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Chinese Companies and Foreign Direct Investment in Brazil between 2000 and 2018

Abstract

The article aims to understand the relationship between Foreign Direct Investment (FDI) and the presence of Chinese multinationals in Brazil. To achieve its purpose, the text retrieves theoretical elements about FDI and the theories that explain the process of internationalization of companies, in order to explain the growing presence of Chinese multinationals in the country. We used data from official sources, such as the Central Bank of Brazil (CBB), UNCTAD and the Ministry of Commerce of China (MOFCOM), and from unofficial sources, such as the American Business Institute (ABI) and the Brazil China Business Council. We present some case studies of multinationals such as Sinopec (petroleum sector), Didi Chuxing (Technology/ Startup), State Grid (Electric Power) and Chery Automobile (Auto Industry), with intent to show the *modus operandi* of companies from different economic sectors. To analyze these companies, we used data from their websites and other information available online. As a preliminary conclusion, it can be stated that Chinese FDI in Brazil increased significantly during the 21st century, when compared to the total direct investment from other countries. The Chinese multinationals in Brazil focus their interests in search for raw materials and sale of products with greater added value.

Keywords: Chinese companies; FDI; Foreign Direct Investment; Raw Materials; Market Seeking Strategy; Brazil

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Introduction

China becomes Brazil's largest trade partner in 2009, in terms of the trade balance of imports and exports, surpassing the US. However, while the US imports more industrialized products, China buys mainly commodities and raw materials¹. In addition, China overtook Japan as the world's second largest economy in 2010. Moreover, China's FDI increased, and its companies became major investors in Brazil, both in the quest for raw materials and/or commodities, and to sell an ever-wider range of industrialized products and services.

The presence abroad of Chinese companies has already been mentioned for several reasons, according to Buckley et al. (2007). Authors have examined them in terms of their position in global trade flows (Lall and Albaladejo 2004); its comparative advantage as manufacturing location (Chen et al. 2002; Rowen 2003); and their search for raw materials and other inputs needed to sustain the recent development by domestic economy (Appel and Dalla Costa 2014). Our objective with this article is to understand the relationship between FDI and the presence of Chinese multinationals in Brazil. In addition, to discuss the hypotheses of the reason these multinationals entered in the Brazilian market, that is, if they did come to seek raw materials and/or sell products and services with higher added value.

Data were obtained from official sources such as the Central Bank of Brazil (CBB), UNCTAD and the Ministry of Commerce of China (MOFCOM); and, from unofficial sources such as the American Business Institute (ABI) and the Brazil-China Business Council (CEBC). In addition, the article presents some case studies of multinationals such as State Grid, Didi Chuxing (Technology / Startup), China Construction Bank (Financial) and Chery Automotive

¹<https://www.terra.com.br/economia/china-torna-se-o-maior-parceiro-comercial-do-brasil,dc3117a7adc4b310VgnCLD200000bbccceb0aRCRD.html> Accessed on 19 Nov 2018.

(Automobiles), through which it is intended to show the *modus operandi* of companies from various economic sectors. For the analysis of these companies, it will be used data from their websites and other online information, as well as secondary sources. Finally, the article concludes by presenting the main considerations regarding FDI and the presence of Chinese multinationals in Brazil.

Foreign Direct Investment and Chinese Multinationals in Brazil: theoretical/methodological aspects

The intention of this part of the text is not to deepen the study of Foreign Direct Investment theory nor to deal with the in-depth discussions about the theories of multinationals developed by the traditional authors, their criticisms and the recent models. We only tried to discuss some aspects that contribute to understand the presence of Chinese companies in Brazil.

North (1990) and Williamson (1998) emphasize the importance of institutions in the economic development and wealth of nations. They show that the Western world countries, based on solid and perennial institutions, have gained space in international economic development and the FDI. Once established as developed nations, a portion of their companies started to operate in the international market, in several continents. Recently, China, following a similar model, can be seen as one of the nations that has consolidated institutions and constituted world-class companies.

This article aims to verify how a group of Chinese multinationals increased their relevance in China's economy and settled in Brazil. Until 1979, FDI and the internationalization of Chinese enterprises were controlled by central or provincial governments (Buckley et al. 2006). Since then, there has been a growing liberalization of FDI and foreign operation by firms. The process

has taken a more rapid pace since 2000 when Deng Xiaoping adopted a government policy known as 'Go Global' (Sauvant 2005).

Buckley et al. (2007), when analyzing the Chinese FDI, found that it was associated with high levels of political risk for the years 1984 to 1991. From 1992 to 2001, the country's companies were mainly in search of natural resources. Theoretically, the experience of Chinese firms can be understood using the traditional explanation of the reasons that lead the companies to internationalization, summarized in Dunning's eclectic paradigm (Dunning 1977; 1993). For this author, there are three factors considered preponderant: i) foreign market seeking FDI; ii) efficiency (cost reduction) seeking FDI; iii) resource seeking FDI (including a subset that is known as strategic-asset seeking FDI).

In the case of the productive process' internationalization, Dunning (1977; 1988) links it to the use of property advantages, which are specific to firms and countries themselves and make it possible to explain the activities of firms abroad. These advantages are represented by the OLI (ownership, location and internalization) sub-paradigms.

The ownership advantages are related to tangible and intangible assets (brands, technological capacity and human potential), allowing companies to use them in order to take advantage of the locational advantages offered by countries (natural resources, infrastructure, market size and characteristics and reliability of economic policy).

On the other hand, investment outside their home borders makes companies decide whether to internalize production or allow production licenses to third parties. The advantages of internalization arise from the easiness in which the integrated firm is able to appropriate a higher total return, retaining, controlling and managing a more complex set of physical, technological and financial assets. In sum, according to Dunning, the concrete way in which a multinational

company operates in a given market is a combination of these three factors, which vary according to country, industry and company characteristics (Marinho 2013).

In the case of Chinese companies, it is possible to see motivations such as: a) Go to countries with significant energy reserves and large raw materials deposits; b) "It may also involve the search for specific assets such as R&D capacity and output, design facilities and brand names that are embedded in advanced country firms and which are usually only accessed by takeover of these firms or subdivisions of them" (Buckley et al. 2007, 5; Dunning 2001).

Specifically, the Chinese government has used FDI to ensure the supply of domestically-scarce factor inputs as the Chinese economy has grown (Ye 1992; Zhan 1995; Appel and Dalla Costa 2014). Key sectors include minerals, oil, timber, fishery and agricultural products (Wu and Sia 2002; Cai 1999).

Authors such as Buckley et al. (2007, 6-7), based on several studies, point out four reasons that contributed to the internationalization of Chinese companies: i) State-owned firms may have capital made available to them at below market rates (Lardy 1998; Warner et al. 2004; Scott 2002); ii) inefficient banking systems may make soft loans to potential outward investors, either as policy or through inefficiency (Child and Rodrigues 2005; Warner et al. 2004; Antkiewicz and Whalley 2006); iii) conglomerate firms may operate an inefficient internal capital market that effectively subsidizes FDI (Liu 2005); and iv) family-owned firms may have access to cheap capital from family members (Erdener and Shapiro 2005; Tsai 2002; Child and Pleister 2003).

As China became the world's second largest economy, its available capital increased highly in recent years due to large foreign exchange reserves and surplus of savings of China was an important part to support China's FDI (Salidjanova 2011). The China's "going global" strategy

in 2000 was an important advantage for Chinese enterprises have gone abroad. In the first stage of “going global” policy, Chinese enterprises only focus on the manufacturing and mining sectors to extract the natural resources. In recent years, however, China's FDI has spread across the various sectors (Anh and Hung 2016).

Chang (2014) examined determinants of China’s FDI into 138 nations over a seven-year period, 2003-2009. He applied gravitational-spatial linkages in regression analysis to show that China’s FDI was attracted by high-tech industries in developed nations and natural resources of host countries in general.

A mix of motives drives the growth of China’s outward FDI. These reasons are similar to motives to explain the growth of MNEs headquartered in other countries, although their relative importance may vary (Buckley at al. 2007). One of these motives is resource-seeking, explained by the fact that China is short on mineral and oil resources, while its rapid economic growth needs them in high quantities. Trade-supporting FDI is another important reason, reflecting the country’s leading role in international exports. Also relevant is the desire to access markets through direct investment, including to protect the China’s exporters against possible trade barriers. A number of projects are furthermore characterized by the need to acquire technology and other asset-augmenting resources. Given the rising costs particularly in the China’s coastal provinces, efficiency-seeking investment is becoming important, directed mainly to some Asian and African countries. Finally, several specific factors play a role, including round-tripping funds back into the country to benefit from lower taxes, keep funds abroad for future uses, or simply to withdraw funds from the country under the guise of outward FDI (Sauvant and Nolan 2015).

As China continues to grow, develop, and integrate into the global economy, its overseas investments expand in quantity and quality, reflecting both the growing sophistication of the Chinese economy and broader Chinese commercial and policy goals (Seaman, Huotari, and Otero-Iglesias 2017). These phenomena can be verified, for example, regarding the Chinese Direct Investment in the European Union between 2010 and 2016. These investments were split by the following sectors: ICT 16%; Transport and Infrastructure 15%; Real State and Hospitality 15%; Automotive Industry 14%; Industrial Machinery and Equipment 11%; Others 29%. In the following sections, we analyze how the Chinese multinationals were established in Brazil and in what sectors they operate, as well as their perspectives in the coming years.

Chinese Direct Investments in Brazil

To understand the Chinese FDI in relation to Brazil, we will highlight some elements that allow us make its contextualization. Until the end of the last century, the FDI directed to Brazil came from Europe, especially from England, followed by investments from the US after World War II.

By 1950, FDI stock had reached roughly US\$ 334 million. Between 1951 and 1960, FDI flows amounted to approximately US\$ 1.1 billion. In the 60's, this process continued. Between 1961 and 1970, the investment flows reached US\$ 2.48 billion, and in 1979, according to data from the Central Bank of Brazil (CBB), amounted to US\$ 9.6 billion (Curado and Cruz 2008). Therefore, the recent Chinese FDI in the Brazilian economy continues what foreign firms have done since 1889 (beginning that when Brazil becomes a Republic), with Americans replacing Europeans in importance and, in the last decades, Chinese step by step becoming protagonist.

As for the presence of foreign companies, there were also changes in the second half of the twentieth century. Between 1980 and 2000, the share of foreign firms in the group of 500 largest Brazilian companies, that was already significant, had increased continuously. In 2000, 46% of the 500 largest firms were foreign and their importance can be verified by the following numbers. They were responsible for 56% of sales, 49% of exports and 67.2% of imports (Sarti and Laplane 2002).

The increase of the multinationals presence reached all the economic sectors, but was particularly intense in service activities, in which they previously had little participation (Laplane et al. 2001). To Sarti and Laplane (2002), one of the strategies adopted by the multinationals subsidiaries was the Resource Seeking, characterized by the high propensity to export, at the same time as they have a reduced coefficient of imports, which resulted in positive trade balances.

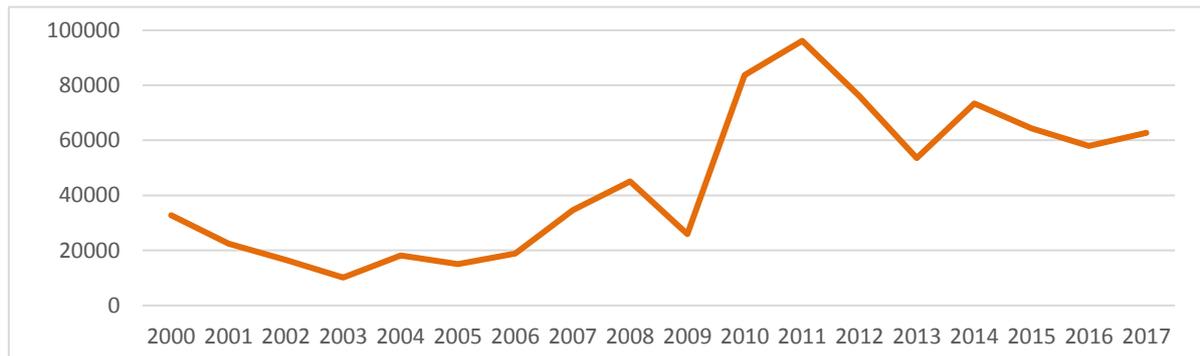
Brazil maintained its insertion in the world stage as an exporter of primary goods and natural resource intensive products to the developed countries, and exporter of products with higher value-added and intensive R&D for the south American countries (Coutinho 1997).

The data regarding Brazil's FDI inflows from 2000 to 2018 will be presented next, considering two official sources: one international, the United Nations Conference on Trade and Development (UNCTAD), the other national, the Central Bank of Brazil (CBB).

In the UNCTAD data, there is some information on the flows and stocks of FDI that Brazil received from the rest of the world, broken down by year. It allows us to observe the growth trajectories during the last years as can be seen in graph 1.

The FDI flow can be better understood by analyzing its stock. In the period from 2000 to 2017, the stock of Chinese FDI in Brazil rise from about 100 to 800 billion dollars (UNCTAD STAT 2018).

Graph 1. FDI flow from the world to Brazil from 2000 to 2017 (in US\$ million)



Source: Own elaboration from UNCTAD STAT (2018).

In the Central Bank of Brazil website, it is possible to extract the detailed data by country for the period 2010 to 2016, showing the progress of the FDIs by the immediate investor and final controller. By analyzing these data, it is clear that investments from the United States, the Netherlands and Spain stand out.

Regarding the collection of statistical data on Chinese investments in Brazil, it is important to consider the differences between all the available statistical sources and the difficulty of analysis of official data due to various reasons.

First, the Ministry of Commerce of China (MOFCOM), the official statistical source, only provides data on the first destinations of the investments, instead of the final ones. According to Kupfer and Freitas (2018), this distorts the results, since Chinese companies usually carry out *trans-shipping* - channeling the investments through third countries. In addition, it is common in China to practice *round-tripping* - sending capital to Hong Kong and returning to the mainland as FDI, which overestimates the data. It is noteworthy that UNCTAD also provide, in the Bilateral FDI Statistics (2014), the statistics of incoming FDI in Brazil from 2001 to 2012,

broken down by country of origin. However, in that timeframe, Chinese investments were still relatively low in Brazil.

In addition, the official Brazilian source, the Central Bank of Brazil (CBB) provides the Census of Foreign Capital in Brazil (base years: 2010 to 2016), where statistics are broken down by: sector of activity, country of origin, immediate investor and final controller. Despite the short period of time (2010 to 2016), it is possible to analyze the phase in which Chinese investments remained high, unlike UNCTAD statistics.

As the purpose of this study is to present data on Chinese investments in recent years, and, therefore, provide an overview of the growing presence of Chinese companies in Brazil, all sources should be considered. Among the various unofficial sources available, we will use the international databases China Global Investment Tracker and RedALC China, and the national database Brazil China Business Council.

China Global Investment Tracker is a database developed by the American Enterprise Institute (AEI) and The Heritage Foundation, compiling all Chinese OFDI transactions worth more than US\$ 100 million between 2005 and 2018. The data include countries of destination, sectors, subsectors, transaction channels, entry modes, and the percentage that Chinese companies own of each project when it comes to M&A and Joint Ventures.

The other international database was prepared by RED-China FTA, from various sources such as Capital IQ, CEBC, Market FDI, Bloomberg, CGIT, etc. It contains data on Chinese FDI in Latin America countries and the Caribbean from 2003 to 2017, sorted by investing company, recipients, sectors, subsectors, countries of destination, mode of entry and number of employees.

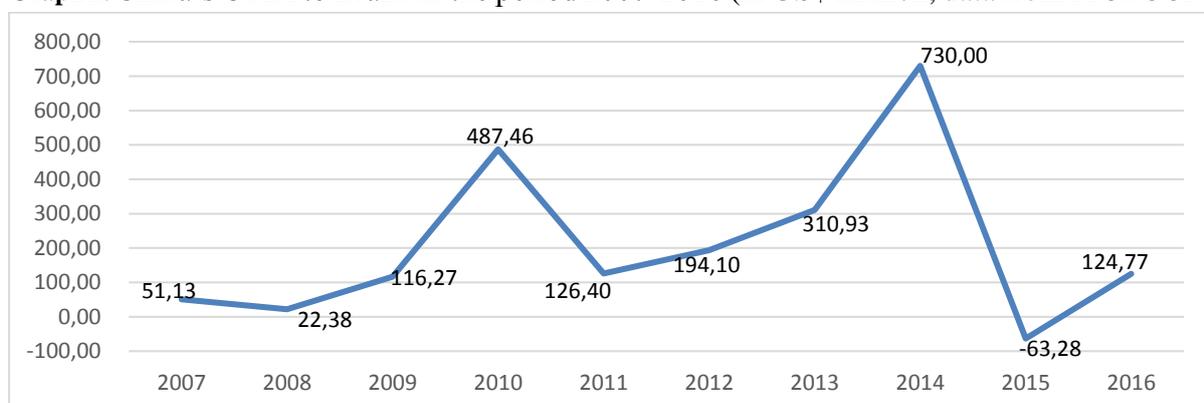
The Brazil China Business Council (BCBC) has developed reports and analysis since 2011, compiling the investment projects of the major Chinese firms in Brazil, classifying them as "announced" or "confirmed." From various sources and interviews, the council has developed studies that provide a relatively complete database from 2007 to 2016, containing detailed investment information such as negotiation values, companies involved, sectors and project progress.

Therefore, the different accounting methods and statistics sources, allow us to see the Chinese investments in Brazil from different angles and help us analyze the strategies adopted and the growth trajectory with more rigor.

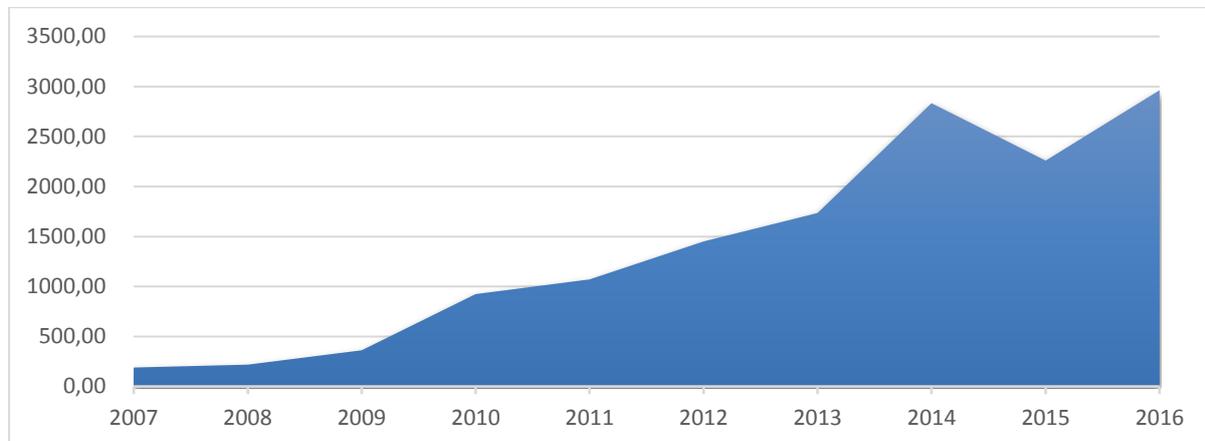
Evolution of Chinese Investments in Brazil (2000 to 2018)

First, it will be presented China's FDI data in Brazil derived from official sources, broken down by periods, in order to clarify the evolution of the Chinese investments. Then, two MOFCOM charts will be displayed, showing the FDI stocks and entry flows, as well as an UNCTAD graph of Chinese FDI inflows to Brazil. Finally, two charts from the Brazilian Central Bank (CBB), one representing the entry of investments by immediate investor and the other by the final controller.

Graph 2. China's OFDI to Brazil in the period 2007-2016 (in US\$ million, data from MOFCOM)



Source: Own elaboration from the Statistical Bulletin of China's Outward Foreign Direct Investment 2016, 45-49.

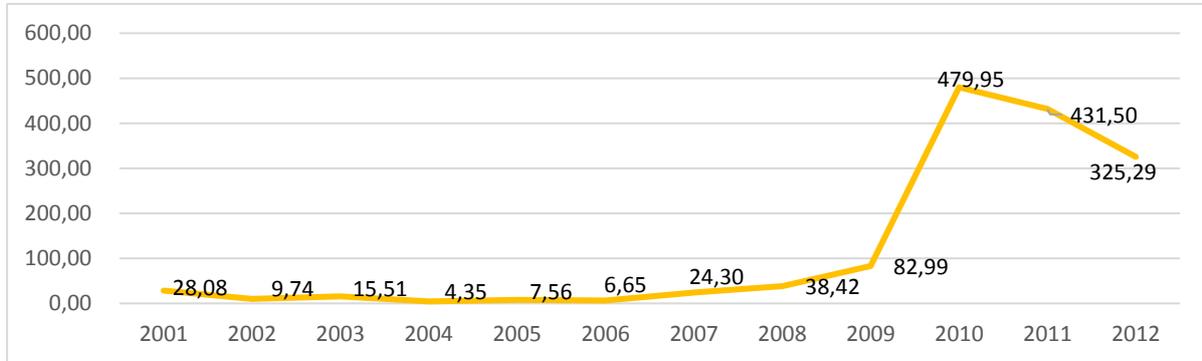
Graph 3. Chinese FDI stock in Brazil in the period 2007-2016 (in US\$ million)

Source: Own elaboration from the Statistical Bulletin of China's Outward Foreign Direct Investment 2016, 50-54.

It can be seen in the graphs that there was a rapid expansion of FDI from 2009, with a decline after the first peak (\$487.46 million USD) flow in 2010, returning to growth in 2011. In 2014, the flow reaches another peak at an even higher level (\$730 million USD) and then a sharp drop to below-zero (\$-63.28 million USD) in 2015. There is no definitive explanation as to the reasons for this decline in 2015, but 2014 was a very contested election year and there was great uncertainty about the direction the Brazilian economy would take. In addition, in the post-election immediate period, several indicators that showed a certain weakness of the Brazilian economy were disclosed. These factors may have motivated the reduction of Chinese FDI in Brazil in 2015.

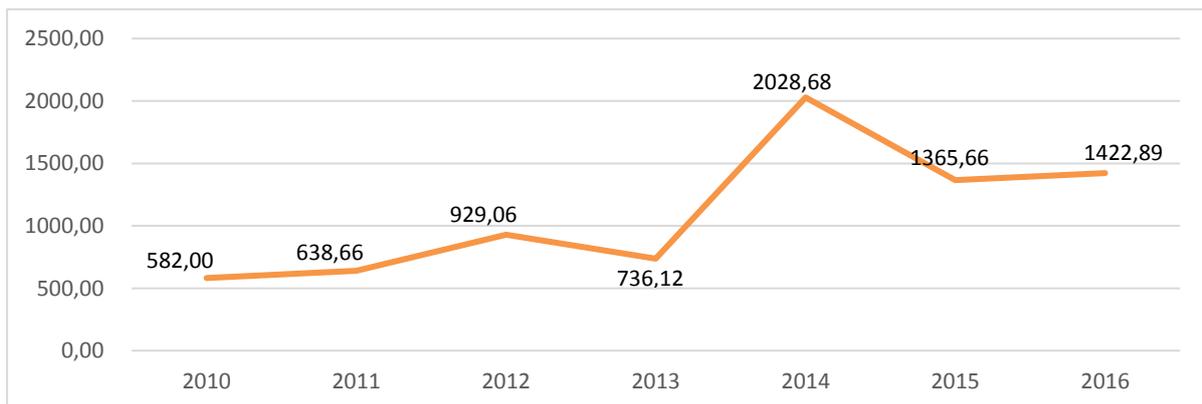
It is noticed in the chart that between 2001 and 2006, Chinese FDI inflows in Brazil kept a very low level and the significant growth occurred from 2009 to 2010. This fact coincides with the MOFCOM data, despite the general divergences in numbers and in the downward trajectory in 2011 and 2012, after a peak in 2010.

Graph 4. FDI flows from China to Brazil from 2001 to 2012 (in US\$ million, data from UNCTAD)



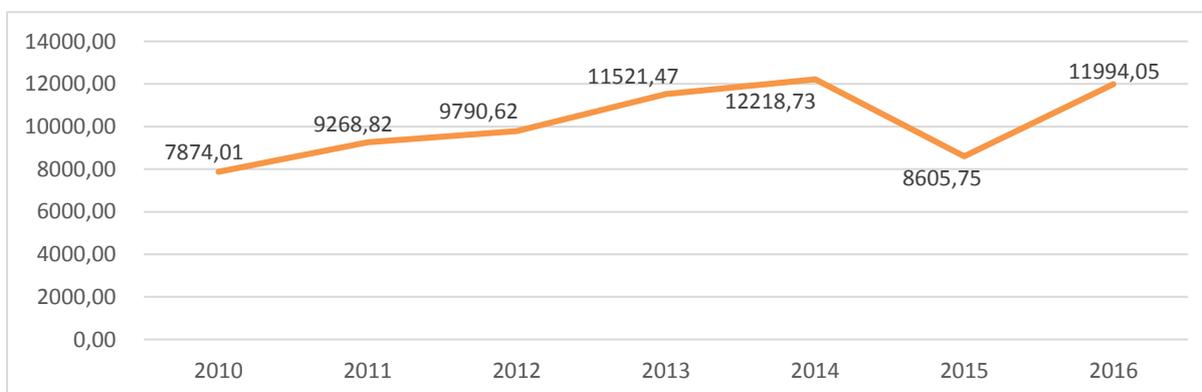
Source: Own elaboration from Bilateral FDI Statistics (2014).

Graph 5. FDI flow from China to Brazil, as immediate investor, from 2010 to 2016 (in US\$ million, data from CBB)



Source: Own elaboration from the Census of Foreign Capital in the County (2010 to 2016).

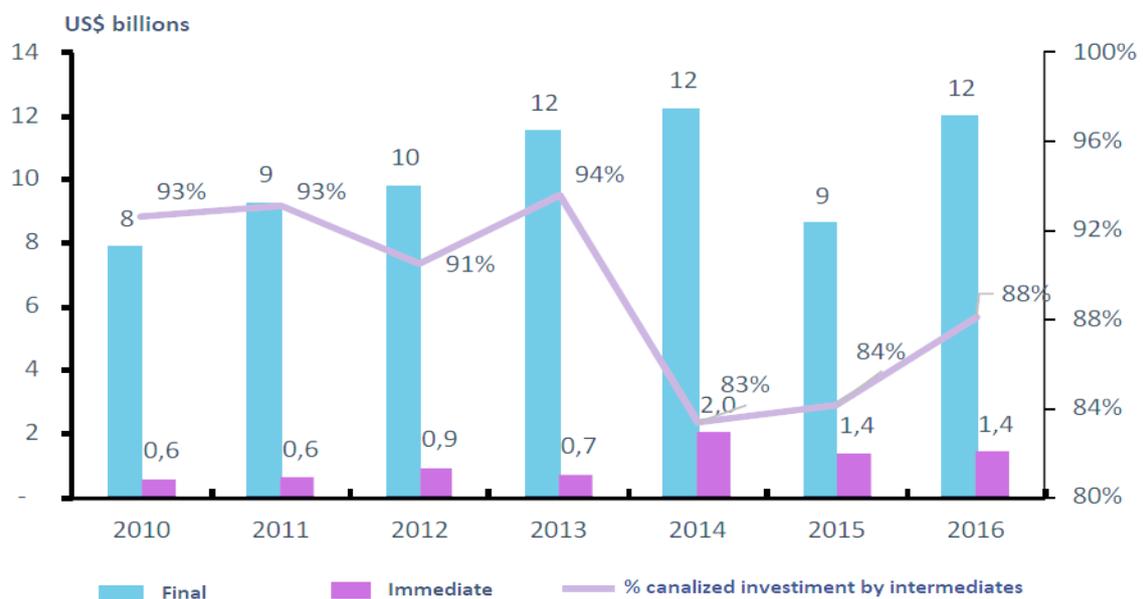
Graph 6. FDI flow from China to Brazil, as final controller, in the period from 2010 to 2016 (in US\$ million)



Source: Own elaboration from the Census of Foreign Capital in the Country (2010 to 2016).

Analyzing the graphs drawn from the Central Bank of Brazil data, it is possible to note the differences in relation to MOFCOM data, both in values in general, and in oscillation over the years. For example, in the chart of FDI flows by the immediate investor criterion, there has not been a reduction in FDI values after 2010, as occurred in graph 2 of MOFCOM. Moreover, despite having the same trajectory format between 2013 and 2015 (a peak and then a decline), the reduction is not as sharp as the MOFCOM “case”. In the FDI flows by the final controller criterion graph, the values are much higher than those presented in the MOFCOM and in the immediate investor charts. This can be explained by the common practice of channeling investments through intermediate countries.²

Graph 7. China’s FDI to Brazil: Comparison by the final controller and immediate investor criteria (in US\$ billion)

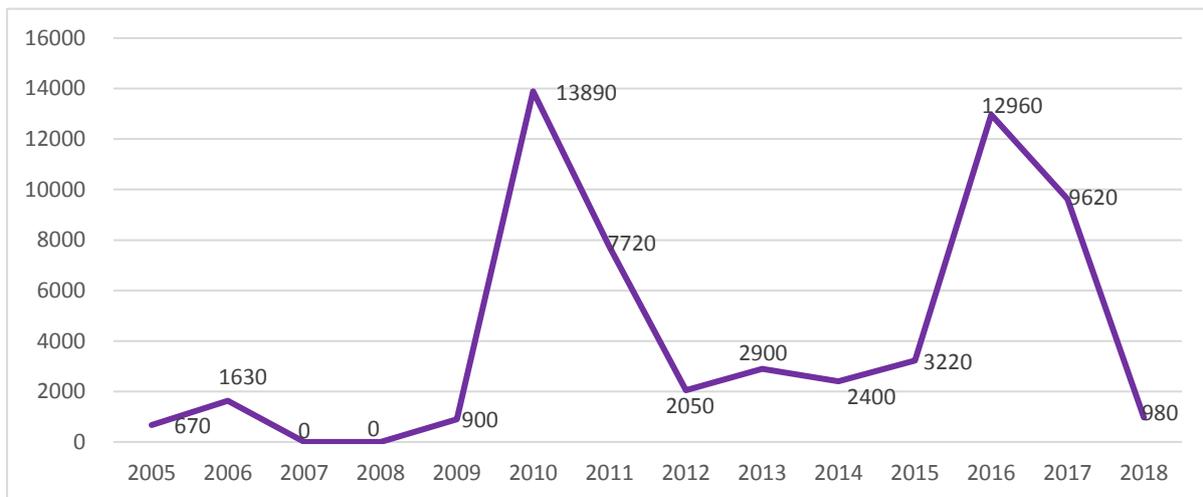


Source: Central Bank of Brazil, Report of Direct Investment in the Country (2018, 19).

² According to the Country Direct Investment Report (2018) published by the Central Bank of Brazil, the average percentage of investments channeled by third countries relative to direct Chinese investments reached, in general, 94% in 2013 and 88% in 2016, with the majority of investments coming from Luxembourg.

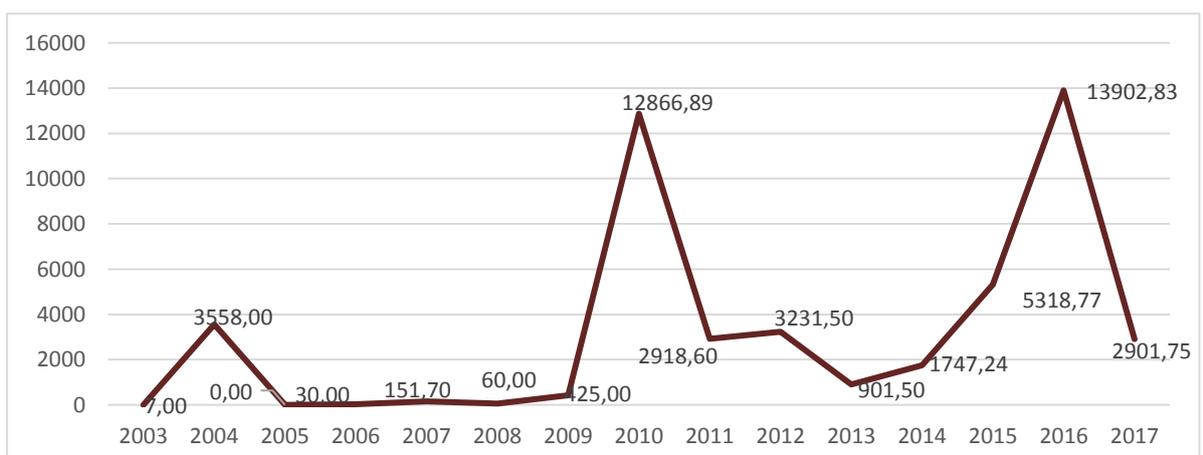
Next, it will be presented data from unofficial sources, namely China Global Investment Tracker, Red Alc and CEBC. This section will have three graphs of the Chinese FDI inflows history in Brazil, allowing us to see and analyze the subject with another perspective.

Graph 8. China's FDI to Brazil from 2005 to 2018, by China Global Investment Tracker database (in US\$ million)

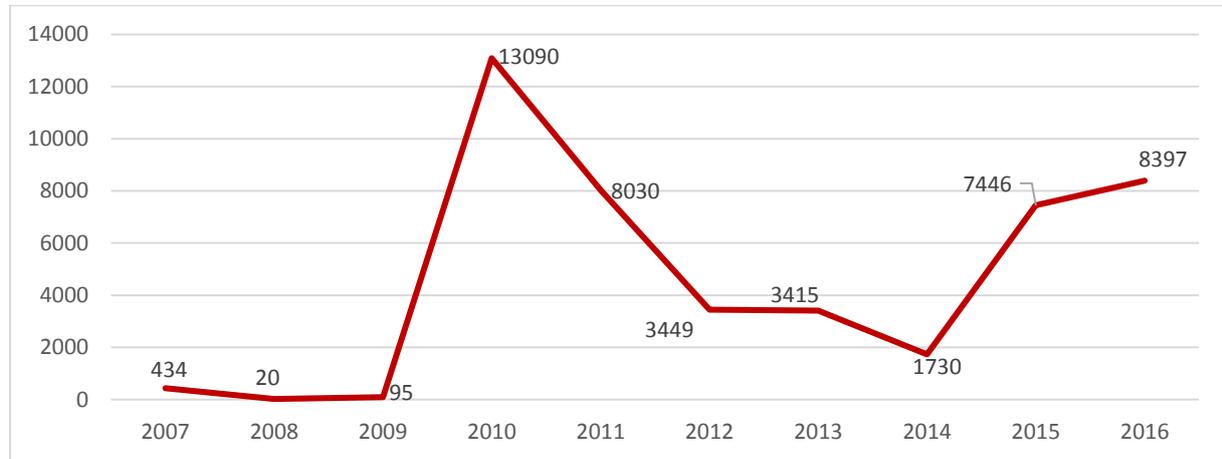


Source: Own elaboration from China Investment Tracker (<http://www.aei.org/china-global-investment-tracker/>). Accessed in 30 Sep. 2018.

Graph 9. China's FDI to Brazil from 2003 to 2017, by Red ALC China database (in US\$ million)



Source: Own elaboration from "Chinese OFDI in Brazil at company level (2003-2017)" (<http://www.redalc-china.org/monitor/informacion-por-pais/busqueda-por-pais/29-brasil>) Accessed on 30 Sep. 2018.

Graph 10. China's FDI to Brazil from 2007 to 2016, by CEBC database (in US\$ million)

Source: Own elaboration from ‘An analysis of Chinese investments in Brazil: 2007-2012’ ‘Bulletin of Chinese investments in Brazil 2012 – 2013’ and ‘Chinese investments in Brazil – 2016’ (CBEC).

It is observed that these three graphs have some resemblance, both in relation to the values, as about the investment development path. In this sense, it is inferred that the inflow of Chinese FDI maintained a negligible level before 2009 and, as of 2010, there was an investment boom, reaching a level of US\$ 12 to US\$ 13 billion. Then, after a sharp and long drop, we can see a new exponential growth from 2014 on, to another peak in 2016.

Despite the differences between official and unofficial data, it is possible to aggregate the different views on the subject to raise certain characteristics of the historical trajectory of the Chinese FDI inflows in Brazil.

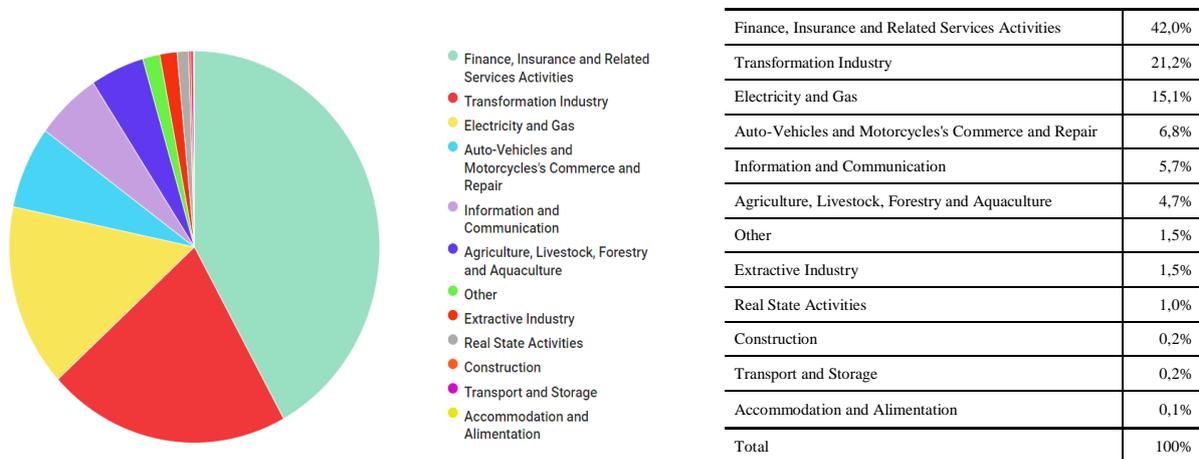
First, it can be observed in all graphs (except the CBB graph, due to the restricted period), the abrupt increase of the Chinese companies' presence in Brazil happened from 2009 on, and figures from previous years are almost insignificant to the analysis. This fact may have been, according to Frischtak et al. (2013), the result of the significant growth of bilateral trade movements between the two countries in recent years, which has made the mentioned Asian country Brazil's largest trading partner, surpassing the United States. Moreover, the decline of

population consumption capacity in developed countries and the devaluation of companies' assets in different countries could also have corroborated the fact.

Distribution of the Chinese Investments in Brazil by Sector

In this section, we will discuss the statistical data on the sector distribution of Chinese firms' investments in Brazil. Here, two sources will be chosen for reference: the official one is the Central Bank of Brazil, and the unofficial is the China Global Investment Tracker. Both use data from 2010 to 2016, when Chinese investments were more significant. Therefore, it is possible to clarify in what sectors the Chinese firms invested the most in Brazil.

Graph 11. Sector participation of Chinese FDI in Brazil by the immediate investor criterion, from 2010 to 2016 (in US\$ million – CBB data)



Source: Own elaboration based on the Census of Foreign Capitals in Brazil (2010 to 2016).

Graph 12. Sector participation of Chinese FDI in Brazil by the final controller criterion, from 2010 to 2016 (in US\$ million)



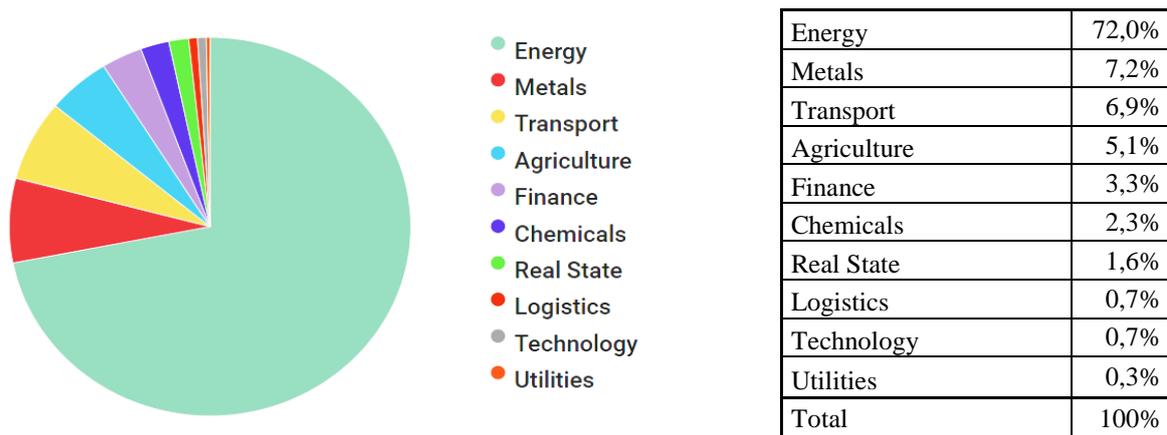
Source: Own elaboration based on the Census of Foreign Capitals in Brazil (2010 to 2016).

When comparing the two graphs, there is a divergence between the sector distribution by the immediate investor and final controller criteria. In the first criterion, the sectors that most concentrated Chinese capital were Financial Activities, Insurance and Related Services (42%) and Manufacturing Industries (21%). In the second, the sectors that received most of the investments were the Extractive Industries and Electricity and Gas (14%). This may be a result of investment channeling practice through intermediary countries, mentioned earlier, as seems to be the case of the entry of Sinopec in Brazil through the purchase of Repsol Brazil in Luxembourg, presented below.

Despite different results, it is possible to conclude that most of the Chinese capitals entering Brazil came through intermediary countries. It is supported by an analysis of the CBB data published. That is, even by the criterion of the immediate investor, the sectors of Financial Activities, Insurance and Related Services and Industries of transformation present a relevant concentration of investments.

Therefore, from this analysis, the Extractive Industries and Electricity and Gas can be considered that the Brazilian economic sectors that Chinese firms allocated more investments.

Graph 13. Sector participation of Chinese FDI on Brazil from 2010 to 2016 (in US\$ million, CGIT data)



Source: Own elaboration and translation based on the China Investment Tracker (<http://www.aei.org/china-global-investment-tracker/>)

It is a fact that, among unofficial statistical sources, the one that demonstrates greater coherence and clarity in the division of sectors and subsectors is the China Global Investment Tracker database. It can be seen from the graph that, among the 10 sectors analyzed, the Chinese investment transactions are concentrated mainly in the Energy sector (76%), which is far from second sector, Metals (6%).

In the China Global Investment Tracker database, the Energy sector includes extractive activities of oil, coal and gas, and the generation, transmission and distribution of electricity. From this perspective, together with the analysis of the CBB base, it can be concluded that the predominant objective of the Chinese firms in Brazil is the extraction of raw materials, mainly oil, gas and iron ore from the energy and metal segments. In this context, the companies that

are currently working in these segments include: Sinopec and CNPC in oil extraction, WISCO and China Minmetals in the mining sector.

In addition, the energy alternative generation, transmission and distribution sector plays a major role in the segment, with the most relevant companies being State Grid, BYD and China Three Gorges in the hydroelectric production.

From the petroleum and metallic extractive industry to the transmission and distribution of electricity, the trend of investments by Chinese multinationals in Brazil experienced a gradual change in the period between 2010 and 2018. China has prioritized investment in the search for natural resources in Brazil, developing economic segments connected directly to commodities, including the oil, mining and agribusiness. From 2014 on, this concentration of capital was gradually transferred to the services sectors, prioritizing the transmission and distribution of electricity and the financial sector.

As a conclusion of this part, it can be said that Chinese investments are concentrated in three sectors: Financial Activities, Insurance and Related Services (42%); Manufacturing Industries (21%); Extractive Industries and Electricity and Gas (14%). Another trend is the steady increase of these Chinese investments in Brazil, a trend that should continue in the coming years.

Case Studies of Chinese Companies in Brazil

Sinopec – International Petroleum Exploration and Development Corporation

In recent years, China's accelerated economic growth has resulted in an expansion in oil consumption, surpassing the amount of domestic production. This fact has required an intensive search for this natural resource, whether in the form of imports, either in the internationalization of oil extraction companies.

According to data from the International Trade Center, China is the largest petroleum importer in the world, with value amounting to US\$ 163.8 billion in 2017, and its biggest suppliers are Russia (US\$23.8 billion), Saudi Arabia (US\$20.5 billion) and Angola (US\$20.1 billion).

On the one hand, the commodity worldwide supplier network guaranteed the supply of domestic demand; on the other, the country sought to invest abroad, through oil companies, as alternative forms of obtaining crude oil. According to China Global Investment Tracker data, between 2005 and 2018, 151 projects were announced by Chinese companies in the oil segment, ranging from the construction of pipelines in Russia and Kazakhstan by CNPC to acquisitions of the oil extraction fields in Angola and Brazil by Sinopec³.

Sinopec was established in 1998 based on the former China Petrochemical Corporation, with a registered state-owned capital of only 274.9 billion yuan and was based in Beijing. 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.

Sinopec has 73 investment projects abroad and its operation takes place especially in the Arab Middle East and North Africa, with 19 projects announced. However, in relation to transaction values, the most significant region is South America, with US\$ 19 billion of accumulated investments, which represent 22% of the multinational's total transactions.

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

³ Amongst the largest Chinese oil companies, predominantly state-owned, the one that has the bigger operation in Brazil is Sinopec – the biggest petroleum company in China and in the World, according to Fortune Magazine.

city, in Bahia, in which Sinopec was responsible for the construction of Gascac (northern section) and Gascav (southern section).

As an engineering services provider, the multinational made several investments, not only limited to the oil and gas sector, such as the UNF III project (fertilizers production), Samarco (mining) and TRBA Natural Gas Pipeline and Petrobras Rio City Project (natural gas transmission). Some have been successfully completed, but others have not been successful, such as the UNF III project, due to errors in estimates of the costs involved. As a result, debt was generated during the rendering of services, resulting in Sinopec Brazil's judicial recovery in 2018 (Polito 2018).

From 2010 to 2012, the European financial crisis provided an opportunity for Sinopec to expand its business by acquiring assets from European companies, such as Spain's Repsol and Portugal's Galp (Frischtak and O'Connort 2013). Hence, the Joint Venture with Repsol formed Repsol Sinopec Brasil and the one with Galp gave rise to Petrogal Brasil. However, despite the acquisitions, the Chinese oil company did not interfere in the operations control, leaving the management responsibility for the acquired companies. In other words, Sinopec took advantage of the expertise of these companies already consolidated in the market, without compromising their own management resources.

The Repsol's assets acquisition granted Sinopec stakes in exploration and extraction of pre-salt petroleum reserves of the Santos and Campos Basins, where the Sapinhoá, Lapa, Pão de Açúcar and Gávea fields, among others, were discovered. With the acquisition of Galp, it obtained holdings in the exploration of the blocks distributed in the six basins owned by the Portuguese oil company. In addition, in 2010, Sinopec acquired 20% of operations in the PAMA-3 and

PAMA-8 offshore exploration blocks in the Pará-Maranhão Basin, with an exploration period of eight years.

So, despite a relatively recent insertion in the Brazilian market, Sinopec has experienced both ways of operating. One as a provider of engineering services and the other as a direct investor, through the acquisition of holdings in companies already established in the sector, in order to shield itself against operation risks, considering the deep existing cultural gaps. Apparently, the second form of action has been more successful so far, due precisely to the safety and speed in obtaining results from the operations that this form has. However, it is expected that as the company acquires the know-how of its operations in Brazil, it will be able to overcome cultural and organizational gaps in the future, managing directly in the production and extraction of petroleum products, such as its competitors ExxonMobil and Shell.

Didi Chuxing

The Chinese startups market has experienced a real boom in the past decade, changing in a way, the vision of China as the ‘world's factory’ to a global innovation hub. According to CB Insights data, up to the beginning of 2018, of the 230 ‘unicorn’ companies in the world, 62 were Chinese, behind only the United States, with 113 startups.

These startups have received extensive support, not only from investment funds, but also from the Chinese government in the form of direct investments and incentives, minimizing regulations and tax preferences. Furthermore, in 2016, several guidelines were included in the 13th Five-Year Plan to stimulate the innovative and shared economy sectors.

Many of these firms allied themselves with the four market leaders, the so-called BATJ (Baidu, Alibaba, Tencent, Jingdong), to receive direct investment and support from the tech giants. So, an ecosystem of startups was created that revolves around the BATJ, interconnecting the *big*

data to develop constant improvements solutions through the *feedbacks* received by this ecosystem.

As a result of their business model, some of these companies, despite having only a few years of existence, have already extended their operations overseas, seeking to increase revenues and to maintain their growth rate. Among them, the most noteworthy and active in Brazil is Didi Chuxing, the second largest unicorn startup, just behind Uber.

The application developer company Xiaoju Tecnology Co. was founded in 2012 in Beijing. It launched the primary version of Didi Chuxing, the Didi Dache that had the only function of connecting taxi drivers with passengers. From 2013 to 2014, it received an investment of US\$ 15 million from Tecent. In parallel, it launched a number of additional in-app functions, such as trip scheduling, dynamic pricing and incorporated ride services with premium cars and trained drivers.

Later, in 2015, Didi and its competitor Kuaidi merged, creating the largest Chinese private transport platform, developing the "carpool paid ride" services, Didi Bus and Aftermarketing. To improve these products operations, they founded the Didi Research Institute in the same year, bringing together professionals to develop big data and deep learning technologies applied in urban mobility.

The huge amounts of investments received and the constant development of new technologies, in strategic partnership with other international leaders such as Singapore's Grab, USA's Lyft and India's Ola, fostered the rapid expansion of Didi in the Chinese market, leaving little room for Uber's growth in the country. All this, along with disjointed administration, misguided strategies and lack of innovation for the Chinese market, made Uber to sell its operations in China to Didi in 2016, after only two and a half years of operation. Therefore, with the

acquisition of Uber China, Didi Chuxing has become one of the world leaders in urban mobility, possessing the largest transportation app platform in the world.

In 2017, Didi Chuxing invested in the Brazilian startup 99, in order to expand into Latin America, competing for market share with Uber. Initially it invested about US\$ 100 million, used to improve and expand the 99 Pop services app, hiring an on-demand private driver platform. As a major investor, Didi joined the 99 board of directors, assisting in business planning and new products development. In addition, 99 was able to take advantage of the latest technologies developed at the Chinese headquarters, in areas such as artificial intelligence, big data processing and advanced urban mobility solutions. At the beginning of 2018, Didi acquired 99 for approximately US\$ 600 million.

On the one hand, the purchase of the Brazilian company marked a new stage in Didi's international strategy. On the other hand, with the acquisition, the 99 company strengthened itself to fight for market leadership in transport apps in Brazil, challenging face to face Uber, its biggest competitor.

It is noteworthy that Didi Chuxing process of internationalization and insertion in the Brazilian market has a greater degree of agility and dynamism compared to companies from other traditional sectors.

However, despite the continued and rapid growth of 99, fueled by its acquisition, there are still a number of problems with daily operation. For example, few months after the acquisition, the number of complaints in social networks due to app malfunctioning increased, most of which were immediately identified by the engineers, but the solution was time-consuming. From this example, is important to take into consideration that, as the company expands in other countries,

the management group needs to be better prepared to deal with the difficulties that arise from a series of aspects, especially organizational and cultural gaps.

State Grid – Transmission and Distribution of Electricity

The expansion of the Chinese economy in recent years has boosted the rapid growth of electric power consumption. According to the Statistical Yearbook for Electric Energy (2017) and the Energy Research Company and Ministry of Mines and Energy, in 2011, China surpassed the United States, both in consumption and in electricity generation capacity, becoming the largest consumer in the world. All this stimulated the market expansion and transmission, favoring the growth of State Grid.

China's largest power transmission and distribution company, State Grid was founded in Beijing in 2002, with government exclusive funding and management staff. In 2018 it already had services in 26 Chinese states, covering 88% of the territory, supplying the needs of 1.1 billion people.

State Grid's first step to operate abroad was in 2009, when it participated in the consortium of companies to control the Philippines' National Grid Corporation, entering with 40% of the capital. From 2010 to 2014 it made state and private-based investments in several countries, including the National Energy Networks of Portugal, SPI Australia Assets and SP AusNet (formerly owned by Singapore Power of Temasek Holdings), ElectraNet of Australia, HK Electric of Hong Kong and Cassa Depositi and Prestiti (from Italy)⁴.

Unlike the other Chinese multinationals, State Grid's internationalization trajectory was driven by the low profitability of domestic operations, which were around 2 to 3%. Operations abroad

⁴ As the second largest company in the world, or the largest public sector company (Forbes magazine), State Grid is the right hand of the Chinese government in implementing the "One Belt One Road" initiative.

generated an average profitability of around 10 to 12%, therefore sustaining the operation margins in the country of origin. This situation shows that profits abroad reach around five times the domestic, with the difference that profitability is higher in developing countries, such as Brazil and the Philippines, but more stable in developed countries, as in Europe.

State Grid has been in Brazil since 2010, when it acquired seven national power transmission companies at a cost of US\$ 989 million. Between 2010 and 2014, it acquired ten other concessionaires in the transmission subsector and built its headquarters in Rio de Janeiro, consolidating the position of State Grid Brazil Holding, operating in 12 states.

In 2014, in partnership with Furnas and Eletronorte, State Grid began planning the construction of the Belo Monte transmission line, the first and largest ultra-high-voltage electricity transmission line in Latin America, putting together, for the first time on a single project, technology, equipment and construction. The project also had the objective of discharging part of the power generated by the Belo Monte Hydroelectric Power Plant, from the Xingu region (northern Brazil), to the Estreito substation in the southeast region.

Initially, the project was seen as a risky investment because of the long-distant power transmission, passing through different biomes, facing climatic variations, which can create risk and uncertainty. Moreover, the strict environmental laws in Brazil can create obstacles in project approval and license issuance, as the construction works pass through ecological reserves. Besides the 'ecological issue', there was the fact that many of the construction works would go through some private owned properties, including indigenous populations. So, authorization for construction was required, which is a slow process. However, with the cooperation of local governments and local police, the operational team overcame the difficulties. On the one hand, they advanced in bureaucratic matters with previous planning, on

the other they interacted with the local populations, spreading the importance of the project and building reservoirs, wells and schools in the poor regions on the line way.

In 2016 the company acquired 54.64% of the largest private group in the Brazilian electric sector, CPFL Energia, for approximately \$3.5 billion USD, assuming its shareholding control.

In addition to opening the possibility of technological exchange - mainly of renewable energy and Smart Grid - between the two companies, with CPFL, State Grid also started to operate in the generation, transmission, distribution and commercialization of electricity in Brazil.

This was a successful insertion case in the Brazilian market: apart from presenting certain advantages in market issues, State Grid differs from other Chinese state companies in overcoming difficulties in relation to local gaps. This fact is due mainly to the use of knowledge developed locally and maintaining at the command posts executives who had been working in the company before the acquisition.

The accuracy of the strategic choices in the acquisition process of the transmission lines concessionaires and electric companies helped State Grid to become one of the largest multinationals in the Brazilian electric sector. In the future, its presence will be even more significant since, in May 2018, it announced investments of over USD 35 billion over the next five years.

Chery Automobile

The car market in China has seen an exponential increase from 5.5 million vehicles in 1990 to 1.85 billion in 2016, according to China Statistical Yearbook (2017), making it the largest automotive market in the world. In addition, according to OICA statistics (2017), in 2009, China surpassed the United States in the production of vehicles. In 2017, with a production of 29

million vehicles/year, it reached almost the triple of United States figure (11 million), becoming the world's largest producer of cars.

This boom in the Chinese automotive market was the result of a series of central government plans, starting in 1986, when it prioritized the automotive sector in the seventh Five-Year Plan, defining it as the pillar of the national economy. Then, they launched two Automotive Industrial Policies, one in 1988, another in 1994, with the objective of restructuring, developing and modernizing the automotive industry. First, the political and economic decisions were decentralized to provincial levels, encouraging the creation of new car manufacturers and suppliers. This has generated inefficiency in the market, due to competition among provinces, protectionism, low production capacity and lagged technologies. As a result, restrictions were established for the entry of new participants and a reduction in the number of companies via mergers was set in place, and consequently the emergence of large national automotive companies. In addition, to modernize the sector, it was encouraged the entry of multinationals, but with a requirement: they must to form joint ventures with the national companies and to cooperate in the research and development of technologies (De Oliveira 2012, Vianini 2017). Following the restructuring, China reduced the entrance barriers for new participants, meeting the requirements of WTO membership in 2001. From reduction of restrictions, new domestic automakers that didn't belong to any of the previously formed joint ventures groups were founded, the so-called independent automakers, which one of them was Chery Automobile (De Oliveira 2012).

As one of the independents that has grown faster since its foundation, Chery and its development plan has caught the attention of the global automotive industry. Founded in 1997 in Wuhu city, Chery faced several difficulties in the beginning of its operations. Because of the

restrictions of entry into the automotive industry, it did not obtain the license to manufacture automobiles. The strong support of the local government, because of the automotive industry development plan in the province, encouraged production even without the license and the cars produced were intended to be used as taxis in the city, guaranteeing the company's initial survival (Luo 2005).

Later, the central government discovered Chery's practice of unlicensed production and ordered its operations to be suspended. To overcome the situation, the company sold 20% of its assets to one of the three largest state-owned automakers, Shanghai Automotive Industrial Company (SAIC). This change in shareholding composition, in addition to facilitating the granting of the manufacturing license, helped in sales, considering that the SAIC logo on the products made the public think the cars were produced in Shanghai, which was the symbol of excellence in quality (Luo 2005).

Between 2000 and 2003, Chery launched several car models such as FengYun, QQ, Oriental Son and QiYun, with great success. However, the similarity of the QQ model to Chevrolet Spark has caused dissatisfaction with GM, SAIC's joint venture partner. The fact led to the sale 20% of shares back to Chery herself, making the company completely independent (Luo 2005). Since then, Chery sales have grown substantially, turning the company biggest car seller in China in 2007, with only seven years of operation.

Chery's internationalization trajectory began in 2001, when Malcolm Bricklin, owner of a vehicle dealer in the USA, saw in China Chery's the new model, "FengYun", and decided to import the car brand to his country. Since then, the company has opened a range of partnerships with different countries such as Iran, Egypt, Cuba and Russia, inserting its most popular models in the various global markets. According to Oliveira (2012), in 2006, the company exported

more than 50.000 vehicles to 67 countries, surpassing the amount exported by the whole country in the period between 1955 and 2004. Hence, in a context in which the great Chinese automakers didn't have the freedom to participate in the 'wave' of export, due to joint ventures with foreign brands, Chery ranked first in the export of 'light' vehicles for 15 years, becoming the Chinese brand that has more representation outside the country.

In Brazil, according to Oliveira (2012), Chery's operations can be divided into two phases: the first, from 2009 to 2013, in which it concentrated its activities on the import and resale vehicles in Brazil, and the second, from 2014 onwards, was based on local car production, with sales focused on Brazil and Latin America.

With its office in Salto, in São Paulo countryside area, Chery entered the Brazilian market in 2009, in a partnership with a reseller network in São Paulo. In 2011, Chery Brazil already had more than 80 dealerships, serving all Brazilian regions, making its most popular models available to the public.

In 2014, Chery inaugurated its production plant in Jacarei (Vale do Paraíba region), a US\$ 400 million investment located on 1 million square meters land. With a production capacity of 50 to 150 thousand vehicles, the plant is the first and only Chinese automaker production plant in Brazil, and the first full operational production facility of the brand outside China. From then on, it began to serve the Brazilian and some Latin American markets.

In 2017, after 18 months of negotiations, Caoa, the Brazilian distributor of Hyundai, Ford and Subaru brands, acquired 50.07% of Chery Brazil shares for US\$ 60 million, taking control of the brand's operations. With this acquisition, Chery vehicles will also be produced at the Annapolis plant, in Goiás state, and be available at dealerships, which doesn't mean that the Chinese company has given up investing in the country.

Chery's rapid expansion on the path to internationalization was fostered by the strategies adopted both in product development and in market choice. According to Luo (2005), one of the biggest advantages that Chery possesses in comparison with other brands is the low price of the products, as it can be seen in table 1.

Table 1. Vehicle type, models and price comparison (2005)

Types	Comparable Models and Brands	MSRP	
		(10,000 Yuan)	(10,000 US\$)
Subcompact	Chery QQ 0.8L AT	4.98	0.60
	GM Spark 0.8L AT	6.28	0.76
Economic Sedan	Chery Feng Yun 1.6L MT	5.98	0.72
	VW Jetta 04 1.6L MT	9.78	1.18
	VW Santana 3000 1.8L MT	14.50	1.75
	Critoen Fu Kang 1.6L MT	8.08	0.97
Sedan	Chery Oriental Son 2.0 AT	12.68	1.53
	VW Passat 2.0 AT	21.90	2.64
	Honda Accord 2.0 AT	22.98	2.77
	GM Regal 2.0 MT	20.68	2.49
SUV	Chery Tiggo MT	13.00	1.57
	Honda CR-V 2.2L M/AT	23.98	2.89
	Hyundai Tucson 2.5L MT	17.98	2.17
	Beijing-Jeep outlander 2.4L MT	17.28	2.08

Source: Lou (2005).

Note that in all criteria presented, Chery's popular models have price advantages. According to Luo (2005), this price range established by Chery was made possible by copying the competitors' models, which resulted in minimized development costs, improvement of production efficiency and cost reduction in manufacturing, mainly labor. Therefore, with a low price and a design compatible with the Chinese 'taste', the brand's products quickly conquered

the domestic market, once dominated by the oligopoly of joint ventures of large state-owned brands.

When deciding what foreign markets to serve, Chery sought to join the countries with a demand profile similar to China, which ended up in attending the developing countries markets, where their products can make the most of its competitive advantages. As for Brazil, the brand has positioned itself as the better cost benefit offer, selling cars with *premium* offers (all accessories included) to lower income buyers (Oliveira 2012).

However, as of 2011, the attempt to transform the company's strategic guideline, shifting from a cheaper product brand to a high-quality one has resulted in a three-year hiatus in launching new models, giving opportunity for the competitors' growth. Thus, with the loss of market share and consequently some sale points, Chery reacted and released models from its 'second brand' companies 'ZhiGuan' and 'KaiYi', but it didn't obtain the expected result. Furthermore, since the Jacareí plant inauguration, Chery has accumulated losses in the Brazilian operation, resulting in the sale of the business control to Caoa Group. Hence, it is expected that with the investments in the brand to be made by the new partner, Chery and Caoa can mutually benefit from the experience and technology of each other to strengthen the brand's position in the Brazilian market.

Conclusion

China became the second largest economy in the world in 2010, overtaking Japan. In addition, a year earlier, it ranked first as Brazil's largest trading partner, surpassing the United States. These two phenomena contributed to a greater Chinese FDI in Brazil as well as to a more effective presence of their companies in the country.

Regarding the literature that investigates FDI and the multinationalization of Chinese companies, it was found that these companies went out in search of natural resources (Buckley et al. 2007), but also went to other countries with significant energy reserves and large raw materials deposits (Dunning 2001). Some companies have been looking for key supplies for the domestic market, such as minerals, oil, agricultural products (Wu and Sai 2002; Cai 1999). In recent years, China's FDI has spread across the various sectors (Tuong Anh and Hung 2016). Similarly, they pursued different goals according to their destination countries. For Chang (2014), the China's FDI was attracted by high-tech industries in developed nations and natural resources of host countries in general.

In Brazil, the presence of Chinese multinational aims the raw materials extraction, mainly in energy and metal sectors, notably oil, gas and iron ore products. The main companies operating in these segments are: Sinopec and CNPC in oil extraction, WISCO and China Minmetals in mining. In addition, the electricity sector (generation, transmission and distribution) plays a major role in OFDI strategy, represented by enterprises such as State Grid, BYD and China Three Gorges.

In relation to the *modus operandi* of the four chosen companies in this study, there are diverse situations.

Sinopec switched between two different ways of operating in Brazil: the first consisted of providing engineering services, first starting with the construction of gas pipelines and later advancing to ore slurry pipelines and a fertilizer production plant. The second form consisted of forming Joint Ventures with existing competitors (Repsol and Galp), without interfering with the management of these companies, in order to minimize the risks caused by cultural differences. This way of operating was successful in terms of operation management and

profitability, differing from the first form, which resulted in debt and the company's judicial recovery in 2018.

Didi ChuXing, a startup, entered in Brazil by acquiring the 99 Company, an Uber's market competitor. Unlike Sinopec, it went straight to the lucrative services market, facing, however, technical and cultural difficulties to provide fast solutions for everyday problems.

State Grid (electricity sector), unlike other Chinese multinationals, has internationalized due to low domestic profitability. While in the Chinese market the profitability was around 2 to 3%, overseas this average rose to 10-12%, sustaining the company's operation margins in the origin country. With the acquisition of CPFL in 2016, State Grid started to operate in the generation, transmission, distribution and commercialization of electricity in Brazil.

Chery Automotive has used loopholes in legislation as well as the fact that it has no joint ventures with international competitors to become the largest Chinese exporter of cars. In Brazil, it acted as an importer (2009-2013) and then started to manufacture cars, from 2014 on. Because of difficulties intrinsic to the Brazilian market (oligopoly by major world manufacturers, that have been in Brazil since the 50s), the Caoa Group bought 50.07% of Chery's capital in 2017.

Finally, we can state that the Chinese multinationals have a double interest in Brazil. On the one hand it is a country rich in natural resources and raw materials and, on the other hand, is among one of the eight largest consumer markets in the world. They come, therefore, for both reasons: to seek raw materials and to sell goods and services with higher added value. However, cultural, political, economic and social learning requires time of maturation and long-term dedication that, for the time being, most Chinese multinationals have not yet reached.

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