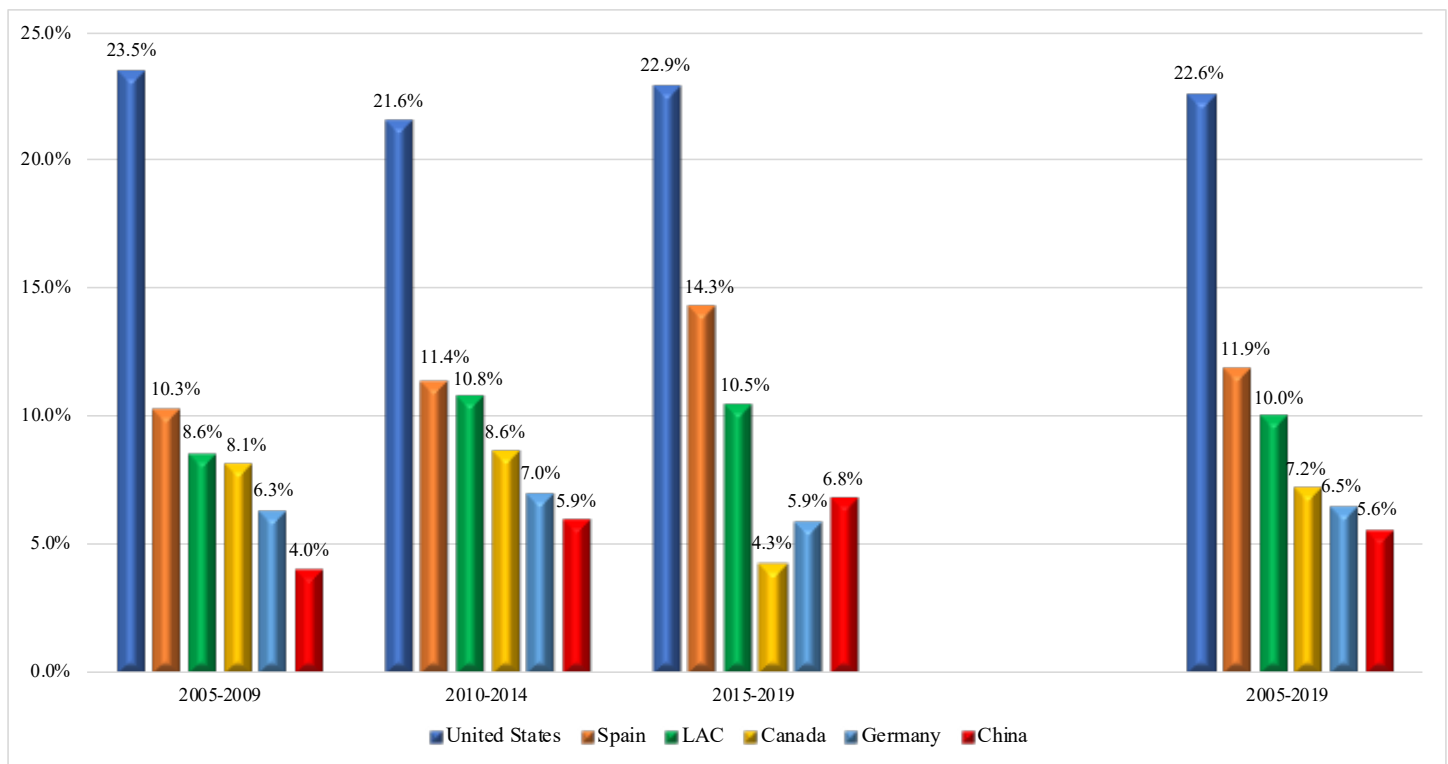
Notes: The data is based on announced investments. For this analysis, China's investment in the Nicaragua Canal in 2014 was taken out given its sizeable value and its status as a "zombie" investment.

region (ECLAC 2018; Liang 2019; Perez Ludeña 2017). From 2005 to 2019, China has comprised less than 10 percent of total FDI in Latin America whereas shares by the United States and Spain—the top two FDI partners during this period—have surpassed 20 percent and 10 percent, respectively (Figure 2).

The examination of these shares by period continue to underline China's much less dominant role in FDI in comparison to its position as a top trade partner for the main Latin American economies (i.e., Argentina, Brazil, Chile, Peru, and lately, Uruguay). Since 2010, the United States and Spain represented more than 30 percent of greenfield FDI inflows in Latin America. When adding intra-regional FDI inflows, which have been led by Brazil and Mexico as the main investors, these amounts ranged approximately 45 percent. This means that close to half of new investment inflows into Latin America was dominated by a limited group of countries, and even with the increased participation of China since 2000, these regional investment shares have remained constant with small to moderate increases and decreases.

During Period 1 (2005-2009), the United States had an average percentage share of 23.52 percent of greenfield FDI in Latin America. This share experienced a decrease in Period 2 (2010-2014), reaching 21.57 percent, and it picked up in Period 3 (2015-2019), increasing to 22.94 percent. This means that the growth trajectory of U.S. greenfield FDI inflows in the region has been stable and constant. Even with the repatriation of some of U.S. branches abroad as a result of fiscal changes since 2017 (ECLAC 2018), FDI inflows from the United States have maintained their dominant position in Latin America. Spain, the second largest source of greenfield FDI in LAC during these past 20 years, shows a similar development albeit with a more positive trend. From 2005 to 2019, Spanish greenfield FDI inflows have gradually increased from 10.30 percent to 11.41 percent, and 14.33

Figure 3: Percentage Share of Top Greenfield Investors in Latin America, 2005-2019



Source: fDi Markets, 2005-2019.

Notes: The data is based on announced investments. For this analysis, China's investment in the Nicaragua Canal in 2014 was taken out given its sizeable value and its status as a "zombie" investment.

percent in Latin America. Although more in-depth analysis is needed to assess the different type of investments Spain has brought to the region in the last two decades, in comparison to other non-European partners, European firms have led in FDI projects that focus on renewable energies, telecommunications, and the automotive sectors in Latin America, including investment in research and development (R&D) (ECLAC 2019).

At a sectoral level, there has been an increased interest in renewable energy in the last ten years (Table 2). The sector of alternative and renewable energy has doubled its percentage share in FDI, from an average 6.6 percent in Period 1 to 16.6 percent in Period 3. Conversely, sectors such as coal, oil and gas, as well as mining, which largely benefitted from the commodity boom and drove up FDI flows between 2005 and 2015 due to the purchase of mega-projects in Brazil and Peru (Red ALC-China 2020; Perez Ludeña 2017; Ray and Gallagher 2015), experienced a downward trend, from 15.8 percent to 6.5 percent in oil and gas, and from 12.1 percent to 4.7 percent in mining. Yet it is too soon to conclude that there is growing disinterest in these sectors. While global trends towards decarbonization and more sustainable and efficient energy sources are on the rise, the much lower FDI flows in mining and oil are also representative of investments that have matured since the first decade of the 2000s (Perez Ludeña 2017). In comparison to other main sectors for investments in Latin America and the Caribbean, the extractive industries have a longer development, implementation, production, and completion trajectory.

In addition, the decrease in these sectors also explain the flattening of Latin America's FDI average percentage shares between Periods 2 to 3 (10.80 to 10.48 percent). Most of the interregional FDI flows has been provided by Brazil and Mexico. While Mexican firms lead in manufacturing activities, Brazilian engineering, construction, and mining firms have dominated in Latin America. As a result,

the considerable slowdown in the mining and oil industries, as well as Brazil’s economic recession and the political scandals that emerged since the 2014 (i.e., Lava Jato), have forced one of Brazil’s main engineering conglomerates—Odebrecht—to quickly sell its regional assets as the company filed for bankruptcy in 2019 (OECD 2019). Other top—albeit comparatively much smaller—greenfield investors in Latin America also experienced decreases or the flattening of their market share from Period 2 to Period 3, including Canada, Germany, Japan, Italy, and the United Kingdom (Table 1). With the exception of Canada and the United Kingdom, the changes in percentage share of these countries have been between 1 and 2 percent.

What does this mean in terms of diversification? If China is not a dominant investor in Latin America, is China rounding out or adding to the region’s investment landscape? To reiterate, if China is contributing to Latin America’s investment diversification, we would observe the following non-mutually exclusive scenarios: (a) FDI becomes more diverse geographically—the inclusion of additional players does not diminish the overall investment share of traditional investors. Furthermore, the distribution becomes more balanced among all countries—there is a more leveled playing field. (b) In terms of industries and sectors, FDI is expected to gradually expand into activities traditional investors did not invest in; and (c) China—albeit not a dominant player—provides some relief as Chinese firms buy assets when traditional investors (and sellers) experience economic contractions or run out of other alternatives.

Thus far, there is no clear evidence that China has dramatically altered greenfield FDI in Latin America. While Chinese greenfield FDI did experience growth from period to period, the changes have been moderate, averaging less than a 3 percent increase. Furthermore, the market share by the top three greenfield FDI partners has remained almost unchanged and stable, making China less of a threat to these country investors and more of an additional player to host countries in Latin America. Therefore, it appears that China joined in the game, although at much gradual pace than expected.

Table 1: Development of Top Greenfield Investors in Latin America by Period, 2005-2019

Country	Period 1 to 2	Period 2 to 3
United States	Decreased	Increased
Spain	Increased	Increased
LAC	Increased	Flat
Canada	Flat	Decreased
Germany	Flat	Decreased
China	Increased	Increased
Japan	Increased	Decreased
Italy	Decreased	Decreased
United Kingdom	Flat	Decreased
France	Decreased	Increased

* Considered an increased if 1% or more growth

Source: fDi Intelligence, 2005-2019.

Notes: The data is based on announced investments. For this analysis, China’s investment in the Nicaragua Canal in 2014 was taken out given its sizeable value and its status as a “zombie” investment.

The analysis by sector also shows a similar distribution. The United States, Spain, and LAC are among the top investors in industries with the highest greenfield FDI (Tables 2 and 3). Unsurprisingly, European countries are the leading investors in the alternative and renewable energy activities,

while the United States has remained as the leading source of greenfield FDI in manufacturing, representing close to one quarter of the total greenfield FDI inflows in the sector in all three periods (Table 2). The only main sectors where China is a top five source of greenfield FDI are: mining (third), engineering (third), and manufacturing (fourth). But even in these cases, the percentage share over each period has been less than 10 percent. China's participation in transportation has fared better, where it ranks as number two with a total share of 15.14 percent from 2005 to 2019, behind the United States (22.37 percent). However, this is a sector that remains underdeveloped and underinvested in the region.

Table 2: Top Target Sectors for Greenfield FDI in Latin America, 2005-2019*

Sectors	United States			Spain			China			Total Greenfield Investment			
	2005-09	2010-14	2015-19	2005-09	2010-14	2015-19	2005-09	2010-14	2015-19	2005-09	2010-14	2015-19	Total
Manufacturing	25.1%	26.2%	23.1%	1.4%	3.3%	2.1%	3.8%	5.4%	8.3%	23.3%	25.1%	23.1%	24.0%
Communications & IT services	27.1%	29.4%	39.2%	8.8%	24.5%	20.9%	0.2%	4.3%	2.2%	8.9%	17.1%	12.8%	13.3%
Alternative & Renewable Energy	12.5%	24.6%	7.1%	36.8%	27.1%	29.4%	0.0%	0.7%	5.2%	6.6%	10.5%	16.6%	11.1%
Coal, oil, natural gas	27.4%	4.9%	31.4%	11.4%	5.2%	12.8%	1.9%	5.4%	3.9%	15.8%	7.2%	6.5%	9.7%
Mining	3.8%	7.9%	3.4%	0.0%	--	--	10.4%	6.6%	5.7%	12.1%	9.1%	4.7%	8.8%

*Although China is not a top investor in Latin America, this table shows the country's share in each of these main industries for the region.

Source: fDi Markets, 2005-2019.

Notes: The data is based on announced investments. For this analysis, China's investment in the Nicaragua Canal in 2014 was taken out given its sizeable value and its status as a "zombie" investment.

Table 3: Top Greenfield Investors in Each Main Sector, 2005-2019

	2005-2009	2010-2014	2015-2019	Total
Manufacturing	United States	United States	United States	United States (24.97%)
Communications & IT Services	United States	United States	United States	United States (31.69%)
Alternative & Renewable energy	Spain	Spain	Spain	Spain (29.93%)
Coal, oil, natural gas	United States	LAC	United States	United States (21.55%)
Mining	Canada	Canada	LAC	Canada (46.10%)

Source: fDi Markets, 2005-2019.

Notes: The data is based on announced investments. For this analysis, China's investment in the Nicaragua Canal in 2014 was taken out given its sizeable value and its status as a "zombie" investment.

Objectively, China's investments in Latin America have mostly been complementary to its trade exchanges, especially during the commodity boom period. This means that China's initial efforts focused on the promotion of trade versus foreign direct investment. As such, China's export of capital did not take off until the 2000s, and it was centered on a number of sectors that supported the country's commercial exchanges. From 2000 to 2010 approximately, most of China's FDI was destined to the Latin American countries that produced and exported minerals and hydrocarbons



to China, and in a slightly lesser extent, agricultural products (i.e., Argentina, Brazil, Chile, Ecuador, Peru, and Venezuela) (Berrios 2010; Gallagher 2010; Perez Ludeña 2017). These were the same countries with which China has had stronger trade exchanges, thus making Chinese investment intrinsically connected with its commercial ties during the boom period.

As Sino-Latin American ties deepened and China's economic priorities shifted around the mid-2010s, Chinese investments changed as well, including increased interest in renewable energy, electricity, telecommunications, and infrastructure. In addition to new emerging global trends, the shift in China's foreign economic policies and development strategies also explain this transformation in the focus of its investments. Nevertheless, China's interest in the extractive industries and the agricultural sector has continued in the post-boom period, but with a noticeable slowdown from 2014 to 2017 (Perez Ludeña, 2017). In 2017, China's investments in Latin America picked up (ECLAC 2018; Ray 2018) and, most importantly, showed greater diversification, albeit at a gradual pace.

Analyses by Dussel Peters (2019, 2020) and Canuto (2019) suggest that Chinese investors are becoming more diverse, not only within existing infrastructure projects, but in sectors that target services and banking. During Period 3, the region saw the entry of more Chinese infrastructure and engineering firms. Although the market share of these Chinese firms remains lower than that of LAC's traditional partners in these sectors, it appears that this diversification by Chinese companies could be boosting investment in these industries at a regional level. For instance, a report by The Atlantic Council (2017) estimates that from 2012 through 2016, investments in Latin America's service sectors nearly doubled. The authors explain that this expansion has in part been influenced Chinese investment in information technology (IT), green technology, communications, and finance. However, these investments have mostly taken place in the form of mergers and acquisitions (M&As).

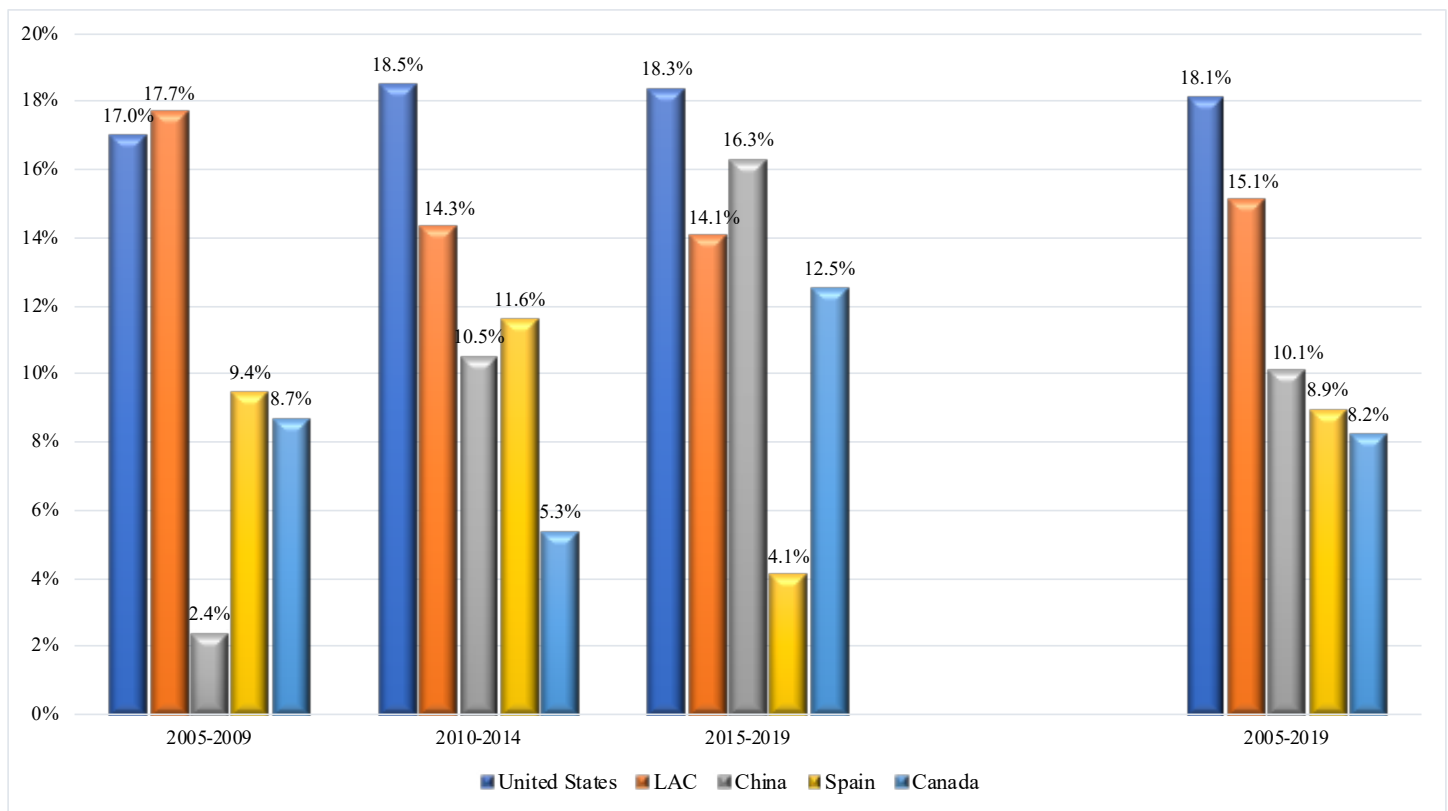
China as a Buyer in Latin America

Data from China's Ministry of Commerce (MOFCOM) shows that, in 2017, a record high of US\$ 17.5 billion in Chinese mergers and acquisitions was recorded in Latin America. However, that amount fell quickly after merely one year, when China only invested US\$ 7.6 billion in M&As (Ray and Wang 2019). In general, China has rapidly grown as a buyer of assets in the region (Figure 4, Tables 4a and 4b), growing from having an average 2.4 percent participation in Period 1 to 16.3 percent in Period 3. But it remains to be seen if this growth could be interpreted as the accumulation of aggressive or as predatory acquisitions.

External conditions and regional circumstances played a role in the increase of China's participation in M&As in Latin America (ECLAC 2018; ECLAC 2019). The effects of the financial crisis of 2008 and 2009, and the Odebrecht crisis in Brazil, made China a very attractive (and sometimes the most plausible) option. Brazil became the top divestor or seller of assets in M&A, a position that was driven by the large sale of projects in Period 3 (2015-2019), when the Odebrecht scandal broke out. While between 2005 and 2009 Brazil comprised 17.01 percent of sales in Latin America, from 2015 to 2019 the country's share increased to 32.51 percent (Figure 5). In fact, more than 50 percent of China's asset purchases in the region in Period 3 were from Brazilian firms, compared to 19.3 percent from Canadian companies, and 8.6 percent from firms from the United States (Table 6). Similarly, it is worth noting that aside from Brazil, other top sellers have also been top buyers.

The United States is both a main divestor and acquiror in Latin America (Figure 5, Tables 5 and 6). As a seller, the United States is positioned in the fourth position, representing 8.54 percent of the overall sales. As a buyer, the United States has remained in the top position with a total M&A share of 18.1 percent, with no significant changes in Periods 2 and 3. Latin America as a whole follows in second, with a percentage share of 15.1 percent. Although companies from the region have experienced a decline from Period 1 (17.7 percent) to Period 2 (14.3 percent), intra-regional transactions did not

Figure 4: Top Acquirors in Latin America (M&A), 2005-2019



Source: Dealogic, 2005-2019.

experience much movement over the last decade, mirroring the United States. In the third position, China accounts for 10.1 percent of the region’s M&As from 2005 to 2019, having experienced its largest average growth from Period 1 to Period 2, when China’s participation jumped from an average 2.4 percent to 10.5 percent (Figure 4).

Then, based on the data, China’s increased participation does not seem to have displaced Latin America’s top actors. Rather, since 2010, M&A inflows appears to be more widely distributed among the main investors. For example, between 2005 and 2009, the United States and Latin America together held close to 35 percent of the region’s M&As inflows, whereas the rest of the investing countries had less than ten percent share each. During Period 2 (2010-2014), about 55 percent of M&A inflows was distributed among four sets of players: United States (18.5 percent), Latin America (14.3 percent), Spain (11.6 percent), and China (10.5 percent). Canada seemingly recovered its position during Period 3, comprising 12.5 percent of M&A inflows thus placing fourth in total participation, while Spain dramatically dropped to the sixth position with a percentage share of less than 5 percent. Similar to the previous set of five years, the United States, Latin America, China, and Canada accounted for more than 60 percent of mergers and acquisitions. It is relevant to point out, however, that the total amount of M&A inflows in Period 2 (over US\$ 400 billion) was almost twice the total amount of inflows in Period 1 (roughly US\$ 210 billion) and Period 3 (US\$ 245 billion). In addition, as indicated by Ray and Wang (2019), in terms of sectors, while China’s M&As mainly targeted extraction activities prior to 2015 and infrastructure in the latter five years, these two sectors have not necessarily led the bulk of merger and acquisition deals in the region.

Table 4a: Top Ten Acquirors by Period, 2005-2019

Rank	2005-2009	2010-2014	2015-2019
1	LAC	USA	USA
2	USA	LAC	China
3	UK	Spain	LAC
4	Spain	China	Canada
5	Canada	Netherlands	France
6	France	Belgium	Spain
7	Japan	Canada	UK
8	Netherlands	Japan	Norway
9	Switzerland	UK	Italy
10	China	Switzerland	Israel

Source: Dealogic, 2005-2019.

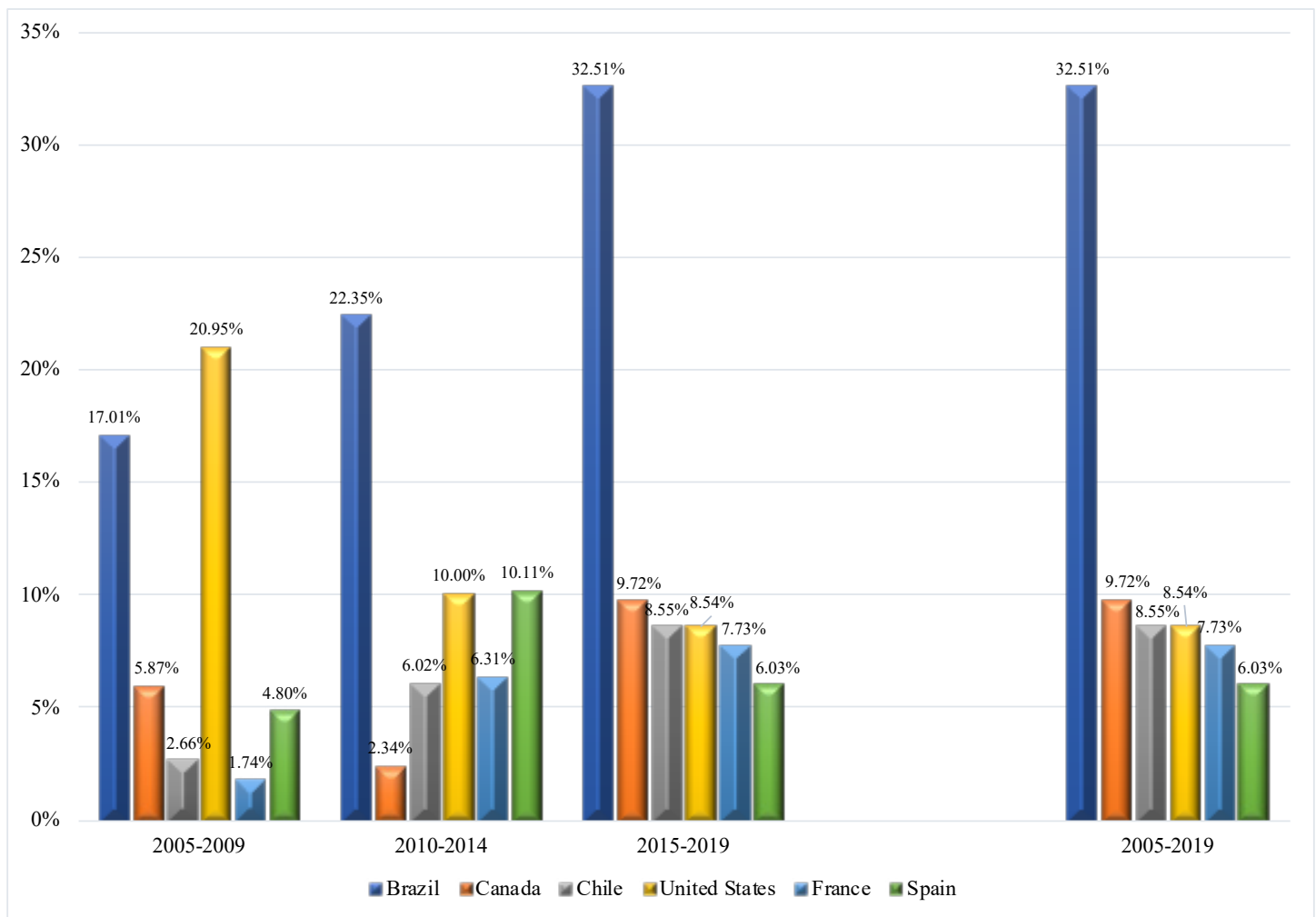
Table 4b: Development by Period of the Main Five Acquirors in Latin America, 2005-2019

Acquirors	Period 1 to 2	Period 2 to 3
LAC	Decreased	Flat
USA	Increased	Flat
China	Increased	Increased
Spain	Increased	Decreased
Canada	Decreased	Increased

Source: Dealogic, 2005-2019.

Thus, this preliminary analysis shows that China has become an emerging investment partner for Latin America. While its growth has been fast in terms of mergers and acquisitions, China does not appear to be an immediate threat to traditional investors in the region. Instead, China is buying as top traditional partners in the region are also selling. However, this analysis does take into consideration the limitations of using regional aggregated data. Similar to trade exchanges, China's interactions in Latin America have been centered on a group of countries (Gallagher and Porzekanski 2010; Wise 2020) and depending on the domestic investment policies of these countries, China's impact may be more acute in some cases than in others. Nevertheless, from a regional perspective, China appears to be filling in some spaces. Data from the Red ALC-China indicates that from 2000 to 2017, Chinese FDI contributed to 15 percent of the estimated two million net jobs China created in Latin America, a socio-economic trend that has been less analyzed and which suggests that Chinese firms can contribute to the region's employment market. Similarly, in Brazil, China's investments have varied from transactions in the automotive sector to software and IT services, as well as in the more predominant extractive and energy sectors (Dussel Peters 2020), showing gradual diversification within one country. Yet project delays and postponement in Peru, for example, due to weak due diligence or ineffective compliance of local environmental standards also indicate how some Chinese investments may still need improvements.

Figure 5: Top Divestors in Latin America (M&A), 2005-2019



Source: Dealogic, 2005-2019.

Table 5: Top Ten Divestors in Latin America, 2005-2019

Countries	2005-2009	2010-2014	2015-2019	Total
Brazil	17.01%	22.35%	32.51%	32.51%
Canada	5.87%	2.34%	9.72%	9.72%
Chile	2.66%	6.02%	8.55%	8.55%
United States	20.95%	10.00%	8.54%	8.54%
France	1.74%	6.31%	7.73%	7.73%
Spain	4.80%	10.11%	6.03%	6.03%
Italy	2.08%	1.86%	3.52%	3.52%
Colombia	8.48%	2.34%	3.37%	3.37%
Mexico	9.39%	5.58%	2.17%	2.17%
Norway	0.07%	1.32%	1.82%	1.82%

Source: Dealogic, 2005-2019.

Table 6: Main Sellers to China in Latin America, 2005-2019

Countries	2005-2009	2010-2014	2015-2019	Total
Brazil	13.1%	22.5%	58.9%	39.0%
Canada	54.0%	0.1%	19.3%	11.8%
Switzerland	0.0%	20.6%	0.0%	10.0%
United States	0.6%	9.3%	8.6%	8.5%
Portugal	0.0%	14.5%	0.0%	7.0%

Source: Dealogic, 2005-2019.

The Path Ahead

China has been a fast growing and evolving player in Latin America. The country's financing capacity and the state-led nature of its multinationals have created expectations of what doing business with China may look like. Economically, the asymmetry between China and Latin America has led to discourses that underline the prevalence of China's interests over those of Latin American countries given its position as the more powerful player. Politically, greater attention has been placed on how China could be using its economic leverage to advance political and ideological gains. But less has been said about where China is positioned as it enters Latin America's investment landscape and the conditions under which countries in the region have been responding to China's advances. This analysis is an initial attempt in examining these scenarios using aggregated investment data.

Thus far, China appears to be an additional source of capital and resources for Latin America. Yet further examination is needed, particularly in those countries with weaker investment policies and more lax environmental and labor standards. China may be contributing to the completion of key projects, but one question is whether the benefits and advantages supersede the costs in the long term.

BIBLIOGRAPHY

LatAm Investor (2018). What Odebrecht Tells Us About Corruption in Latin America. Available at <https://latam-investor.com/2018/04/odebrecht-bribed-region/#> (Accessed: December 2020).

Anderson, S. (n.d.) Latin America new target for US greenfield and M&A projects. *fDi Intelligence*, n.d. Available at <https://www.fdiintelligence.com/article/29066> (Accessed: December 2020).

Ashraf, A., Herzer, D. (2014) The Effects of Greenfield Investment and M&As on Domestic Investment in Developing Countries. *Applied Economics Letters* 21(14): 997-1000.

Ashraf, A., Herzer, D., Nunnenkamp, P. (2016) The Effect of Greenfield FDI and Cross-border M&As on Total Factor Productivity. *The World Economy* 39(11): 1728-1755.

Bertola, L., Ocampo, J.A. (Eds.) (2012) *The Economic Development of Latin America Since Independence*. Oxford University Press.

Buerger, M.J., Ianchovichina, E.I. (2017) Surges and Stops in Greenfield and M&A FDI Flows to Developing Countries: Analysis by Mode of Entry. *Review of World Economics* 153: 411-432.

- Canuto, O. (2019) Latin America Is Not Benefiting from the U.S.-China Trade War. *Americas Quarterly*. Available at <https://www.americasquarterly.org/article/latin-america-is-not-benefiting-from-the-u-s-china-trade-war/> (Accessed: October 2020).
- Chen, T., Perez Ludeña, M. (2014) Chinese Foreign Direct Investment in Latin America and the Caribbean. *Economic Commission for Latin America and the Caribbean (ECLAC)*, Production Development Series No. 195.
- Chen, W., Nord, R. (2017) A Rebalancing Act for China and Africa – The Effects of China’s Rebalancing on Africa’s Trade and Growth. *International Monetary Fund (IMF)*, African Departmental Paper Series, 2017.
- . (2018) Reassessing Africa’s Global Partnerships: Approaches for engaging the new world order. *Foresight Africa 2018 Report*, Africa Growth Initiative.
- Coatsworth, J.H., Taylor, A.M. (Eds.) (1998) *Latin America and the World Economy*. The David Rockefeller Center Series on Latin American Studies, Harvard University.
- Cortés, L.M., Agudelo, D.A., Mongrut, S. (2017) Waves and Determinants in Mergers and Acquisitions: The Case of Latin America. *Emerging Markets, Finance & Trade* 53: 1667-1690.
- Dettoni, J. (2018) How the Odebrecht scandal has shaken Latin America. *fDi Intelligence*. Available at <https://www.fdiintelligence.com/article/70943> (Accessed: December 2020).
- Dunning, J.H. (1982) “Explaining the international direct investment position of countries: towards a dynamic or developmental approach” in *International Capital Movements*. *International Economics Study Group*, Black J., Dunning J.H. (Eds.). Palgrave Macmillan.
- ECLAC (2018) Foreign Direct Investment in Latin America and the Caribbean. Available at <https://www.cepal.org/en/publications/43690-foreign-direct-investment-latin-america-and-caribbean-2018> (Accessed: October 2020).
- ECLAC (2019) Foreign Direct Investment in Latin America and the Caribbean. Available at <https://www.cepal.org/en/publications/44698-foreign-direct-investment-latin-america-and-caribbean-2019> (Accessed: October 2020).
- El-Hage, J. (2019) Shaking the Latin American Equilibrium: The Petrobras & Odebrecht Corruption Scandals. *Fordham Journal of Corporate & Financial Law*. Available at <https://news.law.fordham.edu/jcfl/2019/11/04/shaking-the-latin-american-equilibrium-the-petrobras-odebrecht-corruption-scandals/> (Accessed: December 2020).
- Erthal Abdenur, A. (2017) Skirting or Courting Controversy? Chinese FDI in Latin American Extractive Industries. *International Development Policy* 9: 174-198.
- Gallagher, K.P., Porzecanski, R. (2010) *The Dragon in the Room: China and the Future of Latin American Industrialization*. Stanford University Press.
- Gallagher, K., Irwin, A., Koleski, K. (2012) The New Banks in Town: Chinese Finance in Latin America. *Inter-American Dialogue*. Available at https://www.thedialogue.org/wp-content/uploads/2012/02/New-Banks_FULLTEXT.pdf (Accessed: September 2020).
- Jenkins, R., de Freitas Barbosa, A. (2012) Fear for Manufacturing-China and the Future of Industry in Brazil and Latin America. *The China Quarterly* 209: 59-81.
- Mano, R.C., Zhang, J. (2017) China’s rebalancing: Recent Progress, Prospects and Policies. *International Monetary Fund (IMF)*, IMF Working Paper WP/18/243.
- Niu, N. (2019) Building Development Partnership: Engagement Between China and Latin America. *The Carter Center*. Available at https://www.cartercenter.org/resources/pdfs/news/peace_publications/

[china/building-development-partnership-engagement-china-latin-america.pdf](#) (Accessed: September 2020).

Ortiz Velasquez, S. (2019) Inversión Extranjera Directa de China en América Latina y el Caribe, aspectos metodológicos y tendencias durante 2001-2016. *Economía Informa* 406: 4-17.

Parrado, E. (2019). How Latin America is Holding Its Own Growth. *Americas Quarterly*. Available at <https://www.americasquarterly.org/article/how-latin-america-is-holding-back-its-own-growth/> (Accessed: August 2020).

Park, B., Taewoo. R. (2019) Chinese Multinationals' FDI Motivations: Suggestion for a New Theory. *International Journal of Emerging Market* 14(1): 70-90.

Perez Ludeña, M. (2017) Chinese Investments in Latin America: Opportunities for growth and diversification. *Economic Commission for Latin America and the Caribbean (ECLAC)*. Available at <https://www.cepal.org/en/publications/41134-chinese-investments-latin-america-opportunities-growth-and-diversification> (Accessed: October 2020).

Ray, R., Gallagher, K. (2015) China-Latin America Economic Bulletin, 2015 Edition. *Boston University*, Working Group on Development and Environment in the Americas, Global Economic Governance Initiative.

———. (2017) China-Latin America Economic Bulletin, 2017 Edition. *Boston University*, Working Group on Development and Environment in the Americas, Global Economic Governance Initiative.

Ray, R. (2018) China-Latin America Economic Bulletin, 2018. Edition. *Boston University*, Working Group on Development and Environment in the Americas, Global Economic Governance Initiative.

Ray, R., Wang, K. (2019) China-Latin America Economic Bulletin, 2019 Edition. *Boston University*, Working Group on Development and Environment in the Americas, Global Economic Governance Initiative.

Rojas-Suarez, L. (Ed.) (2009) *Growing Pains in Latin America: An Economic Framework as Applied to Brazil, Colombia, Costa Rica, Mexico, and Peru*. Center for Global Development.

Stoddard, O., Noy, I. (2015). Fire-sale FDI? The Impact of Financial Crises on Foreign Direct Investment. *Review of Development Economics* 19(2): 387-399.

Quer, D., Rienda, L., Andreu, R., Miao, S. (2019) Host Country Experience, Institutional Distance and Location Choice of Chinese MNEs. *Cross Cultural & Strategic Management*, 26(1): 24-45.

Zhang, L. (2019) China's Rebalancing Explained in 6 Charts. *IMFBlog*. Available at <https://blogs.imf.org/2016/09/06/chinas-rebalancing-explained-in-6-charts/> (Accessed: October 2020).

Appendix 1: GDP Annual Growth (%) in Selected Investment Partners

Country	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Canada	5.00	4.17	6.87	1.01	-2.93	3.09	3.15	1.76	2.33	2.87	0.66	1.00	3.17	2.01	1.66
Switzerland	3.12	3.99	4.11	2.15	-2.22	3.00	1.69	1.01	1.85	2.45	1.33	1.72	1.80	2.75	0.93
China	11.40	12.72	14.23	9.65	9.40	10.64	9.55	7.86	7.77	7.42	7.04	6.85	6.95	6.75	6.11
Germany	0.72	3.81	2.98	0.96	-5.70	4.18	3.92	0.42	0.43	2.23	1.74	2.23	2.47	1.53	0.56
Spain	3.65	4.10	3.60	0.89	-3.76	0.16	-0.81	-2.96	-1.44	1.38	3.84	3.03	2.89	2.35	1.98
France	1.66	2.45	2.42	0.25	-2.87	1.95	2.19	0.31	0.58	0.96	1.11	1.10	2.29	1.79	1.51
United Kingdom	3.18	2.79	2.43	-0.28	-4.25	1.95	1.54	1.48	2.14	2.61	2.36	1.92	1.89	1.34	1.41
Italy	0.82	1.79	1.49	-0.96	-5.28	1.71	0.71	-2.98	-1.84	0.00	0.78	1.29	1.67	0.80	0.30
Netherlands	2.05	3.46	3.77	2.17	-3.67	1.34	1.55	-1.03	-0.13	1.42	1.96	2.19	2.91	2.60	1.81
Norway	2.63	2.40	2.99	0.48	-1.73	0.70	0.98	2.70	1.03	1.97	1.97	1.07	2.32	1.29	1.15
Portugal	0.78	1.63	2.51	0.32	-3.12	1.74	-1.70	-4.06	-0.92	0.79	1.79	2.02	3.51	2.64	2.16
United States	3.51	2.85	1.88	-0.14	-2.54	2.56	1.55	2.25	1.84	2.45	2.88	1.57	2.22	2.93	2.33

Source: World Development Indicators.



GLOBAL CHINA INITIATIVE

The Global China Initiative (GCI) is a research initiative at Boston University's Global Development Policy Center. The GDP Center is a University wide center in partnership with the Frederick S. Pardee School for Global Studies. The Center's mission is to advance policy-oriented research for financial stability, human wellbeing, and environmental sustainability.

www.bu.edu/gdp

The views expressed in this Working Paper are strictly those of the author(s) and do not represent the position of Boston University, or the Global Development Policy Center.