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The impact of FDI : the expansion of China in Argentina and Brazil

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ABSTRACT (English)

This research aims to investigate the extent to which foreign direct investment (FDI) promotes technology transfer and contributes to economic growth, taking as an example the case of China and the choices that led the country to invest in the South American continent, specifically in Brazil and Argentina, which were the main recipient countries between 2010 and 2020 according to the CEPAL/ECLAC document "Relations between Latin America and the Caribbean and China: areas of opportunity for more productive, inclusive and sustainable development, 2025". Moreover, the cases of BYD for the automotive field expanding in Brazil, and the lithium sector in Argentina will be discussed to further highlight the effects of investments in the case of foreign companies operating abroad.

ABSTRACT (Italiano)

La presente ricerca mira a esaminare in che misura gli investimenti diretti esteri (IDE) favoriscano il trasferimento tecnologico e contribuiscano alla crescita economica, prendendo a esempio il caso della Cina e le scelte che hanno portato il Paese a investire nel continente sudamericano – nello specifico in Brasile e Argentina, principali destinatari tra il 2010 e il 2020 secondo il documento della CEPAL/ECLAC "Relations between Latin America and the Caribbean and China: areas of opportunity for more productive, inclusive and sustainable development, 2025". Verranno inoltre analizzati i casi dell'espansione di BYD nel settore automobilistico brasiliano e del comparto del litio in Argentina, per evidenziare ulteriormente gli effetti degli investimenti da parte di aziende estere operanti all'estero.

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Chapter 1 : The role of MNEs and FDIs

1.1 Introduction

When we think about globalization, the first words that comes up to mind are Multinational enterprise (MNE) and Foreign direct investment (FDI).

Multinational enterprises (MNEs) represent one of the primary drivers of the international economy, playing a crucial role in the cross-border distribution of capital, technology, and knowledge. Foreign direct investment (FDI) lies at the heart of globalisation and serves as an important conduit for the transfer of capital, goods, services, and information across economies. At the microeconomic level, foreign affiliates are on average 70% more productive than domestic firms, 80% more likely to invest in R&D, and 18% more likely to adopt digital payment systems. At a systemic level, MNEs can serve as a conduit for domestic firms — particularly small and medium-sized enterprises (SMEs) — to access international markets and integrate into global value chains, through supplier relationships and strategic partnerships that support the growth and upgrading of local businesses. In this context, foreign direct investment should not be understood merely as a financial flow, but as a vector of sustainable development: beyond its direct contribution to capital investment and employment generation, FDI can benefit host economies through knowledge and technology spillovers, which drive productivity growth and foster innovation. It is precisely from this perspective that the nature, forms, and implications of foreign direct investment must be examined in greater detail.

1.2 Introducing FDIs

Foreign Direct Investment (FDI) is defined by the IMF and OECD as an investment in which an entity (private or State) in one economy aims at establishing a long lasting agreement and a significant degree of influence over an enterprise resident in another economy. Technically, the ownership amounts to at least 10% of the ordinary shares. (Organisation for Economic Co-operation and Development. (s.d.).

Foreign direct investment qualities and impact.)

Unlike portfolio investments, which are often volatile and speculative, FDIs represent a long-term commitment. They are not simple capital transfers, but tools able to generate technology, managerial expertise, and integration into global value chains and economies, making it an active type of investment. (International Monetary Fund. 2025. *Balance of payments and international investment position manual* (7th ed.)).

In a more and more globalized world, FDIs represent a primary instrument for structural innovation and transformation, allowing the "Home Country" (investor) to obtain advantages, while providing the "Host Country" (recipient) with the necessary capital to overcome domestic saving gaps.

Given that China has been transitioning into a global creditor and a technological power, its strategic expansion is reshaping Latin-American economic landscape, among others, which will be the focus of this study. Particularly in Brazil and Argentina, Chinese foreign direct investment is evolving from a traditional model, based on the sourcing of raw materials such as soybeans and iron ore, to a model of strategic investments in specific assets and efficiency, such as the automotive and energetic sector.

1.3 The OLI Model

A foundational framework for understanding the motivations behind firms' engagement in FDI is the OLI model, also referred to as the Eclectic Paradigm, developed by economist John Dunning. Rather than opting for alternative market entry strategies such as exporting or licensing, firms that pursue foreign direct investment do so on the basis of three distinct but interrelated advantages: Ownership, Location, and Internalization. Ownership advantages refer to the firm-specific assets or capabilities that provide a competitive edge over local competitors in the host market; Location advantages concern the characteristics of the destination country that make it an attractive site for investment; while Internalization advantages capture the incentive to exploit these assets internally rather than through market transactions. Together, these three dimensions not only explain a firm's strategic decision to invest abroad, but also lay the groundwork for understanding the mechanisms through which FDI can generate technology transfer

across borders.

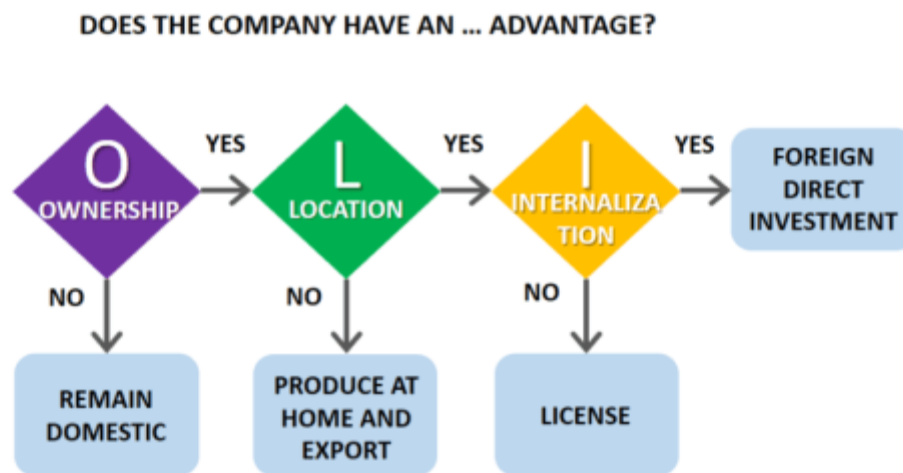


Figure 1 : OLI Model

Source : <https://www.business-to-you.com/choosing-the-right-entry-mode-strategy>

While the OLI Model provides valuable insight into the motivations behind FDI and the reasons multinational companies choose to invest in foreign economies — including its role as a vehicle for technology transfer — it falls short in considering the dynamic process through which technological diffusion spreads over time.

1.4 Types of FDI and Their Role in Technology Transfer

Foreign direct investment is doubtless one of the major way to support technology transfer worldwide. FDI mostly falls in the following categories, which are helpful to understand each type of innovation transfer in the host economies : Greenfield Investments, Brownfield Investments, Horizontal FDI, Vertical FDI, Platform FDI, Mergers and acquisitions, and Joint ventures.

1.4.1 Greenfield Investment

The greenfield investment is represented by those investments made by the parent company by setting up a whole new manufacturing site or subsidiaries abroad. This type of investment is particularly successful in promoting growth, given that direct spillovers are likely to happen, starting from direct improved production techniques, research and development (R&D) skills, and managerial expertise.

However, we have to take into consideration the absorptive capacity of the economy targeted by the MNE.

1.4.2 Brownfield Investment

A brownfield investment differentiates from the greenfield one given that companies purchase or lease existing facilities for their production, providing faster market entry and lower initial costs, though they may require significant upgrades to meet present standards. When a foreign firm acquires a domestic firm it is a Merger and Acquisition transaction (M&A). With this type of investment it can be said that, while greenfield investments do not need anything else to increase economic growth through investments, brownfield investments need additional requirements to have a direct impact on economic development, according to the study of Hayalı, A. S. (2014), in which the variable of brownfield investment does not have a significantly positive direct effect on economic growth.

1.4.3 Joint Ventures

A joint venture is an agreement between two or more domestic and foreign firms. This type of investment allows for firms to gain reciprocal benefits as both parties maintain governance and share ownership usually. However for this to happen, both parties require high trust between them and a secured intellectual property environment.

1.4.4 Horizontal FDI

The horizontal FDI happens when a multinational enterprise decides to replicate its own production in another foreign country. This type of FDI is called “horizontal” because the multinational duplicates the same activities in different countries. Horizontal FDI arises because it is too costly to serve the foreign market by exports due to transportation costs or trade barriers (Protsenko, A. 2003)

1.4.5 Vertical FDI

A firm may invest in production facilities in another country, differently from the horizontal FDI as in this case the production is specialized across the global value chain and assembled later. When a firm brings the goods or components back to its home country (i.e., acting as a supplier), this is referred to as backward vertical FDI. When a firm sells the goods into the local or regional market (i.e., acting as a distributor), this is termed forward vertical FDI. The largest global companies often engage in both backward and forward vertical FDI depending on their industry.

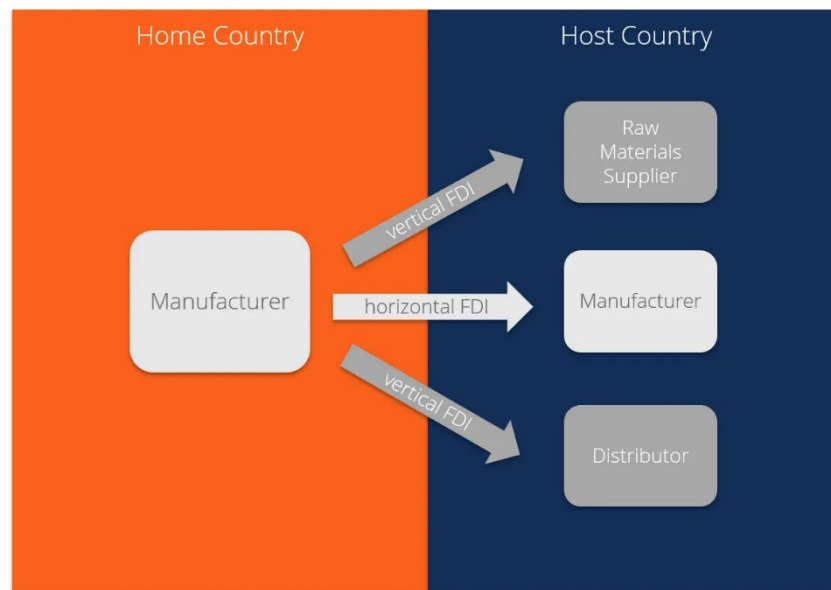


Figure 2: Difference between vertical and horizontal FDI

Source : <https://corporatefinanceinstitute.com/resources/economics/foreign-direct-investment-fdi/>

1.4.6 Platform FDI

Platform FDI is the foreign direct investment from a source country into a destination country for the purpose of exporting to a third country. This form of investment comes with plenty of benefits for the investing firm, such as the optimization of distribution markets, however, it can also positively impact the host economy. (Ekholm, et al., 2007)

In summary, the various forms of FDI present distinct ways for technology transfer, each carrying its own set of benefits and limitations. While greenfield investments and joint ventures prove particularly effective in driving innovation and spreading technological knowledge, mergers & acquisitions, and brownfield investments are better suited to upgrading and optimizing existing assets. Platform FDI, meanwhile, opens doors for developing economies to integrate into global value chains, thereby strengthening their technological foundations.

The extent to which FDI successfully facilitates technology transfer ultimately is based on a range of factors, most notably the ability of host countries to absorb and adapt incoming knowledge and innovations. To ensure that FDI yields meaningful benefits for recipient economies, governments must establish sound policies, robust institutional frameworks, and adequate infrastructure.

1.5 Absorptive capacity

In the specific context of this study, Brazilian and Argentinian economies' absorptive capacities will be analyzed from a qualitative perspective, comparing the two particularly for the electric and energetic sector.

Absorptive capacity, according to Cohen and Levinthal (1990), is “an ability to recognize the value of new information, assimilate it, and apply it to commercial ends”.

Several factors determine the level of absorptive capacity. One of the most important is human capital, including the education, skills, and training of the workforce, which enables individuals to understand and apply new knowledge. A second factor is research and development (R&D) capability, as investment in research activities helps firms and countries develop the expertise needed to absorb and adapt external innovations. Technological capabilities and previous experience with innovation also play a significant role because existing knowledge provides a foundation for learning and integrating new technologies. In addition, the quality of institutions and governance, including effective regulations, legal systems, and public policies, can facilitate or hinder the diffusion of knowledge. Infrastructure, such as transportation networks, telecommunications systems, and digital

connectivity, is another essential factor because it supports the flow of information and resources. Finally, openness to international markets, collaboration between universities and industry, and participation in global knowledge networks can further strengthen absorptive capacity by increasing access to new ideas and technologies. Together, these factors determine how effectively firms and countries can transform external knowledge into innovation, productivity gains, and long-term economic development.

1.6 Challenges to technology transfer

1.6.1 Weak International Property Rights

The successful diffusion of technology in emerging and developing economies depends on several interrelated factors. One of the most significant barriers is the weakness of intellectual property rights (IPR) protection. Multinational corporations (MNCs) often possess advanced technologies, proprietary knowledge, and innovative business practices that constitute valuable competitive assets. Consequently, host countries that fail to provide adequate legal safeguards against intellectual property theft may discourage foreign firms from investing or transferring technology. In environments where patent enforcement is weak and intellectual property violations are common, MNCs face a higher risk of imitation and unauthorized use of their innovations, making alternative investment destinations more attractive (Maskus, 2000).

Overall, weak intellectual property protection creates an uncertain and risky business environment for foreign investors. As a result, foreign direct investment (FDI) inflows may decline, while opportunities for establishing subsidiaries, strategic partnerships, or joint ventures become less attractive. Even when multinational corporations are already present in the host economy, inadequate legal protection may limit their willingness to transfer advanced technologies and knowledge. Instead, they may confine local operations to low-value-added activities, thereby restricting opportunities for technological learning and significantly slowing the host country's technological development and innovation capacity.

1.6.2 Poor Infrastructure

Another major obstacle to technology diffusion in emerging economies is inadequate infrastructure. High-quality infrastructure plays a fundamental role in facilitating the transfer and adoption of new technologies by enabling the efficient movement of goods, services, people, and information. For instance, poorly developed transportation networks and limited connectivity between cities and regions can hinder the distribution of products and technologies throughout a country. This may exacerbate regional inequalities and slow the overall process of economic and technological development.

However, the challenge extends beyond deficiencies in physical infrastructure. In an increasingly digitalized global economy, the availability of advanced digital infrastructure has become equally important. Reliable internet access, telecommunications networks, and digital technologies facilitate the rapid exchange of information across borders and enable firms to participate effectively in global value chains. These technologies support communication, coordination, and knowledge sharing among international partners, thereby enhancing opportunities for technology transfer and innovation.

While advanced digital infrastructure is often taken for granted in developed economies, many emerging countries continue to face a significant technological gap known as the digital divide. The digital divide refers to disparities in access to information and communication technologies (ICTs) and internet connectivity, both between countries and among regions within the same country. This divide limits the ability of individuals, firms, and institutions to access and utilize knowledge, reducing their capacity to benefit from technological advancements. Several factors contribute to these disparities, including infrastructure availability, regulatory frameworks, and socioeconomic conditions. Nevertheless, education is widely recognized as one of the most influential determinants, as higher levels of education enhance digital literacy and improve the ability of individuals and organizations to adopt and exploit new technologies effectively (Lythreathis et al., 2022).

1.6.3 Quality of Human Capital

The effective absorption of technological innovations largely depends on the quality of human capital available within the host economy. A workforce equipped with strong educational backgrounds, technical skills, and relevant expertise is better positioned to understand, adapt, and implement new technologies. Conversely, low levels of education and limited technical competencies can significantly hinder the diffusion of technology and reduce the benefits associated with technology transfer. A further challenge faced by many emerging economies is the shortage of qualified workers, often exacerbated by the phenomenon of brain drain, whereby highly skilled individuals migrate to developed countries in search of better employment opportunities and higher living standards. Moreover, disparities in educational quality and access between developing and developed nations can further constrain technological progress, making it more difficult for emerging economies to build the human capital necessary to support innovation and technological adoption (Lythreathis et al., 2022).

Overall, barriers to technology transfer can substantially limit the ability of emerging economies to maximize the benefits of foreign investment and technological inflows. Addressing these challenges requires a comprehensive and coordinated approach. Investments in both physical and digital infrastructure are essential to facilitate the movement of goods, services, and information. Equally important are investments in education, vocational training, and workforce development to enhance the absorptive capacity of local firms and workers. In addition, establishing effective legal frameworks that protect intellectual property rights can help create a secure environment that encourages multinational corporations to share advanced technologies and knowledge. While multinational enterprises play an important role in introducing innovations and technological expertise, governments bear the primary responsibility for creating the institutional, educational, and infrastructural conditions necessary for successful technology absorption. Without these enabling conditions, the potential benefits of technology transfer are likely to remain limited and underutilized (UNCTAD, 2001).

Chapter 2 : China and its expansion in South America

2.1 China's Economic History

Nowadays China represents the second largest economy in the world, with a nominal GDP of \$ 17-18 trillion, compared to the U.S.A. with \$ 27- 28 trillion.

It's interesting to note that the massive growth of China happened in less than a century, with a speed that overcame the economic growth of the other BRICS countries (Brazil, Russia, India, China, South Africa), together with a huge population number, about 1.4 billion people, making its economy “emerged” among the so considered emerging countries.

The People's Republic of China was established in 1949, under the government of the Communist Party, led by Mao Zedong. The transformation of China from a centrally planned socialist economy into a global economic power through gradual and state-controlled market reforms initiated after 1978 (Haini, 2021). China's economic success was driven by agricultural liberalization, the expansion of private and non-state enterprises, foreign direct investment, and integration into the global economy, particularly after joining the World Trade Organization in 2001. Unlike the rapid transitions experienced by many post-communist states, China adopted a pragmatic reform strategy that preserved political control while encouraging economic modernization and industrial growth. Nevertheless, several structural challenges may limit future growth, including demographic aging, environmental degradation, rising debt, inequality, and slowing productivity. China's long-term economic sustainability will depend on its capacity to transition from an export- and investment-driven model toward innovation, domestic consumption, and higher-value economic development. (Haini H., 2021)

The economic reforms implemented in China after 1978 transformed the country from a rigid centrally planned economy into one of the fastest-growing economies in the world. China's success was largely due to its reform strategy, which differed significantly from the rapid liberalization adopted in many other socialist and post-communist economies. Rather than dismantling the socialist system immediately, China introduced market mechanisms progressively while preserving strong state control over political institutions and key sectors of the economy.

The reform of agriculture through the “household responsibility system,” replaced collective farming, and allowed rural households to make production decisions and retain profits after meeting state quotas. These reforms dramatically increased agricultural productivity, rural incomes, and food production, creating the economic surplus necessary to support industrial expansion. The emergence of township and village enterprises (TVEs) became a major source of industrial growth, employment, and innovation in rural areas. These enterprises operated outside the traditional state sector and benefited from greater flexibility and market incentives, making them more efficient than many state-owned enterprises. (K.Chen, GH. Jefferson, and I.Singh, 1992)

Decentralization played a crucial role in China’s development. Local governments were granted greater autonomy in economic decision-making, investment, and enterprise management, which encouraged experimentation and regional competition. This decentralized approach allowed successful reforms to spread gradually across the country. In addition, China’s “open-door policy” attracted foreign direct investment, technology transfer, and international trade, especially through the establishment of Special Economic Zones. These zones became centers of export-oriented industrialization and accelerated China’s integration into the global economy.

Despite these achievements, several problems persist, including inefficiencies within state-owned enterprises, corruption, regional inequalities, inflationary pressures, and the incomplete development of legal and financial institutions necessary for a fully functioning market economy. China’s experience demonstrates that successful economic reform in socialist economies does not necessarily require immediate privatization or political liberalization. Instead, gradual institutional adaptation, experimental policymaking, and strong state coordination can produce sustained economic growth and social stability during periods of major economic transition.

The Chinese government has indeed implemented several incentives and programs to foster technology advancement. One of the projects was the so-called “Four Modernization” program in the late 1980’s, the aim of which was to achieve a full-scope modernization in four areas: Industry, Agriculture, Defence, Science and Technology. The modernization of these fields was made possible because of the new sentiment of Deng Xiaoping, political leader who encouraged opening up the economy and liberalizing foreign trade, therefore allowing the inflow of foreign capital, as well as advanced technology and knowledge. Deng

Xiaoping transformed China's economy through a series of innovative reforms aimed at promoting economic development while maintaining political stability. Beginning in 1978, Deng introduced the policy of Reform and Opening Up, marking a shift away from the strict centrally planned economic model of the Mao era. One of the major strategies was the Household Responsibility System, also mentioned earlier, which replaced collective farming and allowed rural families to manage agricultural production and keep surplus profits, significantly increasing productivity and farmers' incomes. Another key strategy was the decentralization of economic decision-making, giving local governments and state-owned enterprises greater autonomy to respond to market conditions and improve efficiency. Deng also promoted the establishment of Special Economic Zones (SEZs), such as Shenzhen, where foreign investors were offered favourable conditions to bring capital, technology, and management expertise into China. In addition, the government encouraged the growth of private and collective enterprises, gradually introducing market mechanisms while retaining state control over strategic sectors. A further strategy was the promotion of international trade and foreign investment, which integrated China into the global economy and stimulated industrial growth and exports. Unlike many countries that pursued rapid privatization, Deng adopted a gradual and experimental approach, often summarized by his famous principle of "crossing the river by feeling the stones." These reforms created a unique model known as "socialism with Chinese characteristics," combining market-oriented economic policies with the continued political leadership of the Communist Party. The success of these strategies led to sustained economic growth, modernization, poverty reduction, and China's emergence as one of the world's leading economic powers.

2.2 Foreign Direct Investment in China

The factors that attracted foreign direct investment (FDI) to China during the reform era and evaluates its impact on the country's economic development are set within the context of China's transition from a centrally planned economy to a more market-oriented system following the economic reforms initiated by Deng Xiaoping.

FDI became one of the most important driving forces behind China's rapid economic growth. Several factors contributed to China's attractiveness for foreign investors. First, China's vast domestic market offered significant opportunities for multinational corporations seeking to expand their sales. Second, the country provided a large supply of relatively low-cost labour, allowing firms to reduce production costs and increase competitiveness. Third, the Chinese

government actively encouraged foreign investment through preferential policies, tax incentives, and the establishment of Special Economic Zones (SEZs), where foreign firms enjoyed greater economic freedom and fewer regulatory restrictions. Improvements in infrastructure, increasing openness to international trade, and sustained economic growth further strengthened China's appeal as an investment destination (S. Dees, 1998). FDI was not distributed evenly across the country. Most foreign investment was concentrated in coastal provinces such as Guangdong, Fujian, Jiangsu, and Shanghai, where infrastructure, transportation networks, and access to international markets were more developed. These regions were therefore able to attract more foreign firms, creating a cumulative process in which investment generated further economic opportunities and additional investment inflows.

Regarding the effects of FDI, foreign investment contributed significantly to China's modernization and industrial development. FDI increased the amount of capital available for investment, helping to finance industrial expansion and economic growth. Foreign enterprises introduced advanced technologies, modern production methods, and managerial expertise that improved productivity. Domestic firms benefited from technology spillovers, learning new techniques and becoming more efficient through competition and cooperation with foreign companies.

Another major effect of FDI was the expansion of China's export sector. Foreign-invested enterprises became key contributors to export growth, integrating China into global production networks and international markets. This process accelerated China's transformation into a major manufacturing and exporting economy. FDI also contributed to job creation, higher incomes, and improvements in human capital through worker training and skill development. (S. Dees, 1998)

However, some limitations and challenges are associated with FDI. Because foreign investment was concentrated in the coastal regions, economic disparities between coastal and inland provinces increased. The benefits of globalization and modernization were therefore not shared equally across the country. In addition, some concerns existed regarding the dependence on foreign technology and capital.

Overall, FDI played a crucial role in China's economic success during the reform period. By providing capital, technology, managerial knowledge, and access to international markets,

foreign direct investment accelerated economic growth, increased productivity, and supported China's integration into the global economy. Despite contributing to regional inequalities, FDI was one of the key factors behind China's emergence as a major economic power in the late twentieth century. FDI inflows have grown rapidly from the 1990s reaching about \$350 billion in 2020.

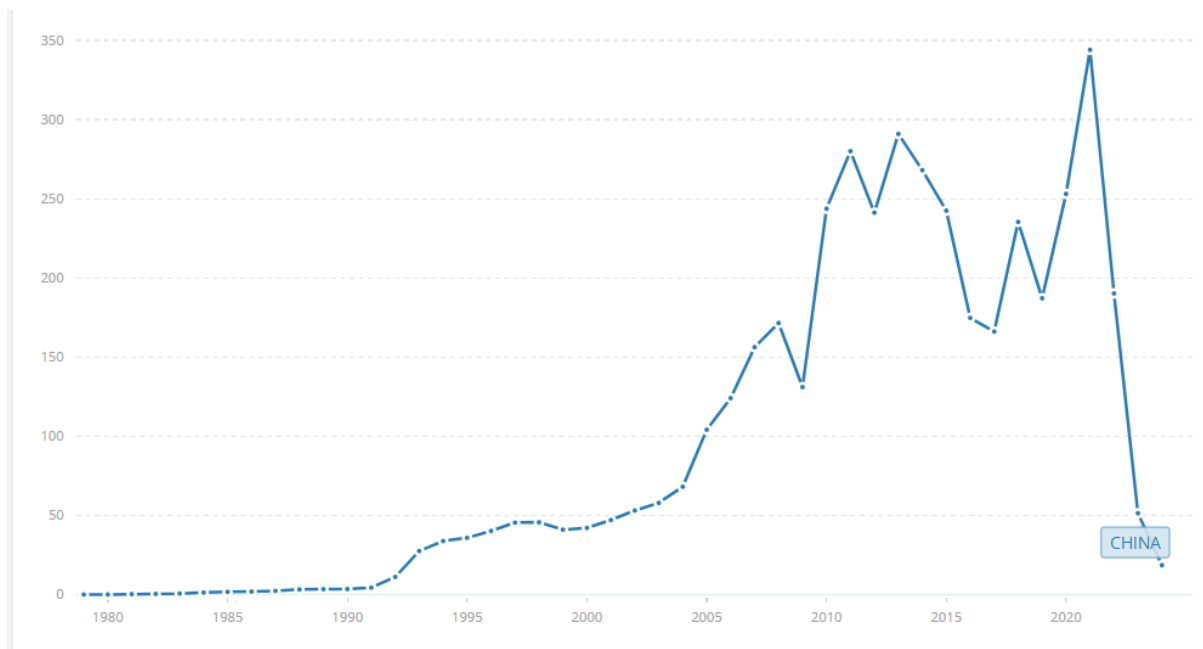


Figure 3: Foreign direct investment, net inflows (BoP, current US\$) – China

Source: Data World Bank

As China recognised the importance of technology in driving long-term economic growth, it opened up to foreign investors to foster technological development.

FDIs have significantly contributed to China's economic growth by increasing productivity, employment, and industrial competitiveness. Foreign-invested enterprises have introduced capital, advanced management practices, and modern production techniques, which have enhanced the performance of local firms and stimulated regional economic development. FDI has been one of the key drivers behind China's rapid economic transformation during the reform era. (Zeng & Zhou, 2021)

Foreign Direct Investment contributed significantly to the economic transformation and development of China, so much so that the country became the number one destination for FDI. The main investors in 2023 were Asian countries, with Hong Kong in the first place, but other developed countries like the United States, United Kingdom, Germany and France are investing in China as well.

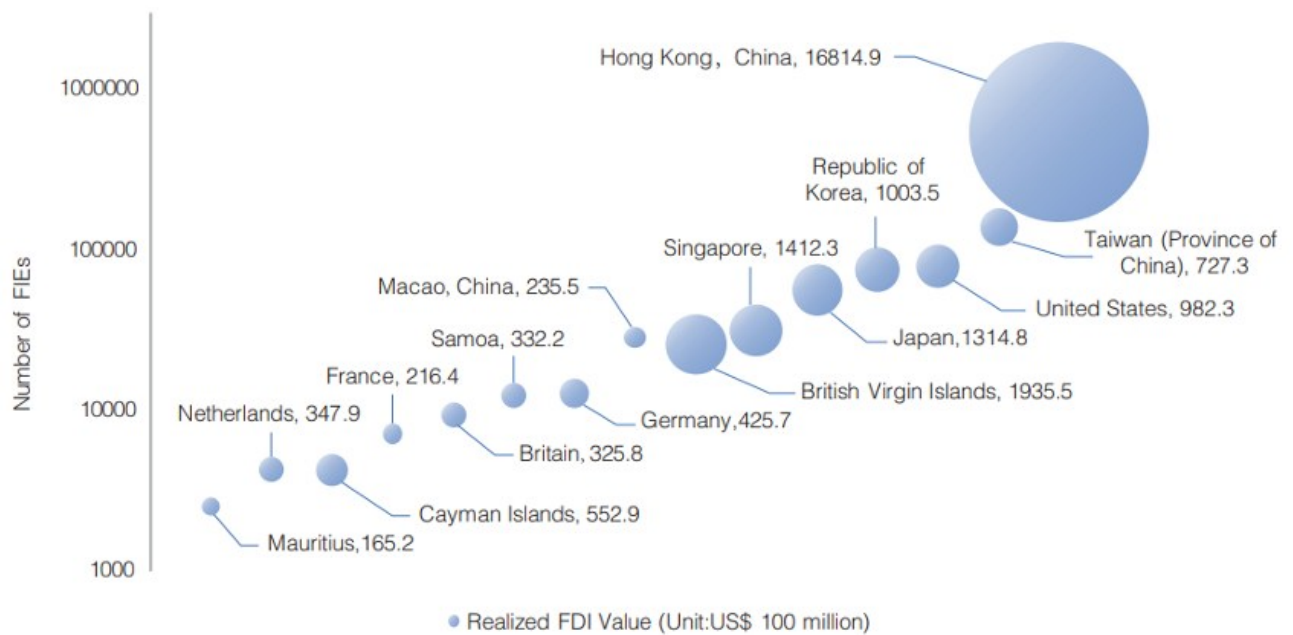


Figure 4: Top 15 FDI Sources of China as of 2023

Source: <https://www.china-briefing.com/news/chinas-fdi-trends-2024-key-sources-destinations-and-sectors/>

While much of the literature on China's economic rise has focused on the role of Foreign Direct Investment (FDI) flowing into the country, China's position in the global economy has been going through a profound transformation. As previously mentioned, inward FDI contributed significantly to China's economic growth, technological upgrading, and integration into global production networks. However, as domestic firms accumulated capital, technological capabilities, and international experience, China gradually evolved from a major recipient of foreign investment into one of the world's leading sources of outward foreign direct investment (OFDI). Today, Chinese investment extends across multiple

regions, with Africa and South America emerging as key destinations.

2.3 The Belt & Road Initiative

In *Understanding China's Belt & Road Initiative: Motivation, Framework and Assessment*, Yiping Huang (2016) examines the origins, objectives, and potential implications of China's Belt and Road Initiative (BRI), one of the country's most ambitious international economic strategies. Huang argues that the BRI emerged as a response to both domestic and international challenges facing China. Domestically, the Chinese economy was experiencing slower growth, industrial overcapacity, and diminishing returns from its export-led development model. Internationally, China sought to strengthen economic integration with neighbouring regions and expand its role in global economic governance.

The BRI is not merely an infrastructure program, but a comprehensive framework aimed at promoting connectivity across Asia, Europe, and Africa. According to Huang, the initiative is built around five pillars: policy coordination, infrastructure connectivity, free trade, financial integration, and people-to-people exchanges. Infrastructure development plays a central role because inadequate transport, energy, and communication networks are viewed as major obstacles to economic growth in many participating countries. BRI represents an effort to reconfigure China's external economic relations. By investing in transport corridors, ports, railways, and energy projects abroad, China can create new markets for its firms, secure access to resources, and promote interregional economic development. The initiative also reflects China's growing confidence as a global economic power and its desire to contribute to international development through a model influenced by its own growth experience.

Although the article was written in the early stages of the BRI, Huang suggests that the initiative has the potential to stimulate growth across participating regions and create a new economic area connecting Asia, Europe, and Africa. At the same time, he recognizes that the success of the BRI depends on effective implementation, international cooperation, and the ability to manage economic and political risks.

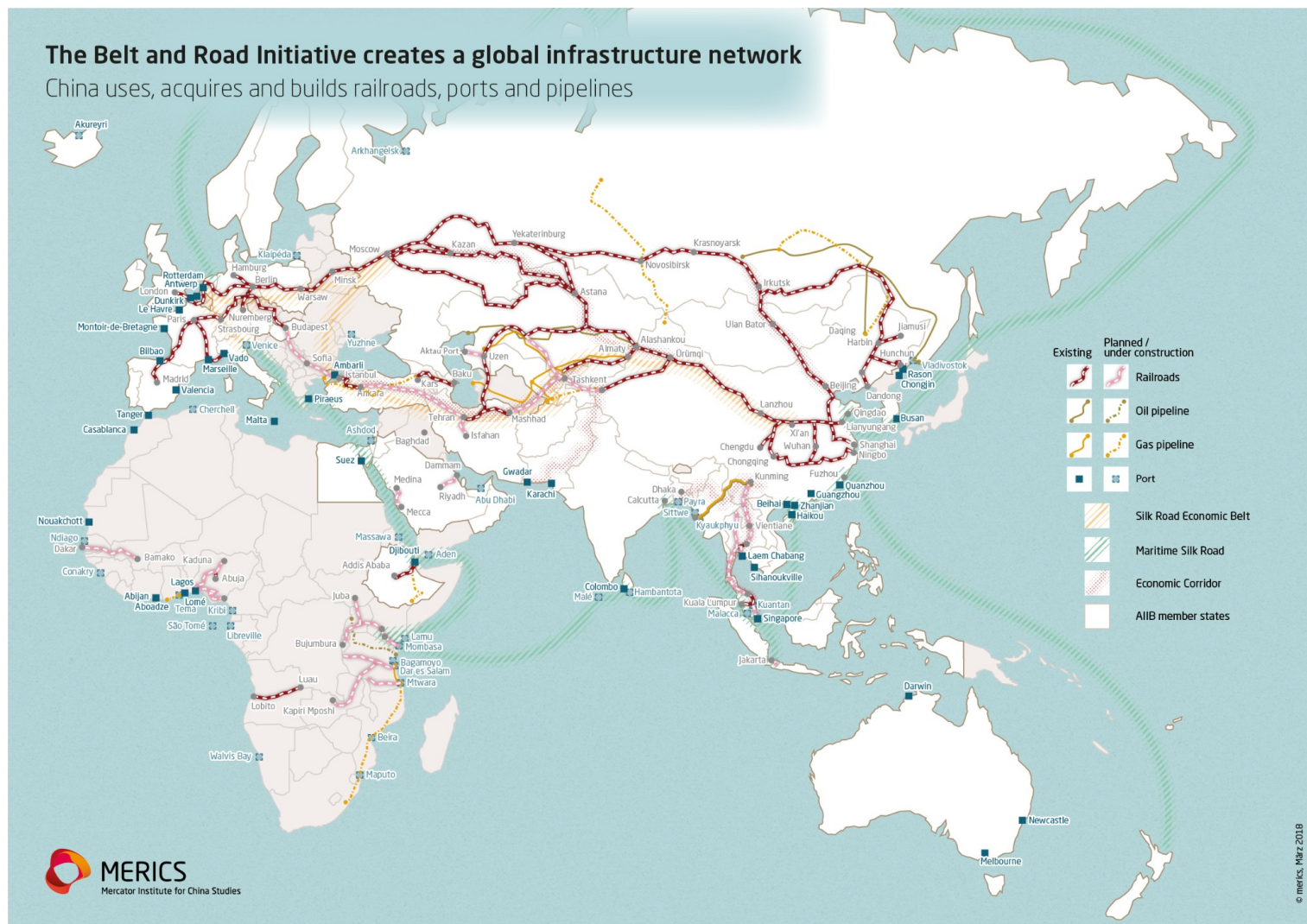


Figure 5 : The BRI map

Source: <https://merics.org/en/tracker/mapping-belt-and-road-initiative-where-we-stand>

The Belt and Road Initiative (BRI) should be understood primarily as an economic development program, and then as a broader geopolitical strategy. The BRI combines economic, political, and strategic objectives, reflecting China's growing role in international affairs. While officially presented as a framework for regional cooperation, infrastructure development, trade facilitation, and economic integration, the initiative also serves China's long-term interests by expanding its influence across Asia, Africa, Europe, and other developing regions.

The BRI emerged during a period in which China sought to address domestic economic challenges, including industrial overcapacity, regional development imbalances, and the need for new markets for Chinese companies. By promoting infrastructure investment and connectivity projects abroad, China can create opportunities for its firms while strengthening economic ties with partner countries. (Z. Zhang, 2019)

It has important geopolitical implications as well. Through investments in ports, railways, energy networks, and transportation corridors, China is increasing its economic presence and political influence in strategic regions. This growing connectivity enhances China's ability to shape regional economic structures and strengthen diplomatic relationships. However, the BRI should not be interpreted solely as a tool for geopolitical dominance. Instead, it represents a complex strategy that integrates economic development, international cooperation, and national interests.

The BRI reflects China's transition from a regional power to a major global actor. It demonstrates Beijing's ambition to participate more actively in global governance, promote economic integration, and expand its international influence through investment, infrastructure development, and strategic partnerships. Therefore, the BRI can be seen as both an economic initiative and a geopolitical instrument that supports China's broader vision of international engagement in the twenty-first century.

2.4 China and its investments in Latin America

In Africa, Chinese firms have invested heavily in infrastructure, energy, mining, and telecommunications, often within the broader framework of the Belt and Road Initiative. In South America, investments have focused on natural resources, agriculture, transportation, and strategic industries, reflecting China's growing demand for commodities and its ambition to strengthen economic ties with developing economies. This shift from investment recipient to global investor highlights the changing nature of China's development model and its increasing influence on international economic governance and South-South cooperation.

As China became a major source of outward foreign direct investment, South America emerged as a strategic destination due to its abundance of natural resources and growing

markets. While Chinese trade and investment have stimulated economic growth in countries such as Brazil, Argentina, Chile, and Peru, they have also reinforced a pattern in which Latin America exports primary commodities and imports manufactured goods. Consequently, China's expanding presence in the region creates both development opportunities and concerns regarding long-term industrialization and economic dependence. (Gallagher and Porzecanski, 2010)

The researchers examine the growing economic relationship between China and Latin America and its implications for the region's long-term development. China's rapid economic rise has created both significant opportunities and important challenges for Latin American countries. They note that Latin American exports to China increased ninefold between 2000 and 2009, reaching approximately US \$ 41.3 billion by 2009.

On the positive side, China's growing demand for commodities has increased exports from South America, particularly in sectors such as minerals, oil, soybeans, and agricultural products. Countries including Brazil, Chile, Peru, and Argentina have benefited from higher commodity prices and expanded access to the Chinese market. Chinese investment has also contributed to infrastructure development and strengthened trade links between the two regions.

In 2024, China's OFDI in Latin America and the Caribbean amounted to roughly \$8.5 billion, or approximately 6 percent of China's total OFDI. Meanwhile, the state-owned China Development Bank and the Export-Import Bank of China are among the region's leading lenders; since 2005, they have loaned more than \$120 billion to Latin American and Caribbean countries and state-owned enterprises. Chinese firms invested at least US \$ 25 billion in Latin America between 2005 and 2010, with a strong focus on resource-seeking investments in mining, energy, and agriculture.

However, it is emphasized that the relationship is highly asymmetric. While Latin America mainly exports raw materials and primary commodities, China exports manufactured goods with higher technological content. This trade pattern risks reinforcing Latin America's traditional dependence on commodity exports and limiting industrial diversification. Many Latin American manufacturing industries face increasing competition from Chinese firms both in domestic markets and in international export markets.

China's rise may contribute to a process of “re-primarization” in South America, where economic growth becomes increasingly dependent on natural resources rather than industrial development and technological innovation. Although commodity exports generate short-term economic gains, excessive reliance on them may expose countries to price volatility and affect long-term industrialization.

Chapter 3 : Brazil and the BYD automotive case

3.1 Brazil Economy

Home to 205.3 million people and with a real GDP per capita of \$10,616 (2024), Brazil is the largest country in Latin America.

Werner Baer's *The Brazilian Economy: Growth and Development* is one of the most influential books on Brazil's economic history and development. First published in 1979 and updated through several editions, it provides a comprehensive analysis of Brazil's economic evolution from the colonial period to the early 2010s. Baer examines the historical, institutional, and structural factors that shaped the country's development trajectory, making the book a standard reference for scholars of Latin American economics.

A central argument of the book is that Brazil's economic growth has been characterized by periods of rapid industrialization accompanied by persistent structural problems. During the twentieth century, especially after the 1930s, Brazil adopted an Import Substitution Industrialization (ISI) strategy, using state intervention, protectionism, and public investment to reduce dependence on imported manufactured goods. This strategy successfully transformed Brazil from an agricultural-export economy into one of the world's largest industrial economies. However, it also generated inefficiencies, high levels of state intervention, and increasing external debt.

It is highlighted the role of the state in promoting industrial development through institutions such as the National Development Bank, state-owned enterprises, and infrastructure investment. Government policies were crucial in fostering industrial growth, but they also contributed to fiscal imbalances and inflationary pressures. These problems became particularly severe during the debt crisis of the 1980s, often referred to as Brazil's "lost decade."

Another major theme is Brazil's chronic struggle with inflation and income inequality. Inflation became deeply embedded in the economy through indexation mechanisms and fiscal deficits. Although stabilization programs repeatedly failed during the 1980s, the Real Plan (1994) eventually succeeded in controlling inflation and restoring macroeconomic stability. Nevertheless, Brazil continued to face one

of the highest levels of income concentration in the world, limiting the social benefits of economic growth.

The later editions of the book analyze the liberalization reforms of the 1990s and the economic performance of the Lula and Rousseff administrations. Trade openness, privatization, and greater integration into the global economy increased efficiency and attracted foreign investment. However, long-term growth remained constrained by low productivity, deficiencies in education, inadequate infrastructure, and weak institutional capacity, given that human capital development is identified as a key factor for sustaining future growth.

Brazil's economic transformation during the 1990s, particularly after the implementation of the Plano Real (1994), successfully reduced the hyperinflation that had affected the country for decades. The country has been undergoing profound structural reforms aimed at creating a more stable and competitive economy. (Fernando Rezende, 1998)

A central theme is the importance of macroeconomic stabilization. The Real Plan restored confidence in the national currency, lowered inflation, and improved economic predictability. However, stabilization also revealed structural weaknesses, including fiscal imbalances, inefficiencies in the public sector, and the need for reforms in pensions, taxation, and public administration.

The role of privatization and market liberalization was crucial in attracting foreign capital. During the mid-1990s, Brazil opened sectors such as telecommunications, electricity, and oil to private and foreign investors. As a result, foreign direct investment (FDI) increased significantly and became a major source of financing for economic development and external deficits. The growing share of FDI relative to short-term portfolio flows shows as a positive sign of international confidence in Brazil's long-term prospects.

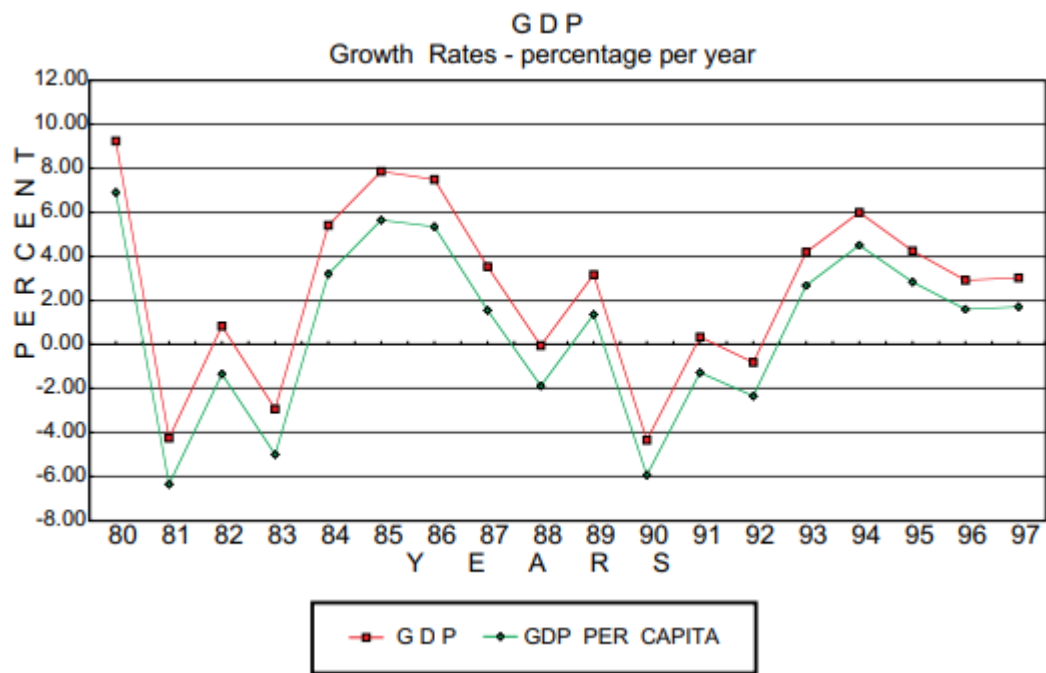


Figure 6 : Economic growth from 1980 to 1997

Source: Fernando Rezende, 1998

Based on studies by the Brazilian Institute of Applied Economic Research (IPEA), Brazil could achieve annual GDP growth rates of around 5–6% if reforms were completed and macroeconomic stability maintained. Such growth was considered necessary to generate employment, reduce poverty, and meet increasing social demands.

There are demographic challenges as well. Although population growth was slowing, the labour force was expected to continue expanding rapidly, requiring the creation of roughly 1.3 million jobs per year to prevent rising unemployment. Therefore, sustained economic growth was seen not only as an economic objective but also as a social necessity.

Brazil had made remarkable progress in stabilizing its economy and attracting investment, but its future success depended on completing structural reforms, maintaining fiscal discipline, and sustaining investor confidence. If these conditions were met, Brazil had the potential to enter a period of strong and inclusive economic growth.

Brazil's productive structure evolved between 1990 and 2015, a period marked by trade liberalization, economic stabilization, globalization, and major institutional reforms. Significant changes after the economic opening of the 1990s, but these changes did not produce a strong and sustained modernization of the productive structure. Economic growth remained heavily dependent on domestic and external demand shocks, rather than on continuous technological progress or productivity gains. As a result, the Brazilian economy showed signs of structural fragility throughout the period.

One of the main reasons is that the manufacturing sector remained the main engine capable of generating structural transformation. Manufacturing creates stronger linkages with other sectors, stimulates technological diffusion, and contributes more effectively to productivity growth than primary activities.

While trade openness increased competition and integration into global markets, it did not lead to a sufficient technological upgrading of Brazilian industry. Instead, the economy became increasingly specialized in commodities and resource-based activities, reducing the relative importance of more technology-intensive manufacturing sectors. (JF. Sousa Filho et al, 2020)

Between 1990 and 2015 Brazil underwent structural change, but not the type of transformation associated with successful industrial development in East Asian economies. The productive structure remained vulnerable, growth depended largely on demand expansion, and industrial policies aimed at strengthening manufacturing and technological capabilities would be necessary to achieve long-term economic development.

3.2 The relationship between China and Brazil

Although Chinese foreign direct investment (FDI) increased substantially around 2010, trade rather than investment, was the dominant channel through which China affected Brazil.

A key finding is the growing asymmetry in trade patterns. Brazilian exports to China became heavily concentrated in a few primary commodities, particularly soybeans, iron ore, and other natural resources, while imports from China consisted overwhelmingly of manufactured products that were becoming increasingly technologically sophisticated. This pattern raised concerns about the long-term structure of the Brazilian economy.

Brazil benefited from China's rapid growth because Chinese demand helped drive up global commodity prices, improving Brazil's terms of trade and export revenues. However, these gains were accompanied by a process of "primarization" (re-primarization), where Brazil became increasingly dependent on commodity exports while manufacturing lost relative importance.

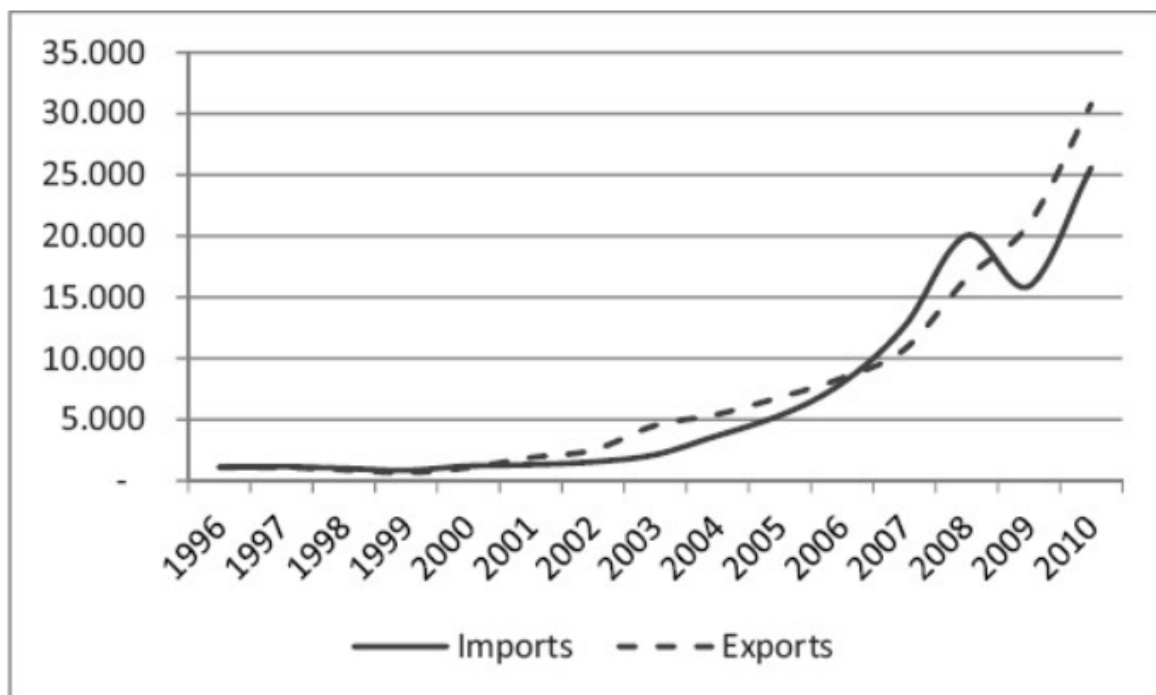


Figure 7: Brazilian Trade with China, 1996–2010 (in million USD)

Source : Jenkins, 2012

Brazilian manufacturers faced growing competition from Chinese firms both in the domestic market and in international markets. Chinese products displaced Brazilian manufactured exports in regions such as Latin America, the United States, and Europe, making it more difficult for Brazil to sustain industrial upgrading and technological development.

Overall, China–Brazil relationship produced short-term economic gains through higher commodity exports and favourable prices but also created long-term development challenges by reinforcing commodity specialization and weakening manufacturing competitiveness. (Jenkins, 2012)

The developmental impact of multinational enterprises depends on the existence of domestic capabilities, linkages with local firms, and complementary industrial policies. Countries that attract FDI without fostering domestic technological upgrading may experience limited productivity gains and weak spillover effects. The comparison between Brazil and Mexico reveals two distinct development models:

- **Mexico** adopted a strongly export-oriented strategy, deeply integrated into North American value chains through manufacturing industries such as automobiles and electronics.
- **Brazil** remained more dependent on its large domestic market and increasingly specialized in commodities and resource-based sectors during the commodity boom of the 2000s.

Brazil attracted substantial FDI but increasingly concentrated economic activity around commodities and natural-resource-based industries. The absence of a coherent long-term industrial strategy contributed to limited structural transformation and a weakening manufacturing sector.

Successful development requires governments to actively shape the relationship between FDI, domestic firms, and productive capabilities through measures such as targeted incentives, technological upgrading, supplier development programs, and performance requirements. Simply opening the economy to foreign investment is insufficient to achieve structural transformation. (Pineli and Narula, 2023)

3.3 Trading Partnership

Brazil's economic relationship with China became increasingly unbalanced during the 2000s. China emerged as Brazil's largest trading partner in 2009, largely because of Chinese demand for commodities such as soybeans, iron ore, and oil. At the same time, China became Brazil's main supplier of manufactured goods, reinforcing concerns about deindustrialization and excessive dependence on commodity exports. (Hiratuka, 2022)

Bilateral trade reached a record US\$171 billion in 2025. Brazil exported approximately US\$100 billion to China that year, with the country's agricultural frontier—the eleven states concentrated in the Midwest and northern regions—accounting for around 36 per cent of those exports. This region is particularly dependent on Chinese demand: in 2022, China purchased approximately 80 % of its soybean exports and 86 % of its beef exports.

The trade relationship between Brazil and China has evolved into one of the most significant examples of South–South economic cooperation, characterized by deep economic interdependence. Brazil seeks to enhance its international competitiveness by exporting agricultural commodities, minerals, and energy resources while attracting foreign investment and improving logistics infrastructure. China, in contrast, aims to secure long-term access to strategic raw materials, expand its global economic influence, and strengthen international supply chains through trade, infrastructure development, and investment.

Although Brazil occupies a weaker position in terms of economic size and technological capabilities, the relationship is beneficial to both, because both countries derive substantial benefits. China relies heavily on Brazilian soybeans, iron ore, meat, and other commodities to sustain its industrial production and food security, while Brazil benefits from a large and stable export market, increased foreign exchange earnings, and Chinese participation in transport, ports, railways, and logistics. Logistics plays a particularly important role, as efficient transportation networks reduce transaction costs, improve supply-chain resilience, and facilitate the continuous expansion of bilateral trade. Institutional cooperation through BRICS, bilateral agreements, and infrastructure initiatives further reinforces this interdependence even though Brazil has not formally joined the Belt and Road Initiative.

The study concludes that long-term stability in the Brazil–China partnership depends on maintaining institutional coordination, efficient logistics systems, and complementary strategic objectives rather than economic symmetry. Asymmetric partnerships can remain durable when each side obtains measurable economic benefits and when trade, investment, and infrastructure are supported by effective governance mechanisms. The Brazil–China relationship therefore represents a model of contemporary South–South cooperation in which economic complementarities outweigh structural disparities, while logistics and institutional coordination serve as the principal mechanisms sustaining long-term commercial integration (P.Hong et al, 2026)

A. China became Brazil's main export destination

- By 2009, China had overtaken the United States as Brazil's largest export market.
- Brazilian exports to China became highly concentrated in a few primary commodities, especially soybeans, iron ore, and crude oil.
- This specialization generated trade surpluses but increased dependence on commodity cycles.

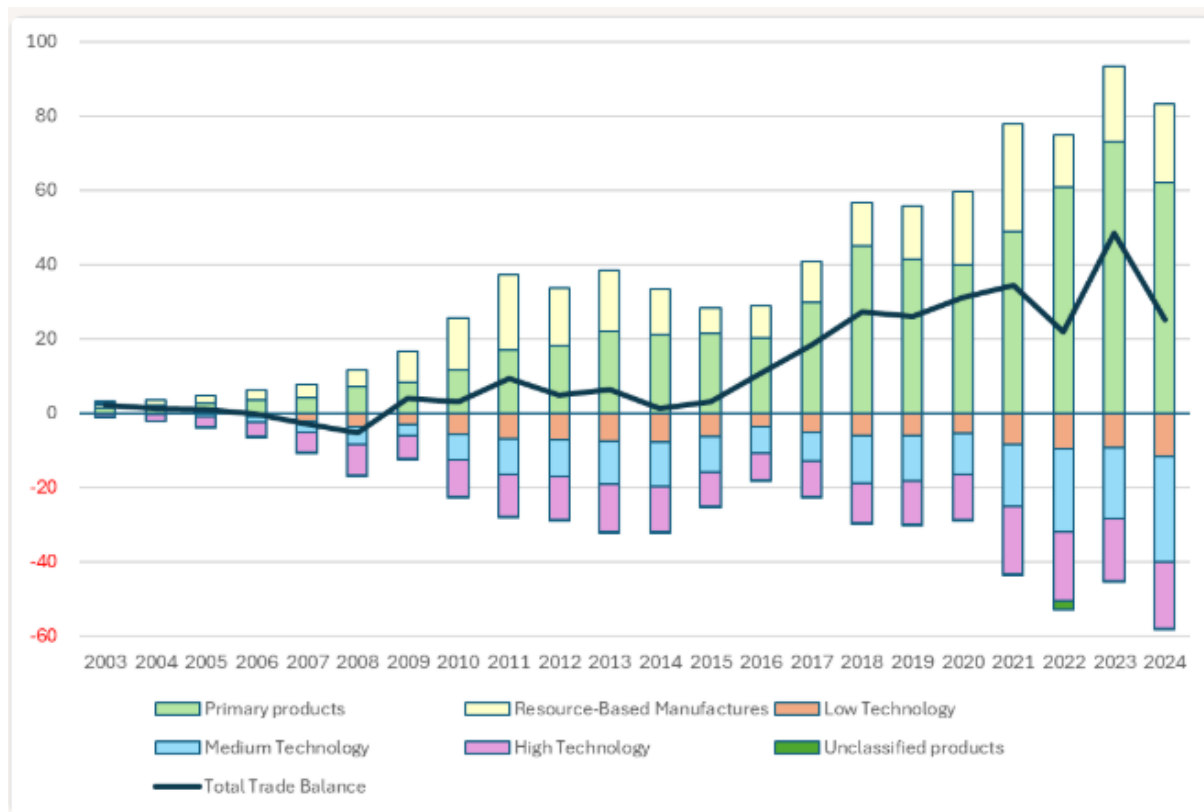


Figure 8 : Trade balance between Brazil and China by technology category (billion USD): 2003-2024

Source : UNCTAD

B. Growing concern about deindustrialization

While commodity exports expanded rapidly, Brazilian manufacturing struggled against Chinese competition.

Brazilian policymakers and industrial firms worried about:

- Loss of manufacturing competitiveness.
- Rising imports of Chinese manufactured products.
- Weak technological upgrading.
- Excessive concentration of exports in resource-based sectors.

C. Chinese FDI as a solution, not a threat

Unlike many studies that focus on trade, Hiratuka's paper (2022) emphasizes the potential role of Chinese foreign direct investment (FDI) in helping Brazil diversify its productive structure. The key question is not whether Chinese investment enters Brazil, but which sectors receive the investment and whether it creates technological

spillovers.

Brazil's economic relationship with China has evolved from a simple commodity-export partnership toward a more diversified investment relationship, in which Chinese foreign direct investment (FDI) can support Brazil's industrial development.

Brazil deliberately sought greater Chinese investment in manufacturing to counteract premature deindustrialization. Rather than viewing China solely as a competitor, Brazilian policymakers increasingly recognized Chinese firms as potential partners capable of bringing capital, advanced technologies, managerial expertise, and integration into global value chains. This strategy became particularly important after the slowdown of domestic investment and the decline of traditional Western FDI.

Earlier investments were concentrated in energy, mining, electricity transmission, and oil, reflecting China's objective of securing strategic resources. More recently, however, Chinese companies have expanded into manufacturing sectors such as automobiles, machinery, electronics, telecommunications, and renewable energy technologies. Investment of BYD is an example of this shift. Such investments demonstrate how Chinese FDI can contribute to upgrading Brazil's industrial capabilities rather than merely exploiting natural resources.

Nevertheless, these benefits are not automatic. Positive spillovers depend heavily on domestic industrial policies that encourage local sourcing, workforce training, research and development, university–industry collaboration, and stronger integration between foreign investors and domestic firms. Without these complementary policies, Chinese investments risk remaining isolated reserves with limited effects on technological learning and productivity growth.

Overall, Chinese FDI represents an important opportunity for Brazil to diversify its productive structure and revive manufacturing competitiveness. However, realizing this potential requires an active development strategy that links foreign investment to technological upgrading, innovation, and domestic value creation rather than relying solely on market forces (Hiratuka, 2022).

3.4 The BYD Case Study

The BYD case is particularly significant because it illustrates a shift in the nature of Chinese investment in Brazil. Rather than reinforcing Brazil's traditional role as a commodity exporter, BYD represents an example of efficiency- and technology-seeking foreign direct investment (FDI) that has the potential to support industrial diversification, technological upgrading, and the development of green industries. Unlike earlier waves of Chinese investment concentrated in mining, oil, electricity, and agriculture, BYD entered sectors associated with the low-carbon transition, including electric vehicles (EVs), lithium batteries, solar photovoltaic modules, and electric buses. This type of investment could help Brazil move from a commodity-based relationship with China toward one based on manufacturing and innovation, provided that appropriate industrial policies are in place.

BYD's international expansion strategy reflects the company's broader evolution within China. Founded in 1995 as a rechargeable battery manufacturer, BYD became one of the world's leading producers of electric vehicles by combining strong in-house research and development with vertical integration. Rather than outsourcing key components, the company manufactures batteries, semiconductors, electric motors, and electronic control systems internally. This capability allows BYD to reduce production costs, accelerate innovation, and maintain greater control over its supply chain. These technological capabilities make BYD different from many foreign investors whose activities are largely limited to assembly operations. Instead, the company has the potential to introduce advanced manufacturing knowledge into host economies.

Brazil became an attractive destination because it is the largest automotive market in Latin America, has an established manufacturing base, and possesses abundant renewable energy resources that complement electric mobility. However, Brazil also faced growing concerns about deindustrialization during the 2010s.

Manufacturing's contribution to GDP had declined, while exports became increasingly concentrated in soybeans, iron ore, and crude oil destined primarily for China. Policymakers therefore viewed technologically intensive Chinese investment as an opportunity to diversify the productive structure. This explains why Brazilian

authorities welcomed BYD's investments despite broader concerns regarding Chinese competition in manufacturing. In 2015, the company established one of its first Brazilian production facilities in Campinas (São Paulo) to manufacture electric bus chassis. The choice of electric buses was strategic because public transport fleets could adopt electrification more rapidly than the private passenger vehicle market, allowing governments to stimulate demand through procurement policies. BYD later expanded its activities by establishing solar panel manufacturing and battery assembly operations in the same industrial complex. This diversified investment portfolio reflected a long-term strategy aimed at developing an integrated clean-energy ecosystem rather than focusing solely on vehicle production.

The author concludes that Chinese investment can help Brazil move beyond commodity specialization, but only if it is accompanied by:

- Long-term industrial policy.
- Local supplier development.
- Technological partnerships.
- Stable regulatory frameworks.
- Government support for innovation and manufacturing upgrading.

Without these policies, Chinese investment may remain limited to assembly operations and generate fewer productivity spillovers. This concern remains relevant today, as recent studies show that many Chinese firms in Brazil still rely heavily on imported components, limiting domestic supply-chain development.

From an academic perspective, the BYD case supports theories emphasizing that FDI contributes to structural transformation only when embedded within an active industrial policy framework. These findings are consistent with those of Pineli and Narula (2023), who argue that foreign investment generates meaningful productivity spillovers only when governments foster domestic technological capabilities and supplier networks, and with Masiero et al. (2016), who demonstrate that BYD's own success in China resulted from the interaction between firm-level innovation and state-led industrial policy.

The evolution of Chinese foreign direct investment (FDI) in Brazil has become a strategic component of the bilateral relationship rather than a simple extension of trade in commodities. Over time, Chinese multinational enterprises diversified their investments into manufacturing, technology, logistics, agribusiness, and telecommunications, demonstrating a broader commitment to the Brazilian economy.

Chinese firms have gradually adapted to Brazil's institutional environment by combining mergers and acquisitions with greenfield investments and by establishing long-term partnerships with local governments and companies. Unlike the perception that Chinese investors primarily seek resource extraction, many investments pursue market access, production localization, and participation in Brazil's industrial development.

State-owned enterprises such as State Grid and China Three Gorges became major investors in the electricity sector, while private companies including Huawei and BYD expanded into telecommunications and advanced manufacturing.

On the one hand, Chinese investments provide capital, infrastructure financing, employment opportunities, and access to new technologies, contributing to Brazil's economic modernization. On the other hand, the developmental benefits depend on the country's ability to strengthen domestic institutions, promote technology transfer, and encourage stronger linkages between foreign investors and local firms. Without complementary industrial and innovation policies, the potential spillovers from Chinese investment may remain limited. (Santoro, 2022)

Together, these studies suggest that Chinese FDI represents both an opportunity and a policy challenge for Brazil. Chinese investment can help close the country's infrastructure gap, stimulate economic activity, and diversify sources of external financing. However, maximizing its developmental impact requires coherent industrial and regulatory policies capable of promoting technology transfer, strengthening domestic productive capabilities, and ensuring that foreign investment contributes to long-term structural transformation rather than simply reinforcing Brazil's role as a supplier of commodities and strategic assets.

Chapter 4 : Argentina and the Energetic Sector

4.1 Argentina's economic history

Argentina's economy is characterized by periods of remarkable prosperity followed by repeated episodes of instability, making it one of the most intriguing cases in economic development. At the beginning of the 20th century, Argentina ranked among the world's wealthiest nations, driven by agricultural exports, abundant natural resources, and strong integration into the global economy. However, political instability, shifts toward import-substitution industrialization, recurrent fiscal imbalances, high inflation, external debt crises, and repeated policy reversals gradually undermined its economic performance. Since the late 20th century, Argentina has experienced cycles of economic expansion and severe recession, accompanied by sovereign debt defaults and persistent inflationary pressures. Understanding Argentina's economic trajectory requires examining the interaction between domestic political institutions, macroeconomic policies, and changing international economic conditions, which together have shaped the country's long-term development and continue to influence its economic prospects today.

Its economic history from 1516 to 1987 began with Spanish colonization, when the region was incorporated into the Spanish Empire and used mainly for cattle, hides, silver routes, and colonial trade. After independence in the early 19th century, Argentina slowly developed around agriculture and livestock, especially in the fertile Pampas. During the late 19th and early 20th centuries, the country became one of the world's major exporters of beef, wool, and grain, attracting European immigration and British investment. However, this export-led model made Argentina dependent on foreign markets. After the Great Depression of 1929, the country shifted toward import-substitution industrialization, with a stronger role for the state. Under Juan Domingo Perón in the 1940s and 1950s, wages, workers' rights, and industrial policy expanded, but inflation and fiscal problems also increased. From the 1950s to the 1970s, Argentina experienced political instability, military coups, uneven industrial growth, and rising debt. The military dictatorship of 1976–1983 deepened economic problems through financial liberalization, deindustrialization, and foreign borrowing. When democracy returned under Raúl

Alfonsín in 1983, Argentina faced high inflation, debt, social tensions, and weak confidence, leading to the economic crisis that marked the end of this historical phase by 1987. (Rock, 1987)

Argentina's economic development has been a long-term paradox: the country had exceptional natural resources, strong agricultural exports, immigration, foreign capital, and rapid growth between the late 19th century and the First World War, yet it failed to maintain that prosperity during the 20th century. From an economic perspective, Argentina's decline was not caused by one single factor, but by the interaction of weak institutions, political instability, poor macroeconomic management, inflation, debt crises, and inconsistent policies. The export-led model based on wheat, beef, wool, railways, and British investment made Argentina one of the richest economies in the world around 1913, but later protectionism, excessive state intervention, and unstable fiscal and monetary policies reduced productivity and competitiveness. (G. Della Paolera, G.M. Taylor, 2003) Argentina's economic history centers around the transition from a dynamic agro-export model, based on fertile land, European immigration workforce, foreign capital, and integration into world markets, to a more closed and industrialized economy marked by growing internal imbalances. Before the First World War, Argentina achieved rapid growth through exports of beef, wheat, and other agricultural products, benefiting from European demand and foreign investment, especially British capital in railways, ports, and infrastructure. However, this growth depended heavily on international trade and external finance. After the Great Depression of 1929 and the collapse of world trade, the old export-led model weakened, and Argentina moved toward import-substitution industrialization. This strategy encouraged manufacturing and strengthened the domestic market, but it also created protectionism, productive inefficiencies, distributional conflicts, and tensions between the agricultural export sector and urban industry. Peronism intensified this transformation by expanding the role of the state, raising wages, strengthening labour rights, and promoting internal demand, but it also contributed to fiscal problems, inflation, and declining external competitiveness. Argentina's relative decline in the 20th century was not caused by a single factor, but by the interaction of external vulnerability, unstable economic policies, difficulties in balancing agricultural growth and industrialization, and social conflicts over income distribution. In this perspective, the Argentina case demonstrates how a country rich in natural resources can lose

economic momentum when it fails to build a balanced, competitive, and institutionally stable development model (Díaz Alejandro, 1970).

4.2 Major Financial Crisis

The financial crisis of 2001–2002 marked a decisive turning point in Argentina’s modern economic history because it revealed the fragility of the economic model built during the 1990s. The Convertibility Plan, which fixed the peso to the US dollar, initially helped reduce hyperinflation and restore confidence, but over time it became increasingly difficult to sustain. Argentina lost competitiveness, exports weakened, public debt grew, and the government became dependent on foreign borrowing. When international investors began to doubt the country’s ability to repay its debt, capital inflows declined and recession deepened. The crisis quickly became systemic: the state could no longer finance itself, banks faced massive withdrawals, and social unrest intensified. The collapse ended with the abandonment of the peso-dollar peg, a sharp devaluation, a severe contraction of output, rising unemployment, poverty, and one of the largest sovereign defaults in history at that time. From an economic perspective, the crisis shows how a fixed exchange-rate regime can become dangerous when it is combined with weak fiscal discipline, high external debt, low competitiveness, and fragile political credibility. It also became a major case study for understanding sovereign debt restructuring, the role of international financial institutions, and the difficulty of managing a crisis when monetary, banking, fiscal, and social pressures explode at the same time (Setser and Gelpern, 2006)

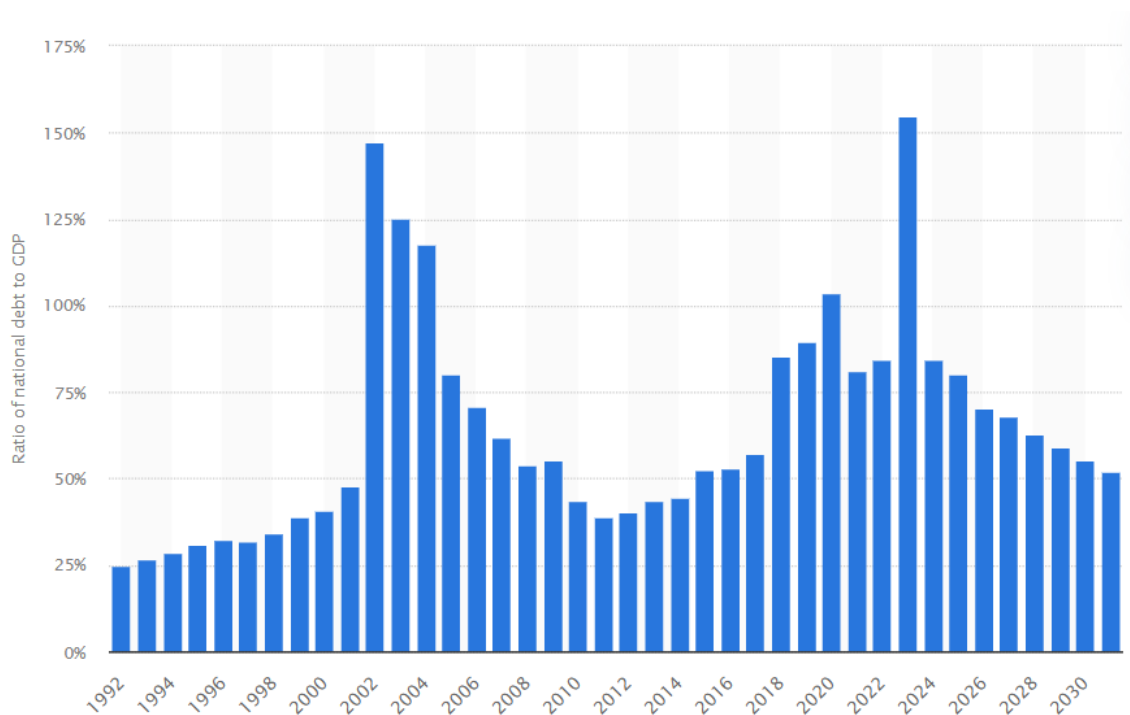


Figure 9 : Ratio of national debt to GDP of Argentina from 1992 to 2031

Source : Statista

4.3 The role of FDIs

The evolution of Argentina's economy shows a long alternation between growth, crisis, state intervention, and attempts at liberalization. From its early success as an export-led agricultural economy to the later phases of import-substitution industrialization, debt crises, inflation, and structural reforms, Argentina's development was deeply shaped by its relationship with international markets. This historical background is essential for understanding the role of foreign direct investment, because FDI entered Argentina not only as a source of capital, but also as a response to the country's changing economic model, institutional instability, and need for technology, infrastructure, and industrial modernization.

Foreign Direct Investment (FDI) has played a major role in Argentina's economy. During the 1990s, a period of deep structural reforms largely based on the neoliberal "Washington Consensus," Argentina was one of the main destinations for FDI among "emerging markets."

Argentina's FDI boom in the 1990s was closely linked to the country's neoliberal reforms: trade liberalization, financial opening, deregulation, privatization, and the

Convertibility Plan. Foreign capital was expected to modernize the economy, finance current-account deficits, improve productivity, and bring more stable long-term investment than portfolio flows. Transnational corporations became central actors in the Argentine economy, especially in privatized utilities, banking, telecommunications, oil, gas, mining, and manufacturing. However, the developmental results were mixed. FDI helped modernize some sectors and improved access to international technologies and management practices, but much investment entered through acquisitions and privatizations rather than new productive capacity. This limited job creation and reduced the expected spillovers to domestic firms. Foreign firms did not automatically generate sustainable development: their contribution depended on local absorptive capacity, regulation, environmental standards, and industrial linkages. In many cases, Argentina attracted large volumes of FDI without building a strong domestic innovation system or a more balanced productive structure. Therefore, FDI was important, but it was not sufficient by itself to guarantee long-term development, especially in a context of macroeconomic instability and weak policy coordination (Chudnovsky & López, 2009). Much of this investment entered through the purchase of formerly state-owned enterprises, especially in public utilities, telecommunications, energy, banking, transport, and natural resources. Foreign companies saw Argentina as a strategic market because of its macroeconomic stabilization, deregulation, access to Mercosur, and the opportunity to acquire important assets at relatively low cost. However, the effects were not entirely positive. Although FDI contributed to modernization, new technologies, better management practices, and improved infrastructure in some sectors, it was often concentrated in acquisitions rather than in the creation of new productive capacity. This meant that its impact on employment, domestic industrial development, and technological spillovers was limited. The inflow of foreign capital also increased the presence of multinational firms in key sectors of the economy, making Argentina more integrated into global markets but also more dependent on external capital and vulnerable to future crises.

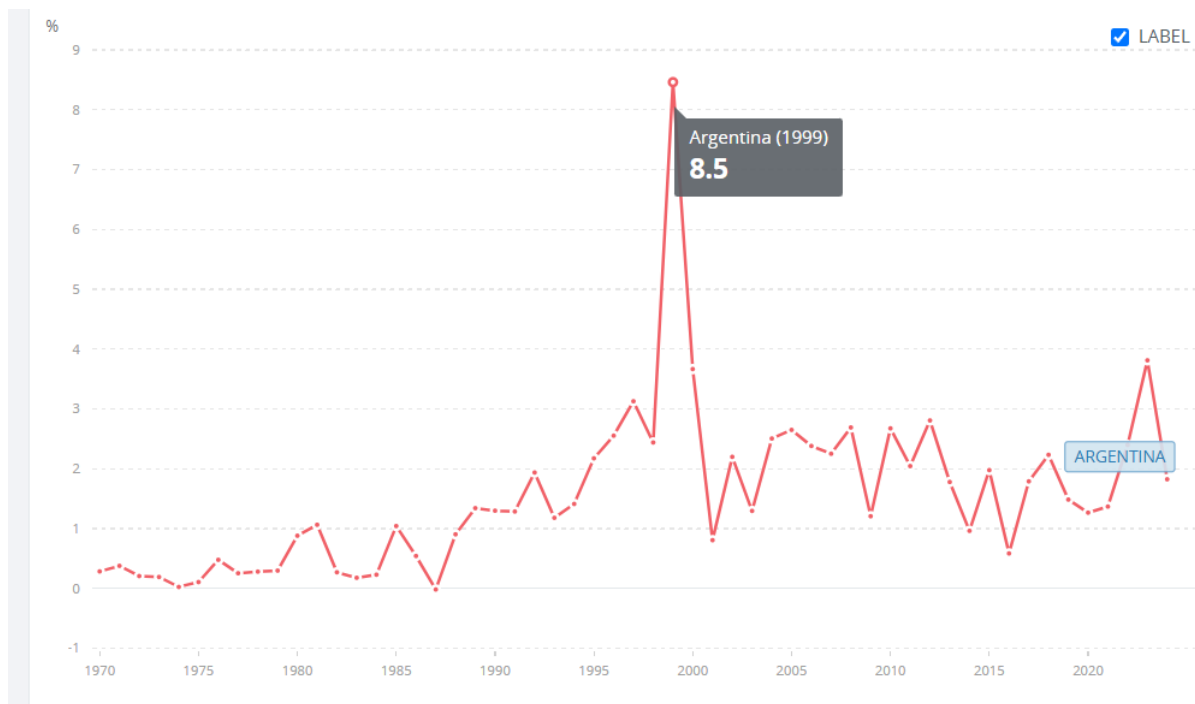


Figure 10 : Foreign direct investment, net inflows (% of GDP) - Argentina from 1970 to 2024

Source : Data World Bank

Overall, FDI in the 1990s reflected both the success and the fragility of Argentina's liberalization model: it attracted large amounts of foreign capital, but did not solve the country's deeper structural weaknesses (Petrecolli, 2001).

4.4 Relationship between China and Argentina

The relationship between China and Argentina has become increasingly strategic as global competition over energy, infrastructure, and critical natural resources intensifies. For Argentina, cooperation with China offers access to capital, technology, and long-term financing that can support the modernization of its energy system, the expansion of renewable generation, and the development of sectors such as lithium, wind, solar, hydroelectricity, and electricity transmission. For China, Argentina represents both an important supplier of agricultural commodities and strategic minerals and a promising market for Chinese firms involved in energy, construction, transport, and green technologies. This complementarity has placed the energy transition at the centre of bilateral relations:

Argentina seeks to use its abundant renewable resources and lithium reserves to attract investment and diversify its productive structure, while China aims to secure the materials and projects necessary for its global clean-energy and battery supply chains. At the same time, the developmental outcome of this partnership depends on Argentina's ability to ensure that foreign investment generates local value, technological learning, employment, environmental protection, and stronger domestic industrial capabilities rather than merely reinforcing its role as an exporter of primary resources.

Chinese OFDI in Latin America and the Caribbean has become one of the most important flows in the region's external economic relations. China moved from being mainly a trade partner and buyer of raw materials to becoming a direct investor in strategic sectors such as energy, mining, infrastructure, transport, telecommunications, agriculture, and manufacturing. Chinese investment should be measured through specific transactions, because official statistics often underestimate or distort the real scale of Chinese capital flows. By 2018, Chinese global OFDI reached almost US\$130 billion, more than six times the level of 2005, making China the second-largest source of outward investment after the United States. In Latin America, Chinese investment has been highly concentrated in a few countries and sectors: Brazil, Peru, Argentina, Chile, and Mexico receive most of the flows, while energy, mining, and infrastructure dominate. The developmental impact is mixed. On one side, Chinese investment provides capital for sectors where Latin American economies often lack financing, especially infrastructure and natural resources. On the other side, it can reinforce dependence on primary commodities, create limited local technological upgrading, and generate environmental and social conflicts. The central argument is therefore that Chinese OFDI is not automatically beneficial or harmful: its effects depend on the ability of Latin American states to negotiate, regulate, and connect Chinese capital with domestic development strategies (Enrique Dussel Peters, 2025)

Argentina's renewable energy transition was not simply the result of Chinese expansion abroad, but also of Argentina's own effort to attract and shape foreign investment according to national development needs. After years of underinvestment, Argentina needed to modernize its electricity grid, diversify its energy matrix, and reduce dependence on fossil fuels. The country had strong natural potential in wind and solar energy, especially in Patagonia and the

northwest, but lacked sufficient financing, technology, and infrastructure. Chinese firms became important partners because China had global advantages in renewable energy equipment, construction capacity, and long-term finance. Argentina, through national and provincial actors, encouraged Chinese participation in projects linked to wind farms, solar parks, transmission lines, and broader energy infrastructure. A key point is that Chinese investment was not imposed from outside: Argentine policymakers, companies, and local governments actively negotiated with Chinese actors to support domestic energy priorities. This cooperation was shaped by Argentina's economic constraints, including debt, limited access to international finance, and difficulties in attracting Western investors. Chinese companies therefore filled an important gap, helping Argentina expand renewable generation and improve its grid, although some limits: technology transfer, local industrial development, and stronger domestic value chains remained weaker than they could have been. In this sense, Chinese investment contributed to Argentina's energy transition, but its developmental impact depended on how effectively Argentina could guide foreign capital toward long-term national goals (González Jáuregui, 2021).

China and Argentina have developed a strategic economic partnership that extends beyond trade to encompass investment, infrastructure, finance, and energy cooperation. Although Argentina continues to face macroeconomic challenges such as inflation, exchange-rate instability, and fiscal constraints, bilateral cooperation has remained resilient, supported by Argentina's participation in the Belt and Road Initiative (BRI) since 2022 and by expanding financial mechanisms such as RMB settlement and bilateral currency swaps. Trade remains the cornerstone of the relationship. In 2024, bilateral trade reached US\$16.35 billion, a 6.2% decline from the previous year but a much smaller contraction than in 2023, suggesting greater stability. China remained Argentina's second-largest trading partner. Chinese exports to Argentina totaled US\$9.32 billion, led by electrical machinery (US\$2.04 billion), machinery and boilers (US\$1.79 billion), organic chemicals (US\$939 million), vehicles, and plastics. Meanwhile, China's imports from Argentina increased 5.24% to US\$7.03 billion, driven primarily by agricultural commodities, including meat (US\$2.22 billion), oilseeds (US\$2.09 billion), cereals, inorganic chemicals, and seafood. (China Briefing)

Chinese investment has experienced greater volatility than trade. After reaching a

stock of US\$2.14 billion in 2021, Chinese FDI in Argentina declined to US\$1.82 billion by the end of 2023, including a net outflow of US\$42.76 million during that year. This decline is attributed mainly to Argentina's high inflation, foreign exchange restrictions, and policy uncertainty rather than to a reduced long-term Chinese interest in the country. Despite these short-term fluctuations, China continues to view Argentina as a strategic destination because of its abundant natural resources, infrastructure needs, and role in South America. (China Briefing)

Chinese investment is concentrated in three strategic areas. Infrastructure projects include the modernization of the Belgrano and San Martín railways, improving domestic logistics and agricultural exports. In energy and mining, Chinese firms have invested heavily in lithium extraction within the Lithium Triangle (between Chile and Bolivia), as well as renewable energy projects such as the Cauchari Solar Park and hydroelectric developments in Santa Cruz Province. In finance, cooperation has deepened through RMB settlement mechanisms, the bilateral currency swap agreement, and the growing role of ICBC Argentina (Industrial and Commercial Bank of China) in financing investment and facilitating cross-border transactions.

Argentina's long-term opportunities lie in combining its comparative advantages in agriculture, critical minerals, and renewable energy with Chinese capital and technology. At the same time, sustained investment will depend on Argentina's ability to reduce macroeconomic instability, improve regulatory predictability, and strengthen institutions, while China seeks to secure critical resources and diversify its global supply chains. Overall, the bilateral relationship is presented as increasingly strategic, with lithium, clean energy, infrastructure, and financial integration expected to remain the principal drivers of future cooperation. (China Briefing)

China's Direct Investment in Argentina, 2018 – 2023		
Year	Annual flow (US\$, million)	Year-end stock (US\$, million)
2019	353.55	1,808.41
2020	401.24	1,992.66
2021	295.68	2,141.14
2022	59.19	2,134.49
2023	-42.76	1,821.20

Figure 11 : China's Direct Investment in Argentina, 2018-2023

Source : Ministry of Commerce PRC

4.5 The lithium industry

Lithium occupies a particularly strategic position. Argentina possesses some of the world's largest lithium resources and, in 2022, exported more than US\$300 million in minerals to China, over 92 % of which consisted of lithium carbonate, followed by silver and concentrates. China received nearly 42 % of Argentina's lithium exports. Chinese companies—including Ganfeng, Zijin, Tsingshan, Zangge, Tibet Summit Resources, Hanaq and RevoTech—expanded their position through acquisitions and joint ventures and participated in thirteen projects, many of them at advanced stages. Their principal objective is not merely short-term profitability but the control of battery-grade lithium carbonate for processing within China's battery and electric-vehicle value chains. This creates opportunities for Argentina but also risks reinforcing its role as an exporter of raw materials.

The expansion of Chinese investment in Argentina's lithium industry reflects China's broader strategy to secure the critical minerals required for electric vehicles, renewable energy storage, and other technologies associated with the global energy transition. China occupies a dominant position in the downstream stages of the lithium value chain, controlling approximately 60 % of global lithium refining, 70 % of lithium-ion battery production, and 60 % of battery-component manufacturing. By contrast, Argentina is principally positioned at the extractive end of the chain. At the time examined, it accounted for around 4.7 % of global lithium production,

behind Australia, Chile, and China, while most global demand was concentrated in Asia, particularly China. This unequal geographical distribution of extraction, processing, technology, and consumption creates a centre–periphery structure in which Argentina supplies raw or minimally processed lithium while higher-value activities remain concentrated abroad.

Table 1. Argentine lithium exports (2021, 2022, 2023, and first seven months of 2024).

Country of destination	% Total exports (2021)	% Total exports (2022)	% Total exports (2023)	% Total exports (First seven months 2024)
China	42,29	41,59	43	68
United States	19,12	8,84	11	12
Japan	16,49	30,72	25	4
South Korea	7,41	12,84	11	10
Others	14,69	6,01	9	5

Figure 12 : Argentine Lithium exports from 2021 to 2024

Source: data from the Secretaría de Minería de Argentina (2022, 2023, 2024).

Chinese companies have strengthened their presence in the Argentine provinces of Jujuy, Salta, and Catamarca through acquisitions, joint ventures, direct investments, and agreements with provincial governments and public companies. Firms such as Ganfeng Lithium and Zijin Mining have sought ownership or participation in mining projects in order to secure long-term access to lithium resources and integrate Argentine production into supply chains linked to China’s battery and electric-vehicle industries. Their strategies differ in some respects from those of conventional Western mining corporations because Chinese firms may combine mining investment with state-supported finance, diplomatic relations, infrastructure cooperation, and prospective projects in processing or battery production. They also pay particular attention to Argentina’s provincial governments because, under the country’s federal system, ownership and administration of mineral resources belong mainly to the provinces rather than to the national government. This decentralized framework encourages competition among provinces to attract investment but makes the formulation of a unified national lithium strategy more difficult.

Although Chinese capital can expand production, exports, employment, and fiscal revenues, its contribution to structural transformation remains limited when investment is concentrated on extraction. Agreements concerning lithium processing, cathode materials, battery cells, and complete batteries indicate the possibility of developing local industrial capabilities, but many initiatives remain small, experimental, delayed, or disconnected from large-scale mining operations. Argentina lacks a sufficiently coordinated industrial policy linking extraction with scientific research, technological learning, domestic suppliers, skilled employment, processing capacity, and battery manufacturing. Macroeconomic instability, limited infrastructure, financing constraints, regulatory fragmentation, technological dependence, and weak coordination between national and provincial authorities further restrict domestic value creation. Global competition also narrows Argentina's room for manoeuvre. China, the United States, Europe, Japan, and South Korea are seeking secure access to critical minerals while simultaneously protecting the most technologically advanced and profitable stages of their battery industries. Policies such as the United States Inflation Reduction Act demonstrate how major economies use subsidies, trade rules, public procurement, and strategic alliances to reorganize supply chains and reduce dependence on China. Argentina could potentially benefit from this competition by negotiating investment, financing, market access, and technology-transfer commitments with different international partners. However, without a coherent national strategy, geopolitical rivalry may simply intensify the extraction of lithium without promoting local industrialization.

The central conclusion is that foreign investment alone will not transform Argentina's lithium resources into sustainable economic development. Chinese investment may provide capital, expertise, and access to international production networks, but its developmental effects depend on the Argentine state's capacity to establish conditions concerning local content, domestic processing, supplier development, research and development, workforce training, technology transfer, environmental protection, and participation by local communities. The state must therefore coordinate national and provincial policies and connect lithium extraction to a broader industrial-technological strategy. Otherwise, Argentina risks reproducing its traditional role as a peripheral exporter of primary commodities while foreign economies retain control over knowledge, patents, refining, battery

production, and the highest-value segments of the energy-transition economy (Juliana González Jáuregui, 2024).

The results of bilateral cooperation are therefore uneven. Chinese firms have achieved substantial progress through mergers, acquisitions, joint ventures and competitive tenders, especially in oil and gas, mining, wind and solar energy. However, many government agreements concerning nuclear power, hydroelectric dams, pipelines, lithium industrialisation and battery production have not advanced beyond political declarations or initial contracts. Agreements and memoranda are numerous, but relatively few projects obtain financing and fewer are completed. Important obstacles include Argentina's macroeconomic instability, currency controls, inflation, frequent changes of government, regulatory uncertainty, social opposition to extractive projects and geopolitical pressure from the United States, particularly in nuclear energy and strategic infrastructure.

The developmental impact ultimately depends on Argentina's capacity to coordinate national and provincial institutions and to connect Chinese investment with domestic industrialisation. Although cooperation agreements have sometimes proposed battery factories, equipment provision and scientific collaboration, many have not materialised and generally lack enforceable requirements for technology transfer, research cooperation, local supplier development or joint industrial production. Without a coherent long-term strategy, the relationship may deepen Argentina's specialization in commodities and reproduce an asymmetric structure in which China obtains secure access to strategic resources while the highest-value technological activities remain abroad. Conversely, stronger state coordination, environmental safeguards, community participation, technology-transfer provisions and local value-chain policies could transform Chinese cooperation into an instrument for productive diversification and sustainable development (Julián Bilmes, 2025).

Chapter 5 : The Impact of Chinese FDIs on Brazilian and Argentinian Economies

5.1 Evolution of Chinese Investments

China's rise as a major source of foreign direct investment (FDI) has reshaped global capital flows and significantly influenced the economic trajectories of developing economies. In Latin America, Brazil and Argentina have emerged as two of the most important destinations for Chinese investment, reflecting both their strategic importance and abundant natural resources. While Chinese FDI initially concentrated on securing access to commodities such as oil, minerals, and agricultural products, it has progressively expanded into infrastructure, manufacturing, renewable energy, electric mobility, telecommunications, and financial services. This evolution mirrors China's broader economic and geopolitical objectives, including the internationalization of Chinese firms, the diversification of global supply chains, and the promotion of the Belt and Road Initiative. For Brazil and Argentina, Chinese investment has created new opportunities for capital inflows, technological cooperation, infrastructure development, and economic modernization, while also raising concerns regarding economic dependence, industrial competitiveness, environmental sustainability, and national strategic autonomy. Examining the patterns, motivations, and consequences of Chinese FDI in these two countries provides valuable insight into how foreign investment can shape development pathways and influence the economic transformation of emerging markets within an increasingly multipolar global economy.

The developmental implications of China's growing economic engagement in South America compares the experiences of Brazil and Argentina. Chinese foreign direct investment has become a central driver of bilateral economic relations, particularly since the early 2000s, as China's demand for natural resources and agricultural commodities expanded. Chinese investments have been highly concentrated in strategic sectors, including energy, mining, oil, infrastructure, and agribusiness, reinforcing both countries' roles as exporters of primary goods. In Brazil, Chinese capital has supported large-scale investments in electricity transmission, renewable

energy, logistics, and mining, contributing to infrastructure modernization while strengthening trade and production links. In Argentina, investments have focused on hydroelectric projects, oil and gas, lithium extraction, railways, and electricity networks, providing much-needed financing during periods of restricted access to international capital markets. These investments have generated significant economic benefits, including employment creation, infrastructure development, technology transfer in selected sectors, and increased productive capacity. However, they also identify important challenges, such as the persistence of a commodity-based development model, limited diversification into high-value manufacturing, growing dependence on Chinese financing and markets, environmental concerns associated with extractive industries, and asymmetrical bargaining power between China and South American economies. Overall, while Chinese FDI has become an important source of development opportunities for both Brazil and Argentina, its long-term contribution to sustainable and inclusive growth depends on the capacity of national governments to implement industrial policies, strengthen domestic institutions, and maximize local value creation rather than relying solely on resource-based investment. (Bona & Páez, 2022).

5.2 FDI impact in Brazil

The rapid increase in foreign direct investment (FDI) in Brazil during the 1990s apparently strengthened the technological capabilities of Brazilian industry. Following trade liberalisation, privatisation and economic stabilisation, Brazil experienced a sharp rise in FDI, much of which took the form of mergers and acquisitions rather than the creation of new production facilities. The authors argue that the key issue is not the volume of foreign investment itself, but whether it contributes to the development of domestic technological capabilities and long-term industrial competitiveness.

A distinction between operational capabilities and innovative capabilities was created. Operational capabilities refer to the ability of firms to efficiently use existing technologies and production processes, while innovative capabilities involve the capacity to generate, adapt and improve technologies through research and development (R&D), engineering, product development and organisational

learning. Sustainable industrial development depends primarily on the latter rather than on simple production efficiency.

The study finds that foreign-owned firms operating in Brazil generally displayed higher levels of technological capability than domestic firms. They invested more in engineering activities, employed more qualified personnel and had greater access to international technological networks. However, much of their technological strength derived from knowledge generated at the headquarters of multinational corporations rather than from research activities undertaken within Brazil. Consequently, many subsidiaries specialised in adapting imported technologies to local market conditions instead of conducting frontier research or developing original innovations.

Multinational corporations contributed positively to improvements in production efficiency, product quality and managerial practices. They also stimulated competition, introduced international production standards and facilitated access to advanced technologies. Nevertheless, these benefits were concentrated mainly in operational improvements rather than in the creation of autonomous technological capabilities within the Brazilian economy. The majority of strategic R&D activities continued to be located in the parent companies' home countries.

Therefore, an increased foreign ownership does not automatically generate significant technological spillovers for domestic firms. Knowledge diffusion depends on the existence of strong local suppliers, qualified human capital, research institutions and firms capable of absorbing new technologies. Without sufficient absorptive capacity, interactions between multinational subsidiaries and domestic companies remain limited, reducing opportunities for learning and innovation.

The widespread assumption that FDI alone can modernise an industrial economy is not entirely true. While multinational corporations may increase productivity and introduce superior production techniques, they do not necessarily transfer core technologies or establish substantial research activities in the host country. As a result, countries may experience industrial modernisation without achieving technological independence or strengthening their national innovation systems.

It is important the presence of complementary public policies. Governments should promote domestic R&D, support universities and public research organisations,

strengthen collaboration between foreign subsidiaries and local firms, encourage supplier development and invest in scientific and engineering education. Such measures would increase the capacity of domestic firms to benefit from foreign investment and transform operational improvements into long-term technological upgrading.

FDI represents an important source of industrial modernisation for Brazil but is insufficient on its own to generate sustained technological development. The developmental impact of multinational investment depends largely on the host country's institutions, innovation policies and absorptive capabilities. Foreign firms can become catalysts for technological progress only when domestic firms possess the capacity to learn, innovate and integrate into higher-value segments of global production networks. (Costa, I., & de Queiroz, S. R. R., 2002).

The Brazil-China Business Council (CBBC/CEBC) report *Chinese Investments in Brazil: 2016* provides one of the most comprehensive analyses of Chinese foreign direct investment (FDI) in Brazil during the first decade of China's large-scale expansion into Latin America. Using confirmed investment projects rather than official balance-of-payments statistics, the report argues that 2015 marked the beginning of a new phase in Chinese investment. While the first wave (2007–2010) was dominated by large acquisitions in oil, mining and agribusiness, the second phase was characterised by greater sectoral diversification, an increasing number of greenfield investments, and stronger participation in infrastructure, electricity generation and manufacturing.

Brazil consolidated its position as the principal destination for Chinese investment in Latin America. Between 2007 and 2015, confirmed Chinese investments exceeded US\$45 billion, involving more than one hundred projects carried out by both state-owned enterprises (SOEs) and private companies. The report highlights that Chinese firms increasingly viewed Brazil not only as a supplier of commodities but also as a strategic market due to its large domestic consumer base, abundant natural resources and long-term infrastructure needs.

The electricity sector emerged as the leading destination for Chinese capital. Companies such as State Grid and China Three Gorges (CTG) expanded rapidly

through acquisitions and new infrastructure projects, particularly in electricity transmission and hydropower generation. These investments reflected China's growing expertise in large-scale infrastructure while simultaneously supporting Brazil's efforts to modernise its electricity network. Besides energy, Chinese companies increased their participation in manufacturing, automotive production, telecommunications, logistics, financial services and consumer goods, indicating a gradual shift from purely resource-seeking investment toward greater market-oriented strategies.

During the early years, mergers and acquisitions dominated Chinese FDI because they allowed rapid access to strategic assets, natural resources and established firms. By 2015, however, the number of greenfield projects had increased, suggesting that Chinese firms were becoming more confident about establishing long-term productive operations within Brazil. This evolution indicates a gradual transition from securing commodity supplies toward integrating Chinese companies into Brazil's domestic economy.

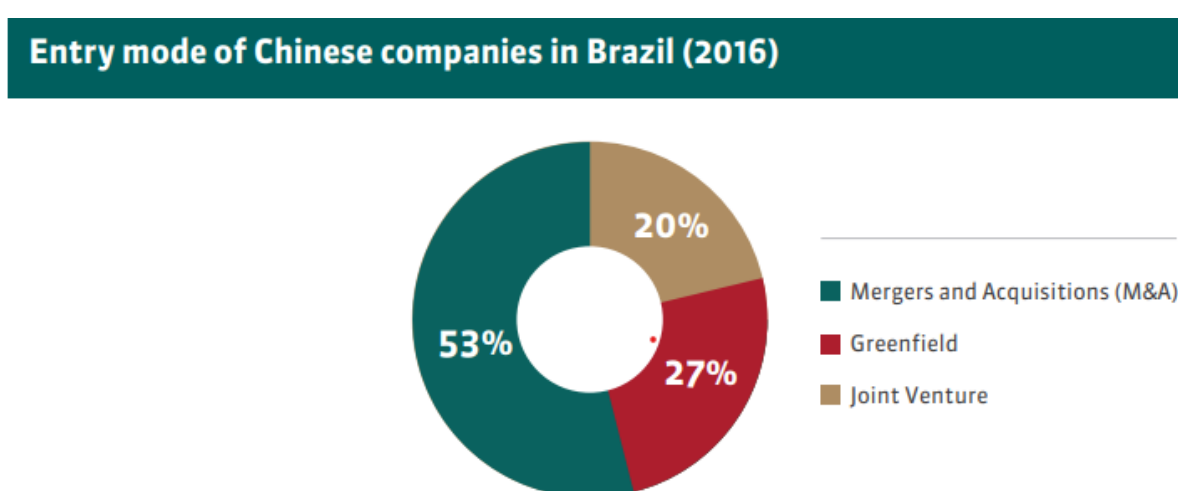


Figure 13: entry mode of Chinese companies in Brazil (2016)

Source: Brazil-China Business Council report

Several potential development benefits arose from Chinese investment. First, Chinese capital contributed to financing large infrastructure and energy projects at a

time when Brazil faced economic recession and declining domestic investment. Second, investments in electricity transmission and generation improved the country's infrastructure capacity. Third, manufacturing investments created opportunities for employment, local production and industrial cooperation. Finally, increased Chinese participation diversified Brazil's sources of foreign capital and reduced dependence on traditional investors from North America and Europe.

Nevertheless, there are also several challenges. Chinese investment remained highly concentrated in strategic sectors such as electricity, oil and mining, raising concerns about excessive dependence on natural resources and infrastructure rather than technologically sophisticated manufacturing. Moreover, although manufacturing projects increased, local technological spillovers and supplier linkages remained limited in many cases. The developmental impact of Chinese FDI would ultimately depend on Brazil's ability to strengthen industrial policy, encourage technology transfer, increase local content and promote partnerships between Chinese investors and Brazilian firms and research institutions.

The profile of Chinese investors is becoming more diversified. While large state-owned enterprises continued to dominate strategic sectors such as electricity and energy, private Chinese firms increasingly entered consumer markets, services and manufacturing. This diversification suggested that Brazil's attractiveness was no longer based solely on natural resources but also on its domestic market potential and long-term economic prospects.

Overall, Chinese investment in Brazil had entered a more mature stage by 2015. Instead of being confined to resource extraction, Chinese FDI increasingly combined resource-seeking, market-seeking and strategic asset-seeking motivations. Although these investments created important opportunities for infrastructure development, capital inflows and industrial cooperation, their long-term contribution to economic development would depend on Brazil's capacity to integrate foreign investment into a broader strategy of technological upgrading, productivity growth and industrial diversification. (Brazil-China Business Council, 2017)

5.3 FDI impact in Argentina

Chinese outward investment accelerated considerably after the 2008 global financial crisis, as Chinese enterprises—particularly large state-owned companies—expanded internationally in search of natural resources, markets and strategic assets. Chinese corporations invested an average of approximately US\$10 billion annually in Latin America from 2010, although China still represented a considerably smaller source of regional FDI than the United States and the European Union. Official statistics often overstate Chinese investment in Latin America because a large share is formally directed to financial centres such as the Cayman Islands and the British Virgin Islands rather than to productive activities in the region.

In Argentina, Chinese FDI increased sharply at the beginning of the 2010s. The country received only around US\$143 million in Chinese investment between 1990 and 2009, but approximately US\$3.1 billion in 2010, US\$2.45 billion in 2011 and US\$600 million in 2012. This sudden rise was primarily associated with major acquisitions in the hydrocarbons sector rather than with a broad diversification of productive activities. Argentina therefore became one of the principal South American destinations for Chinese capital, alongside Brazil, Peru and Venezuela. The most important Chinese investments in Argentina identified were made by the state-owned oil companies CNOOC and Sinopec. In 2010, CNOOC invested approximately US\$3.1 billion to acquire a substantial interest in Bidas Corporation, an Argentine energy company with significant oil and gas assets. In 2011, Sinopec entered the Argentine market by purchasing the local assets of Occidental Petroleum for approximately US\$2.45 billion. These operations illustrate the dominant resource-seeking motivation of Chinese FDI: Chinese enterprises sought to secure access to energy supplies while acquiring already-established firms, production facilities and local experience.

Argentina's experience reflects the wider regional pattern. Almost 90% of estimated Chinese investment in Latin America was concentrated in natural resources, particularly oil and mining, even though natural resources accounted for only about one quarter of total FDI received by the region from all foreign investors. Chinese investment was therefore much more resource-oriented than investment originating

in Europe or the United States. This concentration was closely connected to China's growing demand for oil, minerals and agricultural commodities and to the fact that approximately 70% of Chinese imports from Latin America consisted of primary commodities.

A proposed Chinese agricultural investment in Argentina demonstrates the political and institutional difficulties encountered by foreign investors. The Chinese company Heilongjiang Beidahuang Nongken reportedly planned to acquire or develop approximately 300,000 hectares of land and invest as much as US\$1.5 billion in agricultural production. However, the project was suspended following political opposition and concerns surrounding foreign ownership and control of agricultural land. This case shows that Argentina was attractive to Chinese firms not only because of hydrocarbons but also because of its agricultural resources, although domestic regulation and public opposition could limit such projects. From a development perspective, Chinese investment provided Argentina with new sources of capital and strengthened the country's economic relationship with an increasingly important global partner. The acquisitions in the energy sector could support production, maintain employment and facilitate the exploitation of oil and gas reserves. Chinese investment could also reduce Argentina's dependence on traditional Western investors and create opportunities for cooperation in infrastructure, agriculture and manufacturing.

Nevertheless, important limitations persist. Chinese FDI in Argentina was highly concentrated in extractive industries and mainly involved the acquisition of existing assets. Such investments do not necessarily generate the same increase in productive capacity, employment or local supplier demand as greenfield projects. Furthermore, their concentration in hydrocarbons risked reinforcing Argentina's specialization in natural resources rather than promoting industrial diversification, innovation and technological upgrading. Little evidence shows that Chinese investment had produced extensive technology transfers or strong linkages with Argentine manufacturing firms by 2013. (Chen, T., & Pérez Ludeña, M., 2013). Chinese companies frequently experienced difficulties adapting to Latin American legal systems, labour relations, regulatory structures and business cultures. Consequently, some investment projects were delayed, altered or abandoned. In the Argentine context, the suspended agricultural project illustrates how insufficient

understanding of domestic political and institutional conditions could undermine apparently significant investment initiatives.

Overall, Chinese FDI in Argentina is an important but strongly resource-centred phenomenon. Its immediate significance derived from the scale of major oil-sector acquisitions, while its wider developmental impact remained uncertain. Argentina and other Latin American countries should not simply seek larger volumes of Chinese capital. Instead, governments should design policies capable of directing foreign investment toward national development objectives, including economic diversification, productivity growth, local supplier development and knowledge transfer. Chinese investment would have a more positive long-term effect on Argentina if it expanded beyond the acquisition of natural-resource assets and contributed more directly to productive transformation and technological capability.

5.4 Argentina's Lithium reserves

Argentina's lithium reserves have acquired increasing strategic importance as the global transition toward electric mobility and renewable energy has intensified competition for critical minerals. Within this context, Chinese companies have expanded their presence in Argentina to secure access to lithium, reduce supply-chain vulnerabilities and consolidate China's dominant position in battery and electric-vehicle production. Argentina has consequently become both an important source of raw materials for China and a significant destination for Chinese investment in the energy-transition sector.

Chinese participation in Argentine lithium differs from earlier Chinese investments that concentrated mainly on hydrocarbons and infrastructure. Lithium investment is connected to an integrated global industrial strategy encompassing mineral extraction, chemical processing, battery production and electric vehicles. Major Chinese firms have entered Argentina by purchasing stakes in existing projects, acquiring mining companies, forming partnerships and developing new extraction operations. These investments reflect the growing international competition among Chinese, North American, European and other global companies to control the minerals required for low-carbon technologies.

The expansion of Chinese capital offers Argentina several possible economic

benefits. It can provide financing for projects requiring substantial initial investment, accelerate the development of mining infrastructure, increase lithium production and exports, and create employment in the north-western provinces where deposits are concentrated. Lithium exports can also generate foreign currency and fiscal revenues, which are particularly valuable given Argentina's recurring external and macroeconomic constraints.

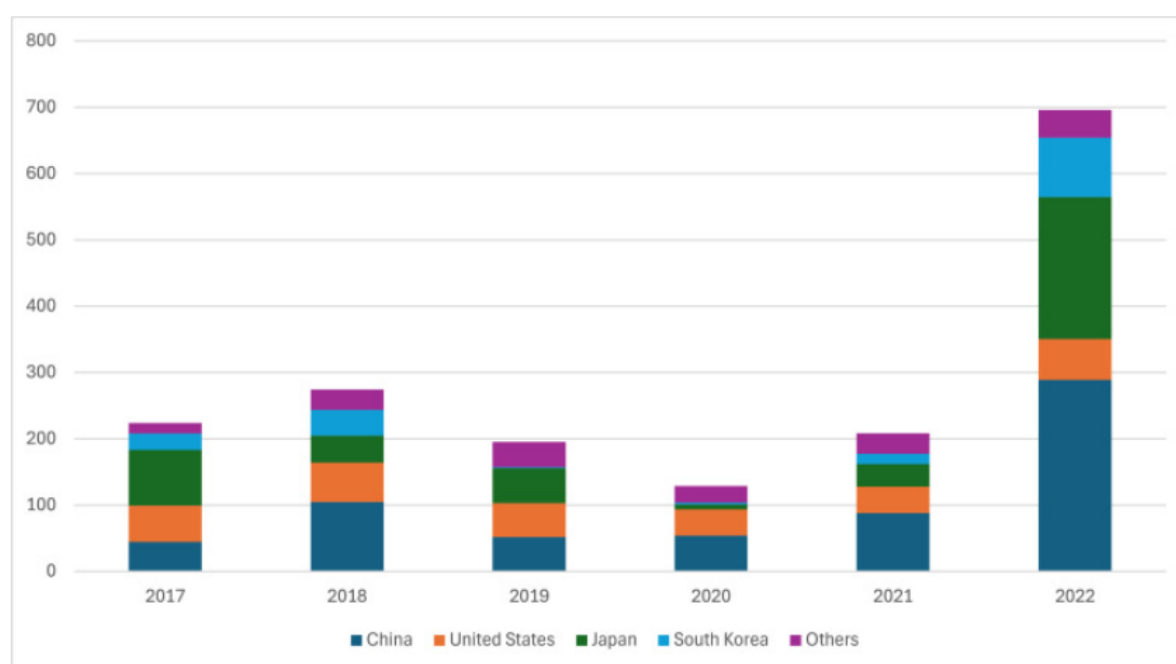


Fig. 14 : Argentine lithium exports 2017–2022 by main recipient countries (millions of US dollars).

Source : González Jáuregui, J. (2024)

Nevertheless, the existence of abundant lithium resources and rising foreign investment does not automatically produce economic development. The principal challenge is whether Argentina can move beyond the extraction and export of lithium carbonate and develop higher-value activities such as advanced processing, battery components, battery-cell production, research and electric mobility. Without such upgrading, the country risks occupying a subordinate position in the global value chain: Argentina would supply an essential raw material, while technology, industrial knowledge and the largest profits would remain concentrated in China and other advanced manufacturing economies.

This concern is examined through the perspective of Latin American structuralism and contemporary approaches that emphasise the role of the State in promoting

innovation, industrialisation and greater economic complexity. From this standpoint, foreign direct investment contributes to development only when it creates domestic technological capabilities, linkages with local firms, skilled employment and opportunities for diversification. The nationality of the investor is therefore less important than the conditions under which the investment is received and integrated into the national productive system.

Chinese investment could potentially help Argentina enter more technologically advanced stages of the lithium value chain because Chinese firms possess capital, industrial experience and expertise in battery-related industries. However, the interests of Chinese companies do not necessarily coincide with Argentina's development objectives. Their main priority is normally to secure a stable and competitively priced supply of lithium for production networks centred outside Argentina. Consequently, technology transfer, local processing and domestic supplier development cannot be assumed to occur spontaneously.

The capacity of the Argentine State is therefore central. National and provincial authorities must coordinate mining, scientific, technological and industrial policies if lithium is to support broader productive transformation. Possible measures include requirements or incentives for local processing, cooperation between foreign investors and Argentine universities, support for domestic suppliers, public investment in research, workforce training and partnerships involving national firms. However, Argentina's fragmented regulatory structure creates difficulties because the provinces control their natural resources, while industrial, technological and foreign policies are largely determined at the national level. (González Jáuregui, J. 2024).

This institutional fragmentation can produce competition among lithium-producing provinces for foreign investment. Provinces may prioritise rapid project approval, employment and royalties, while the national government may seek industrialisation and integration into a domestic battery chain. Without coordination, individual agreements with foreign companies may expand extraction but fail to generate a coherent national development strategy.

The international geopolitical environment creates both opportunities and constraints. Competition among China, the United States, Europe and other actors may increase Argentina's bargaining power by providing alternative investors and markets. Argentina could use this competition to negotiate better conditions,

including technological cooperation and local value creation. At the same time, dependence on Chinese companies and markets could expose the country to external political pressures, technological dependence and fluctuations in global lithium demand.

The environmental and social dimensions are also fundamental. Lithium extraction in Argentina takes place in fragile, arid ecosystems and may affect water availability, biodiversity and the livelihoods of Indigenous and local communities. Although lithium is essential to technologies presented as environmentally sustainable, its extraction can reproduce traditional patterns of intensive resource exploitation. A development strategy must therefore include credible environmental assessments, transparent regulation, community consultation and equitable distribution of the benefits generated by mining.

Finally, Chinese investment has the potential to increase Argentina's lithium production, export revenues and participation in the global energy transition. However, investment alone will not transform the country's productive structure. In the absence of active and coordinated state policies, Chinese participation may reinforce a centre-periphery relationship in which Argentina exports raw or minimally processed lithium and imports high-technology products. Its developmental impact will ultimately depend on Argentina's ability to negotiate with investors, build domestic capabilities, promote industrial linkages and integrate lithium extraction into a broader strategy of technological and productive upgrading.

5.5 FDI as drivers for innovation

Chinese foreign direct investment has become an increasingly important driver of economic development in both Brazil and Argentina, although its developmental effects have varied according to each country's industrial structure and policy framework. In Brazil, Chinese investment has progressively diversified from natural resources into electricity transmission, renewable energy, manufacturing and electric vehicles, creating opportunities for infrastructure modernisation, industrial upgrading and employment. In Argentina, Chinese FDI has remained more concentrated in strategic sectors such as hydrocarbons, lithium, mining and infrastructure, providing much-needed capital and foreign exchange while reinforcing the country's dependence on commodity-based exports. Despite these positive contributions, the evidence suggests that Chinese investment has generated only limited technological spillovers because much of the high-value research, design and innovation activities remain located in China or within multinational headquarters.

As argued by the literature on absorptive capacity and technological capabilities, the developmental impact of FDI depends less on the nationality of investors than on the host country's ability to absorb, adapt and commercialise external knowledge. Consequently, Brazil and Argentina should move beyond policies aimed solely at attracting foreign capital and instead implement strategies that maximise innovation spillovers. Such policies should include incentives for greenfield investments over purely extractive acquisitions, joint ventures between Chinese and domestic firms, stronger collaboration between universities, research institutes and multinational corporations, investment in engineering education and technical skills, support for local suppliers, technology-transfer requirements in strategic sectors, and the development of innovation clusters around renewable energy, electric vehicles, batteries and advanced manufacturing.

Furthermore, governments should strengthen intellectual property protection, improve regulatory stability, and provide targeted fiscal incentives for research and development conducted locally by Chinese firms. By combining these measures with broader industrial and innovation policies, both countries could transform Chinese FDI from a source of capital and resource extraction into a tool for

technological learning, productivity growth, industrial diversification and sustainable long-term economic development.

Chapter 6 : Conclusion

The evolution of foreign direct investment (FDI) has transformed the global economy by reshaping production networks, accelerating technological diffusion, and strengthening the economic integration of developed and emerging markets. While traditional theories viewed FDI primarily as a means for multinational enterprises to exploit ownership advantages and access new markets, recent decades have demonstrated that it has become a strategic instrument for securing resources, expanding geopolitical influence, and promoting long-term economic development. The increasing importance of emerging economies as both recipients and sources of FDI has fundamentally altered the geography of international investment. China represents the most significant example of this transformation. Since the launch of the foreign investment strategy in the late 1990s and its subsequent expansion under the Belt and Road Initiative, Chinese firms have become major global investors across sectors such as energy, mining, manufacturing, infrastructure, telecommunications, and high technology. Unlike many Western multinational corporations, Chinese investment has often combined commercial objectives with broader national development goals, supported by state-owned enterprises, policy banks, and industrial strategies. As a result, Chinese outward FDI has become an important component of China's global economic presence, enabling the country to secure natural resources, diversify export markets, acquire advanced technologies, and strengthen international political and economic partnerships.

Latin America has become one of the principal destinations of this outward investment. The region's abundance of natural resources, growing consumer markets, and infrastructure needs have made it particularly attractive to Chinese investors. However, Chinese engagement has evolved beyond simple resource extraction. Increasing investments in renewable energy, electric mobility, logistics, digital infrastructure, and manufacturing suggest a gradual shift toward more diversified and technologically sophisticated forms of cooperation. Nevertheless, the developmental impact of these investments continues to depend largely on domestic institutions, regulatory frameworks, and the capacity of host countries to maximize technology transfer, local value creation, and industrial upgrading. Brazil and Argentina illustrate two distinct but complementary models of

engagement with Chinese FDI. Brazil has attracted substantial investment due to the size of its economy, diversified industrial base, and abundant natural resources. Chinese companies have established a significant presence in electricity generation and transmission, mining, agribusiness, automotive manufacturing, and increasingly in renewable energy and electric vehicles. Investments such as BYD's expansion into electric vehicle production demonstrate that Chinese capital is progressively moving beyond commodity extraction toward higher value-added manufacturing. If effectively integrated into national industrial policies, these investments have the potential to strengthen technological capabilities, generate skilled employment, and support Brazil's transition toward a greener and more innovative economy, while boosting it.

Argentina, by contrast, has received lower volumes of Chinese FDI but in sectors that are strategically critical for its long-term development. Chinese investment has focused on energy infrastructure, hydropower, transportation, and, most importantly, lithium extraction. As global demand for batteries and electric vehicles continues to grow, Argentina's vast lithium reserves position the country as a key supplier within the global energy transition. Chinese participation has provided capital and technological expertise at a time when domestic financial constraints have limited alternative investment sources. However, the Argentine case also highlights persistent challenges related to macroeconomic instability, regulatory uncertainty, debt sustainability, and the need to ensure that natural resource exploitation generates broader industrial development rather than reinforcing dependence on primary commodity exports.

The comparison between Brazil and Argentina demonstrates that the impact of Chinese FDI cannot be evaluated solely through the volume of capital invested. More important are the quality of investment, sectoral composition, technological spillovers, institutional governance, and the policies adopted by recipient countries. Where governments successfully promote local supplier development, research collaboration, workforce training, and innovation, FDI can become fundamental for structural transformation. Conversely, without effective industrial and regulatory policies, as well as a reduced absorptive capacity, foreign investment risks reinforcing existing patterns of economic dependence and limited value addition.

Ultimately, China's expanding role as a global investor reflects broader changes in the international political economy, where emerging economies increasingly shape global capital flows alongside traditional Western investors.

For Brazil and Argentina, Chinese FDI presents both significant opportunities and important challenges. It offers access to capital, infrastructure development, technological cooperation, and integration into emerging green value chains, while simultaneously requiring careful policy design to preserve economic sovereignty, encourage sustainable development, and maximize long-term national benefits. The future contribution of Chinese investment in both countries will therefore depend not only on China's investment strategy but also on the ability of Brazil and Argentina to implement coherent development policies that transform foreign capital into inclusive, diversified, and sustainable economic growth.

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