

# Expansion of Investments by Chinese Companies in the Brazilian Amazon – the Case of Agribusiness

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**Abstract:** This paper aims to systematize and analyse the expansion of Chinese agribusiness business towards the Brazilian Amazon. A scenario of possible natural resources to be exploited in the South American Amazon is presented, followed by a discussion of the changes in the conduct of economic exploitation in the Brazilian Amazon since the Bolsonaro government came into power. We opted for this cut due to the increase in the soy trade flow from Brazil to China, in addition to the direct foreign investments of Chinese companies in this sector to be concentrated in Brazil, as well as investments in infrastructure for transporting soy grain from the Amazon.

**Keywords:** Amazon; expansion of the agricultural frontier; China; FDI; Agribusiness.

## Introduction

Chinese agribusiness conglomerates have invested in other countries' agriculture not simply to guarantee access to food or raw materials, but also for the formation of Chinese trademark and technologies which strengthen its strategy of leading international brands, especially from the early 2000s onwards. The economic and social transformations experienced by the Asian country represent more than changes in the dietary patterns of the Chinese population, but also represent the adoption of central development goals for agriculture considering its strategic role in the Chinese national economy. At the same time, significant advances were made in the industrial model<sup>1</sup> and in the internationalization of its companies, triggering reactions from western powers in the scenario of intensified international competition (Gouveia 2020).

Brazil has positioned itself as a soy 'export hub' for China. The value of soybean exports to China reached approximately US\$12b in 2012, constituting 69% of the total

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value of soybeans exported (US\$17b) by Brazil in 2012. The value of soybean exports from Brazil subsequently increased to US\$28.6b in 2020, and China, which was responsible for 73% of this total value exported by Brazil,<sup>3</sup> had an increase of around 19%, reaching approximately US\$21b. The following year, Brazil exported US\$38.6b, and China was responsible for 70.4% of this amount. Different environmental, geopolitical and economic elements between 2019 and 2021 influenced the bilateral China-Brazil soy trade.<sup>4</sup> China's share in Brazilian soy exports continuously expanded between 2012 and 2021, and in addition to facilitating a Brazilian growth pattern centred on agribusiness exports, it also had consequences on infrastructure and expansion of the agricultural frontier to the Amazon on the Brazilian side. This dynamic has been the object of attention in the literature (Vieira, Buainain, and Figueiredo 2016; Leusin Jr 2017; Escher and Wilkinson 2019; Escher 2020; Kreter and Pastre 2022).

The starting point of this article is in the most intense discussions held since mid-2019 regarding the economic occupation of this biome on the Brazilian side. This occupation has been modifying the economic dynamics of the Legal Amazon, but the consequences for the region are ambiguous. On the one hand, investments in infrastructure can be key to economic development and poverty reduction in the region; on the other hand, the construction of this same infrastructure affects native peoples, particularly after the accelerated dismantling of supervisory bodies by the Bolsonaro government. On the Chinese side, in its agricultural and rural development strategy, articulating the valorisation of Chinese multinational agribusiness companies with production stability in all agricultural and food price chains, which at the domestic level requires the Communist Party of China's (CPC) Central Committee and the State Council to implement a strategy of assigning specific roles to its partners. In this case, Brazil would represent a grain logistics partner in South America.

The main objective of this article is to analyse the expansion of Chinese investments in agribusiness towards the Brazilian Amazon. A scenario of possible natural resources for exploitation in the South American Amazon is presented and then the changes in the economic exploitation conduct of the Brazilian Amazon since the Bolsonaro government came to power are also discussed. In addition to this introduction and the final remarks, the article is divided into three other sections. The second section will present the expansion of the Chinese multinational company, highlighting its role in agribusiness. In the third section, we will discuss Brazil's role in expanding the agricultural frontier in the Amazon. Finally, we will analyse Chinese investments in the Amazon on the Brazilian side in the fourth section.

## **Chinese multinational agribusiness companies**

### *Productive internationalization as part of China's agricultural development*

Chinese Foreign Direct Investment (FDI) transactions and international trade in the agricultural sector are part of a Chinese national agricultural and rural development policy. The large agricultural business conglomerates in China are either traditional state-owned

companies or technology-based companies that promote traditional internationalization through mergers and acquisitions (M&A) using access to resources, but also by acquiring technological brands. Data from official Chinese government departments (central and local) and annual reports from state-owned companies point to the existence of actors such as: cooperatives, family farms, specialized and capitalized farmers, *dragon heads* (leading companies in agriculture industrialization),<sup>5</sup> in addition to large companies (conglomerates) operating from the countryside (from within) and from outside (urban, industrial). Even if the family agricultural production unit remains, according to Zhang and Donaldson (2010) and Zhang (2019), new forms of work organization would be increasingly perceived and a ‘class differentiation’ among peasants.

This process is what has been called in official documents<sup>6</sup> the ‘rural revitalization’ of China, and this articulates an intensification of capital inflow into the countryside through a mechanism focused on increasing profit generation by rural businesses (listed above) and support from the central government with its own agricultural policy instruments for this purpose. Thus, the central government hopes to not only modernize agriculture in terms of productivity and markets, but also to generate (an increase in) income and improve living standards in rural areas. It is important to emphasize that there is a guideline in the two most recent five-year plans for an agricultural sector in the technological frontier of the 4<sup>th</sup> Industrial Revolution, articulated with improving the standard of living of the rural population and alleviating poverty and green agriculture. As a result, China emerges in academic research in agriculture on two axes: one of the new poles of the global agrifood regime and another of the social and environmental transformations that its policy of revitalizing the countryside has led to.

### ***Expansion of the FDI volume from Chinese companies and the performance of the public sector of the host countries***

A liberal agrifood regime perspective is not in the interests of the CPC Central Committee and the SC. However, as highlighted by Gaudreau (2019), market benefits and greater participation of multinationals within a capitalist agrifood system are not excluded. The deepening and expansion of Chinese actors in agrifood markets as global players since 2008 indicates or evidences a change in China’s role in the international agrifood order. The construction of China’s power in agribusiness does not take place in a way that separates the international performance of the Chinese multinational company from the state. While China remains attentive to the goals for Food and Nutrition Security (FNS), in defining its own terms of international power in agribusiness it challenges the notion that the country acts only to export surplus agricultural capital abroad (Gaudreau 2019).

One aspect recognized as belonging to the contemporary international agrifood system is the concentration of multinational companies along the entire production chain, even ‘emerging’ companies such as Chinese ones. Moreover, the state’s role in expanding connections in international agrifood production chains is decisive. Thus, rules and technologies are standardized, generating new forms of power for multinational companies (Schneider 2017).

International competition in agribusiness is also disputed by China with investment (in addition to specific programs, such as subsidies for products and sectors, covering the entire production chain) in strengthening agricultural conglomerates. According to the state-owned Assets Supervision and Administration Commission (SASAC),<sup>7</sup> there were 97 state-owned business conglomerates in 2019 which answer to the central government and represent a good part of the assets of state-owned companies in the country. The objective of consolidating state-owned companies in the domestic market and in the international market has been put in five-year plans and government documents, consisting of restructuring of ownership, but mainly of financing and public investment. According to SASAC data, 41 companies in different sectors have been restructured since the 18<sup>th</sup> National Congress in 2012. Mergers and acquisitions have guided the restructuring process of Chinese companies. According to Xinhua (2020), the assets of state-owned enterprises were strengthened in 2019 with an increase of 7.6% compared to 2018 (CN¥2.8t – approximately US\$407b, in 2018). This means state capital participation in the Chinese industrial sector increased.

The data suggests that the FDI operations of Chinese companies in agriculture carried out between 2006 and 2019 expanded in volume and began to stand out for their sophistication in terms of the agricultural sectors in which they invested and in terms of host countries, as well as in maintaining the strategy of Chinese business conglomerates from other sectors to acquire stakes in companies which had already been established in their countries of origin. In other words, Chinese agricultural companies were seeking to acquire stakes in companies in the sector at different links in the production chain, and not only for access to agricultural products. Table 1 seeks to systematize some of these data from the most prominent companies by transaction volume (in US\$) in the period under analysis.

The China Reform Holdings Corporation and the ChemChina (China National Chemical Corp) are both corporations mentioned together when ChemChina carried out an operation in 2017 to raise US\$20b in perpetual bonds and preferred shares to finance the acquisition of Swiss company Syngenta. The Bank of China (BoC) invested US\$10b in perpetual bonds and China Reform Holdings Corporation financed US\$7 billion also through a perpetual bond.

China Reform Holdings was founded in 2010 under the direct supervision of SASAC and is a Chinese state-owned fund for industries in priority areas for security and the economy. Then, following the provisions of the 12<sup>th</sup> Five-Year Plan, its strategic area of action has been to generate new information technology, and its objectives are: to promote the reform and restructuring process of the state-owned company linked to the central government; assist in improving skills and participate in their IPO transactions; make strategic investments in companies in emerging industries; acquire shares in central state-owned companies within the scope of SASAC; and generally advise directors of central state-owned companies.

The WH Group is a holding company located in Hong Kong, whose subsidiary is Shuanghui Development. The Shuanghui Pig Company was established in 1980 in

**Table 1.** Chinese multinational agribusiness companies: A characterization.

<b>Company</b>	<b>Ownership</b>	<b>Sectors of activity</b>	<b>Observations</b>	<b>Acquisitions or brands</b>
ChemChina – China National Chemical Corporation	State	Chemical industry: basic chemistry, new chemical materials, agrochemicals, rubber processing and petroleum refining	Began in 1964 from a set of small solvent factories. In 2004, the State Council approved the merger of a number of companies in the chemical sector in the country under the control of the Ministry of Chemical Industry. It has four subsidiaries and international operations.	French Adisseo Group, Qenos, Rhodia Global, Eikem, ADAMA, Pirelli, KraussMaffei, Syngenta
WH Group	State	Packaging of meat products, frozen pork and pig-farming activities	Publicly held, WH Group originates from the Henan Shuanghui Investment & Development Co. and consolidated its position as the world's largest pork company with the acquisition of Smith Foods.	Smithfield, Eckrich, Farmland, Armour, FarmerJohn, Margherita, Cook's
CIC – China Investment Corporation	State	Subsidiaries: CIC International Co Ltd, CIC Capital Corporation and Central Hujian Investment Ltd.	Founded in 2007 to foster the diversification of China's foreign currency holdings.	Subsidiaries: CIC International Co Ltd., CIC Capital Corporation and Central Hujian Investment Ltd.
China National Cereals, Oil and Foodstuffs Co –COFCO	State	Grains and oilseeds, sugar, coffee, cotton, transport and distribution	Founded in 1949, it consolidated itself as a publicly traded company in the mid-2000s and as a large agribusiness company in 2016 with the acquisition of Noble Agri. In 2019, it had around 11 000 employees worldwide, assets of CN¥561b and revenue of CN¥471b.	Temasek, Hopu Investment Management, China Investment Corporation (shareholders) COFCO International, COFCO Biochemical, COFCO Sugar, COFCO Grains & Cereals, COFCO Coca-Cola, Mengniu Dairy etc

Company	Ownership	Sectors of activity	Observations	Acquisitions or brands
Bright Foods	State	Distribution of food products and processing, dairy, candy.	It began in 1954 with the action of government divisions from Fengxian, Shanghai to set up farms. It created an exclusive government department to manage these farms between the 1960s and 1970s, which was then transformed into a company in 1994 by the State Council: Shanghai Agriculture Industry and Commerce Corporation. It became a publicly traded state company in 2004 named Shanghai NGS, and then Bright Foods in 2006.	Its four listed subsidiaries are: Bright Dairy & Food Co. Ltd; Shanghai First Provisions Store Co. Ltd., Shanghai Maling Aquarius Co. Ltd., and Shanghai Haibo Co. Ltd.
Legend Holdings	Private <sup>8</sup> Chinese Academy of Science holds around 30%, with Lenovo Group being its best-known shareholder.	Investment and financial portfolio	Founded in 1984 by the Chinese Academy of Sciences, at which time the State Council encouraged research institutes and universities to set up companies.	It has around 20 listed subsidiary companies. Some of them include: Joyvio Group, Better Education Group Corporation, Right Lane Limited.

Source: Authors' own preparation from company reports.

Henan Province, becoming a private company specializing in pig slaughter and processing. The company increased its market share, becoming the largest pork company in the world by acquiring the American company Smithfield Foods in 2013 for US\$4.7b, considered the largest acquisition made by a Chinese company in the agricultural sector, and then changing its name to the WH Group. Smithfield Foods, which operated in China, relied on a pig R&D structure, as well as vertical control of pig farming, with one of the largest installed capacities in the country at the acquisition time with a capacity of 450 pig farms, 933,000 sows and 2.5 million nursery pigs. The company has an organization for integrating the pig production chain in the United States.

ChemChina is a state-owned company established in Beijing, still during the Maoist period, as a company linked to the Ministry of Chemical Industry. It is the largest Chinese company in the chemical industry. Its strategy has been guided by the principle of 'new Science, new future' and operates in six main business sectors covering new chemical materials, agrochemicals, petroleum processing and refined products, rubber, chemical industry equipment and R&D. It is the largest manufacturer of non-patented pesticides in agrochemicals, as well as herbicides, insecticides, bactericides and growth regulators.

The China National Cereals, Oils and Foodstuffs Co (COFCO Group) is the largest Chinese agribusiness company, largest food processor, agro-industry and exporter. Its activities extend to wholesale and storage and port. It is a performance leader in relation to the Chinese agri-food system regarding production, processing, distribution, and export and import. According to Jiamei and Xuanmin (2016), COFCO surpassed large companies such as Bunge in 2015, which put China in a prominent position in the international grain market, as stated by Belesky (2018: 13): 'COFCO is challenging the historical dominance of the northern grain traders and restructuring power relations in the corporate dominated contemporary food regime.' It is a diversified conglomerate specializing in the trade and processing of all foodstuffs, an internationally integrated agrifood chain with accumulated capabilities in processing, manufacturing, logistics and distribution. In addition, it operates in financial services such as commodity futures, regional banking and insurance markets.

Bright Foods, JIC, Shenzhen Donghua Tong was created in 1954 in Shanghai under the name Shanghai Agriculture Industry and Commerce Corporation Group, known in China as Guangming since the 2000s, and is a business conglomerate of the Shanghai municipal government. The Shanghai State Asset Management Committee via document no. 17 approved capital registration of CN¥1.566b in 1995. Then in 2004 via document no. 113, the Shanghai State Assets Supervision and Administration Commission approved restructuring and reorganization of the company, changing its name to Shanghai Agriculture Industry and Commerce Group and increasing its capital to CN¥2.5b (Bright Food 2020).

The company has expanded, and the Bright Foods group has five listed companies, namely: Bright Dairy, Jinfeng Winery, Meilin, Bright Real Estate and Kaichuang International. It is one of the biggest food companies in the world, with annual revenue of CN¥76b. In 2018, the company carried out a large-scale bond purchase operation, becoming the first Chinese company to hold Eurobonds in Singapore. Its international

expansion has been consolidated with subsidiaries in Asia-Pacific countries and through the acquisition of international food brands, as well as food distributors and retailers (Ren 2018). With the growth of meat consumption in China and the pressure for quality, the company started to invest in a network of consolidated brands (Bright Food 2019), and it has become China's most prominent local government business conglomerate in the national state farm system.

China's insertion in the international agribusiness chain has been supported by a national strategy to strengthen a business system which articulates farmers, *dragon heads* and new rural cooperatives backed by direct support from the government (especially the central government). These companies have operations and brands in different fields, from inputs to processed foods, and undergoing expansion in investment, revenue and technology. Although it does not fit into the scope of this article, it is worth mentioning that all of these large multinational companies articulate with the *dragon heads* at the domestic level, which are the new actors considered as being strategic by the State Council to revitalize the rural and modernize agricultural and livestock production in China. As described and analysed by authors such as Schneider and Sharma (2014) and Zhang (2019), these companies establish new market relations in rural China by inducing new forms of interaction between family farmers, such as directly with peasants or with the intermediation of cooperatives.

## **Brazil's role in expanding the agricultural frontier in the legal Amazon<sup>9</sup>**

The agricultural frontier in Brazil has expanded to the north of the country since the late 1990s, deepening towards the Amazon. Deforestation by fires increasingly associated with promoting development in the region, which also exacerbated land conflicts through speculation, gained prominence. According to Fearnside (2001), soybean was introduced in this region in the transition area between the *Cerrado* and the Amazon Forest, becoming a pressure vector for occupying deforested areas from the middle north of the state of Mato Grosso to the west of Maranhão, which constituted the 'Arc of deforestation' since 1996.

Pasquis (2005) describes the expansion process of the soybean crop to the northern region of Brazil as being 'devastating,' given that its production cycle would be comparatively more abrasive than that of crops such as sugar cane and coffee. The international trade in soybeans was already pointed out by Pasquis (2005) as a catalyst for this expansion: soybean cultivation in the early 2000s had advanced more than 2000 km towards the north of the country. Meeting the growing external demand for soy would depend on Brazil expanding crops to the Legal Amazon (Pasquis 2005). Ferreira, Soares and Forline (2005) add government subsidies, the minimum price policy, as well as public investments in infrastructure and logistics in the region as being among the expansion inducers of soybean plantations in the Amazon. These authors believed that soy cultivation would intensify human pressure on Amazonian resources, producing changes in biodiversity.



On the other hand, as assessed by Heredia, Palmeira, and Leite (2010), the Brazil-China bilateral trade pattern being centred on soybeans would not be a unilateral Chinese action. In fact, the intensification of soy production in Brazil was uncritically presented by class entities and the federal government as an ‘engine of national development.’ For example, in a seminar held by Embrapa Soja in 2019, Gazzoni, Cattelan, and Nogueira (2019) concluded that in addition to representing a ‘factor for developing several regions of the country,’ the soy production system would be consolidated and would use technologies which make it sustainable and without putting pressure on forested areas. Even earlier, in the mid-2010s, the expansion of the agricultural frontier was also chosen as a development strategy during the government of former president Dilma Rousseff, including the articulation of rail and road modals, as well as logistics in the north of the country, being deepened to facilitate the flow of exported production – the Arco Norte. The Maranhão Grain Terminal (Tegram), located in Porto do Itaqui, in São Luís (MA), was inaugurated in 2015 with the strategic function of transporting and developing a new agricultural frontier in Brazil (Porto de Itaqui 2015). According to the Maranhão government news agency, the Port handled 25.3 million tons of cargo in 2020 alone (Agência de Notícias 2021).

However, maintenance of the Legal Amazon region under a logic of internationalization and opening has strengthened in recent years. Brazil was at the time of writing under the government of a political group (Bolsonaro government) which has carried out actions at odds with sustainable development – in fact, at odds with anything resembling ‘development’ – in the Amazon region due to a radical agenda of expanding the agricultural frontier and of mining. The mere concern of this government with attracting foreign investment to the detriment of specific measures for the sustainable development of this region is demonstrated by the logic of reducing inspections, deforestation, fires and closing of local projects and programs whose long-term effects could be harmful and go against international agreements, which in turn will prevent the entry of new investments. Scantinburgo (2018), from the comparison between the government plan registered in the Superior Electoral Court (*Tribunal Superior Eleitoral* - TSE) of the previous president with his actions at the beginning of his term for the environmental policy agenda, evaluates an ‘amateur’ perspective of dealing with the environmental issue and setback in terms of the treatment given to this issue since the late 1980s. This amateurism was due to an essential point, namely, that the excessive flexibility of the regulatory apparatus of the environmental issue would start to have reverse effects on the soil and climate dynamics of Brazilian agribusiness by affecting biodiversity and worsen climate change (Scantimburgo 2018).

Some facts can be mentioned. Regarding land occupation, according to the bulletin released by the National Rural Environmental Registry (*Cadastro Nacional Ambiental Rural* – SICAR),<sup>10</sup> maintained by the Brazilian Forest Service, 1.6 million properties were registered until 31 January 2020, in the Amazon biome, corresponding to 220.1 million registered hectares. This corresponds to 16.3% of the total registered properties and 40.5% of the total hectares registered in the Rural Environmental Registry (*Cadastro*

*Ambiental Rural* - CAR), considering all Brazilian biomes – *Cerrado*, *Pantanal*, *Pampa*, Atlantic Forest and *Caatinga*, in addition to the Amazon. No other biome came close to the total number of hectares registered in the Amazon, not even the *Cerrado*, where agricultural activity for grain production is intense. A total of 1 million properties were registered in the *Cerrado*, corresponding to 161 million registered hectares. Moreover, the properties registered in the Amazon biome are massively rural properties: 590 496 rural properties (RUP) were registered until the end of January 2020 against 6864 properties of the agrarian reform settlement type (AST). Registered rural properties correspond to more than 148 million hectares registered in the Amazon, where more than 34 million hectares of these are up to four fiscal modules, more than 89 million over 15 fiscal modules, and more than 25 million between four and 15 fiscal modules.<sup>11</sup> These numbers therefore suggest an expansion of rural activity to this biome centred on large properties.

Altogether, 12% of the properties that grow soybeans in the Amazon and *Cerrado* do not have registrations and two-thirds of the harvest in the municipalities with these properties not registered goes to China and Europe, with a share of 39% and 12%, respectively. Moreover, 33% are destined for the Brazilian domestic market, in which the companies ADM, Bunge and Cargill (United States) plus the Brazilian company Amaggi are the main producers (Hanbury 2019). According to data from the National Supply Company (*Companhia Nacional de Abastecimento* - Conab), the cultivated area, production and productivity of soybeans in Brazil showed a considerable jump between 2000 and 2018: from 1.7 tons per hectare to 3.7; from 50 million tons to more than 200 million tons produced; and from 40 million hectares to more than 50 million hectares with soybean production.

In this context, the main purchasing partner of Brazilian soy, the Chinese government, stated through its minister adviser, Qu Yuhui, that the expansion of (uncontrolled) fires in the Legal Amazon would not be able to affect relations between Brazil and China (Hessel and Cardim 2019). Regarding the agreement, Qu Yuhui limited himself to saying that it is robust and that he expects MERCOSUR to make its trade with China more flexible (Mazieiro 2019). However, according to data from a study carried out by the NGO Imaflora<sup>12</sup> using Trase annual report data,<sup>13</sup> China imports 30% of Brazilian soy production from properties not registered in CAR, while the European Union imports 12%. These data suggest that the flow of soy trade unfolds under motivations which are mainly focused on factors such as food production or animal farming in countries (Hanbury 2019). It would be up to the Brazilian government to regulate and control this process.

However, in October 2019, the Brazilian government sanctioned removal of the deadline for registering sentences for non-adherence to the CAR. Furthermore, measures were launched which allowed mining activity expansion in the Amazon, in addition to installing roads that would cut through the virgin forest, not to mention the approval of using agrochemicals which had been prohibited in this biome (Hanbury 2020). This joint study between Trase and Imaflora found that 2.6 million hectares of soy plantations on unregistered land are located in the Amazon and *Cerrado*. Of the land destined for soy production in the Legal Amazon, it is worth mentioning that 88% are

registered according to this study. Such conclusions were released in November 2019, amid all the neglect of the federal government in relation to this issue.

Still in this context of setbacks, the Economic Affairs Committee (*Comissão de Assuntos Econômicos* - CAE) and the Agriculture Committee approved a bill in December 2019 (2963/2019) which facilitates land acquisition by foreign individuals and legal entities, as well as its lease. The project was approved in the Federal Senate in December 2020, and is now awaiting a vote in the House. The bill revokes the law that regulates acquisition of rural property by foreigners (Law 5709/1971) by providing for some restrictions for this type of transaction, namely: limitation of the dimensions of the areas that can be acquired and a prior authorization requirement of the National Institute of Colonization and Agrarian Reform (*Instituto Nacional de Colonização e Reforma Agrária* - INCRA). Thus, an understanding of the 1990s is resumed, when the Brazilian governments of the time proceeded to measures of a neoliberal character. During this period, the Attorney General's Office (AGU) issued opinions authorizing Brazilian companies under foreign control and foreign companies with Brazilian capital to acquire land without having to comply with these requirements. In 2010, the AGU had revised these opinions and resumed the legal understanding of 1971, limiting the access of foreigners to Brazilian lands.

The perspective for the Amazon was even more evident in President Jair Bolsonaro's speech at the opening session of the United Nations General Assembly in 2019. At that moment, in the midst of the fire catastrophe in the Amazon, the president preferred to declare an attack on the Amazon indigenous leaders (El Tricontinental, 2019<sup>14</sup>), although the Amazon constitutes one of the three existing areas in the world of forest reserve that regulate regional ecosystems (Houtard 2015). Among the functions of the Amazon raised by Nobre (2014) are the 'green ocean' which represents maintaining air humidity, regulating rainfall, conserving a hydrological cycle, and preventing desertification. On the other hand, degradation of the Amazon rainforest is a process which has not started in recent years. According to Houtard (2015), deforestation of more than 760,000 km<sup>2</sup> was recorded in 2013 alone.

Considering that the Amazon permeates other South American countries, cooperative actions between these countries could be a path to regulation within the scope of sustainable development in the region. Along these lines, there is a range of regional agreements in South America for the preservation and conservation value of the Amazon but which have not been respected. The Amazon Cooperation Treaty (*Tratado de Cooperação Amazônica* - TCA) was signed in 1978 and its main objective is to promote the harmonious development of the region and the well-being of local populations. Decades later, in 2000, the South American Regional Infrastructure Initiative (*Iniciativa para Infraestrutura Regional Sul-Americana* - IIRSA) and the South American Infrastructure and Planning Council (*Conselho Sul-Americano de Infraestrutura e Planejamento* - COSIPLAN) turned to the Amazon with measures to promote investments in infrastructure and logistics.<sup>15</sup> Furthermore, the Chinese national government has financed many infrastructure investment projects in the Amazon within the IIRSA-COSIPLAN in axes

with outlets to the Pacific or the north of South America, facilitating the flow of its imported commodities. In addition to IIRSA-COSIPLAN, the *Arco-Norte* project, which encompasses a large part of the Brazilian states to the north, which Rodrigues (2018) highlights is a project in line with the interests of agribusiness and the infrastructure business sector which ensures and organizes conditions for the construction of railways, waterways and port facilities. These are both initiatives aimed at directing the insertion of the Amazon – not only on the Brazilian side – into a logistics consortium for the flow of goods, in which China is the main trading partner and important provider of those investments.

However, investments by Chinese companies in infrastructure in the Amazon have been directed to Brazil, in the Legal Amazon. Thus, a new infrastructure project is planned to be built by Chinese investors to connect the southeast region of Pará to the port of Barcarena, the *Ferrovía Paraense* and *Ferrogrão*, which will link Mato Grosso to Itaituba. According to the Reserved Report (2019), in November 2019, the *Cerrado* railroad project would have been put into motion through negotiations between a group of Chinese investors and the government of Mato Grosso. Its costs are estimated at R\$7b and at a length of 680 km, in a logistical corridor to transport grain production from the Mato Grosso municipality of Alto do Araguaia and connecting with the Centro Atlântica railroad, in Uberlândia. The *Ferrovía Paraense* project with a route of 515.02 km, another project under the responsibility of the state government and with Chinese investors, has an estimated budget of R\$14b.

The critical environmental context experienced by the Legal Amazon must be taken from the Brazilian insertion strategy in soy export to international markets. As Angelo (2018) recalls, a large part of the infrastructure megaprojects in the Tapajós basin are articulated by the interests of large agribusiness groups – in addition to the traditional Cargill, Dreyfus, and Bunge, the Chinese COFCO International has increased its participation. Convention 169<sup>16</sup> of the International Labor Organization (ILO) regarding indigenous peoples is not observed in these projects. Schreiber (2020) systematizes the result of the report by the Articulation of Indigenous Peoples of Brazil (*Articulação dos Povos Indígenas do Brasil* - Apib) and the NGO Amazon Watch in which nine multinational companies would be accused of causing harm to the indigenous peoples of Brazil – companies such as: BlackBlock (fund manager), Bank of America, Vale, Anglo American, and Cargill, among others. Houtard (2015) listed the economic exploitation ventures that advanced in the Amazon in soy monocultures as a way to guarantee and strengthen a modern agricultural standard, such as hydroelectric plants (project on the Madeira River, Belo Monte on the Xingú River), illegal logging and road infrastructure construction works.

The links in the higher value-added soy production chain in Brazil and South America continue to be controlled by multinational companies, in addition to the Brazilian company Amaggi. According to Traser (2018), only six companies – 0.24% of the total agricultural commodity traders operating in the region – were responsible for the export of 57% of soybean exports in Brazil in 2016. COFCO International exported 3.4 million tons in 2016, rapidly increasing its scale and influence in Brazil. Multinational

**Table 2.** China and agriculture: evolution of investments announced in Brazil in US\$ million (2013–2017).

Year	Investor	Total of the transaction	Size of the participation	Other part
2013	COFCO	320	–	–
2014	COFCO, Hopu Investment	750	–	Noble Agri Limited
2016	Shanghai Pengxin	290	57%	Fiagril Participações
2017	Shanghai Pengxin	250	–	DKBA
2017	CITIC-led fund	1100	–	Dow

Source: The authors based on the China Global Investment Tracker.

companies differentiate themselves in vertical integration with a network of silos and infrastructure, thereby crushing smaller units installed in the country.

## Evolution of investment and trade in agribusiness in the legal Amazon – Chinese perspective

The acquisition by the Chinese company Hunan Dakang of the Shanghai Pengxin group of 57% of Fiagril Participações in 2016 stirred discussions on the mechanisms used by the Chinese to enter the Brazilian soy market. Escher and Wilkinson (2019) reinforce that this transaction, as well as the other transactions raised to compose Table 1, expose the growth in the participation of Chinese companies in a market that was mostly being occupied by companies from the North Atlantic. The Shanghai Pengxin group bought 53.99% of Belagrícola in 2017, which operates in the marketing of grains and inputs whose transaction value would not have been disclosed (Belagricola 2017). However, data from China Global Investment Tracker indicate that the Shanghai Pengxin group acquired DKBA – which would already be part of this conglomerate – for US\$250m. Of the companies listed in Table 1, COFCO International, branch of the COFCO Group, state-owned multinational company that stands out in terms of the FDI volume carried out in agriculture in Brazil (Table 2), considering that it is one of the largest grain companies in the world.

Oliveira (2015) lists a series of Chinese grain companies and agro-industries in general which operate in Brazil and South America. COFCO International initially acquired stakes in cofco – the largest trading company in the Netherlands and the agro-industrial arm of the Noble Group – and more recently took over 100% (Barros 2016) of Nidera, expanding its operations in Brazilian agribusiness<sup>17</sup>. Nidera and Noble have assets in Brazil, Argentina, Australia and the Black Sea. According to the COFCO website, its international operations are in grain production, storage, processing and distribution and commercialization, in addition to transport.

**Table 3** – China and agriculture: evolution of investments announced in Brazil in US\$ million (2013–2019).

Year	Investor	Total of the transaction	Size of the participation	Other part
2013	Xugong Construction Machinery	200	100%	Greenfield
2017	China Communications Construction Company	100	80%	Concremat
2017	China Communications Construction Company	240	51%	–
2018	China Energy Engineering	190	100%	Sistema Produtor
2019	China Communications Construction Company	220	100%	Greenfield

Source: The authors based on the *China Global Investment Tracker*.

The data in Table 1 show the internationalizations by mergers and acquisitions. For agribusiness, it is a way to enter the international market of branches which have consolidated brands, such as for seeds, and diversification into links with higher added value. Associated with this investment is that in infrastructure and logistics to avoid incurring higher costs in the transportation of soy imported from Brazil, taking advantage of existing facilities. The main mergers and acquisitions transactions carried out by Chinese companies in agribusiness focused on companies in the United States and European countries<sup>18</sup> (Zhang 2019). No FDI transactions were carried out by Chinese agribusiness companies in Brazil between 2018 and 2021 according to the database consulted. However, the number of FDI transactions by Chinese companies in infrastructure focused on outflow logistics of grains imported by China from Brazil increased during this period (Table 3).

Wegner and Fernandes (2018) pointed out that in addition to Chinese FDI constituting mergers and acquisitions, it had been predominant since the mid-2010s in sectors such as infrastructure. In the case of the object of this article, it can be evaluated that under the facilitation of mismatched measures by Brazilian governments, China constitutes a logistical system for the flow of grain production produced in Brazil. The data in Table 3 suggest most of the transactions surveyed between 2013 and 2019 were of the new investment type (greenfield) and, with the exception of China Energy Engineering, of state-owned companies.

The transactions described in Table 3 have been aimed at Brazilian companies or undertakings underway in the region that comprises the Legal Amazon, intensifying their economic exploitation. Chinese multinational infrastructure and agriculture companies operate under an interlinked strategy, as evidenced by an opinion paper by Li and Chang (2017) in which the authors, employees of China Communications Construction Company (CCCC) and COFCO International, issued an assessment of the conditions of Brazilian infrastructure in the Legal Amazon, in which they highlight an existing contradiction between the high supply and demand for transporting grains (soybeans, in particular) which lead to their increase in price, and the plans for a ‘trend of development

**Table 4** – Amazon: evolution of the exported value of soy from 2012 to 2019 (FOB, in US\$ million)

State (UF)	Route	2012	2013	2014	2015	2016	2017	2018	2019
Mato Grosso	Maritime	3597.96	4722.75	4572.29	3570.24	3354.64	4340.22	4950.24	4210.76
Pará	Maritime	15.79	34.42	48.51	93.41	96.19	192.70	306.61	267.14
Mato Grosso	Undeclared route	0.00	0.00	0.00	0.00	0.00	0.00	7.75	83.44
Mato Grosso	River	0.00	39.48	48.60	0.00	173.56	113.73	72.71	56.23
Pará	Undeclared route	0.00	0.00	0.00	0.00	0.00	0.00	0.21	6.89
Pará	River	0.00	0.00	1.70	0.00	30.58	19.05	12.27	0.00
Exportation total to China		11880.05	17145.72	16615.10	15787.79	14386.11	20310.21	27233.07	20452.34
Total Soy exportation		17235.12	22805.76	23273.06	20981.83	19327.39	25712.17	33046.71	26071.76

Source: The authors based on COMEX-STAT-MDIC data.

of the northern passage’ which is referring to the *Ferrogrão*, *Arco Norte* projects, and the association between the large international grain trading companies.

The Amazon biome has been increasingly used to dispose of soybeans acquired by China from agricultural properties located in Brazil, both in the Amazon biome and in the *Cerrado*. Investments by Chinese companies in agribusiness is a strategy to have access to the logistics installed in Brazil that the acquired company has; for example, *Fiagril* had a considerable logistics network in the *Cerrado* (Escher and Wilkinson 2019) and induces foreign companies to invest in infrastructure to monitor the need to dispose of soybeans. The *CCCC* stood out in the construction of a national production flow corridor to the point of creating the *CCCC South America* for the construction of ports in *Miritituba Vila do Conde* and *Itaqui*, in *Pará* (Escher and Wilkinson 2019). According to the company’s annual report *CCCC (2021)*, the company had 18 projects in South America that totalled *CNY5b* in 2020, constituting around 7% and 2.4% of its total portfolio, approximately. Another relevant company is the *China Railway Construction Corporation*, which in 2014 signed an agreement with *Camargo Corrêa* for the possible construction of railways – such as the *Bioceânica* – in addition to agreements with the Brazilian government of the state of *Mato Grosso (Relatório Reservado 2019)*.

Although many of these investments in infrastructure for grain transportation (soybean) occur within the scope of the *UF (Unidade Federal* or states in Brazil), this expansion is allowed by the federal government and by the state governments of the affected *UFs*, also without much planning or control. The first large company to start building ports in this region was *Bunge* in 2014, in the *Miritituba-Barcarena* binary logistics integration with a capacity of 4 million tons and using the *BR-163* highway. Brazil adhered to *Convention 169* of the *International Labor Organization* by which communities must be publicly consulted before implementing or carrying out projects that generate impact, as well as the *Territorial Rights* guaranteed by the 1988 Constitution and strengthened with the *National Development Policy Sustainable Development of Traditional Peoples and Communities (Aguiar 2017)*. According to the leaders of tribes such as the *Mundurucus*, the *Cianporte* construction via of the *Turia River* took place without them being heard.

According to the Public Ministry of Pará, not even environmental licensing was required by the state secretariat for the environment. In addition to Pará, Amapá has one of the final points of the soy outflow waterway, located near Porto de Santana, coexisting with the risks of port undertakings, in which terminals are overloaded with soy daily.

In December 2017, the government of Mato Grosso and COFCO International signed an agreement to invest in this state (Teodoro 2017). In the protocol of intentions, it was agreed that the government of the state of Mato Grosso should complete 100 km of asphalt to the port of Miritituba to transport the soy produced and purchased. In turn, COFCO International will double its investments in soybean crushing in the municipalities of Itiquira (the company has plants in Rondonópolis and Sorriso), including doubling the shipment of soybeans to China from 3.5 million tons to 7 million. New investments in storage are planned in contiguous municipalities.

Brazil's Waterways (*Hidroviás do Brasil*<sup>19</sup>), which operates the Midwest grain shipping route, signed an agreement with COFCO International in 2018 with a contract lasting until 2031. Prior to that fact, the multinational companies Nobli Agri, Nidera and Multigrain announced in 2016 the definitive establishment of grain shipping routes through the Amazon basin, with the terminals being built by *Hidroviás do Brasil*. COFCO International is the parent company of Nobli Agri and Nidera, while Multigrain is controlled by the Japanese Mitsui.

For the Brazilian part, especially the *Arco Norte* project has revealed significant consequences. The Transoceanic route, the Paraense and Ferrogrão railroads – which will link the states of Mato Grosso and Pará – and the West-East Integration Railroad are some examples. At a conference held in March 2021, the Brazilian Minister of Infrastructure stated that *Ferrogrão* is one of the Ministry's main projects, as well as raising funds through auctions for airport concessions and the West-East Integration Railroad (*Ferrovía de Integração Oeste-Leste - Fiol*) in Bahia (Ministério da Infraestrutura 2021). The Chinese company CCCC, already mentioned in this article, is the company that would be at the forefront of these projects. Its participation in the Brazilian infrastructure sector grew from 2016 when it acquired 80% of the engineering company Concremat, and, in the following year, 51% of a private terminal in the port of Porto do Itaqui (MA), which were being carried out by Concremat. In 2019, it was estimated that the CCCC would maintain a portfolio of 26 infrastructure investment projects in Brazil, totalling an investment of R\$102b to be executed in a period of 10 years (Exame 2019). The announcement by the CCCC that it would participate in the auction for the concession of *Ferrogrão* was carried out in 2017, and since then, even without its participation having taken place, the expansion of CCCC's participation in investments in infrastructure in modalities linked to the flow of grains has been consolidated in Brazil. Abdenur, Folly e Santoro (2021) assess that investments by Chinese companies in railroads in the Legal Amazon are a source of learning for both parties regarding the definition of regulation and inspection, as well as monitoring the rules and risks of enterprises.

Chinese agribusiness companies have not only invested in infrastructure. Hunan Dakang Pasture Farming, a unit of the Chinese group Shanghai Pengxin Group, invested around US\$200m in the acquisition of 57% of the shares of Brazilian grain processing



and trading company Fiagril Ltda. in 2016. The investment has soybean and corn areas as its main interest and is located in Lucas do Rio Verde, Mato Grosso, according to the China-Brazil investment report (Angelo 2018). In late 2017, Chinese group Citic Agri Fund Management purchased the corn seed operation of Dow Agro Sciences Sementes e Biotecnologia Brasil for US\$1.1b. This new company, renamed LP Sementes, holds about 20% of the national market for corn seeds. Yuan LongPing High-tech Agriculture – a subsidiary of the Citic Agri Fund – is the seed market leader in China and the global leader in hybrid rice seeds, with the transaction gaining access to the corn germplasm bank in Brazil. However, even these transactions contribute to pressure the expansion of investments in logistics infrastructure for soy transportation in the Legal Amazon.

Trade between countries in *in natura* soy continues to maintain the known pattern. The growth of Brazilian soy imports by China is remarkable, as indicated by the data in Table 4. These data were collected and tabulated with attention to the routes and Federative Units of soy production flow to China, which resulted in data only for 2012 onwards, although the parameters in the search were defined with the initial year 2008. The average proportion of Brazilian soybean exports in FOB values to China from 2012 to 2019 was 76% of the total soy exported by Brazil. Mato Grosso is the main way of Brazilian soy leaving for China, representing 20% of what is exported. This proportion began to decline in 2016 with a clear increase in soy output from the state of Pará by sea. Although the export echoed by the state of Pará is considerably lower compared to the value exported by Mato Grosso, its growth has been highlighted: from US\$15m in 2012 to US\$267.14m in 2019: respectively 0.13% and 1.31% of the total value of soybeans exported to China. The waterway is more erratic through both Mato Grosso and Pará; still, it stands out for Mato Grosso in 2016 and 2017.

The data in Table 4 indicate a diversified trend of the flow channels of soybean produced in Brazil to China by Brazilian states of the Amazon biome. This reinforces the role of infrastructure works designed, built or in progress from Chinese investors. The maritime route through Mato Grosso presupposes a route by land road, exposing the relevance for the soy trade between Brazil and China of the newly built or designed highways. Thus, the data suggest that all investment by Chinese companies in agribusiness is accompanied by infrastructure investments.

Such movements have transformed the economic and social conformation of the northern region of Brazil. Ships or convoys in which tons of soy are stored, cross the rivers in the state of Pará, which has produced significant changes in the environment and affect the local population, such as waves that make water invade the houses on stilts. This scenario became possible from the creation of the *Arco Norte* with the export of soybeans in grains flowing through the ports of the Amazon basin increasing between 2017 and 2018 by 28% (Reed and Fontana 2019). The logistical interest in transporting soybeans through the Amazon is justified by the lower costs it represents, as the distance to travel to leave by sea is shorter than in the Midwest, and by the increase in Brazilian exports of this grain to China since the intensification of trade grievances between China and the United States in 2018.

This movement has unleashed demographic pressure due to the arrival of workers from other regions of the country on the UFs which compose the Amazon biome, especially Pará. Moreover, it is an expansion of urbanization with the construction of new roads and intensification of vehicle traffic. Indigenous villages have been impacted by the construction of new ports along the rivers, especially by affecting fishing activity when trucks arrive which are unloaded of soy to supply silos. The exodus of rural residents and indigenous people to urban areas is also not ruled out.

## Final considerations

China constituted a complex network of public ownership and industrial policy tailored to the private sector throughout the 1980s. Then throughout the 2000s and 2010s, government guidelines began to focus on agriculture modernization, and the construction of multinational agribusiness companies was strengthened starting from 2008.

The expansion of cultivated area largely serves the Chinese appetite for agricultural commodities, in particular, soy, which has Brazil as the largest producer and China as its largest global consumer. Moreover, as discussed in this article, the Legal Amazon contributed to the supply of *in natura* soy whose Chinese demand occurs, as is well known, due to animal feed whose processing takes place considering the period analysed herein in China itself. While its imports of *in natura* soybeans from Brazil expand, there is also an increase in the grain levels produced since 2004 and in the mechanization of the sector, as well as in the use of fertilizers.

However, the consequences of Chinese FDI on the region are ambiguous. The country cannot do without investments in infrastructure, as they are fundamental for economic development in the region. The negative consequences on native peoples are real, but they could have been lessened if the Bolsonaro government did not act deliberately to dismantle the supervisory bodies.

## Notes

- 1 The use of information and communication technologies in the country's agriculture is a goal of its recent five-year plans.
- 2 If we make a proportion between exported value in US\$FOB (Free on board) and exported kilograms in 2012, we will find the ratio of 0.53 value/quantity exported to China, then 0.34 in 2020, and 0.43 until the month of June 2021. Even with the increase in the international price of a bag of soybeans in 2021, the ratio of 2012 has not yet been exceeded. On the other hand, the increase in the quantity, in kilograms, exported in 2021 is more than 200% higher than that exported in 2012 (data from the Comex Stat database of the MDIC).
- 3 Throughout 2019, the reduction of the swine herd in China due to the swine flu impacted its imports of *in natura* soy processed in the country to become feed for the herds. According to U.S. Department of Agriculture (USDA), China is the fourth largest producer in the world, but the largest consumer. The pig herd has increased as announced by China's Ministry of Agriculture and Rural Affairs (MARA); in addition, China's State Council has recommended processing companies to increase their stock, in part due to reforms in the country's minimum price policy. The US-China trade dispute has boosted the Asian country's strategies in relation to Brazil. For a better understanding of the effects of the new coronavirus pandemic on China-Brazil agribusiness trade relations, we recommend reading Schneider et al. (2020).

- 4 The mention of leading companies in the industrialization of agriculture in China appeared in official Chinese documents for the first time in 1998 (Zhang 2019), when the need to increase agricultural productivity, increase the income of the rural population, among other aspects, were projected as goals of the State Council and the CPC Central Committee. China's leading agricultural industrialization companies are a relative innovation in the Chinese system and have been responsible for capitalizing on this country's traditional agriculture. The role assigned to leading companies in the contemporary modernization of China's agriculture is to deepen productive (vertical) integration, increase farmers' market access, promote value addition to agricultural products, as well as increase productivity and erect a minimum purchase by the market pricing system, guaranteeing a given return to the farmers. Furthermore, the leading company has access to some benefits to play this role, such as: preferential access to subsidized loans and subsidies for production, marketing and access to agricultural inputs (Zhang 2019).
- 5 In all documents, such as CPC Work Reports and central government Budget Reports, 'rural revitalization' is used to refer to China's agricultural and rural development policy. One of the highlights came during the 19<sup>th</sup> CPC National Congress when President Xi Jinping hailed rural revitalization as having much to contribute to the nation's revitalization. One can also cite the report released by the Ministry of Agriculture and Rural Affairs (MARA) and the National Development and Reform Committee (NDRC) and 25 other ministries – 'Report on Implementation Achievements of Rural Revitalization Strategic Planning (2018-2019).'
- 6 Large state-owned enterprises (SOEs) were taken by the central government as instruments for expanding public investment in China and for internationalization in strategic sectors. The country's international leadership is a project also spearheaded by multinational companies, which is reflected in the country's competition pattern as in the 4<sup>th</sup> Industrial Revolution, for example.
- 7 Careful consideration needs to be given to the designation of 'private' for Chinese multinationals. In China, the State Council exercises strict control over these companies, which is unthinkable in the Western world.
- 8 According to information extracted from the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística* – IBGE), this is the 'area of action of the Superintendence for the Development of the Amazon (*Superintendência de Desenvolvimento da Amazônia* – SUDAM), delimited in accordance with Art. 2 of Complementary Law no. 124, of 01.03.2007. The region is made up of 772 municipalities distributed as follows: 52 municipalities in Rondônia, 22 in Acre, 62 in Amazonas, 15 in Roraima, 144 in Pará, 16 in Amapá, 139 in Tocantins, 141 in Mato Grosso, as well as by 181 Municipalities in the State of Maranhão located to the west of the 44th Meridian, of which 21 are partially integrated into the Legal Amazon. It has an approximate surface of 5,015,067.75 km<sup>2</sup>, corresponding to about 58.9% of the Brazilian territory.' Cf. <https://www.ibge.gov.br/geociencias/cartas-e-mapas/mapas-regionais/15819-amazonia-legal.html?=&t=o-que-e>
- 9 SICAR is an electronic public record of national scope which is mandatory for all rural properties and seeks to represent a database for control, monitoring, environmental and economic planning and combating deforestation. The CAR integrates environmental information on rural properties and possessions in Environmental Preservation Areas (EPAs), with restricted use, Legal Reserves, forest remnants and other vegetation forms.
- 10 Fiscal module is a unit of measurement in hectares. Its value is set by the National Institute of Colonization and Agrarian Reform (INCRA) for each municipality. The fiscal module value in Brazil is from 5 to 110 hectares.
- 11 Imaflores is a non-governmental organization created in 1995 dedicated to environment conservation through solutions considered innovative by the NGO, and which aim to combine production and conservation, benefits people and the environment, as well as to reduce gas emissions.
- 12 Trase annual report data is a partnership between the Stockholm Environmental Institute and Global Canopy in collaboration with the European Forestry Institute, Vizzuality and other partners. The 2018 Yearbook was produced in partnership with *Université Catholique de Louvain*, among others. This yearbook was called: 'Sustainability of production chains: risk of deforestation in Brazilian soy exports.'
- 13 According to the Tricontinental Institute, the actions of the Jair Bolsonaro government to harm the environment can be systematized as follows: weakening of regulatory agencies, such as the Brazilian

Institute of Environment and Natural Resources (*Instituto de Meio Ambiente e Recursos Naturais - IBAMA*) through significant budget cuts, weakening of legal provisions via the National Congress with bills that eliminate areas of environmental protection, for example, co-opting the Amazon Fund created in 2008, making its resources destined for ruralists and weakening land protection, and, according to the Institute, encouraging territorial disputes over land.

- 14 For a more in-depth comparison between these two moments, we suggest reading Wegner and Fernandes (2018).
- 15 Approved in 1989, Convention no. 169 of the ILO is an international treaty adopted at a conference of that organization held in the same year. It is about recognizing the rights of indigenous and tribal peoples in the ILO member states, and it is up to the governments of these countries to protect these rights. The Convention recognizes the rights of indigenous peoples to land and natural resources, as well as defining their priorities for development. It seeks to overcome discriminatory and oppressive practices against indigenous peoples and ensure that they participate in decision-making channels in measures that affect their lives. More information at: [ilo.org/brasilia/noticias/WCMS2781508/lang-pt/index.htm](http://ilo.org/brasilia/noticias/WCMS2781508/lang-pt/index.htm)
- 16 China's entry into the soybean production chain has represented a transformation in the traditional pattern of grain intermediation. See Wesz Júnior (2014).
- 17 These transactions would be: ChemChina which acquired Syngenta, Shuangui, Smithfield Foods from the United States, China Investment Corp., Uralkali from Russia, COFCO International and Nidera from the Netherlands.
- 18 Company of integrated logistics solutions, which was born from a startup financed by the Pátria Investment Fund. *Operação Norte* (North Operation) is one of the central projects and is focused on the flow of commodities from the centre west of Brazil through *Arco Norte*, creating a new route for this purpose. It operates in all modes: road, terminal, river and cabotage. Available at: <http://hbsa.com.br/projetos-logisticos>. Accessed in April 2020.

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# Expansão dos investimentos de empresas chinesas na Amazônia brasileira – O caso do agronegócio

**Resumo:** Esse artigo objetiva sistematizar e analisar a expansão dos interesses chineses no agronegócio em direção à Amazônia brasileira. Apresenta-se um cenário de recursos naturais possíveis de exploração na Amazônia sul-americana para em seguida se discorrer sobre as mudanças na condução da exploração econômica da Amazônia brasileira, desde o governo Bolsonaro. Optou-se por esse recorte em função do aumento do fluxo de comércio de soja do Brasil para China, bem como de investimento externo direto de empresas chinesas nesse setor, concentrarem-se no Brasil, além dos investimentos em infraestrutura para escoamento do grão, na Amazônia.

**Palavras-chave:** Amazônia Legal; expansão da fronteira agrícola; China IED; Agronegócio.

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