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Exploring the Drivers of Chinese FDI in Latin America: An RBV and Institutional Theory Analysis

A Study of the Mining, Energy, and Technology Sectors

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Abstract

This thesis provides a comprehensive analysis of the Resource-Based View (RBV) and Institutional Theory to explain Chinese investments in Latin America. The study aims to identify the motivations, strategies, and challenges associated with China's growing presence in the region.

The RBV explains that China invests in resource-rich Latin American countries to secure reliable and affordable supplies of commodities, minerals, and oil, essential for economic growth and industrial development. Chinese firms also invest in the region to gain a competitive advantage over their rivals from other countries, particularly the US, which is still the main investor in the region.

Institutional Theory, on the other hand, highlights the role of cultural, social, and political norms in shaping investment decisions. The theory suggests that China's investments in Latin America reflect its efforts to build relationships with key actors in the region, such as governments, business leaders, and local communities. Additionally, China's investments are influenced by the political and regulatory environment of the region, which can either facilitate or hinder investment activities. The success of Chinese investments in Latin America depends on how well China can navigate the institutional environment of the region, which is characterised by a complex set of regulations, norms, and power dynamics.

The study also identifies that Chinese firms' ownership advantages are mostly either network-based or home country-based. However, Chinese firms must learn to navigate local cultures and customs, build relationships with key stakeholders, and adapt their business strategies to fit the local context. Additionally, they must also be aware of the risks associated with investing in politically unstable and economically volatile regions, which can have a negative impact on their investments.

Overall, this research sheds light on the dynamics of Chinese investments in Latin America and contributes to a broader understanding of the intersection between economic and institutional factors in international business. The insights of the RBV and Institutional Theory provide a nuanced and comprehensive analysis of the motivations, strategies, and challenges associated with China's growing presence in Latin America. However, other

perspectives, such as Transaction Cost theory, the Eclectic paradigm (OLI), and the Linkage, Leverage, and Learning (LLL) framework, could provide further analysis and complement the findings of this study.

As China continues to expand its global reach, it is important to understand the drivers of its investments and the implications for the countries and regions involved. This thesis makes a significant contribution to this important area of research and highlights the need for further investigation into the complex interplay between economic and institutional factors in international business.

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1. Introduction

Since China started its transition from a planned economy to a social market economy in 1978, it has experienced significant economic growth and development, becoming the second-largest economy in the world. This transition was led by Deng Xiaoping, who implemented various economic reforms and policies that encouraged foreign investment, privatisation of state-owned enterprises, and the development of special economic zones. As a result, China's GDP has grown at an average rate of around 9% per year over the past four decades (World Bank, 2023), lifting millions of people out of poverty and creating a large middle class.

Chinese demand for natural resources, in particular, has led China to invest overseas, becoming for many countries in the world the primary source of foreign direct investment (FDI). Over the past decade, FDI from China to Latin America has grown significantly, especially in industries such as mining, energy, infrastructure, and agriculture. Investments in the Latin American market have led China to become the second largest FDI exporter in the region, behind the US.

Many theories could be used to understand the reasons behind China’s investments in Latin America. This study aims to do so by using two established theories, such as the Resource-Based View (RBV) and Institutional Theory.

The Resource-Based View (Barney, 1991, Teece et al., 1997) suggests that a firm's resources, including its technological capabilities, financial resources, and organizational structure, are the primary drivers of its competitive advantage and long-term success. In the context of Chinese FDI in Latin America, the RBV suggests that Chinese firms may be drawn by the region's rich natural resources, which offer opportunities to build strategic assets and gain a competitive advantage. Furthermore, Chinese firms may bring their technological expertise and financial resources to the region, creating new opportunities for growth and development.

Institutional Theory, on the other hand, posits that the broader institutional environment plays a critical role in shaping firms' behaviour and strategic choices (Meyer & Rowan, 1977). As for Chinese FDI in Latin America, Institutional Theory suggests that Chinese

firms may be influenced by the institutional environments of both China and the host countries, as well as the evolving institutional relationships between China and Latin America. For instance, Chinese firms may be driven to invest in Latin America as a means of securing access to natural resources in the face of increasing global competition, and may seek to adapt to local institutional environments by partnering with local firms or complying with local regulations.

After presenting the two theories and other relevant literature, an overview of the evolution of Chinese FDI will be provided, as well as a description of China's and Latin America's institutional environments. Subsequently, Chinese FDI in the mining, energy, and technology sectors in Latin America will be analysed by using the above-mentioned theories. Lastly, the results section will provide the findings of the paper.

By examining the interplay between the RBV and Institutional Theory in explaining Chinese FDI in the mining, energy, and technology sectors in Latin America, this thesis aims to shed light on the drivers of Chinese investment in the region and the implications of these investments for both China and Latin America. Through a qualitative analysis of primary and secondary sources, this study seeks to provide a nuanced understanding of the ways in which Chinese firms navigate local institutional environments while leveraging their resources to gain a competitive advantage in the region. Ultimately, this research will contribute to a broader understanding of the dynamics of international investment and the evolving relationship between China and Latin America.

2. Methodology

The objective of this paper is to gain a deeper understanding of the internationalisation strategies used by Chinese firms when investing in the Latin American market. The analysis will focus on three sectors: the mining, energy, and technology sectors. The approach adopted by this research is a qualitative one, as it allows for an in-depth examination of the experiences, perceptions and practices of Chinese firms operating in the region. Additionally, by utilising established theories such as the Resource-Based View and Institutional Theory, this study will build on existing knowledge and provide a comprehensive understanding of the subject.

Sample and Data Collection

The object of study is countries in Latin America, with a particular focus on the countries in which Chinese FDI in the technology, mining and energy sectors is especially relevant and in which sufficient information can be collected. The study covers the period from the start of Chinese FDI in the region in the 1970s, until 2023. This time frame allows for the observation of the evolution of Chinese FDI in the Latin American region in relation to the different policies adopted by the governments involved.

The data for this study has been collected through a review of relevant literature, including academic articles, publications, and financial databases. Examples of relevant databases used include the World Investment Report redacted by the United Nations Conference on Trade and Development (UNCTAD), the World Bank, Bloomberg, and data from Chinese and Latin American governments. In addition, several articles from renowned academic journals have been reviewed. To ensure that the data is reliable and valid, a multi-source approach has been adopted, which involves collecting data from multiple sources.

Data Analysis

Once the data was collected, it has been analysed qualitatively, using content analysis. This process involved reading through the data, in order to identify patterns, themes and

relationships. The analysis has focused on understanding the internationalisation strategies used by Chinese firms in the mining, energy, and technology sectors when investing in the Latin American market. Additionally, the study has connected the data with the established theories to support the findings and to contribute to the existing literature.

Limitations of the study

One limitation of the study is that it is focused on a specific time and specific sectors, disregarding others. Therefore, it might not be generalisable to other time periods or industries. In addition, as some of the articles used in the study adopted a qualitative research approach, collecting and analysing non-numerical data such as interviews and observations, the results obtained may not be representative of a larger population, due to the fact that the findings of these articles are based on a small and non-random sample. Furthermore, other information has been collected from literature from publicly available sources, that may not have access to the inner workings of the firms under study.

To address these limitations, the study has drawn on multiple sources of data to ensure the validity of the findings, in an attempt to provide a detailed and in-depth examination of the internationalisation strategies used by Chinese firms in the mining, energy and technology sectors when investing in the Latin American market.

Despite these limitations, this study provides valuable insights into the internationalisation strategies used by Chinese firms in the Latin American market, which can be considered when making decisions regarding the operations and the improving of competitiveness.

Finding the data

When researching Chinese FDI in Latin America, one of the main challenges that researchers may face is the lack of reliable and comprehensive information available. This is due to a variety of reasons, including the fact that Chinese companies may not always disclose information about their investments and operations in the region, making it difficult to track and verify the extent of their activities. Additionally, official Chinese government statistics on FDI in Latin America may not always be entirely accurate or complete

(Fernández-Arias, 2011). Furthermore, there may be a lack of transparency in the reporting of investment and trade data by Latin American governments, which can also make it difficult to obtain reliable information (Myers, 2011). In particular, there could be under-reporting in the official data collected by the Chinese Ministry of Commerce.

For instance, it has been reported that Chinese firms often invest in the region through subsidiaries or affiliates, which can make it challenging to trace the origin of the investment and understand the ownership of assets. This can be seen in the case of the Chinese company Sinohydro, which invested in a hydroelectric project in Honduras through a local subsidiary, making it difficult to track the flow of investment and understand the nature of the investment. Another example is the acquisition by Sinopec of 40% of Brazil's company Repsol for over $7 billion. As the operation was conducted by a subsidiary located in Luxembourg, the FDI was registered from Luxembourg, and not from China.

Another example is the lack of consistency in the way Chinese companies and government agencies report their investments in Latin America. This can make it difficult to understand the total value and scope of Chinese FDI in the region. This is particularly true in the case of barter and counter-trade arrangements, which are often used by Chinese firms to invest in Latin American countries (Irwin & Gallagher, 2013). These types of arrangements can make it difficult to track the investment and understand its impact, as the terms and conditions of the investment may not be made publicly available. For instance, a Chinese company might agree to make an investment in Latin America in exchange for the rights to export a certain amount of the country's natural resources, such as oil or minerals. As the investment is not in the form of cash, it can be harder to track and measure the impact of the investment on the recipient's economy.

Furthermore, some countries in Latin America may not have robust systems in place for collecting, reporting, and disseminating data on foreign investment. This can make it difficult to obtain reliable information on Chinese FDI in these countries (Irwin & Gallagher, 2013). Additionally, language barriers can also be a problem, as much of the information available on Chinese FDI in Latin America may be in Chinese or Spanish, making it difficult for English speakers to access.

Given these difficulties, it is important to use multiple sources and to verify the information obtained when researching Chinese FDI in Latin America.

3. Literature review

The topic of firm growth has been extensively explored in academic research. Various factors such as company size, ownership, export intensity, and international experience have been used to measure it (Deng, 2012). Research has mostly been conducted on Western firms, operating in a market-based economy and with the aim of profit maximisation (Child, 1972, 1994). In the West, companies have traditionally adopted two strategic choices in order to grow: they have done so through generic expansion or through acquisitions (Penrose, 1959; Yip, 1982). More recently, they have started to adopt a hybrid or network strategy to achieve growth (Contractor & Lorange, 1988; Powell, 1990; Williamson, 1991). This three-strategic-choice model enables companies to expand their operations and invest in foreign markets.

Following this, many theories have been formulated on the reasons why companies aim to grow. The Evolutionary perspective, for instance, focuses on the desire of managers to achieve growth, and considers the company as a collection of resources and routines that influence growth (Penrose, 1959). The Transaction Cost Theory, on the other hand, sees the growth of the firm as a way to reduce market failures, reduce transaction costs and facilitate the exchange of resources.

Both the Evolutionary Theory and the Transaction Cost Perspective consider generic expansion or acquisitions as traditional strategies for firms to achieve growth. Foreign direct investment, which encompasses operations such as mergers and acquisitions, greenfield and brownfield investments, can serve as a means for firms to pursue these strategies.

Foreign direct investment (FDI) is a significant driver of economic growth and development, and it can take many forms. Siddiqui and Khan (2019) define FDI as a cross-border investment made by a company or individual in one country into business interests in another country, typically through the acquisition of a controlling interest in an existing foreign company, or the establishment of a new business entity in the host country. There are many different classifications of FDI, with no one-size-fits-all classification that is universally accepted. A commonly used one is the distinction between horizontal, vertical, and conglomerate FDI. Horizontal FDI refers to establishing operations in a foreign country,

similar to those in the home country. For instance, setting up a subsidiary that produces the same products or services. Vertical FDI refers to establishing operations that are part of the supply chain. Finally, conglomerate FDI refers to establishing operations in a completely different sector or industry.

More specifically, among the above-mentioned distinction, FDI can happen in many different ways, the most used being mergers and acquisitions, greenfield investments, joint ventures, brownfield investments and strategic alliances.

Mergers and acquisitions (M&A) involve the purchase of an existing foreign company or the merger of a foreign company with a domestic company. M&A is a common way for companies to acquire new technologies, access new markets, or achieve economies of scale. It is a popular way for companies to expand their operations, gain market share and increase their competitiveness.

Greenfield investments entail the construction of new facilities, such as factories or offices, in a foreign country. Greenfield investments are often made by companies seeking to enter new markets or take advantage of lower labour costs in the host country. It is a way for companies to establish a presence in a new market, grow their business and take advantage of new opportunities.

Brownfield investments relate to the acquisition and renovation of an existing facility. This type of investment is often made by companies seeking to expand their operations in an existing market or to take advantage of existing infrastructure. Unlike greenfield, brownfield investments allow companies to acquire existing assets and operations, and to take advantage of existing infrastructure, facilities, and employees.

Together with these strategies, in the last few decades, Western firms have been entering a variety of interorganisational relationships in order to grow. These network-based relationships, as argued by the Interorganisational perspective of firm growth, can assume many forms, such as joint ventures, strategic alliances, partnerships, and hybrid organisations.

Joint ventures (JV) involve the formation of a partnership between a domestic and a foreign company, in which both parties contribute assets and share control of the venture. JVs are often used to share risks and costs, as well as to gain access to new technologies and markets.

It allows companies to share resources, knowledge, and expertise, and to access new markets and technologies.

Strategic alliances involve a partnership between a domestic and a foreign company, but unlike a joint venture, the partners do not share control of the venture. Instead, they collaborate on specific projects or initiatives, such as research and development or marketing efforts. Strategic alliances allow companies to collaborate on specific projects or initiatives without sharing control, and to access new markets, technologies, and resources.

In this literature review, two theoretical frameworks that can help better understand the patterns and impacts of FDI in developing countries will be examined. These frameworks are the Resource-Based View and Institutional Theory. The first one helps explain FDI from a microeconomic, firm-level perspective, while the second one from a macroeconomic, country-level perspective.

3.1 Resource-Based View

The Resource-Based View (RBV) is a perspective that suggests that a firm's unique resources and capabilities are the key drivers of its competitiveness and success (Barney, 1991). In the context of foreign direct investment (FDI), the RBV can be used to analyse a firm's decision to invest in foreign markets, as well as the potential outcomes of that investment.

According to the RBV, a firm's resources can be classified as tangible or intangible. Tangible resources consist of physical assets and financial capital. Intangible resources include intellectual property, brand reputation, human and organisational resources. The RBV posits that a firm's unique resources and capabilities give the company a competitive advantage in the market, allowing it to differentiate itself from its rivals and potentially achieve higher levels of profitability (Porter, 1980). Moreover, the reasons why a firm may seek to invest in foreign markets is to gain access to new resources or to enhance its existing resources (Dunning, 1993). For example, a firm may invest in a foreign market with a highly skilled workforce in order to access a new pool of talented employees, or it may invest in a foreign market with abundant natural resources in order to secure a reliable source of raw

materials (Vernon, 1966). There are several empirical indicators of the potential of a firm's resources to generate sustained competitive advantage. These indicators include rarity, inimitability, non-substitutability, and organizational efficiency (Barney, 1991).

The RBV also emphasises the importance of "capabilities", which are the firm's ability to effectively utilise its resources in order to create value (Grant, 1991). A firm's capabilities can include its production processes, its distribution networks, and its management systems (Peteraf, 1993). In the context of FDI, a firm's capabilities may be a key factor in its ability to successfully enter and compete in a foreign market. For example, a firm with strong production capabilities may be better able to adapt to the unique demands of a foreign market, while a firm with a well-developed distribution network may be able to reach customers more effectively in that market (Hitt, Ireland, & Hoskisson, 2019).

Moreover, according to the Resource-Based View, being the first company to enter a foreign market can provide a significant competitive advantage, as it allows the firm to gain access to distribution channels, build goodwill with customers, and establish a positive reputation before other companies enter the market. In addition, the presence of entry or mobility barriers can also create competitive advantages for firms, as it can make it difficult for other companies to enter or move into the market (Barney, 1991). These first-mover advantages can be valuable for firms seeking to establish a strong position in a foreign market and achieve a sustained competitive advantage.

There are several potential outcomes of FDI from the perspective of the RBV. One potential outcome is that the firm is able to access new resources and capabilities that it did not previously possess, leading to improved competitiveness and profitability (Penrose, 1959). Another potential outcome is that the firm can enhance its existing resources and capabilities through its foreign investment, also leading to improved competitiveness and profitability (Buckley & Casson, 1976). However, there are also potential risks associated with FDI from the perspective of the RBV. For example, if a firm is unable to effectively utilise the resources or capabilities it gains through its foreign investment, it may not realise the expected benefits (Lippman & Rumelt, 1982). Additionally, if a firm's unique resources and capabilities are not suited to the demands of the foreign market, it may struggle to compete and may even incur losses (Peng, 2003).

To summarise, the Resource-Based View can be a useful perspective for analysing FDI decisions and outcomes. By considering the unique resources and capabilities of a firm, as well as the potential risks and opportunities of investing in a foreign market, firms can make informed decisions about whether and how to invest in foreign markets in order to achieve a competitive advantage and enhance their profitability.

3.2 Institutional Theory

Institutional Theory is a perspective in sociology and economics that examines the ways in which social, political, and economic institutions shape individual and group behaviour. In the context of FDI, Institutional Theory can be used to understand the factors that influence a firm's decision to invest in a particular foreign country, as well as the consequences of this investment for the host country and its institutions.

There are several different strands of Institutional Theory that have been applied to the study of FDI. One influential approach is the "New Institutional Economics" (NIE), which emphasises the role of formal and informal institutions in shaping economic behaviour. Douglass North is particularly known for his contributions to the development of NIE, particularly his work on the role of institutions in economic development and economic change. Thanks to his work on the role of institutions, Douglass North won the Nobel Prize in Economics in 1993. In his book “Institutions, Institutional Change and Economic Performance” (1990), North defines institutions as “the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction.” According to North, institutions provide the framework within which economic activity takes place and are a key determinant of economic performance. He argued that the design and functioning of institutions, including formal institutions such as laws and regulations, as well as informal institutions such as cultural norms, values, and practices, play a crucial role in shaping economic outcomes.

The NIE perspective suggests that firms consider the institutional environment of a potential host country when deciding whether to invest, and the presence of certain types of institutions can either facilitate or hinder FDI. For example, a well-functioning legal system

and strong property rights can make a country more attractive to FDI, as investors are more likely to perceive these countries as offering a more stable and predictable business environment. On the other hand, corruption and weak regulatory frameworks can be deterrents of FDI, as they can create uncertainty and risk for investors.

Another strand of Institutional Theory that has been applied to the study of FDI is the "societal culture approach," which focuses on the role of cultural values and beliefs in shaping economic behaviour. According to this perspective, the cultural values and beliefs of a host country can influence the way that firms operate and the types of investments they make. For example, some cultural values may encourage a long-term orientation and cooperation, which can create a more favourable environment for FDI. On the other hand, values that emphasize individualism and competition may create a less favourable environment for FDI.

Scott (1995) provides a further classification of institutions, distinguishing between the cognitive, normative, and regulative pillars, as a way of analysing organizational decision-making and FDI. The cognitive pillar refers to the shared mental models, beliefs, and values that shape how people perceive and understand the world around them. The normative pillar refers to the social rules, norms, and expectations that shape behaviour in a particular social context. The regulative pillar refers to the formal and informal mechanisms that are used to enforce rules and regulate behaviour. In literature, studies that have tried to explain FDI through the institutional framework have mostly focused on institutions that work through regulative processes, usually neglecting the impact of the cognitive and normative pillars (Grosse & Trevino, 2008).

There have been numerous empirical studies that have examined the relationship between institutional factors and FDI. One study found that FDI is more likely to occur in countries with higher levels of economic freedom, as measured by indices such as the Heritage Foundation's Index of Economic Freedom. Other studies have found that FDI is more likely to occur in countries with lower levels of corruption and stronger property rights, as investors are more likely to perceive these countries as offering a more stable and predictable business environment.

However, the relationship between institutional factors and FDI is not always straightforward, and the impact of institutions on FDI can vary depending on the specific

context. For example, some studies have found that FDI is more likely to occur in countries with lower levels of economic freedom, suggesting that there may be other factors at play that influence a firm's decision to invest in a particular country, beyond just the level of economic freedom or the strength of institutions.

In addition to examining the factors that influence FDI, Institutional Theory can also be used to understand the consequences of FDI for host countries and their institutions. For example, FDI can bring with it new technologies and management practices that can contribute to economic development and institutional change in the host country. This can lead to the creation of new jobs and the expansion of local businesses, as well as an increase in productivity and competitiveness.

However, FDI can also have negative consequences, such as exacerbating income inequality and leading to the displacement of local firms. For instance, if a foreign firm establishes operations in a host country and becomes the dominant player in a particular market, it may be able to exert a great deal of influence over the host country's institutions, potentially leading to changes in the legal and regulatory frameworks that favour the interests of the foreign firm. This can lead to conflicts of interest and social unrest, as well as the concentration of wealth and power in the hands of a few large firms.

Overall, Institutional Theory provides a useful framework for understanding the role of institutions in shaping FDI, both in terms of the factors that influence a firm's decision to invest in a particular country and the consequences of this investment for the host country and its institutions. Understanding the role of institutions in shaping FDI can help policymakers and other stakeholders navigate these complex issues and make informed decisions about how to best balance the benefits and costs of FDI.

3.3 Other relevant theories

Together with the Resource-Based View and Institutional Theory, many other perspectives have been used over the years in order to study the process of internationalisation of firms.

The OLI theory, developed by John Dunning (1988) and also known as Eclectic paradigm, highlights ownership, location, and internalisation advantages as the key drivers of FDI and the factors that influence its patterns and impacts.

The LLL framework, proposed by Mathews (2006), aims to explain how FDI can contribute to the development of host countries by creating linkages with local firms, leveraging the benefits of FDI, and promoting learning and technology transfer.

The Uppsala model, developed by Johanson and Vahlne (1977), explains the internationalisation process of firms and identifies the factors that influence a firm's decision to enter international markets.

Over the years, there has been a significant amount of research on the patterns and impacts of FDI in developing countries, which are often characterized by low levels of development, poverty, and inequality (Borensztein et al., 1998). Scholars have examined the role of FDI in driving economic growth and development in these countries (Carkovic and Levine, 2002) and have identified a number of factors that influence its attractiveness to firms, including market size, economic stability, infrastructure, and the quality of the local labour force (Lipsey, 2001). However, it is important to note that there are also potential risks and challenges associated with FDI in developing countries. Some scholars have argued that FDI can lead to the exploitation of local resources and labour (Rodrik, 1999) and can have negative social and environmental impacts. Therefore, it is important for host countries to carefully consider the potential risks and challenges and take steps to mitigate them. The literature on FDI in developing countries has helped to shed light on the patterns and impacts of FDI in these contexts and the factors that influence its success or failure (Blomström et al., 2004). The continuing research and understanding of FDI in developing countries make it possible to effectively address the risks and challenges and maximize the potential benefits for host countries.

Going back to the RBV, an advancement of it is the concept of dynamic capabilities, which highlights the importance of a firm's ability to continuously adapt and improve its resources and capabilities to stay competitive (Teece et al., 1997). Studies have applied this concept to Chinese FDI in Latin America, showing that Chinese firms have leveraged their dynamic capabilities to successfully enter and compete in Latin American markets. In addition, a precondition for firm growth is the existence of excess resources (Penrose, 1959). These

resources can be essentially of three types: physical, human, and financial (Peng & Heath, 1996). Firms in planned economies (state-owned enterprises) often have a huge amount of excess physical resources, as their operations under the planning system are inefficient. It is no surprise that the Kornai ratio, which measures the ratio of input inventories versus output inventories, is always higher in state-owned enterprises than in Western firms (Kornai, 1992). As for managerial resources, state firms in planned economies usually do not have enough skilled and experienced managers trained to compete in a market-based economy (Puffer, 1992). This is because managers in planned economies are typically agents of the government, whose primary role is to take orders from above, while innovation and entrepreneurship are not valued. Finally, state-owned firms from formerly planned economies usually do not have enough financial resources to found growth. They were used to receive funds from the government, but, with the transition to a market-based economy, these funds are not available to them anymore. It must be said, however, that this is not entirely true for Chinese firms, as it will be shown in the following section. Chinese firms usually are founded by banks and organisations created by the Chinese government.

Penrose (1959), with his evolutionary perspective, focuses on the desire of top managers to achieve growth, as well as the firm as a bundle of resources and routines that influence growth. According to him, the firm is a collection of productive resources. This includes both physical resources (plant, equipment, land, raw materials, inventory) and human resources (skilled and unskilled labour, managerial and technical services). Top managers utilise these resources to make the company grow. Nelson and Winter (1982) build on Penrose's work, and argue that firm resources, together with physical and human resources, are also made by organisational routines. Organisational routines are administrative mechanisms that are required to transform inputs into outputs.

Chinese companies differ from Western companies in many aspects: they typically are state-owned and have less experience in acquiring and allocating resources in a competitive, market-based economy (Child, 1990; Lawrence & Vlachoutsicos, 1990). However, since the 1980, Chinese companies have undertaken a transition toward market-based economies. Western companies adopt a "three-strategic-choice" model of firm growth. They either grow through generic expansion, acquisitions (Penrose, 1959; Yip, 1982), or through a network strategy (Contractor & Lorange, 1988; Powell, 1990; Williamson, 1991). When evaluating which strategy to utilise, Western managers base their decision on the company's

internal strengths and weaknesses, and on the environment's opportunities and threats. Peng and Heath's (1996) study on the interaction between institutions and companies in planned economies in transition such as Eastern Europe, former Soviet republics and China reveal that companies in these countries grow through a process of "boundary blurring". This model of growth resembles that of Western companies, taking into account the unique institutional frameworks and economic organisations of developing countries (Peng, 1993, 1994). The countries in their study are similar, as they all transitioned toward market-based economies, with weakened bureaucratic controls and tolerance of private ownership.

Institutional theory, which, as mentioned before, focuses on the role of social, political, and economic institutions in shaping economic behaviour and outcomes (North, 1990), has also been applied to Chinese FDI in Latin America to understand how the institutional environment in host countries affects Chinese firms' investment decisions and outcomes. Studies have shown that Chinese firms have faced challenges in navigating the institutional differences between China and Latin America, but have also been able to leverage their relationships with Chinese institutions to overcome these challenges. This has provided insights into how institutional factors play a role in shaping the success of Chinese FDI in Latin America.

Overall, recent discussions and advancements in understanding the Resource-Based View, OLI paradigm, institutional theory, LLL framework, and Uppsala model in the context of Chinese FDI in Latin America have provided valuable insights into how Chinese firms have been able to leverage their advantages and overcome challenges in entering and operating in Latin American markets. By applying these theories and models, researchers have been able to understand the motivations and outcomes of Chinese FDI in Latin America, the role of the host country's institutional environment, and the impact of Chinese FDI on host countries. This has helped to paint a more comprehensive picture of Chinese FDI in Latin America, including the benefits and challenges that come with it. However, as Chinese FDI in Latin America continues to grow and evolve, there is still much more to be understood and studied in this field, and researchers are encouraged to continue exploring the different perspectives and models that can help to shed light on this important topic.

As for Chinese companies, there is currently a debate in the literature regarding the internationalisation strategies of Chinese companies. This is due to the fact that "China is

different from other less developed countries in terms of market size as well as cultural connections and may not fall into a regular LDC [less developed country] category" (Makino et al., 2002). In particular, the Resource-Based View has been used to understand China's resources and capabilities. The works based on this framework agree that most of the ownership advantages of Chinese firms are home country specific and network-based, rather than firm-specific as usually found in incumbent MNCs.

Additionally, one of the characteristics of Chinese firm's internationalisation, which differentiates them from that of Western firms, is the support of the government. This has historical reasons: before China started its transition from planned economy to market economy in the 80s, central economic planning and bureaucratic control was in place. The planning regime fulfilled most functions that the market fulfils in market economies. This system presented many similarities with multidivisional firms in market economies, with the government acting as headquarters and state enterprises as divisions. For this reason, the typical firm was – and still is – a state-owned enterprise that acted in accordance with the regime. The aim of this type of firm was not necessarily profitability, as funding was provided by the government.

According to Child and Rodrigues (2005), Chinese firms have received financial support and protection from the government to reduce their late-coming disadvantage. It has been studied by Cardoza & Fornes (2011), however, that support from the state seems to be instrumental only in the first stages of the expansion, and that ownership by the state does not seem to play a role in the internationalisation process.

At present, from an institutional point of view, the main change in formal constraints has been the abandonment of the central planning regime, and its replacement with market-based transactions. At the same time, however, features of market-based economies, such as a well-defined property rights-based legal framework are still lacking (Clarke, 1991). In a survey by Tan & Litschert (1994), in fact, Chinese managers have reported that, among eight environmental factors that have an impact on firm performance, they perceive that the state regulatory regime is the most influential, most complex, and least predictable of them all.

For this reason, when formal institutions are lacking, countries in transition, such as China, tend to rely on informal institutions. Network contacts are particularly used in China, and

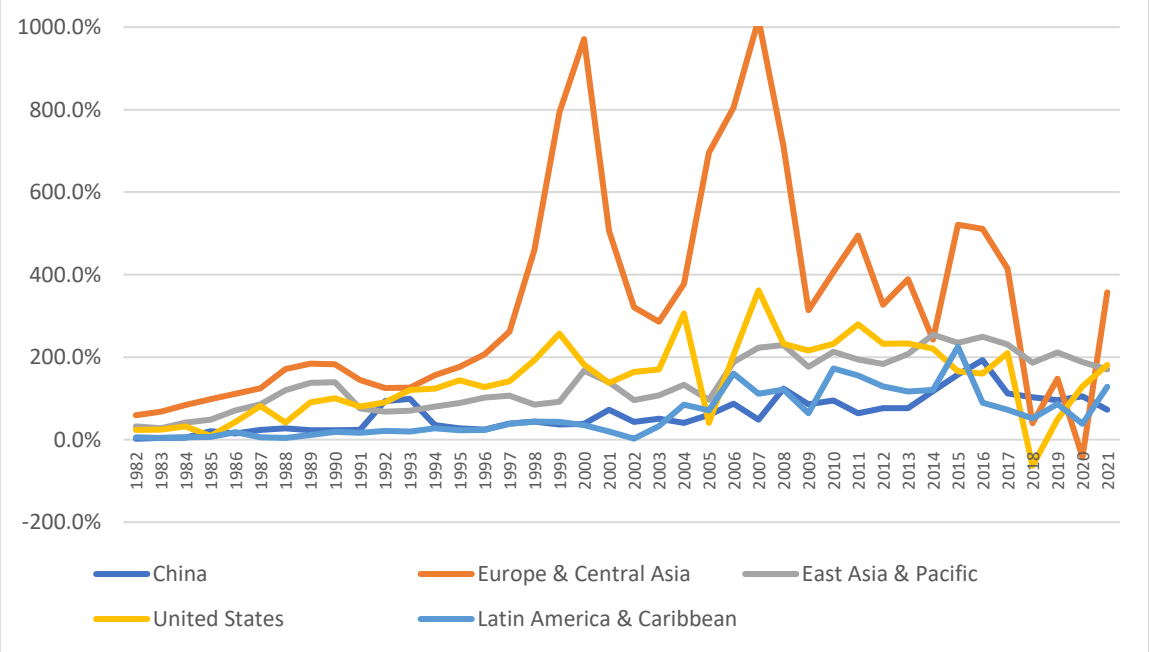
are referred to as “guanxi” (Puffer, 1994). In China, this type of practices is even more widespread due to the country’s Confucian tradition of collectivism (Earley, 1993).

4. History of Chinese FDI

Over the course of three decades, China has shifted from being a recipient of FDI to being a leading FDI exporter, accounting for a considerable portion of the total global outward FDI. Chinese FDI net outflows have increased exponentially over time, from accounting for 2.15% of the country's GDP in 1980, with a peak of 192.66% in 2016, and later declining to 72.2% in 2021 after the economic crisis due to the Covid-19 pandemic.

As can be seen in Figure 1, although the rapid increase in Chinese FDI has been impressive, testimony of the transition from an emerging economy to a developed one, it is still lagging behind other regions, such as Europe and the US.

Figure 1. FDI, net outflows (% of GDP)



Data Source: World Bank, retrieved via Bloomberg (Appendix 1).

Chinese FDI, however, has not always been constant, but it has changed over time. It is possible, in fact, to distinguish four stages of Chinese outward FDI, from its inception, until

the present day (Salidjanova, 2011). The flows of FDI are a direct consequence of a shift in policy, from Maoist propaganda to a "socialist modernisation" proposed by Deng Xiaoping in the 80s, which demanded trade and investment for economic gains (Taylor, 1998).

During the first stage, which goes from 1979 to 1985, China experienced a gradual opening to FDI. The Chinese government started to realise the benefits of foreign investment and began promoting it. However, foreign investment was largely controlled by the state, and only state-owned companies, as well as provincial and municipal economic enterprises, could invest abroad. While the Chinese government wanted to attract capital from foreign investors, they still maintained strict control over foreign investments. During this period, only 189 investment projects have been approved, amounting to a total of $197 million invested.

In the second phase, which goes from 1986 to 1991, the government gradually liberalised its foreign investment policies, giving permission also to nonstate-owned firms to invest abroad. This was the period when the first private companies from China started to emerge, and they were eager to invest overseas. This resulted in an increase in approved projects, which became 891, with a total investment of $1.2 billion.

The third stage goes from 1992 and 1998, and it is characterised by the 1997 Asian financial crisis, in which many Asian countries suffered due to institutional weaknesses, corruption, and a lack of management expertise. This led the Chinese government to be more rigorous with approval procedures for foreign investments, which, in any case, still increased by another $1.2 billion.

The fourth and last phase of Chinese outward FDI goes from 1999, until the present day. This phase is characterised by China's "Go Out" policy, also known as "Going Global Strategy". Through this strategy, the Chinese government started promoting international operations of domestic firms, with the aim of enhancing their international competitiveness.

The Going Global strategy represents an ideologic and economic departure from the Mao era, which was characterised by a self-reliance. The first years coincided with China's admission to the World Trade Organisation in 2001. However, many problems occurred during its implementation, resulting in few profitable projects and governance challenges. On the other hand, the second period of the strategy, denominated "Going Global 2.0", has

been way more successful, having been able to address the failings emerged during the first period, and ensuring that the firms would invest abroad with greater attention for both local needs and China's global image. This period reflects President Xi Jinping's ambition for a global role. Under his leadership, China has become more assertive in promoting its global interests, including the Belt and Road Initiative and the Capacity Cooperation strategies.

4.1 Belt and Road Initiative

The Belt and Road Initiative (BRI) is a global infrastructure and investment project proposed by Xi Jinping in 2013, with the aim of creating infrastructure, trade, investment, and human links across Eurasia. The word "Belt" revokes the "Silk Road Economic Belt", a historical overland trade route for road and trail transportation through Central Asia, while the word "Road" is short for "21st Century Maritime Silk Road", referring to the sea routes that went through Southeast Asia to South Asia, the Middle East and Africa (China Policy, 2017).

Initially targeted to countries in the Asia Pacific, Africa, and Central and Eastern Europe, it did not consider Latin America. The region was later invited to participate in it in 2018, during the China-Community of Latin American and Caribbean States (CELAC) Ministerial Forum in Santiago. To date, twenty-one Latin American countries have signed up to the BRI, with some of them receiving significant Chinese investment. Argentina has been the last Latin American country to enter the BRI agreement, in February 2022, while other major countries, such as Brazil, Mexico and Colombia, are not members. One of the reasons for Argentina to join the BRI was its difficult economic situation and the hope that strengthening economic cooperation with China could be of any help. This example suggests that potential future economic crises could motivate other countries to make the decision to join the BRI. Latin America is an attractive region for the BRI because of its abundance of natural resources, its strategic geographic location, and its potential for economic growth. According to a report by the Inter-American Dialogue, in fact, China's lending to Latin America has increased from $10 billion in 2010 to $141 billion in 2018, with most of the loans going to energy and infrastructure projects.

China’s BRI projects in Latin America have been met both with enthusiasm and with concern. On the one hand, the projects can provide infrastructure and finance for countries in the region, which often experience infrastructure gaps and a limited access to credit. As an example of infrastructure projects, China has invested in the construction of a railway in Brazil, a hydropower plant in Ecuador, and a port in Panama. On the other hand, the concerns are related to the potential impact of Chinese investment on the region’s economies, environment, and political stability. Some experts particularly emphasise the fact that China’s loans can lead to debt traps, that is situations in which countries become heavily indebted to China while having a limited capacity to repay the loans. In addition, some of the projects have been criticised for their lack of transparency, environmental impact, and labour practices. Furthermore, a topic that needs to be discussed is that of the competition in the region: China’s BRI in Latin America can be seen as a challenge to the traditional dominance of the United States in Latin America. The concerns are related to the potential risks of strategic dependencies on China, as well as the potential for China to use its economic influence for political gain.

Together with the Belt and Road Initiative, there is the Capacity Cooperation, which started in 2015. The Capacity Cooperation is another initiative designed to boost China’s global influence. The strategy aims to build partnerships between domestic and foreign firms, boost Chinese industry in global value chains, promote high-speed rail and nuclear energy, and develop foreign country industries and markets in order to sustain China’s growth.

In particular, China’s economic growth needs to be supported by the acquisition of raw materials and energy, and of new technologies. As an example, China passed from being East Asia’s largest oil exporter to becoming the world’s third largest oil importer in 2008, behind the United States and Japan, and since 2014 is the largest oil importer following years of strong economic growth.

5. History of Latin American FDI

Latin America is a diverse and fascinating region with a rich cultural heritage. Unfortunately, it is also known for being the region with the highest income inequality in the world. This inequality is the result of a complex interplay of economic institutions, and differences in productivity, resulting from historical factors.

Miranda Delgado's (2019) analysis of Latin American economic history distinguishes four periods that represent major shifts in the economic policy of the region.

The first period, which goes from 1810 until 1870, is marked by the Industrial Revolution, when there has been a boom of commodities, and a sharp rise in inequality. During this time, Latin America opened for the first time to international trade, but this led to a worsening of the region's commercial balance. This is due to two reasons. First of all, the demand for primary commodities such as sugar, coffee and cotton led to an increase in the exports from Latin America. At the same time, however, the opening up to international trade led to the influx of manufactured goods from Europe and the United States, which were usually cheaper and of better quality than those produced in Latin America. Given that the prices they received for exports were lower than those paid for imports, the result was a trade deficit. This, combined with political instability and the concentration of economic and political power in the hands of a small group of people as a result of the process of independency from European colonial powers and the creation of new constitutions, made it difficult to negotiate favourable trade agreements and to manage the trade deficit, leading to higher inequality.

During the second period (1870-1929), Latin America saw a strong economic growth, led by international trade, and particularly that of commodities. In addition, this period saw a centralisation of power in the hands of the various states, forming oligarchic governments. This centralisation of power made it possible for governments to negotiate with foreign countries on investments in crucial sectors such as infrastructure and communications. Nonetheless, the different specialisations of the regions, with temperate climate areas being the most commercially dynamic, followed by mining areas, and lastly by tropical climate areas, led to an increase in inequality.

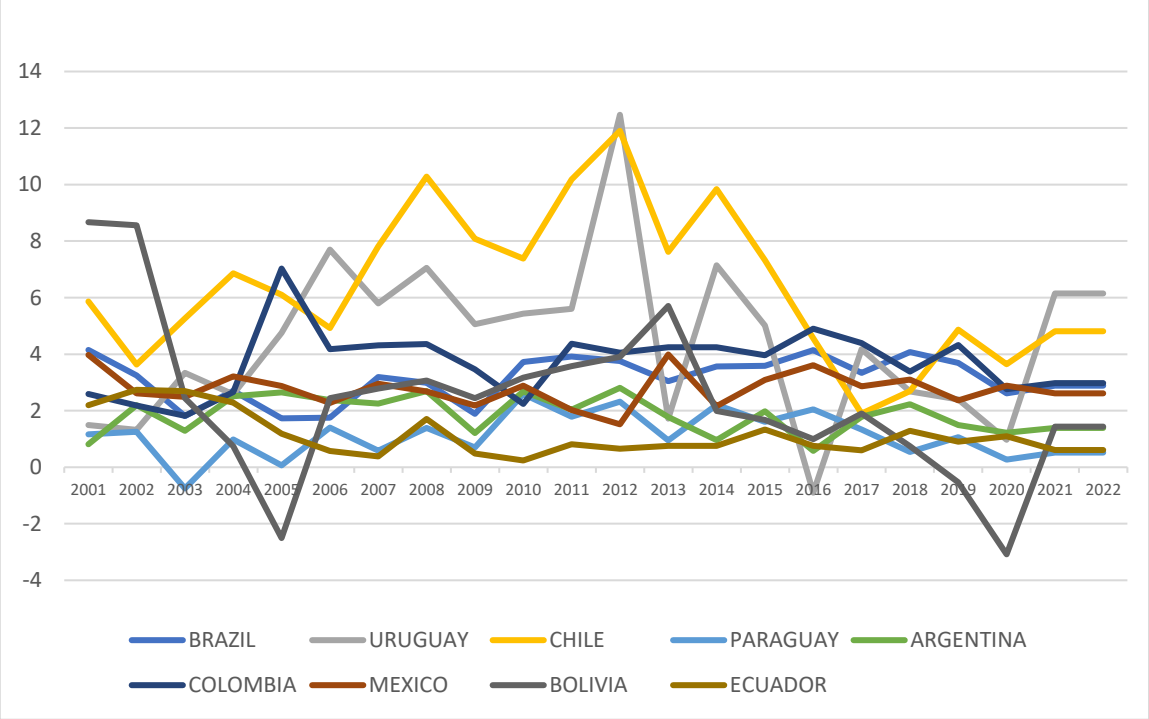
The third period started in 1930, during the Great Depression, and finished in 1980. During this time, there has been a shift towards state-led industrialisation, with the government playing a more interventionist role in the economy. Economic growth was led by the manufacturing sector, as well as financial services, infrastructure, and telecommunications. This period was also marked by a reduction in international trade.

Finally, the fourth period, which started in 1980 and continues until the present day. This period has seen a political liberalisation, which permitted presidential election across the region, strengthened democratic institutions, and led to an environment more favourable to investment and production. As a result of these processes, the Washington Consensus emerged.

The Washington Consensus is a term used for the first time in 1989 by the economist John Williamson. This concept sums up a series of common themes between different institutions such as the International Monetary Fund, the World Bank and U.S. Department of the Treasury. It emphasises ten policy prescriptions, that aimed to promote four main objectives: macroeconomic stability, a small and efficient government, a growing and efficient private sector, and poverty reduction. The ten policy prescriptions that comprised the Washington Consensus included fiscal discipline, public expenditure reform, tax reform, financial liberalisation, exchange rate reform, trade liberalisation, foreign direct investment, privatisation, deregulation, and property rights. These policies were implemented to promote foreign direct investment in developing countries, as a way to stimulate economic growth, bringing capital, technology, and know-how. As many countries in Latin America were facing economic crises, the Washington Consensus has been adopted in the 1990s as to promote growth and stability. In order to attract FDI, which is defined by the Government of Mexico as "investment with the purpose of creating a lasting link with long-term economic and business goals by a foreign investor in the host country", these countries implemented a series of policies such as the privatisation of state-owned enterprises, deregulation of industries, and the creation of free trade zones. In addition, they reduced barriers to entry for foreign investors and offered incentives to companies, such as tax breaks and subsidies to encourage investments in the region. These policies had some success in attracting FDI, especially in areas such as natural resource extraction and manufacturing. However, often the benefits brought by FDI were concentrated in a restricted number of industries and regions, and contributed to the rise of inequality.

Figure 2 shows that inward FDI as measured as a percentage of GDP declined sharply in major Latin American countries, due to the global slowdown caused by the pandemic, but quickly recovered. In 2022, it was in line with the years before the pandemic, and, in some countries, even higher.

Figure 2. FDI inflows as a percentage of GDP



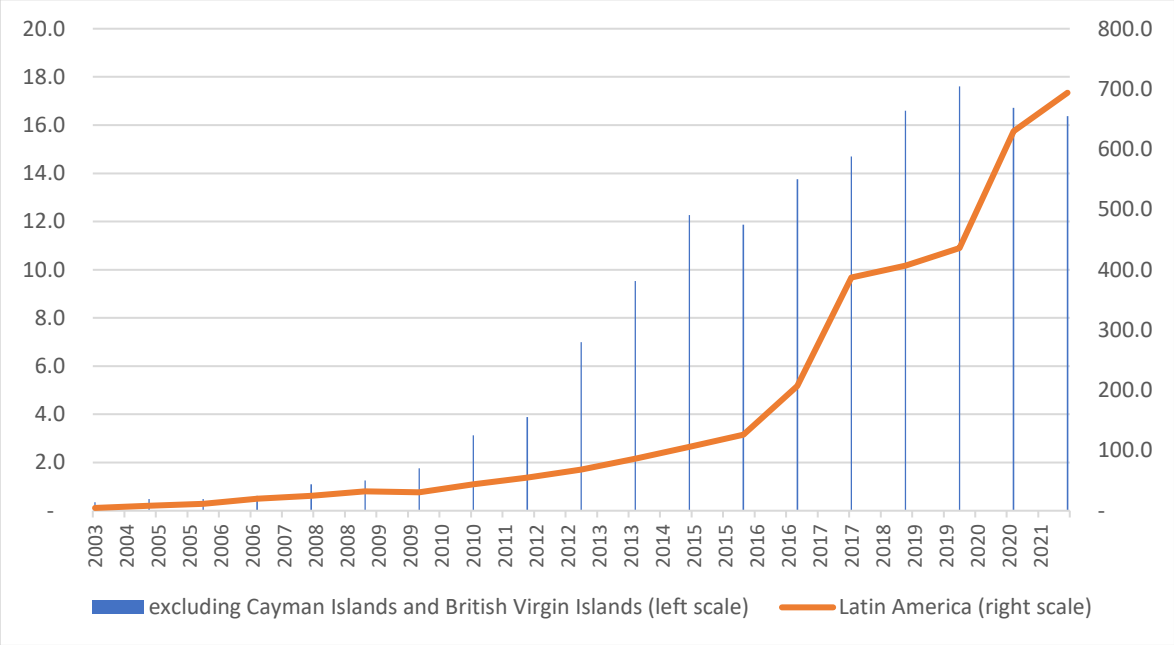
Data Source: World Bank, retrieved via Bloomberg (Appendix 2).

6. Chinese FDI in Latin America

During the last decade, financial flows between China and Latin America have seen an unprecedented growth (Figure 3).

It must also be noted that in 2020 and 2021, in spite of the global slowdown spurred by the pandemic, Chinese FDI has increased by 44% and 10% respectively, when including offshore financial centres. When excluding such centres, FDI remained substantially steady.

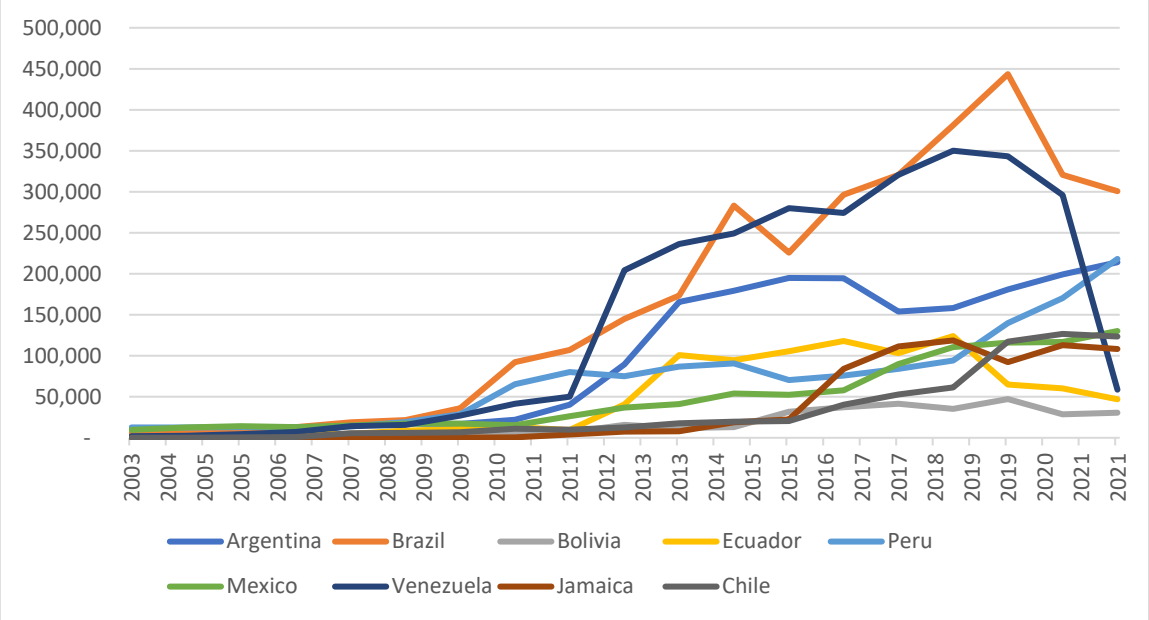
Figure 3. Chinese FDI in Latin America (including and excluding Cayman Islands and British Virgin Islands)



Data Source: China Ministry of Commerce, retrieved via Bloomberg ($ billion)

(Appendix 3)

Figure 4. Chinese FDI in Latin America by country (excluding offshore financial centres)



Data Source: China Ministry of Commerce, retrieved via Bloomberg ($ billion)

(Appendix 4)

These flows are spread throughout all industries, particularly those such as infrastructure, energy and mining.

Chinese enterprises making these investments in the region can be classified as state-owned (SOE) and private firms.

Together with SOEs and private firms, two other main Chinese actors in Latin America can be identified: the Chinese government and quasi-governmental organisations.

As for the government, the central authority designated to formulate, finance, regulate, implement and evaluate strategies for foreign trade and investment is the State Council. Together with the State Council, the National Development Reform Commission (NDRC) and the Ministry of Commerce (MOFCOM) support firms in the investment process.

Quasi-governmental organisations, on the other hand, are institutions such as the Chinese Development Bank (CDB), which is owned by China's central government and supports China's macroeconomic policies in the form of Five Year Plans; the Chinese Export Import

Bank (EXIM), responsible for fostering export and import of manufactured goods and assisting companies to attract offshore projects and investment; and the China Council for the Promotion of International Trade (CCPIT), which brings together the Chinese government, Chinese and Latin American enterprises, and provides information and legal assistance.

Chinese corporations have the ability to engage in investment activities within Latin America, in part due to the provision of bilateral loans by the government. Between 2010 and 2016, in fact, loans from China reached $94 billion, while loans from the World Bank, the Development Bank of Latin America (CAF) and the Inter-American Development Bank (IDB) together accounted for $156 billion. The destination of the funds is different: while Chinese financing is concentrated in infrastructure, mining, and energy, multilateral loans mostly focus on sectors such as finance, education, health, environment, and public administration. Furthermore, between 2005 and 2014, 91% of Chinese loans were directed in only four Latin American countries: Venezuela (47%), Brazil (19%), Argentina (16%), and Ecuador (9%). This is also because of the political orientation of the countries, which used to be – and some still are - prevalently leftist. On the other hand, FDI is directed towards a larger variety of sector, including manufacturing, scientific and technological innovation, and information technologies.

In the analysis of Chinese FDI data to Latin America, it must be noted the large share of outflows to tax havens, namely Cayman Islands and British Virgin Islands. In 2021, this made up 97.6% of the total Chinese FDI to Latin America. It has been explained by Salidjanova (2011) that FDI to tax havens are part of a round-tripping strategy. Indeed, the Chinese government offers incentives to companies in the form of tax concessions, preferential terms for leasing of land and property, and guarantees for repatriation of foreign exchange, which encouraged Chinese investors to move money abroad, registering it as foreign capital, and then bring it back as foreign investment or round-tripping. This is the reason why in this analysis Chinese FDI in tax havens has not been analysed, coupled with the difficulty in measuring it.

7. Mining

China first started investing in the mining industry in 1978, with the trading of minerals and a preliminary openness towards inward FDI. Outward FDI in this industry, on the other hand, began in 1992, when the Shougang Corporation, now known as Shougang Group, acquired an iron ore mine in Peru (Irwin and Gallagher, 2013). From then, Chinese FDI in the Latin American mining industry has kept on increasing, especially as a result of the "Going out" strategy, so much that in 2012, around 24% of China's outward FDI was concentrated on extractive sectors.

As mentioned earlier, the main objective of the Going Out strategy is the acquisition of strategic resources and energy supplies and an increased access to global markets and value chains. In particular, in the period between 2003 and 2013, during the so-called "pink tide", China has been able to strengthen its relationships with Latin American governments and signed a large number of bilateral partnership agreements and Free Trade Agreements, as all large economies, including Argentina, Bolivia, Brazil, Ecuador and Venezuela, apart from Colombia and Mexico, were governed by centre-left governments. Today, China is a global player in the natural resource sector, being one of the biggest producers as well as one of the biggest importers.

According to data from the Inter-American Development Bank, Chinese companies have invested billions of dollars in mining projects in countries such as Chile, Peru, Brazil, and Argentina, among others. Between 2001 and 2010, mining and fossil fuels exports from Latin America to China grew annually at a rate of 16%.

The reason for China to intensely invest in Latin America is due to Latin America's resource endowment: the region is home to some of the world's largest reserves of precious metals, including gold and silver, as well as significant reserves of copper, iron ore, and other minerals. In particular, gold can be found in Peru, which has around 2,000 metric tons of gold reserves, Brazil, with 2,400 metric tons of reserves, Argentina, which has 1,600, and Mexico, with 1,400. In 2021 these countries produced, respectively, 90, 80, 60 and 100 metric tons of gold. As for silver, the major reserves can be found in Peru, which has the

world’s largest reserves, Argentina, Mexico, Chile and Bolivia, with a production in 2021 of, respectively, 3,000, 800, 5,600, 1,600 and 1,000 metric tons.

In addition to gold and silver, Latin American countries are rich in many other minerals. Chile is the world's largest producer of copper, providing 25% of the total global supply, and accounting for more than 28% of the total global production in 2020. Chile also produces significant amounts of molybdenum, lithium, and other minerals. Peru is one of the world's top producers of copper, zinc, and lead. It also has significant reserves of tin, molybdenum, and other minerals. Mexico is a major producer of zinc, copper, and lead. It also has significant reserves of other minerals, including lithium and rare earth elements. Brazil is a major producer of iron ore and bauxite, which is the primary ore of aluminium. In 2020, Brazil was the second largest iron ore mine producer in the world, producing almost half a billion metric tons. It also produces large amounts of manganese, nickel, and other minerals. Argentina is a significant producer of lead, zinc, and copper, and has reserves of lithium. Colombia is one of the biggest producers of coal. It also has significant reserves of nickel, copper, and other minerals. Finally, Ecuador has reserves of copper, zinc and other minerals. Together, Argentina, Chile and Bolivia form the so-called “lithium triangle”, estimated by the UN Economic Commission to have 61% of the world’s lithium resources. Lithium is becoming increasingly important today, as it is being used in electric vehicle batteries and other high-tech applications. Venezuela is also a country very rich in natural resources, including minerals. The country has significant reserves of gold, diamond, bauxite, iron ore, and other minerals. However, their production has decreased significantly in recent years, as it has been impacted by the political and economic instability that characterises the whole country. These are just a few examples of the mineral-rich countries in Latin America. Other countries in the region, such as Panama, Costa Rica, and Guatemala also have significant reserves of minerals and are important producers of gold, silver, and other minerals.

Chinese companies have invested in all of these countries. For example, in Chile, Chinese companies have invested in copper mines, including the $1.5 billion El Teniente mine, which is operated by Codelco, the state-owned copper company. In Peru, Chinese companies have invested in gold, silver, and copper mines, including the $7 billion Las Bambas mine, which is operated by MMG Limited and produces 2% of global copper.

In Brazil, Chinese companies have also made significant investments in iron ore mines, such as the $1.5 billion S11D mine, also known as Serra Sul, which is operated by Vale, the world's largest iron ore producer.

In Argentina, Chinese companies have invested in lithium mines, for instance, the $3 billion Cauchari-Olaroz lithium project, which is operated by Livent, a subsidiary of FMC Corporation. In 2021, Ganfeng, China's largest lithium producer, partially acquired a lithium mining project. In addition, in February 2022, Zijin Mining announced plans to invest $380 million in a lithium carbonate plant in Argentina. Lithium, as mentioned earlier, is fundamental to battery production and the development of electric vehicles. In nature, lithium is found both in hard rock and brine format, with the latter being the easiest to exploit, and the form most found in Latin America.

Chinese investments in strategic commodities such as lithium, cobalt, manganese and graphite have raised alarms to the United States and the European Union, also considering the fact that supply chains for these metals are concentrated in particular countries, and especially in China. The demand for these critical minerals is set to increase in the coming years: it is estimated that, by 2050, the production of graphite, lithium, and cobalt could increase by 500%. This trend is driven by the green energy transition, with the need for clean energy technologies. China is clearly investing a lot in the lithium sector, as shown in the previous examples. Another example is the investment by Chengdu Tianqi in lithium extraction in Chile, in cooperation with Sociedad Quimica y Minera. The total investment accounted for more than $4 billion, representing more than half of the total FDI flows from China to Latin America in 2018 (Dussel Peters, 2019).

Between 2002 and 2012, the World Bank estimates that the value of Latin America's mining exports has increased by more than 50%. This significant growth has been driven partly by the increasing global demand for minerals and metals, including that of China as a support for its industrialisation and urbanisation (The World Bank, 2017).

This resource-seeking FDI carried on by Chinese corporations is complementary to the Chinese government's ambitions. In fact, as previously stated, for these investments to happen, cooperation between the Chinese and Latin American governments is of vital importance. Chinese authorities, in fact, play an important role, by strengthening bilateral trade relations, awarding aid, and providing transport and communication infrastructure. In

particular, the Chinese government encourages companies to invest in mining projects in Latin America through financial incentives, such as low-interest loans from state-owned banks, as well as through political support in the form of diplomatic missions and trade agreements. On the other hand, Latin American governments have also been actively seeking foreign investment in this sector. They take advantage of their resource endowment to attract foreign capital, which is beneficial for economic growth and development. In order to do this, Latin American countries establish policies and regulations with the aim of attracting foreign investment. In addition, they provide financial incentives for companies investing in the mining sector, especially in the form of tax breaks. In many cases, Latin American governments are also directly involved in the regulation and surveillance of mining projects, ensuring the respect of environmental standards and ensuring that the rights of local communities are respected.

Another important theme that needs to be discussed in the mining sector is that of competition between firms. This theme is particularly relevant to the Resource-Based View, as companies aim to attract resources, with the objective of gaining a sustainable competitive advantage against other firms. Competition between firms varies in different industries and sub-industries, and the mining industry is no exception. For instance, the coal industry is said to have a stronger competition climate, compared to that of other mining industries. This competition is also between the government and the public sector.

For advantage to be produced, companies aim to attract resources that present several characteristics: they need to be valuable, rare, they cannot be replicated and replaced, and they need to be relevant for the company. In addition to those, mining companies have the ability to compete using non-product resources. Non-product resources are, for instance, human resources, organisations and technology. By focusing on these three types of resources, mining companies are able to create a competitive advantage. This is relevant to Chinese companies investing in Latin America, as they may have more advanced technologies and operational practices that can improve efficiency and reduce costs, compared to Latin American companies. It has been studied, in fact, that Latin American companies are three times more likely than South Asian firms, and thirteen times more likely than Pacific Asian firms, to face operational problems due to a shortage of human capital (OECD/CAF/ECLAC, 2014).

Together with this, mining firms in Latin America need to expand their operations, including, apart from extraction, activities such as logistics, infrastructure and services, as a way to encourage upgrading activities between Chinese and local firms. An example of this strategy can be found in projects such as Mirador in Ecuador, and Minas Gerais in Brazil.

While offering a wide variety of minerals, however, Latin American countries do not offer much in terms of making investments from abroad appealing. When investing in the mineral sector, companies usually look for stability and confidence in the mining policy of the country of destination, given the long-term nature of the investment. According to a survey made by the Fraser Institute in Canada, 40% of the overall decision process is devoted in analysing the legislative and regulatory environment, looking for aspects such as certainty of regulation, efficiency of the legal system, taxation regime, and political stability. The Investment Attractiveness Index (2019), which is the outcome of the survey, ranked Latin American countries based on these variables. Chile, the highest Latin American country in the list, only came 17th, followed by Peru in 24th place. All the other countries ranked very low, excluding some regions in Argentina, Venezuela, and some Central American countries. This clearly shows how the institutional environment in Latin America does not favour investments from abroad, including from China.

As mentioned previously, most of the Chinese FDI to Latin America takes the form of M&A. FDI in the mining sector is no exception: all of the eight transactions occurred between 2016 and 2018 have been as M&A. That is because, with this form of FDI, already existing projects continue operating, only with a change in ownership. Greenfield investments, on the other hand, are used to establish new projects, which often face opposition and conflicts, as happened to the copper mines Las Bambas and Toromocho in Peru. For this reason, Chinese greenfield investments in Latin America are usually directed to extraction-related infrastructure, such as roads and pipelines. Chinese investors can also enter Latin America through joint ventures, for instance the one between China Minmetals Nonferrous Metals Co. and Codelco, the Chilean national copper company.

8. Energy sector

China is heavily investing in the energy sector. Zhongshu et al. (2020) estimate that, globally, between 2000 and 2017, Chinese firms have invested around $115 billion in electric power assets, with an average of 73% ownership stake in a total capacity of 81 GW. These investments are spread throughout the world, with a concentration is developing countries, particularly Asia (41%) and Latin America. The majority is directed towards coal (24.5 GW), followed by gas (20.5 GW), hydropower (18.1 GW), wind (7.2 GW) and solar (3.1 GW).

China's investments in this sector, as well as many others started in the 1980s, and expanded under the "Going Out" policy. At that time, the demand for electricity was rapidly increasing, and China was suffering from severe power shortages as it could not meet the demand.

Since the early 2000s, China has been steadily increasing its presence in the Latin American energy sector, initially focusing on hydrocarbon investments. However, as the country's global economic influence grew, it began to diversify its investment portfolio in the region. China's expanding investment interests reflected its desire to secure resource access and diversify its energy supply, ranging from metal mining and agriculture to fisheries and transport infrastructure,

After 2010, Chinese investments in Latin America shifted towards the electricity sector, with a growing focus on renewable energy. Chinese investment took the form of both M&A and greenfield projects, with state-owned enterprises (SOEs) being the main drivers behind these deals. The three industries that accounted for 81% of the total M&A investment were electricity, gas and water companies, oil and gas, and mining. On the other hand, the main sectors for project investments were metals, automotive and auto parts, and transport and storage.

Despite the diversification of its investment portfolio, Chinese SOEs have remained the main investors in the energy sector, accounting for 80% of total Chinese investment. The top three companies alone have invested almost half of the total Chinese investment. By

2018, the top five Chinese state-owned electricity companies had completed overseas acquisitions worth $18 billion, which is three times the value of their domestic acquisitions.

The technology mix of Chinese investment in the Latin American energy sector varies depending on the type of investment. Greenfield investment has predominantly focused on coal plants, with 48% of investment going towards this sector, followed by gas (14%), hydro (13%), and nuclear (9%) plants. In contrast, M&A investment is more evenly distributed, with gas (36%), hydro (30%), coal (15%), and wind (12%) plants receiving the most investment.

Overall, the 81 GW of Chinese investment in Latin America's energy sector represent only 5% of China's domestic generating capacity and 1.6% of the global market. However, since 2005, more than $158 billion of FDI projects in renewable energy have been announced in the region, demonstrating China's growing interest in and commitment to renewable energy investment in Latin America.

China has been increasing its investment in the Latin American energy sector since the early 2000s, with the aim of securing access to resources and diversifying its energy supply. In particular, since 2005, more than $158 billion of FDI projects in renewable energy have been announced in the region.

During the first phase of its expansion, Chinese investment in the Latin American energy sector was largely focused on hydrocarbons, including oil and gas. One of the earliest major investments in the sector was made by China National Offshore Oil Corporation in 2004, when it acquired a 45% stake in Bridas, an Argentine oil and gas company, for $1.3 billion.

Since then, China has diversified its investment portfolio in the region, expanding its focus beyond oil and gas to include a wide range of projects in hydroelectric power, solar energy, wind energy, nuclear energy, and bioenergy. As a result, China has become one of the region’s largest sources of foreign investment in the energy sector.

Chinese companies have made significant investments in the Latin American energy sector in a variety of countries. In Brazil, for example, Chinese companies have invested in hydroelectric dams, including the Belo Monte Dam on the Xingu River. The Belo Monte Dam is one of the largest hydroelectric projects in the world, with a capacity of 11,233 MW.

In Chile, Chinese companies have invested in renewable energy projects, such as the Atacama 1 solar farm. This photovoltaic plant has a capacity of 100 MW and is the first solar thermal plant in Latin America, with 110 MW of installed capacity. It is located in the Atacama Desert, which has the highest level of solar radiation in the world.

In Peru, Chinese companies have invested in natural gas exploration and production projects, including the Camisea Gas Project, which is one of the largest natural gas projects in the region.

In addition to these projects, China has also entered into agreements with various countries in the region to further cooperation in the energy sector. For example, as part of the Brazil-China Ten-Year Cooperation Plan (2012-21), the two countries signed a $50 billion infrastructure agreement.

Furthermore, Chinese FDI has helped build one of Latin America's largest solar energy plants in Jujuy, a province in Argentina. This plant has hundreds of thousands of solar panels and contributes significantly to the country's renewable energy capacity.

In recent years, Chinese investment in the Latin American energy sector has increasingly targeted the electricity generation and distribution sectors. There have been more than a dozen acquisition deals in this area, with an average size of over $1 billion. For instance, in October 2019, the State Grid Company of China acquired Chiquinta Energia, the third-largest electricity distributor in Chile, for $3 billion. Similarly, in December of the same year, China Yangtze Power International acquired Luz del Sur, the largest electricity company in Peru, for $3.6 billion.

In recent years, China's influence in the Latin American energy sector has extended beyond traditional forms of energy production to the electric vehicle industry. With the increasing global focus on reducing greenhouse gas emissions, governments worldwide have set targets to encourage the adoption of electric vehicles. In response to this trend, China has emerged as a leader in the production of electric buses, with 90% of the world's electric buses currently being used in Chinese cities. Furthermore, China is the major exporter of electric buses, with 99% of electric buses in Latin America coming from China.

China's success in this sector can be attributed to state intervention, including demand subsidies and industry support, which have helped to strengthen local productive capacities.

The Chinese government's strategy for the adoption of electric buses had multiple objectives, including the environmental decontamination of large cities, the deployment of a renovated public transport system, and the strengthening of local technological and productive capacities. This has led to the concentration of electric bus manufacturing in seven Chinese companies, including Yutong, BYD, CRRC, Zhongtong, Higher, Ankai, and King Long, which account for more than 60% of global output.

One notable investment made by China in the Latin American electric vehicle industry was the acquisition of Compañia General de Electricidad S.A. (CGE) by State Grid Corporation of China from Spain's Naturgy Energy Group S.A. This $3.04 billion investment allowed State Grid Corporation of China to become the largest utility company in the world, and the world's third-largest company by revenue behind Walmart and Amazon. CGE is the largest electricity distributor in Chile and the second-largest transmission network, making this acquisition a significant move for China's presence in the Latin American energy sector.

In Latin America, the adoption of electric buses has been concentrated in Chile and Colombia, with 1800 electric buses put into circulation. Chinese companies have played a significant role in this development, with their investments helping to drive the growth of the electric vehicle industry in the region. In 2015, BYD opened a plant in Sao Paulo, Brazil, for the construction of electric bus chassis, which later expanded to produce batteries, representing an important investment in the region (ECLAC, 2021).

As the world continues to shift towards sustainable energy production and consumption, it is likely that China's role in the Latin American energy sector will continue to evolve, with a particular focus on electric vehicle production and distribution.

Latin American governments, on the other hand, seems not to have yet intervened and taken advantage of the industry opportunities that are emerging.

The governments of Chile, Colombia and Costa Rica have set official targets towards 100% zero-emission bus fleets. They plan to do it by 2050. As a comparison, among the governments that Denmark and the Netherlands plan to do it by 2025, New Zealand by 2035, and the United States by 2050. These objectives were all set during the Global Memorandum of Understanding that was launched at the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 26) in Glasgow.

Projects in renewable energies started to increase in 2015. The major investments were in solar energy (57%), and hydroelectric power (29%) (Cepal 2021).

The Latin American renewable energy sector in 2020 was the sector with the second-largest number of project announcements, especially in solar and wind. The sector is, in fact, considered one of the most dynamic markets for renewable energy in the world (IRENA, 2019). The sector is important for reducing emissions across all electricity uses, and it contributes to SDG 7 (affordable and clean energy) and SDG 13 (climate action).

Among the most relevant M&A operations in the renewable energy, in 2019 CGN (China General Nuclear Power) completed the acquisition of 540 MW of renewable power plants in Brazil from the Italian company Enel. The plants consisted in two solar power plants, namely the 292 MW Nova Olinda solar power plant in the state of Piauí, and the 158 MW Lapa solar plant in Bahia, together with the 90 MW Cristalândia wind park in Bahia. The total price was around $780 mln (or BRL 2.9 bn).

Particularly active in Peru has been China Three Gorges Corporation (CTG), after Peru and China signed in 2016 the Memorandum of the Mechanism for Development and Collaboration of the Energy Sector, and CTG and the Ministry of Energy and Mines of Peru signed the Agreement on Further Cooperation on Renewable Energy.

In 2016 CTG started the construction of the 206 MW an Gabán III hydroelectric plant. The China Development Bank provided a $365 mln financing for the project.

In 2019 the State-owned power company China Three Gorges led a consortium in the acquisition of Empresa de Generación Huallaga, developer and permanent concessionaire of Peru's Chaglia hydroelectric power plant. The amount paid was around $1.4 bn and the seller was the Brazilian company Odebrecht, and the consortium (which also included Hubei Energy Group Co, Ace Investment Fund II LP, and CNIC Corporation Ltd) received a $850 mln syndicated financing facility. The Chaglia plant had a capacity of 456 MW.

In 2020 China Yangtze Power Co (CYPC), a subsidiary of China Three Gorges Corporation (CTG), acquired a 83.6% stake in Luz Del Sur, for a price of $3.59 Bn. Luz Del Sur is the largest power company in Peru and owns 100 MW of hydro generation assets.

8.1 Oil and gas

Production of oil and gas is crucial for a fast-growing country and therefore it comes as no surprise the involvement of China in the oil&gas sector in Latin America. Indeed, China ranks as the largest oil importer in the world since 2014, when it surpassed the United States. However, it must be noted that Chinese interest in Latin American oil has started only in the 21st century, at a time when other countries, especially the US and European countries, already had a strong presence in Latin America.

China has been a major player both as a consumer, importing large quantities of oil and gas products, and also as an investor in the sector.

The first objective has been achieved by granting loans and lines of credit to the governments of oil-producing countries in exchange for future payments in oil. As an example, in 2009 Petrobras (the major Brazilian oil company) borrowed 10 billion dollars from China Development Bank to be repaid with oil exports (loan for oil agreement). And in the period 2009–16, Petrobas has received loans totalling to $36 bn from Chinese banks.

The oil&gas sector was the major destination of Chinese investments in Latin America in the period 2005-2009 as measured in dollar amounts, and the second after the agriculture sector as measured by number of deals (ECLAC 2021).

But in the following five-year period Chinese interest in the oil&gas sector started to decline. It was still the first in dollar amounts, but it was one of the worst in number of deals, and in the following years it dropped also in dollar amounts. The priority of Chinese investments became the electricity, gas and water sector, while the oil&gas sector declined sharply both in dollar amounts and in number of deals.

A major role has been played by the company China Petroleum & Chemical Corp (Sinopec).

Sinopec was stablished in 1998 based on the former China Petrochemical Corporation. In 2001, Sinopec International Petroleum Exploration and Development Corporation (SIPC) was inaugurated, responsible for oil and gas investments and operations abroad, becoming a fundamental part of the Sinopec Group's internationalization. In Brazil, its operations began in 2004, signing a partnership with Petrobras and the Brazilian National Development Bank (BNDES) to develop the Gasene Project. The project consisted in the construction of

a 4.5 km pipeline, linking the city of Macae, in Rio de Janeiro, to the Catu city, in Bahia, in which Sinopec was responsible for the construction of Gascac (northern section) and Gascav (southern section). As an engineering company, Sinopec made also a number of other investments both in Brazil and in other Latin American countries, before changing its strategy and starting investing directly in companies involved in the extraction and production of oil and gas.

The major deal in the history of Chinese investments in the oil&gas sector has been the acquisition of Repsol Sinopec Brasil by China Petroleum&Chemical Corp (Sinopec) in 2010. The company launched a $7.1 bn capital increase, fully subscribed by Sinopec, corresponding to a 40% share in the Brazilian company. Today, Repsol Sinopec Brasil is still controlled by Sinopec (40%) and the Spanish company Repsol (with a stake of 60%), which is an integrated oil and gas company with operations in thirty countries and leader in Spain and Argentina.

The second largest deal by amount in Latin America has been the acquisition of the 30% of Petrogal Brasil Ltda by China Petroleum&Chemical Corp (Sinopec) in 2012. As in the case mentioned above (Repsol Sinopec Brasil), the transaction was carried through a capital increase fully subscribed by the Chinese oil company. In addition, Sinopec provided Petrogal Brasil with a USS 360 mln loan which was used by the company to fully pay off a loan by the same amount received by Galp Energia, the Portuguese shareholder.

Also the third largest operation occurred in Brazil, with the acquisition of Proyecto Peregrino by Sinochem Group Co Ltd, company that operates in the petroleum and agrochemical sector and that is fully controlled by the Chinese state. In this case as well, the operation involved the entry of the Chinese company with a minority stake (40%) in the project's capital, which consists of an offshore field located 85 kilometres from the Brazilian coast. The partner company in this case is Statoil, a Norwegian petroleum company that held the entirety of the Peregrino project. The acquisition by Sinochem Group seems to have come after beating the competition of other potential Chinese buyers, namely CNOOC and Sinopec.

Figure 5 shows the largest deals made by Chinese companies in Latin America in the oil sector.

Figure 5. Largest Chinese M&A deals in the oil sector

YEAR	COUNTRY OF ASSET	INVESTING COMPANY	ASSETS ACQUIRED	SELLER'S COUNTRY	AMOUNT (US$ mln)
2010	Brazil	China Petroleum & Chemical Corp (Sinopec)	Repsol Sinpec Brasil (40%)	Spain	7.100
2012	Brazil	China Petroleum & Chemical Corp (Sinopec)	Petrogal Brasil, Ltda (30%)	Portugal	4.800
2011	Brazil	Sinochem Group Co Ltd	Proyecto Peregrino (40%)	Norway	3.070
2014	Perù	China Petroleum & Chemical Corp (Sinopec)	Petrobas Energia Peru S.A.	Brasil	2.600
2011	Argentina	China Petroleum & Chemical Corp (Sinopec)	Occidental Argentina Exploration & Production Inc.	United States	2.450
2006	Ecuador	Andes Petroleum Ltd	EnCana	Canada	1.420
2011	Trinidad and Tobago	China Investment Corporation (CIC)	Assets of GDF Suez	France	851
2006	Colombia	China Petroleum & Chemical Corp (Sinopec)	Omimex de Colombia Ltd (50%)		800

Data source: ECLAC 2021

The Chinese strategy in Latin America has also faced some setbacks.

In 2011 Sinopec acquired Occidental Argentina Exploration & Production Inc. for $2.45 bn, but it sold it at a much lower price in 2017 for only $600 mln to Mexican company Vista Oil & Co. Most of the assets were in the Santa Cruz region, in southern Argentina and Sinopec in 2016 had incurred in operating losses of around $550 mln in the three years 2014-2016 due to high costs and frequent labour conflicts.

In 2021 Sinopec sold also its shale assets in Argentina to local firm CGC. Although the amount paid by CGC has not been disclosed, the value of the transaction has been estimated around $250 mln and assets covered 20 concessions mainly in the San Jorge, Neuquen, and Cuyo Basins and produced 24,600 barrels of oil equivalent per day in 2020. Among the reasons for the retreat were high costs for the development of the shale fields and the lack of infrastructure.

Different is the situation in Venezuela, one of the countries with the highest oil reserves in the world. In fact, the oil extraction activity in this country is controlled by a state-owned company, PDVSA (Petróleos de Venezuela, S.A), and, therefore, there are no direct Chinese investments in this sector.

Hence, as direct investments in the Venezuelan oil sector are not possible, China is committed to acquire Venezuelan oil through a different strategy, based on commercial agreements and the granting of loans to be repaid with oil (oil-for-loan). It is no coincidence that one of the largest loans ever granted abroad by China was the $20.3 billion loan made to Venezuela in 2010. In 2019, China National Petroleum Corp had suspended the purchase of Venezuelan oil following US sanctions on Venezuela. Starting in 2022, it has been

reported that China resumed the purchase of Venezuelan oil as a means of repaying a loan that the Venezuelan government would have obtained from the Chinese government.

Additionally, in the last decade, investors have been attracted by the so-called unconventional hydrocarbon exploration, especially in relation to discoveries in Brazil's pre-salt fields, deepwater blocks in Guyana and Argentina's Vaca Muerta shale reserves. In order to make oil and gas extraction feasible, a greater deployment of resources and expertise is required, given a context of continuing growth in demand for fossil fuels (Gordon, 2012). At the same time, the energy transition could hamper the demand for fossil fuels. To comply with the Paris Agreement and the "net zero" goal by 2050, oil demand should be reduced from 90 million barrels per day in 2020 to 24 million barrels per day by 2050. The implication of this is that new investments in oil exploration would not be needed. In Latin America, it is estimated that oil production in 2035 should be 60% lower than it was in 2019 (Vogt-Schilb, Reyes-Tagle and Edwards, 2021).

9. Technology sector

Since the beginning of its economic reforms in the late 1970s, development in the technological sector has always been one of the main objectives of the Chinese government. This encompasses fostering technological advancements domestically, as well as seeking out foreign investment to further develop the sector.

First of all, the Made in China 2025 plan, which resembles the Germany's Industry 4.0 plan, and aims to make China one of the leading countries in the high-end manufacturing industry. It is focalised in ten manufacturing sectors deemed strategic by the government: new information and communication technologies, robotics, aerospace equipment, ocean engineering and high-end vessels, railway stock, energy-efficient vehicles and new-energy cars, electrical equipment, new materials, medical equipment, and agricultural machinery.

Together with Made in China 2025, the Fourteenth Five-Year Plan (2021-2025) aims to sustain technological development through a yearly increase in Research and Development by 7%, for the five years. This plan, on the other hand, focuses on technologies such as artificial intelligence, quantum information, neurological science, integrated circuits and semiconductors, clinical medicine and health, genomics and biotechnology, and deep-earth, deep-sea, and polar research.

The strategic importance of these technological sectors, and particularly that of semiconductors, has been highlighted by the advent of Covid-19, when there was a shortage of these products, which led to bottlenecks in the production of consumer goods such as automobiles, televisions, and computers. This shows how semiconductors are fundamental in today's life.

Going back to the Belt and Road Initiative mentioned in the previous chapters, this also has a technological component, which has been called "Digital Silk Road". When it first appeared in 2015, it was known as Information Silk Road, and was focused on fibre-optic cables and telecommunication networks. Successively, it started to amplify its range of action, also including investments in e-commerce and mobile payment systems, space industry projects, data centres, and smart cities. Funds for these projects come from loans

from the China Development Bank, the Export-Import Bank of China, and from state-owned commercial banks.

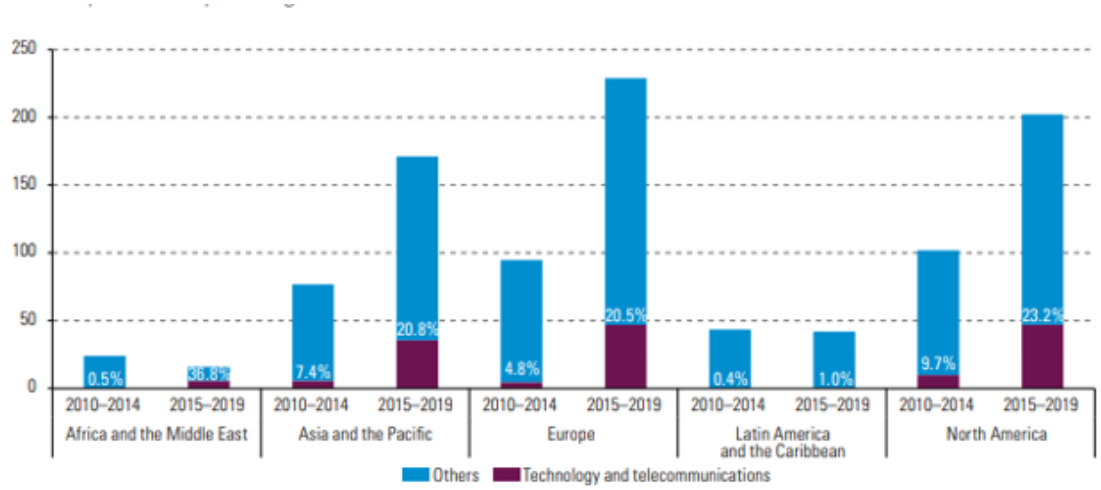
In recent years, China has been actively seeking to expand its technological influence beyond its borders, including in Latin America. In 2022, the China-CELAC Joint Action Plan for Cooperation in Key Areas was established for the period of 2022-2024. During the negotiations, the ministers of the China-CELAC forum agreed on the need to cooperate in key areas such as agriculture, rural revitalisation, development financing, infrastructure, science and technology. With regards to technology, the final version of the document signed by the countries of the forum included the following paragraph:

"5.2. Strengthen mutually beneficial cooperation between governments, enterprises, and research institutions in digital infrastructure, telecommunications equipment, 5G, big data, cloud computing, artificial intelligence, Internet of Things, smart cities, Internet+, universal telecommunication services, radio spectrum management and other areas of common interest, and explore the construction of joint laboratories" (Ministry of Foreign Affairs of the People's Republic of China, 2021).

This highlights China's efforts to expand its technological influence globally through initiatives such as the China-CELAC Joint Action Plan for Cooperation in Key Areas. The plan focuses on fostering cooperation in cutting-edge technological areas such as 5G, artificial intelligence, and cloud computing, among others, which demonstrates China's commitment to staying at the forefront of technological advancements. By seeking international partnerships, China is actively working towards achieving its goals and deepening its engagement with Latin America in key technological areas.

According to the Economic Commission for Latin America and the Caribbean (ECLAC, 2021), between 2005 and 2019, around 25% of the total mergers and acquisitions carried out by Chinese companies abroad were in the telecommunications, internet, and technology sectors. Additionally, the weight of these transactions in the total amount was 14%.

Figure 6. China: M&A by destination region, total amount and share of the telecommunications and technology sectors

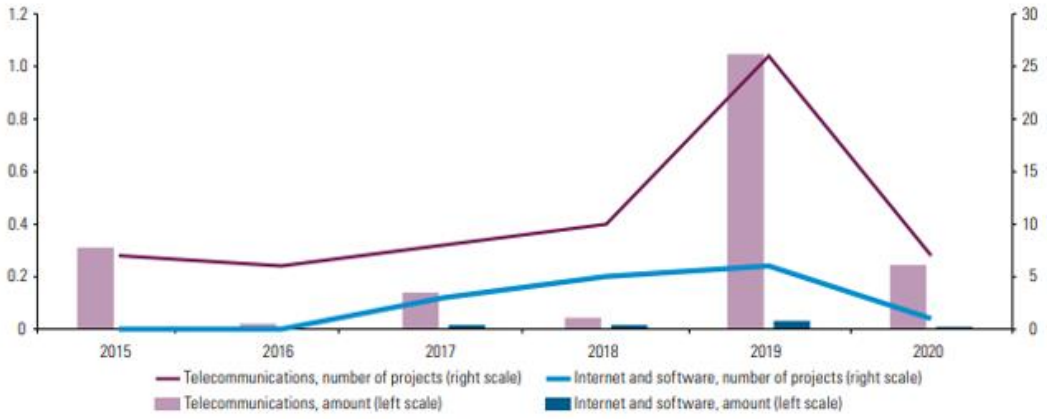


Data Source: ECLAC 2021

Only 1% of the total M&A activity, however, happened in the Latin American region, based on Bloomberg data aggregated by ECLAC.

Looking at new project announced in the telecommunications, software and internet sectors in 2015-2020, according to ECLAC they amounted to 21% of the number of projects announced by Chinese companies but only to 6% in dollar value, highlighting that most of them were for small amounts.

Figure 7. Latin America and the Caribbean: projects announced by Chinese companies in the telecommunications, software and internet sectors, 2015-2020.



Data Source: ECLAC 2021, retrieved via Bloomberg ($ billion and number of projects).

As mentioned before, the technological sector is key for Chinese ambitions. Together with contributing to the development of local economy, however, investments in technology have raised concerns both among Latin American governments, and Western governments. This is because of the financial and personal information that China acquires about consumers, enterprises, and governments, which represent a threat for national security.

One of the major concerns of enterprises is related to the fact that Chinese technology in developing countries could enable China to have a leading role in setting technological standards, through international bodies such as the International Telecommunications Union (ITU), which is the specialised United Nations agency for information and communication technologies. The standards in question relate to various aspects such as technical specifications, performance requirements, safety regulations, and more. By choosing to adhere with the standards adopted by Chinese firms, China would have advantages at a global level. Furthermore, by controlling Latin American payment systems, it would make it easier for China to export its products to the region. Chinese influence also derives from its presence in the 5G group of the International Organization for Standardization (ISO), also known as 3GPP, to which it provided 40% of standards and 32% of documents (MERICS, 2019).

In the telecommunications industry, the main investor in Latin American countries is Huawei. Huawei has been present in this industry since 1999, and in 2019 it operated in 20 countries, with a market share of more than 20% in at least four of these. Most of Huawei's participation in the Latin American telecommunications sector is through its telephones, servers, routers and other equipment used by retail providers such as Claro, Movistar, Personal and Tigo. Huawei also operates with public companies such as Antel in Uruguay or Indodel in the Dominican Republic.

Other Chinese companies in this sector are Oppo and Xiaomi, while other less-known companies do not have a direct presence in the Latin American market: they offer "white label" services, that is, they provide apparel that are commercialised with the name of the local company that sells them.

Particularly important is the installation of 5G networks, a sector which will have high growth rates in the near future, especially in Latin America, which is behind the rest of the world when it comes to adoption of 5G. Huawei is also a leading company in 5G networks, both in the West and in Latin America. Huawei 5G equipment is present in Chile, Peru, and Brazil, which are currently leading the region in the implementation of 5G networks. In particular, in Curitiba, capital of the state of Paranà, Brazil, Huawei is seeking to develop 5G infrastructure to turn the city into a "smart city". Huawei is also present in Argentina and Colombia, which are about to auction 5G spectrum.

In 2020, Huawei entered a partnership with Sul Americana de Metais (SAM), which is the Brazilian subsidiary of the Chinese conglomerate Honbridge Holdings. The collaboration is aimed at implementing 5G-enabled autonomous operations at a new $2.1 billion iron ore complex in the state of Minas Gerais, Brazil. As part of the agreement, Huawei will provide its expertise in the field of 5G technology to enhance the efficiency of the iron ore mining operations at the complex.

Additionally, it is worth mentioning that in March 2022, Huawei opened Brazil's first smart manufacturing factory connected to 5G network in Jundiaì, São Paulo. The Huawei Local Electronic Manufacturing Service (EMS) factory is the first plant in Brazil to use 5G in the production process. The 5G connection has been made possible by fourteen antennas in an area of 30.000 square metres, and it is equipped with artificial intelligence, cloud, and Internet of Things. The plant produces electronic equipment, such as base radios, processor

boards, and controller boards. Among its most innovative features, is the use of augmented reality, for instance used for the maintenance of the machinery.

Another important project for improving communication infrastructure in Latin America is the investment made by China Unicom in 2015 for the installation of a submarine communication cable connecting Cameroon and Brazil. The project saw the joint participation of Cameroon Telecommunications and China Unicom through its Brazilian subsidiary, with an estimated total amount of $142 million. Chinese company Huawei Marine Networks was responsible for carrying out the project, showcasing the ability of Chinese companies to network and cooperate with each other. Huawei has also participated in the construction of many other submarine cables in the region, such as the Lázaro Cárdenas-Santiago Fibre-Optic Submarine Cable Telecommunications System project in Mexico, the Southern Optical Fibre project, and the Strategic Evolution Underwater Link submarine cable project in Belize. Additionally, Huawei is involved in the connection of the Mexican State of Baja California with the rest of the country. These projects aim to improve connectivity and communication infrastructure in Latin America, potentially benefiting China's economic interests in the region by facilitating international trade.

9.1 Surveillance systems

Another digital sector in which Chinese companies are making progress is surveillance systems. Chinese companies offer cameras for surveillance, together with facial recognition, biometric devices, and software for big data. The Chinese companies Hikvision and Dahua, among the world’s leaders in the manufacturing of surveillance equipment, first entered Latin American markets such as Mexico and Ecuador as early as 2007. Dahua Technology provided 80% of the cameras used in the 2016 Rio de Janeiro Olympic Games. In Mexico, China’s Hikvision acquired Mexico’s largest security systems company Syscom in 2022.

The market for surveillance systems in Latin America is particularly attractive given the need to fight insecurity and corruption, often accompanied by a low level of protection for privacy.

A case in point is the ECU-911 Integrated Security Service project in Ecuador. The project has been realised for the most part by the China National Electronics Import & Export Corporation (CEIEC) and by Huawei. The system has methods of facial recognition, data storage systems, regional and provincial command, and control centres, and also a data laboratory and research partnership. The ECU-911 service was designed to monitor and prevent national emergencies and crimes, but it is also considered to have the same capabilities of the pervasive surveillance system built in China.

Chinese surveillance systems installed in LAC countries also include camera systems deployed in cities like Mexico City, Georgetown, Guyana, Jujuy, Argentina, and Colon, Panama. They also include a surveillance system installed on Uruguay's border with Brazil, as well the nation-wide architecture BOL-110 in Bolivia, which is similar to ECU-911. In addition, Hikvision is also making inroads in the corporate and household surveillance markets.

A general concern linked with Chinese surveillance systems is that, although they are meant to tackle natural incidents, emergencies of any kind, and the fight against crime, they provide tools that can also be used to access private information, to facilitate censorship or political persecution, even if the same can be said by any surveillance system, anywhere in the world.

9.2 Smart cities

A particularly innovative sector in which Chinese companies are especially active is that of smart cities. It has been calculated by Keegan (2020) that, of the around 1,000 smart cities projects, about half of them are occurring in China, which means Chinese companies are the most experienced in the world in this sector, and in a favourable position to export their know-how. In South America, there are about ten smart city projects, and the involvement of Chinese companies in their development is crucial.

While the concept of smart cities varies widely, there are some common features. These include various digital services ranging from surveillance architectures to transportation systems, smart pay devices, public utility management, and disaster alerts. This means that

companies involved in the project have great opportunities for gathering information, including data on movement, consumer behaviour, financial wealth, and revenue, and almost any other data on the residents.

As previously mentioned, the project to be developed in Curitiba, the capital of the state of Paraná, Brazil, is an example. In March 2022, TIM Brasil and Huawei announced a Memorandum of Understanding for a smart city project to be realized through a 5G network, with the first test due to be completed by December 2023.

It is inevitable that these projects provide further reasons for concern regarding issues related to privacy and the use of acquired information.

9.3 eCommerce

Alibaba is the most active Chinese company in the eCommerce sector. It has a strong presence in the business-to-business (B2B) market, as well as in the business-to-consumer (B2C) market, particularly in Brazil. However, Alibaba has not yet gained significant market share in the eCommerce sector in Latin America. Instead, companies such as MercadoLibre, B2W Digital, and Magazine Luiza dominate the market in the region. Despite this, Alibaba has been expanding its presence in Latin America through investments and partnerships, such as its investment in Brazilian fintech company StoneCo in 2018 and its partnership with Mexican retailer El Puerto de Liverpool in 2019. So, while Alibaba may not be the most dominant player in the eCommerce sector in Latin America, it is still actively seeking to expand its presence and influence in the region.

Another company that can be included in the eCommerce sector is DiDi Chuxing, the ride-share company. In 2018, DiDi Chuxing significantly expanded its presence in the region through the acquisition of the Brazilian rideshare company 99Taxi. In January 2017, DiDi first invested $100 million in 99, acquiring a stake and management rights in the Brazilian app. Then, in 2018, DiDi acquired a majority stake for an undisclosed amount, but with a total valuation of the Brazilian startup of over $1 billion. Prior to the Covid-19 pandemic, DiDi had an estimated 50% of the rideshare market in Latin America, with a particularly strong presence in Mexico and Brazil, but also operating in Colombia, Chile, and the

Dominican Republic. Like other Chinese companies in the digital space, the services provided by DiDi are also integrated into other digital architectures. DiDi is integrated with some 30 Chinese smart city projects and proposals worldwide and is working towards being a service provider in such cities, including through self-driving cars.

9.4 Fintech

China's technological leadership also allows for expansion into the financial sector (fintech), an industry that requires a high level of technological advancement. This sector is not well developed in Latin America, which could allow for high rates of future growth. However, the low internet penetration in the region could pose an obstacle to achieving widespread coverage. The fintech industry also raises concerns about data privacy, given the vast amount of financial information that these companies possess, including data on the assets, income, spending, and investment habits of both individuals and companies.

Tencent is one of the most active Chinese companies in this sector, with diversified equity stakes in various countries and types of activities, often investing in minority stakes and making investments in the early stages of development of companies (i.e., even before they are listed on the stock market). However, precise data on these investments are not always available, particularly for start-ups in the early stages of development for which there are no full disclosure rules for shareholders and new capital injections. Therefore, anecdotal evidence of individual cases is often provided rather than comprehensive analyses.

Some examples of Tencent's investments in fintech in Latin America include the following: in 2018, Tencent invested $180 million in Brazilian fintech NU Pagamentos SA (also known as Nubank) for the acquisition of a minority stake. Tencent participated in a capital increase of $90 million and acquired shares from previous investors for another $90 million.

Nubank specializes in fee-free credit cards, digital payment accounts, and consumer credit.

Another example is Tencent's investment in Omie, a Brazilian cloud management company, which took place in 2018. In this case as well, Tencent acquired a minority stake, the precise amount of which was not disclosed, participating in a total investment of BRL 580 million.

In 2019, Tencent also invested in an Argentine mobile banking startup called Ualá, with a stake in an investment round of $150 million. Ualá is a fintech company that allows clients to make online payments, obtain loans, and make investments, specializing in the Argentine market characterized by a low penetration of the online banking sector and, therefore, with particularly high growth potential.

In 2021, Tencent also invested $120 million in QuintoAndar (the largest platform for renting, buying and selling real estate in Brazil), a company whose market capitalization has reached $5.1 billion.

Still in 2021, Tencent led another investment of $350 million in Ualá (with which the company had reached a valuation of $2.45 billion). In the meantime, Ualá has also expanded to Mexico.

In other cases, Chinese companies have not made acquisitions, but have sought expansion through partnerships. An example is Alipay, which entered a partnership with Openpay, a Mexican payments platform, in March 2018. The deal allowed Alipay's 600 million users to buy from Mexican businesses that accept Openpay payments. The deal was the first of its kind for the payment platforms in Latin America.

9.5 Data centres

Chinese companies have been particularly active in the development of data centres, especially Huawei and Tencent. In general, the data centre sector is strategic for the technological development of Latin America. The demand for a greater number of data centres comes from the massive adoption of cloud computing, Internet of Things services, and big data, along with the growth in social networking and the need for online video services.

In 2019, Huawei opened its first data centre in Chile and, by 2021, it had already become the top provider of data centre services in the region. In 2021, Huawei announced the opening of a new cloud region in the municipality of Tultitlán, in Mexico, through its division Huawei Cloud. Currently, Huawei Cloud owns three cloud regions (i.e., core data centre clusters) in Brazil, Chile, and Mexico, and two "national" regions in Argentina and

Peru, with nine Availability Zones (AZs, smaller data centre hubs) in total. Huawei also plans to expand in Colombia, although no date has been set yet. It has been estimated that the total investment in Latin America by Huawei amounts to $100 million.

On the other hand, Tencent entered the data centre market in November 2021, when Tencent Cloud, its own cloud computing division, announced the opening of the first Internet Data Centre (IDC) in São Paulo.

So far, examples of Chinese tech companies investing in the Latin American market have been provided. Fundamental is the involvement of the Chinese government in providing funds and delineating strategies for Chinese companies – both private and public – to follow. Chinese investments have been possible due to the underdevelopment of the region in the technology sector. This could be attributed to cultural factors, which influence the choice of studies and the specialisation of workers: while, in China, around half of the students in tertiary education are enrolled in science, technology, engineering and mathematics (STEM) fields, in Latin America only one out of five is enrolled in these areas (OECD, 2016). This is also due to Latin America's under-investment in STEM fields, which are the ones more connected to the productive part of the economy, and which are the drivers of innovation in the future. This makes the composition of skills in Latin America very different to that of China. Attracting FDI represents an opportunity for Latin America to develop skills and innovation in these areas. To do that, institutions need to favour innovation and technology.

10. Results

Research design and methodology

This study uses a qualitative research design to investigate the strategic decision-making and success of Chinese companies investing in Latin America. For the purpose of the study, three sectors have been considered, namely the mining, energy and technology sectors. This has made it possible to gain a detailed understanding of the factors that contribute to the success or failure of Chinese companies operating in these sectors in Latin America, based on a review of existing documents and literature.

A systematic review of existing literature on the Resource-Based View and Institutional theory has been conducted, in order to provide a theoretical framework for the analysis. Furthermore, quantitative data has been collected from online databases and articles on the economic and institutional environment in which Chinese companies operate in Latin America.

The analysis allowed for the identification of the key factors contributing to the success or failure of Chinese companies operating in the mining, energy and technology sectors in Latin America. In addition, it has made it possible to explore the extent to which the Resource-Based View and Institutional theory can explain the strategic decision-making and success of Chinese companies in the above-mentioned sectors.

Economic data

Economic data on the countries in which Chinese companies invest has been collected, including data on gross domestic product (GDP), foreign direct investment (FDI), and trade. Additionally, data on the economic sectors in which the companies are involved has been collected.

The analysis of economic data has shown how China has become an increasingly important economic partner for most of Latin American countries. In recent years, China's trade with Latin America has rapidly grown, and China has become the largest trading partner of many Latin American countries. Additionally, Chinese companies have become significant

investors in the region, with interest spread throughout all economic sectors, although with varying degrees at different periods. At first, with an interest in basic resources, while later the focus of Chinese investments shifted to other sectors, especially technology.

At the same time, it is important to make a distinction between the different economic environment in which these companies operate. In fact, while some countries in the region present stable economic conditions and a favourable investment climate, others face challenges such as political instability, corruption, and economic crises. This makes it harder for companies to invest in such countries, as it is more difficult for them to make long-term plans and earnings predictions, to operate more efficiently and cost-effectively, and to build relationships with local partners, find reliable suppliers, and navigate local regulations.

Institutional data

Institutional data about the legal and regulatory environment in which Chinese companies operate in Latin America has been collected. At the same time, data about informal institutions has been collected, including cultural and social factors that may influence the way companies invest in the region.

The analysis has shown that the legal and regulatory environment is often complex and fragmented throughout the region. While some countries have established laws and regulation that foster foreign investment, others have more restrictive policies that hinder foreign investment. Moreover, some countries are affected by corruption and a weak institutional capacity.

Moreover, cultural and social factors play an important role in the operations of Chinese companies in the region. For instance, language barriers and cultural differences between China and Latin America can pose challenges when communicating with local stakeholders and governments, and also when it comes to building trust with local communities.

All the above-mentioned factors need to be taken into account by Chinese companies willing to invest in the region. Understanding the economic and institutional environment is fundamental for companies that wish to succeed in their investments in Latin America.

Analysis of the data

The analysis of the qualitative and quantitative data obtained in this study provides an insight into the strategic decision-making and success of Chinese companies in the mining, energy, and technology sectors in Latin America.

It has been possible to identify several key factors, including access to natural resources, reliance on government relationships, investment in local communities, and focus on innovation.

As for access to natural resources, while companies operating in the same market might have equal access to tangible resources (Riahi-Belkaoui, 2003), Chinese companies may be able to gain a competitive advantage over Latin American companies when investing in natural resources, while their Latin American counterparts might have a more limited access to capital. This advantage derives from their ability to secure financing from the Chinese government and financial institutions. This can allow them to invest more in finding and exploiting natural resources, which can give them an advantage over companies with more limited access to capital. In addition, Chinese companies might have more experience in operating in the three sectors compared to Latin American companies. This gives them an advantage in terms of reducing costs and increasing efficiency. Furthermore, Chinese companies may be more risk prone when investing in natural resources in Latin America. This is because of their long-term investment horizon and a greater tolerance for uncertainty and volatility, which comes from their larger dimensions, their widespread operations in different geographical areas, and the support from the Chinese government and Chinese institutions.

In addition, Chinese companies often rely on relationships with local governments to secure access to resources and to obtain the potential necessary permits and approvals. These relationships can be a source of competitive advantage but can also create risks related to corruption and political instability.

Investment in local communities means that Chinese companies often invest in local communities through social and environmental programs. The aim of these programs is to build trust and goodwill with local stakeholders and try to reduce the effects of cultural differences and communication barriers.

Lastly, Chinese companies operating in Latin America, and particularly those in the technology sector, often focus on innovation in order to differentiate themselves from their competitors and generate a competitive advantage.

The analysis of quantitative data also provided insights into the economic and institutional environment in which Chinese companies operate in Latin America. For instance, countries with more stable economic conditions and favourable investment climates tend to attract more foreign investment. The same can be said for countries with stronger legal and regulatory frameworks.

Overall, the analysis of the data suggests that the Resource-Based View and Institutional theory can provide useful frameworks for understanding the strategic decision-making and success of Chinese companies in the mining, energy, and technology sectors in Latin America. In particular, the Resource-Based View highlights the importance of access to natural resources and capabilities in creating a competitive advantage, while Institutional theory emphasises the role of institutional factors such as laws, regulations, and cultural norms, in shaping firms' behaviour.

At the same time, the decision making of companies depends on a complex set of factors that go beyond these theories. These factors include relationships with local governments and communities, the ability of companies to innovate and differentiate from competitors, and the ability to adapt to changing environment conditions.

The analysis of Chinese investments in Latin America can also be conducted from a different perspective. In fact, as discussed above, from the point of view of each Chinese company the investment decisions can be explained by traditional theories of the firms, such as the RBV and the Institutional Theory. But the qualitative analysis presented should lead us also to view the behaviours of the firms in the context of an overall strategy of the Chinese government. In other terms, the Chinese government not only supports the expansion abroad of its firms, but plays an active role in providing financing for the investments, in dealing with foreign governments, in developing bilateral treaties (with the BRI being the most prominent), and in defining the objectives of the expansion. Therefore, it can be argued that the active role of the government becomes the dominant factor in shaping the decisions of each firm.

Various considerations support this point of view. First of all, Chinese FDI are a way to use the large surplus of savings which characterizes the Chinese economy and therefore the expansion abroad is beneficial not only to the single firm but to all country. Secondly, most of the Chinese companies are state-owned, or under the public control or oversight and therefore it is natural that their most important investment decisions are under scrutiny of public officials or are mandated directly by the government. Therefore, it comes as no surprise that often the objectives of the investments are defined by the Chinese government. For example, the need to provide raw resources to support the strong economic growth, or the need to increase Chinese exports when the internal market is not sufficient to absorb all the production, or the need to acquire technological or managerial know-how which is beneficial to the objective of global leadership of the country. The analysis conducted above on the shifting of the investments from the resource sectors to other sectors, can indeed be explained by the overall need of the Chinese economy and therefore can be seen as the result of a decision taken at a political level. Moreover, the investments are often supported by financing at favourable conditions, provided by Chinese state-owned banks or by investment funds created by the Chinese government. (Salidjianova, 2011)

Therefore, from this point of view, the theories of the behaviour of the firms are not sufficient to explain Chinese expansion in Latin America (and the same can also be said for other continents).

Discussion of the results in light of previous research, highlighting similarities and differences with existing literature

The results of this study contribute to the existing body of research on the strategic decision-making and success of Chinese companies in Latin America. Previous studies, however, have mostly focused on the role of foreign direct investment and the cultural differences between China and Latin America, for instance, differences in management styles. Chinese managers are said to base their decisions and strategies on the principles of Confucianism (Acquaah, 2007). This philosophy was found to lead to success Chinese companies in some countries where Western organisations had been unsuccessful (Guillen, 2000). Examples of Confucian philosophy are the heavy dependence on relationships (Guanxi), which are the basis of society and success (Puffer et al., 2009), trust, keeping face and not expecting

immediate benefit (Orr, 2008). Through relationships and trust, companies are able to create competitive advantage in areas such as customer loyalty, improved pricing from suppliers, resource sharing with networks and clusters, knowledge acquisition from managerial networks, knowledge preservation through retention of employees, commitment to quality and corporate social responsibility (Acquaah, 2007).

The institutional environment in Latin America, which is mostly characterised by weak regulatory enforcement, high corruption levels, and political instability, creates significant challenges for foreign companies to navigate. However, the findings of this study suggest that Chinese companies can leverage their resource endowments and adopt institutional practices that align with local norms and expectations to achieve success in this challenging environment.

This finding is supported by previous research that emphasises the importance of institutional factors in shaping the strategies and behaviour of multinational corporations. For instance, Meyer and Peng (2016) argue that MNCs operating in developing countries have to adopt institutional practices that align with local norms and expectations to gain legitimacy and establish long-term relationships with stakeholders. In a similar way, Peng and Heath (1996) argue that MNCs can use their internal resources and capabilities to overcome institutional barriers and gain a competitive advantage in emerging markets.

As said above, the role of the Chinese government in shaping the overall strategy of Chinese corporations should also be considered in order to gain a complete understanding of Chinese expansion in Latin America. It appears that this topic has not been sufficiently analysed in existing literature, and therefore it should be the subject of further analysis.

11. Conclusion

This thesis has provided a comprehensive analysis of how the Resource-Based View (RBV) and Institutional Theory can explain Chinese investments in Latin America. By applying these theoretical frameworks to the context of Chinese investments in Latin America, this study has revealed several important insights into the motivations, strategies, and challenges associated with China's growing presence in the region.

Through the RBV lens, it is clear that China's investments in Latin America are driven by its need to secure access to natural resources, establish a competitive advantage in global markets, and diversify its supply chains. By investing in resource-rich Latin American countries, China seeks to secure reliable and affordable supplies of commodities, minerals and oil, which are essential for its economic growth and industrial development. Furthermore, Chinese firms are also investing in Latin America to penetrate in key markets and, at the same time, establish a competitive advantage over their rivals from other countries, particularly the US, which is still the main investor in the region.

Institutional Theory, on the other hand, highlights the role of cultural, social, and political norms in shaping investment decisions. This theoretical perspective suggests that China's investments in Latin America reflect its efforts to build relationships with key actors in the region, such as governments, business leaders, and local communities. Chinese firms are often willing to invest in infrastructure projects, social programs, and other initiatives that aim to benefit the local population, as a way of building trust and goodwill. Additionally, China's investments in Latin America are influenced by the political and regulatory environment of the region, which can either facilitate or hinder investment activities.

The reliance by Chinese companies on both formal and informal institutions makes Chinese firms' ownership advantages to be mostly either network based, or home country based (Deng, 2012).

Therefore, the success of Chinese investments in Latin America is also dependent on how well China can navigate the institutional environment of the region, which is characterised by a complex set of regulations, norms, and power dynamics. Chinese firms are learning to navigate local cultures and customs, build relationships with key stakeholders, and adapt

their business strategies to fit the local context. In addition, they must also be aware of the risks associated with investing in politically unstable and economically volatile regions, which can have a negative impact on their investments.

Overall, this research sheds light on the dynamics of Chinese investments in Latin America and contributes to a broader understanding of the intersection between economic and institutional factors in international business. By combining the insights of the RBV and Institutional Theory, this study has provided a nuanced and comprehensive analysis of the motivations, strategies, and challenges associated with China's growing presence in Latin America. As China continues to expand its global reach, it is important to understand the drivers of its investments and the implications for the countries and regions where it invests. This thesis contributes to this important area of research and highlights the need for further investigation into the complex interplay between economic and institutional factors in firm's decisions to invest abroad.

Chinese investments in Latin America could have also been interpreted by using other perspectives: for instance, Transaction Cost theory, the Eclectic paradigm (OLI), and the Linkage, Leverage and Learning (LLL) framework. These theories, however, do not put as much emphasis on the role that institutions have in shaping companies' decisions and strategies. Further analysis would be needed and complemented by other perspectives, such as those mentioned above, in order to gain a complete understanding of the reasons why China is investing in Latin America.

In addition, the analysis has highlighted the crucial role of the Chinese government and the Chinese institutions in shaping the investment process of Chinese corporations in Latin America. The decision of each company should therefore be considered within the overall strategy and needs of the Republic of China, and it is often only made possible by the support of Chinese institutions.

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13. Appendices

Appendix 1. FDI, net outflows (% of GDP)

Year	China	Europe & Central Asia	East Asia & Pacific	United States	Latin America & Caribbean
1982	2,1%	59,5%	32,3%	23,2%	5,5%
1983	4,0%	68,0%	27,6%	24,1%	4,5%
1984	5,2%	83,8%	41,3%	31,8%	6,0%
1985	20,3%	98,1%	48,5%	8,5%	6,4%
1986	15,0%	111,3%	70,6%	42,6%	18,4%
1987	23,6%	124,4%	85,8%	82,0%	5,4%
1988	27,2%	170,7%	119,6%	41,4%	3,8%
1989	22,4%	184,4%	137,3%	90,4%	10,8%
1990	23,0%	182,8%	139,4%	100,5%	18,6%
1991	23,8%	144,4%	75,6%	80,0%	16,4%
1992	93,7%	125,4%	68,0%	90,1%	21,3%
1993	98,9%	126,3%	69,9%	120,7%	19,3%
1994	35,4%	156,6%	80,0%	123,5%	27,5%
1995	27,2%	176,1%	88,7%	144,1%	22,6%
1996	24,5%	206,8%	102,2%	127,6%	23,2%
1997	39,2%	261,8%	106,8%	141,5%	38,3%
1998	44,0%	460,3%	85,2%	192,8%	43,6%
1999	36,9%	793,5%	92,1%	257,0%	42,8%
2000	38,1%	971,0%	167,1%	181,8%	35,4%
2001	72,4%	506,6%	139,1%	138,0%	19,7%
2002	42,7%	320,9%	95,6%	163,8%	2,4%
2003	50,9%	285,7%	107,2%	170,4%	32,8%
2004	40,8%	377,4%	133,3%	306,1%	84,8%
2005	60,1%	696,0%	96,8%	40,3%	70,7%
2006	87,0%	805,0%	188,0%	205,4%	160,0%
2007	48,3%	1018,5%	223,3%	361,9%	111,0%
2008	123,5%	711,2%	229,5%	232,6%	121,2%
2009	86,0%	314,2%	176,7%	215,9%	63,9%
2010	95,2%	406,0%	212,8%	232,5%	172,4%
2011	64,1%	495,0%	194,0%	279,9%	155,4%
2012	76,1%	327,0%	183,2%	232,1%	128,9%
2013	76,2%	389,0%	207,6%	233,2%	116,8%
2014	117,5%	242,5%	254,5%	220,8%	120,5%
2015	157,7%	521,4%	234,3%	165,9%	225,1%
2016	192,7%	510,8%	249,4%	160,4%	89,2%
2017	112,3%	414,7%	230,9%	210,2%	72,8%
2018	102,9%	40,1%	186,3%	-63,7%	51,8%
2019	95,9%	148,0%	211,2%	49,4%	86,6%
2020	104,7%	-42,0%	187,8%	129,1%	38,4%
2021	72,2%	357,2%	170,4%	180,9%	128,3%

Appendix 2. FDI Inflows (% of GDP)

Dates	BRAZIL	VENEZUELA	URUGUAY	CHILE	PARAGUAY	ARGENTINA	COLOMBIA	MEXICO	BOLIVIA	ECUADOR
2001	4,15	3,01	1,49	5,87	1,17	0,81	2,59	3,97	8,67	2,2
2002	3,25	0,82	1,32	3,63	1,26	2,2	2,18	2,61	8,56	2,74
2003	1,81	1,88	3,34	5,26	-0,75	1,29	1,82	2,49	2,44	2,69
2004	2,71	1,32	2,58	6,86	0,98	2,51	2,66	3,21	0,75	2,29
2005	1,73	1,68	4,76	6,1	0,07	2,65	7,03	2,87	-2,5	1,19
2006	1,75	0,11	7,7	4,93	1,4	2,38	4,18	2,27	2,45	0,58
2007	3,19	1,89	5,8	7,81	0,59	2,25	4,31	2,95	2,79	0,38
2008	2,99	0,66	7,05	10,28	1,39	2,69	4,36	2,68	3,07	1,71
2009	1,89	-0,34	5,06	8,08	0,7	1,21	3,46	2,18	2,44	0,49
2010	3,73	0,4	5,44	7,38	2,59	2,68	2,24	2,89	3,17	0,24
2011	3,92	1,85	5,61	10,18	1,79	2,04	4,37	2,02	3,58	0,81
2012	3,76	1,31	12,47	11,9	2,32	2,81	4,05	1,52	3,91	0,65
2013	3,04	0,58	1,72	7,62	0,95	1,78	4,24	3,99	5,71	0,76
2014	3,57	0,24	7,14	9,84	2,21	0,96	4,24	2,16	1,99	0,76
2015	3,59	0,24	5,02	7,33	1,61	1,98	3,96	3,09	1,68	1,33
2016	4,14	0,24	-0,9	4,56	2,05	0,58	4,9	3,61	0,99	0,76
2017	3,34	0,24	4,18	1,9	1,34	1,79	4,39	2,86	1,9	0,6
2018	4,08	0,24	2,68	2,69	0,54	2,23	3,38	3,1	0,75	1,29
2019	3,69	0,24	2,4	4,87	1,06	1,49	4,33	2,36	-0,53	0,9
2020	2,61	0,24	0,97	3,64	0,27	1,22	2,76	2,89	-3,08	1,1
2021	2,89	0,24	6,15	4,81	0,52	1,39	2,98	2,62	1,44	0,61
2022	2,89	0,24	6,15	4,81	0,52	1,39	2,98	2,62	1,44	0,61

Appendix 3. Chinese FDI in Latin Americaa

Date	LAC ex tax havens	Latin America
2021	16,4	693,7
2020	16,7	629,8
2019	17,6	436,0
2018	16,6	406,8
2017	14,7	386,9
2016	13,7	207,2
2015	11,9	126,3
2014	12,3	106,1
2013	9,5	86,1
2012	7,0	68,2
2011	3,9	55,2
2010	3,1	43,9
2009	1,8	30,6
2008	1,2	32,2
2007	1,1	24,7
2006	0,6	19,7
2005	0,5	11,5
2004	0,5	8,3
2003	0,4	4,6

Appendix 4. Chinese FDI in Latin America by country (excluding offshore financial centres)

Date	Argentina	Brazil	Bolivia	Ecuador	Peru	Mexico	Venezuela	Jamaica	Chile
2021	214.114	300.771	30.751	47.036	218.137	130.216	58.772	108.089	123.524
2020	199.266	320.506	28.796	60.141	170.511	116.695	296.104	113.058	126.683
2019	180.841	443.478	47.227	64.772	139.894	116.108	343.130	92.165	117.189
2018	158.297	381.245	35.150	124.052	94.150	110.688	350.123	118.740	61.370
2017	153.954	320.554	41.349	103.244	83.943	89.802	320.725	111.412	52.757
2016	194.366	296.251	37.068	118.012	75.978	57.860	274.171	83.919	40.362
2015	194.892	225.712	31.746	105.635	70.549	52.476	280.029	22.568	20.464
2014	179.152	283.289	13.217	94.460	90.798	54.121	249.323	18.837	19.583
2013	165.820	173.358	11.892	100.879	86.778	40.987	236.338	7.968	17.904
2012	89.719	144.951	15.619	40.763	75.287	36.848	204.276	7.493	12.628
2011	40.525	107.179	6.632	9.524	80.224	26.388	50.100	3.907	9.794
2010	21.899	92.365	6.485	12.958	65.449	15.287	41.652	437	10.958
2009	16.905	36.089	5.565	10.660	28.454	17.390	27.196	216	6.602
2008	17.336	21.705	2.862	8.860	19.434	17.308	15.596	216	5.809
2007	15.719	18.955	2.303	4.918	13.711	15.144	14.388	2	5.680
2006	1.134	13.041	2.106	3.904	13.040	12.861	7.158	2	1.084
2005	422	8.139	8	1.812	12.922	14.186	4.265		371
2004	1.927	7.922		219	12.582	12.529	2.678		148
2003	105	5.219		55	12.618	9.718	1.939		75