

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/321111368>

Brazil and China: the agribusiness connection in the Southern Cone context

Article in *Third World Thematics A TWQ Journal* · September 2016

DOI: 10.1080/23802014.2016.1259581

CITATIONS

18

READS

539

3 authors, including:



John Wilkinson

Federal Rural University of Rio de Janeiro

90 PUBLICATIONS 2,225 CITATIONS

[SEE PROFILE](#)



ANNA R.M. LOPANE

Federal Rural University of Rio de Janeiro

2 PUBLICATIONS 18 CITATIONS

[SEE PROFILE](#)

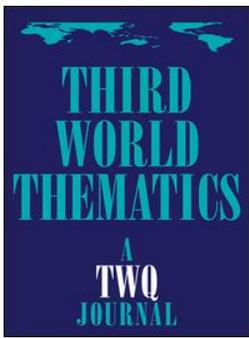
Some of the authors of this publication are also working on these related projects:



Economic Sociology [View project](#)



Insects Atlas [View project](#)



Brazil and China: the agribusiness connection in the Southern Cone context

John Wilkinson, Valdemar João Wesz Junior & Anna Rosa Maria Lopane

To cite this article: John Wilkinson, Valdemar João Wesz Junior & Anna Rosa Maria Lopane (2016): Brazil and China: the agribusiness connection in the Southern Cone context, Third World Thematics: A TWQ Journal

To link to this article: <http://dx.doi.org/10.1080/23802014.2016.1259581>



Published online: 24 Nov 2016.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)

Brazil and China: the agribusiness connection in the Southern Cone context*

John Wilkinson, Valdemar João Wesz Junior and Anna Rosa Maria Lopane

Graduate Center: Development, Agriculture and Society (CPDA), Rural Federal University, Rio de Janeiro, Brazil

ABSTRACT

This article explores the ways in which the Brazil–China axis is reshaping patterns of trade and investment in soy and related commodities. On the Brazilian side, we are particularly interested in the characteristics and dynamics of the models of investment and farming on the soy frontier. China’s extensive interests in Brazilian soy provide a privileged perspective to analyse the different ways in which it is trying to reshape the dynamics of global agricultural commodity trading. We also incorporate insights from China’s involvement in other Southern Cone countries, particularly Argentina. We explore the hypothesis that the scale of China’s food and raw material demands even at low levels of import dependence have led it to adopt ‘more-than-market’ strategies of control which raise important questions for existing patterns of world agricultural trade.

ARTICLE HISTORY

Received 30 May 2016
Accepted 19 October 2016

KEYWORDS

Brazil
China
agribusiness
soy market
ABCD firms

Introduction

In this paper, we analyse the evolution of trade/investment and diplomatic relations between Brazil and China, focusing on agricultural resources and food, and extending the analysis to the Southern Cone countries¹ as a whole in our discussion of the soy and meat sectors. We draw attention to the contrast between the suppositions of parity in diplomatic interests and the deepening of ‘neo-colonial’ trade and investment patterns. China’s current development strategies, as previously in the cases of Britain, Continental Europe and Japan, are geared toward ensuring supplies of a broad range of raw materials, both extractive and agricultural. Food security concerns, however, are central and become increasingly so as China’s per capita income advances and urbanisation accelerates. The scale of even small levels of food and raw material dependence, especially in today’s volatile conjuncture, makes China’s exclusive reliance on world markets and trade increasingly problematic. While China’s strategies to ensure resources are global, Brazil and the Southern Cone have become central to the supply of grains and meats for the dietary transition, along with cotton, pulp and tobacco. We explore China’s initiatives in this region to move towards hands-on control over the supplies of these resources, involving investments in land, long-term contracts, joint-ventures, direct investments, the promotion of infrastructure and logistics, and more recently the transformation of COFCO² into a global trader. In the shift away from policies of food

CONTACT John Wilkinson  jhn.wlksn@gmail.com

*Article initially prepared for the BICAS Small Grants Award. This version updated and expanded.

and raw material self-sufficiency, China initially limited its perspective of dependence on outsourcing to specific non-food and feed products. As China's dietary transition deepens, its dependence on global supplies becomes more far-reaching. Brazil and the Southern Cone, given their centrality in feed grains and meats, are privileged arenas for investigating the 'more-than-market' strategies currently being developed by China to ensure its food security. Our central hypothesis, therefore, is that the scale of China's food and raw materials demands, even at low levels of import dependence, are leading this country increasingly to adopt 'more-than-market' strategies for controlling these resources which raises important questions for existing patterns of world trade.

Evolving economic, diplomatic and geopolitical relations: China and Brazil

In April 2015, the Brazil–China Business Council published a special issue to celebrate 40 years of diplomatic relations between the two countries, which was initiated in 1974.³ In the 1970s and 80s, the terms of trade were determined by Brazil's more advanced industrial structure, exporting intermediary manufactured products from its steel and petrochemical industries in exchange for petroleum. Nevertheless, by the 1990s, current patterns of trade were already in evidence as more than half (56% in 1991) of Brazil's exports earnings came from iron ore and soy oil, with imports from China increasingly concentrated on cheap final consumer goods reflecting China's rapid industrialisation.

Economic cooperation was woven into and highly influenced by the consolidation of diplomatic ties formalised on China's initiative, as a 'Strategic Partnership' in 1993. On both sides, the convergence of diplomacy, trade and investment was stimulated by the centrality of state-owned enterprises and/or firms centrally involved in public investment programs.

Between 2004 and 2013 (Figure 1) trade flows exploded, rising from USD 9 billion to over USD 80 billion, an average annual growth of 30%. China's exports shifted from cheap final consumer goods to machines, equipment and electronic goods, whereas some 75% of Brazil's exports consisted of iron ore and soybeans, with other basic commodities (cellulose, petroleum) making up the remainder.

Trade was increasingly accompanied by direct foreign investment on the part of China, amounting to USD 56.5 billion in announced investments between 2007 and 2013, as it

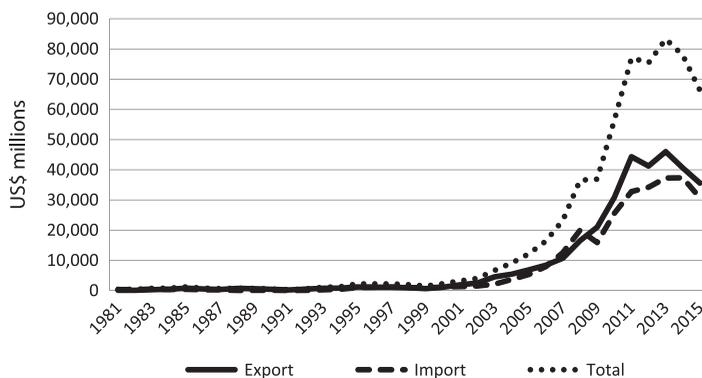


Figure 1. Trade Brazil–China 1981–2015. Source: MDIC (2016).

entered telecommunications, petroleum, transport and the automotive industry.⁴ Brazilian investments in China have been largely firm-specific and sporadic.

Since 2009, China has become Brazil's leading trade partner both for imports (17, 9%) and for exports (18.6%).⁵ The contrary, however, is not the case – with Brazil accounting for only 3% of China's imports and 1.5% of its exports. In the 1970s, the two countries had similar sized economies, with Brazil having a more advanced industrial base.⁶ Forty years later, China's GDP grew six times that of Brazil and accounted for 11.7% of total global trade, compared to 1.3% in the case of Brazil.⁷

Brazil and much of Latin America have become strategic natural resource suppliers for China's economic growth. It is important, however, to distinguish between the different components in China's demand – minerals, petroleum and biomass. This article is primarily concerned with agricultural-based resources. While China has been heavily dependent on mineral extraction imports, agricultural resource dependence is quite selective, China has exhibited a surprising level of agricultural, and particularly food self-sufficiency during these decades of accelerated economic expansion (Figure 2).

Over the last 20 years, China's imports of agricultural products have represented just 7% of its total imports. With total agricultural imports of over USD 80 billion, China exports around USD40 billion in agricultural products and is a leading exporter of fresh and processed fruit and vegetables, particularly to the US, Japan and Europe.⁸ The imports are heavily concentrated in feed and raw materials (soy and cellulose, timber, cotton and tobacco). While exhibiting global concerns for raw material and food provisions which are reminiscent of those of England and Japan, when these countries experienced their industrial take-off, what is exceptional about China is its high degree of agricultural and especially food self-sufficiency. Nevertheless, the scale of its demand means that proportionately moderate imports can have a decisive impact on world trade. For this reason, concerns for food security are leading China to trade agreements and investments strategies that aim to minimise the risks of world trade.

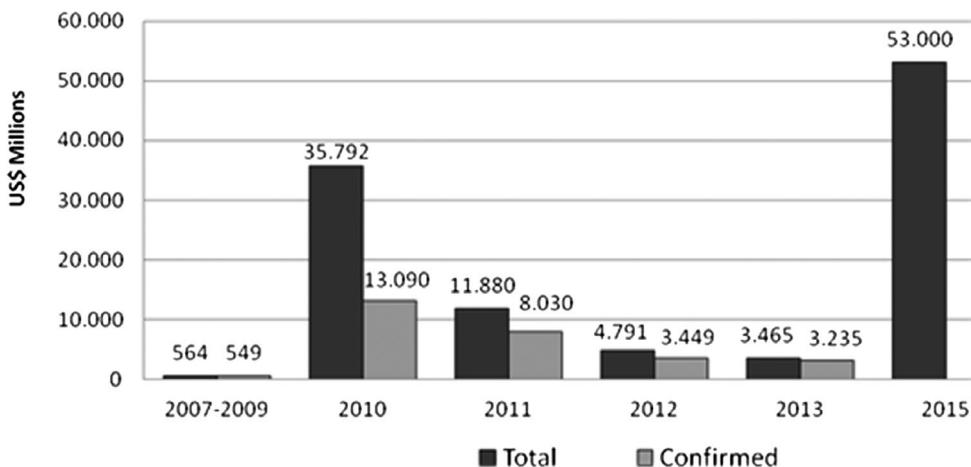


Figure 2. Announced Chinese investment in Brazil 2007–2015. Source: CEBC, MDIC Adapted by the authors for 2015.

The 'centre-periphery' characteristics of Brazil and China's economic complementarity contrast sharply with the strengthening of diplomatic cooperation, which was protocoled as a 'Global Strategic Partnership' in 2012.⁹ Along with India, Russia and South Africa, China and Brazil have assumed the mantle of 'large emerging countries', in the formalisation of the BRICS, highlighting their common interests as developing countries. This collective identity was confirmed in the creation of the G20, with Brazil playing a leading role in negotiating 'developing country' interests within the WTO negotiations. While, therefore, the profile of Brazil and China's trade and investment pointed more to a new version of 'South-North' relations, diplomatically Brazil assumed a leading role as spokesperson for the developing world.¹⁰

China's food security and resource-seeking strategies

Food regime analysis, which has provided the dominant historical frame for interpreting the macroeconomic and political trends in the world agrifood system, has also promoted an over-exclusive focus on agriculture as the source of food. While we cannot explore this point here, a rereading of the earlier industrialisations of Britain and Japan reveals a much broader, simultaneous, concern with food, raw materials (biomass and mineral) and market access.¹¹ Agrifood trade and investment between Brazil and China need to be situated within this broader perspective. As noted above, China has been remarkable in its ability to maintain a high level of food self-sufficiency during three decades of unprecedented rates of economic growth and urbanisation. China is closer to post-Second World War continental Europe in its selective dependence on raw material imports. The Chinese State has traditionally assumed responsibility for food security, a concern accentuated in recent periods through isolationism and famine.

Nevertheless, self-sufficiency in food has been to a surprising extent maintained – first through an indigenous green revolution followed by market incentives from the later 1970s, and more recently through the promotion of large-scale agroindustry.¹² Of non-food biomass, timber has perhaps been the principal import priority as China's natural forests have disappeared.¹³ Although China has promoted planted forests for pulp and paper, it remains highly dependent on imports, with Brazil, as its leading exporter. A range of non-food raw materials has also been opened to imports – such as cotton (although China remains the largest producer and has the largest stocks) and tobacco. Brazil is a leading supplier to China of both of these products, although traditional exporters of tobacco in Africa (such as Zimbabwe) are re-establishing their production.¹⁴

With urbanisation and rising incomes, the principal pressure on the agrifood system comes from the effects of the transition to an animal protein diet. In the 1960s, continental Europe opted for selective dependence on soy while maintaining their priority for self-sufficiency in grains. As from the 1990s, China adopted the same strategy, even at the expense of its traditional soy production. While the US continues to be a leading supplier of soy, the Southern Cone has now assumed dominance and is also the region which has most possibilities for expanding its production in the short term. At the beginning of 2000s, China joined the WTO, which demands minimum levels of market access of its members. At the same time, urbanisation leads not only to the adoption of an animal protein diet but also to a diversification of food consumption habits with a range of other products becoming included in trade – such as fruit juice, coffee and fish. Trade in meat products (poultry, beef) also began to assume importance, even with the shift to large-scale industrial operations in China itself.¹⁵

In spite of the diversification of the urban food diet, basic commodities remain central – oils, grains (maize, wheat), milk, rice and sugar – and even with high levels of self-sufficiency, shortfalls provoke tremors in global commodity markets. The recent surge in dairy product imports in China was a notable example.¹⁶ Maize imports increased sharply after 2008, but have declined over the last two years. Wheat imports have also oscillated, although at lower levels (Figure 7). High levels of volatility have been a key feature of agricultural commodity prices in the 2000s. Many analyses associate these sharp price fluctuations with the financialisation of agricultural commodity markets, and this whole debate was reviewed in the 2011 HLPE Report on price volatility and food security.¹⁷ Others have identified the sudden new pressures on demand created by the biofuels targets, as the main culprit.¹⁸ In all these analyses, surging Chinese demand has also been cited as a contributory, if not a major factor. The response to such price fluctuations has also increased the risks associated with dependence on global trade. Key agricultural commodity exporter countries (Thailand, Indonesia and Argentina) have imposed bans on exports, which in addition to aggravating prices have threatened availability.¹⁹

China has maintained a remarkable level of basic food self-sufficiency in a period of continuous and rapid economic growth and urbanisation. It has selectively outsourced raw materials (timber, cotton and tobacco) and feedstuffs. Its concern with food security has led China to revise its biofuels programme excluding the further use of food crops (wheat and corn). This occurred at a time when membership of the WTO and projections of future demand called into question food self-sufficiency. At different times since 2008, basic foodstuffs have been imported in significant quantities (wheat, corn, rice, dairy products and meats). China, therefore, has to confront the issue of dependence on world markets and world supplies at a time of volatility in prices and supply. It is not so much a question of the degree of dependence, which as a percentage of domestic supplies, is modest. Rather, the issue is the scale of even modest Chinese demand in relation to the size of the world market, whose predictability is equally problematic and whose control is in the hands of the global traders. We will come back to these questions when analysing China's trade and investment strategies in Brazil and the Southern Cone, situating this within a broader global context.

Brazil's agribusiness, global trade and China

Until 2008, Europe was still by far the principal regional destiny for Brazil's agroindustrial exports although China had moved into second place above Latin America, the Middle East and the United States. Between 2008 and 2015, exports to all other regions, with the exception of the Middle East, were in decline and China was edging towards first place, (Table 1), a position which was confirmed in 2015.

Even though China has now become the leading destination, Brazil's agroindustrial exports continue to be widely marketed among the world's principal regions (Table 2). Only one product – soybeans – has China as its almost exclusive customer, accounting for over two-thirds of Brazil's total exports. For other products, China accounts for between a third and a fifth of total exports (peanut oil, hides and cellulose). On the other hand, China's participation in Brazil's other leading export markets – sugar, tobacco, cotton, soy oil, alcohol, poultry and beef, is currently modest. By value, as we have seen above, China accounts for only a quarter of Brazil's total agro-industrial exports (Table 2).

Table 1. Principal markets for Brazilian agribusiness by economic bloc/country.

Years	Agribusiness exports (US\$ millions)	Participation in Brazil's agribusiness exports					
		European Union (EU-28) (%)	China (%)	Latin American and Carib. (%)	Middle East (%)	USA (%)	Others (%)
2000	20.605	41.0	2.7	12.9	4.6	18.0	20.6
2001	23.866	39.2	3.7	11.5	6.3	15.3	24.0
2002	24.846	38.0	5.5	8.4	6.2	16.7	25.2
2003	30.653	38.0	7.4	8.1	6.8	15.7	24.0
2004	39.035	36.2	7.6	8.6	7.1	14.8	25.8
2005	43.623	34.1	7.1	8.3	7.0	13.7	29.8
2006	49.471	32.4	7.6	8.5	8.4	14.2	28.9
2007	58.431	36.0	8.0	9.3	8.1	11.0	27.7
2008	71.837	33.4	11.0	10.5	7.1	8.7	29.2
2009	64.786	29.5	13.8	8.6	9.0	7.0	32.1
2010	76.442	26.9	14.4	9.3	10.1	7.1	32.2
2011	94.968	25.3	17.4	9.1	9.1	7.2	31.9
2012	95.814	23.6	18.8	9.1	8.8	7.3	32.4
2013	99.968	22.1	22.9	8.9	8.3	7.1	30.7
2014	96.748	22.2	22.8	9.0	7.5	7.2	31.3
2015	88.224	20.7	24.1	8.9	8.2	7.3	30.8

Source: MAPA (2016) – Elaborated by the authors.

Table 2. China's participation in Brazil's global agribusiness exports.

Products	Exports to the world				Participation of China in exports (%)			
	2000	2005	2010	2015	2000	2005	2010	2015
Soybeans	26.185	5.341	11.035	20.982	15.4	32.1	64.6	75.2
Sugar	1.199	3.919	12.762	7.641	0.0	0.0	4.0	10.0
Poultry meat	829	3.509	6.808	7.071	1.3	2.2	3.2	8.6
Coffee	1.784	2.929	5.765	6.159	0.0	0.1	0.1	0.2
Bovine meat	814	3.060	4.795	5.795	0.1	0.1	0.1	8.2
Cellulose	1.602	2.034	4.760	5.590	3.4	13.3	23.7	33.1
Bovine leather	742	1.378	1.725	2.250	3.2	18.1	20.4	27.6
Tobacco	841	1.707	2.762	2.186	6.0	14.6	12.4	12.1
Juices	1.090	1.185	1.925	2.050	0.2	3.1	3.9	2.8
Cotton and derivatives	843	1.532	1.446	1.776	0.2	7.1	10.6	10.9
Soy oil	359	1.267	1.352	1.154	5.9	13.4	58.1	12.0
Fruits	387	711	906	889	0.0	0.3	0.3	0.1
Alcohol	35	766	1.014	880	0.0	0.0	0.0	6.2
Tea	119	136	197	481	0.0	0.0	0.1	0.0
Drinks	364	202	264	424	0.0	0.0	0.1	0.1
Cocoa	163	387	419	375	0.3	0.1	0.2	0.1
Milk and derivatives	14	150	155	319	0.1	0.3	0.0	0.0
Fish	239	406	216	220	1.2	1.1	2.7	3.9
Animal feed	61	61	139	208	0.0	5.6	3.3	0.8
Bee products	9	25	60	87	0.3	6.6	0.9	1.4
Peanut oil	0	18	29	75	0.0	0.0	9.0	66.6
Total	20.605	43.623	76.442	88.224	2.7	7.1	14.4	24.1

Source: MAPA (2016) – Elaborated by the authors.

Soy is central not so much in terms of the value of its exports, which is not dissimilar to the value of exports from the sugarcane sector or the combined meats sector, but for the role this crop plays at a number of different levels. In the first place, we need to consider the spatial dimensions of the crop which in Brazil occupies some 28 million hectares, three times that of sugarcane, four times that of planted forests and nine times that of coffee.²⁰ Furthermore, it is combined with the planting of corn. Sixty per cent of this production is

now located on lands newly incorporated for commercial production and, in combination with cattle, has been the primary basis of regional development in the Centre-West of the country – now pushing ever further to the North.²¹ Fifty per cent of this soy is exported as grains and a further 25% as meal.²² This huge regional expansion has been fuelled by China's demand, which has ensured a long period of high commodity prices. High levels of agricultural accumulation from soy production have attracted outside investments and consolidated a new model of large-scale farming in this region.²³

The interactions between soy, cattle and logging and the pressure to create new export routes exert a relentless pressure on the Amazon ecosystem. With the traditional ports over 2000 kilometres to the South and accessible only by clogged and badly maintained roadways, further investments are being attracted to develop the logistics and infrastructure for exports. Highways have to be paved, railways laid down, waterways made navigable, and river and deep-water port terminals constructed. Exports via the Pacific are also being cogitated. A recent study has drawn attention to the indirect effects of China's soy demand for the strengthening of the political power of rural interests.²⁴

Soy in no way exhausts the dynamic of agribusiness trade and investment between Brazil and China and this will be evident from our analysis below. Nevertheless, the extra demand for this product is having a societal impact precisely because of the regional, environmental and political spill-over effects.

China and Brazil: towards a new style of market relations

Brazil maintains a small trade surplus with China but the terms of trade are almost entirely an exchange of basic commodities for manufactured goods, as indicated in Figure 3. Nevertheless, the reach of China's agricultural exports can be surprising. In 2013, the Association of Garlic Producers in the State of Goiás, (the same State which received a USD 7 billion proposal from the Chinese firm CNADC²⁵ for investments in grains production), brought an anti-dumping suit against China, which was supported by the Brazilian Chamber of Exports (CAMEX). Conversely, in the same year, tariffs were waived on imports of black beans (Brazil's most traditional foodstuff) from China to cover a shortfall in the harvest that year.²⁶

The China–Brazil Business Council has accompanied Chinese investments in Brazil since the early 2000s and although the values of these investments are often not revealed, it is possible to identify their principal objectives. Initially the primary focus was on the three types of natural resources – mining, petroleum and land. Market access opportunities quickly

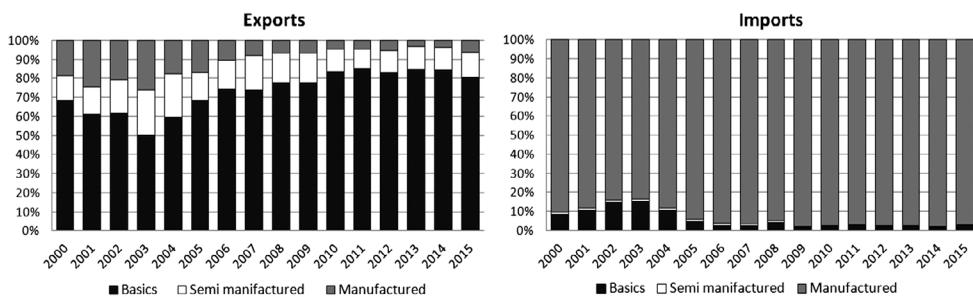


Figure 3. Brazil–China: Comparison of the profile of exports and imports. Source: MDIC (2016).

came to account for a range of investment proposals in telephones, telecommunications and the car industry. More recently, infrastructure (energy transmission, railways and ports) has become a more prominent target.²⁷

In the case of agribusiness, in addition to the soy complex, cellulose, sugarcane, cotton, leather, tobacco, poultry and more recently beef, are important items of trade with Brazil. Continuing with our hypothesis, that for China simple dependence on global markets is intrinsically fraught with risk given the scale of its demand and the increasing volatility of markets – which are in the hands of global traders or subject to intervention by key producer states – we would expect these product sectors to become the object of investments or contract arrangements to influence the conditions of supplies.

Timber was just such an example in the 1990s and the perceived threat of ‘Asian’ investors in the Brazilian Amazon led to a mobilisation of civil society groups.²⁸ It was thought that Asian and Chinese firms were moving into the Brazilian Amazon as forests in Asia were depleted and access to African forests was blocked by the dominance of European logging companies. While these Asian investments did not materialize, China has accessed Amazon timber via Peru and has developed its own global value chain importing timber for the re-export of finished wood products, all under the control of Chinese firms.²⁹

In 2012, China imported 65% of its demand for cellulose becoming the world’s largest importer.³⁰ In contrast, China is the world’s largest producer of paper, (99 million tons in 2011), with imports of less than 5 million tons in the same year. Brazil’s pulp exports to China have increased sharply, doubling in value between 2008 and 2012, although they still fall behind the US and Canada as China imports from a broad range of countries.³¹ The same source projected that Brazil would triple its exports of pulp by 2025. In 2010, the Chinese Company, Rizhao, was reported to have plans to invest in Brazil for the production of 1.5 million tons of cellulose. This investment, however, seems not to have materialised, and in 2012 restrictions on foreign land investments³² severely affected foreign investments in this sector. Suzano Paper and Cellulose, one of Brazil’s leading firms in this sector, trades directly on a contract basis with Chinese firms rather than through the market, and due to its purchase of the British Futurogene also has research facilities in China.³³ Three firms dominate the Brazilian tobacco market: Souza Cruz, Phillip Morris and Alliance One. China is the world’s largest market for cigarettes with an annual growth rate of 3–4%.³⁴ Half of China’s imports come from Brazil and for Brazil’s China has become its leading export market. In 2012, China Tobacco Internacional do Brasil (CTIB), a subsidiary of China Tobacco International, established a joint venture with Alliance One Brazil in which CTIB would have a 51% partnership. Through this agreement, some 6000 contracts with small tobacco farmers in the southern State of Rio Grande do Sul, (the only State then authorised to export to China), representing a fifth of Alliance One Brazil’s contracts, were transferred to the new company. In recent years, China has become a major importer of sugar from Brazil, a trend which is likely to continue given its current below average per capita consumption of 10 kilos as against a world average per capita consumption of 15 kilos in the context of continued urbanisation and economic growth.³⁵ China was largely absent from the huge wave of investments which poured into Brazil’s sugar-alcohol sector in the middle-2000s.³⁶ Noble, the then Hong Kong-based trading company, backed by China’s sovereign fund, already had 2 sugar mills and acquired 2 more in 2010, increasing its sugar producing capacity to 1.34 million metric tons. With the purchase of Noble, COFCO now assumes control of four sugar plants in the State of São Paulo. As in the case of pulp exports, a Brazilian firm took the lead in developing direct trade relations

for sugar with China and the Asian market. In 2012, Copersucar, Brazil's leading sugar producer and exporter, established a subsidiary (Copersucar Asia) in Hong Kong in the same year that China became Brazil's leading export market. In 2014, Copersucar united in a 50–50 joint venture with Cargill to form Alvean, creating the world's largest sugar trading company. This joint venture parallels the creation of Raizen between Brazil's then leading sugar producer Cosan and Royal Dutch Shell. A similar pattern has emerged in the new soy frontier where the Brazilian Amaggi Group has created joint ventures with both Bunge and Dreyfus. The global traders, who pride themselves on the self-sufficiency and secrecy of their operations, are now finding it advantageous to ally themselves with increasingly powerful national players. Copersucar maintains its independence in the ethanol market and with its purchase of the US Eco-energy is now the leading global exporter of ethanol.³⁷

The China, Brazil and the Southern Cone soy nexus

In each of the above sectors where China and Brazil have substantial commodity trading relations, we have seen moves on both sides to go beyond the classical trading model establishing different forms of more direct negotiation – such as long-terms contracts with clients, contract integration for the supply of raw material, direct investments in production and joint-ventures. In none of the above sectors, however, is China's strategic dependence on imports so pronounced as in the case of soybeans. Within a vision of food security dominated by the concept of self-sufficiency, China decided to outsource feed in an effort to secure basic food grain autonomy. This decision was taken even at the cost of seriously weakening China's domestic soy complex, which underwent a rapid internationalisation after 2004.³⁸

Soy and grains more generally are seen to be the products most subject to the global institutions of the agricultural commodity market, with prices decided by the Chicago Board of Trade (CBOT) and supply managed and controlled by the Big Four, ABCD, traders – Archer Daniel Midlands, Bunge, Cargill and Dreyfus.³⁹ An influential interpretation of Brazil's and the Southern Cone's emergence as the new global pole of soy and grains production by Turzi, highlights the region's comparative advantage and its integration into an expanding global value chain orchestrated by the ABCD players, creating the regional Southern Cone 'Republic of Soy'.⁴⁰ While we cannot here address this view with the detailed analysis it deserves, our research suggests the need for serious qualification. Firstly, such a view underestimates the role of public policies, in the two major countries of the Southern Cone, Brazil and Argentina, and their different consequences for the trajectories of soy expansion in each country. It similarly underplays the differences in domestic consumption and demand patterns in these countries. It also fails to appreciate the decisive role played by Japan as from the 1970s in the opening up of Brazil's huge new frontier region in the Center-West of the country.⁴¹

In the 1990s, it may well have seemed that Brazil and Argentina's soy complexes would be integrated on a regional basis. The advance of Brazilian soy was still concentrated in the States of Goiás and Mato Grosso and Argentinian firms, along with the ABCD traders, concentrated their new crushing investments along the Rio de la Plata. With the implementation of the Kandir's Law⁴² in Brazil providing a special stimulus to the export of soy as grain and the contrary policy of taxing (called 'retenciones'), grain exports in Argentina favoring the export of oil and meal, the new crushing capacity along the Rio de la Plata seemed to provide the basis for increasing regional integration of the soy complex.⁴³ However, with the

explosion of Chinese demand for soy grain and the unexpected rapid advance of Brazil's soy frontier up the Center-West to the North of the country, this regional integration became less realistic and the central challenge became that of new investments in crushing, storage and logistics to ship soy out via the North of the country. While the ABCD group has taken the lead this entirely new scenario is creating opportunities for the entry of a wide range of actors⁴⁴ reflecting the increasing importance of local and regional capital along with new global players.⁴⁵

China has frequently declared its interest in establishing greater independence in relation to the ABCD traders and COFCO's recent purchases of Noble and Nidera suggest that it might soon be in a position to add its initials, creating the 'Big Five'. China's activities in the Brazilian and the Argentine soy sector can be divided into four phases, which overlap and have been influenced by changes in the regulatory climate. Initially, the primary focus was on the purchase of land, a strategy limited by the reactivation of restrictive regulations on foreign land purchases in 2010 in Brazil and 2011 in Argentina. A second approach was via negotiation with State and Provincial Governments in the soy regions of both Brazil and Argentina. Proposals here had to take into account public policies and particularly the broad concern regarding China's demand for soybean, rather than processed soy products, an issue discussed during Brazil's Presidential visit to China in 2012. Goiás and Bahia were the two States that became the object of ambitious investment plans, but the results to date have been insignificant.⁴⁶

In Argentina, the Chongqing Grain Group (CGG) acquired 130,000 hectares in Santiago del Estero and established a partnership with Molino Cañueças, producer of vegetable oils and flour, for the purchase of a further 10,000 hectares in the province of Córdoba.⁴⁷ The most significant investment was that by Beidahuang in partnership with Cresud, Argentina's largest agricultural firm, for the acquisition of 320,000 hectares in the province of Rio Negro.⁴⁸ The Governor of Rio Negro ceded the land together with use of the port and offered fiscal advantages for the proposed investments. The Argentine Federal Government found these terms unacceptable, accusing the Provincial government of exceeding its constitutional authority and stopped the project.⁴⁹

A third approach has been evidenced in China's commitment to large-scale infrastructure investments to improve the export logistics of Brazil's new soy frontier, on an average some 2000 kilometres from the southern ports. China's main focus here is on the creation of railway systems linking production to northern port outlets and the Pacific. In 2016, China's largest infrastructure company, China Communications Construction Company (CCCC), has established itself in Brazil and is investing in a key Port Terminal for the export of grains and minerals via the North of the country. In addition, it has become a major supplier of infrastructure equipment and services.⁵⁰ In Argentina, China shifted its focus to the financing of logistics and infrastructure in an investment agreement covering railways and port facilities with Belgrano Cargas, Argentina's largest railway company.

China's fourth approach consists in directly challenging the control of the global grains trade by the Big Four. As we have mentioned, COFCO acquired Nidera (USD 1.2 billion) and Noble (USD 1.5 billion) in 2014, which provides this state firm with an important direct entry into the procurement and marketing of soy in the whole of the Southern Cone, (see Figure 4).⁵¹ With these acquisitions, COFCO's total revenue reaches USD 63.3 billion, in the same league therefore as the Big Four.⁵² Noble operates with a wide range of commodities – grains, oils, sugar, cocoa, cotton and coffee – and is present in 40 countries on the 5

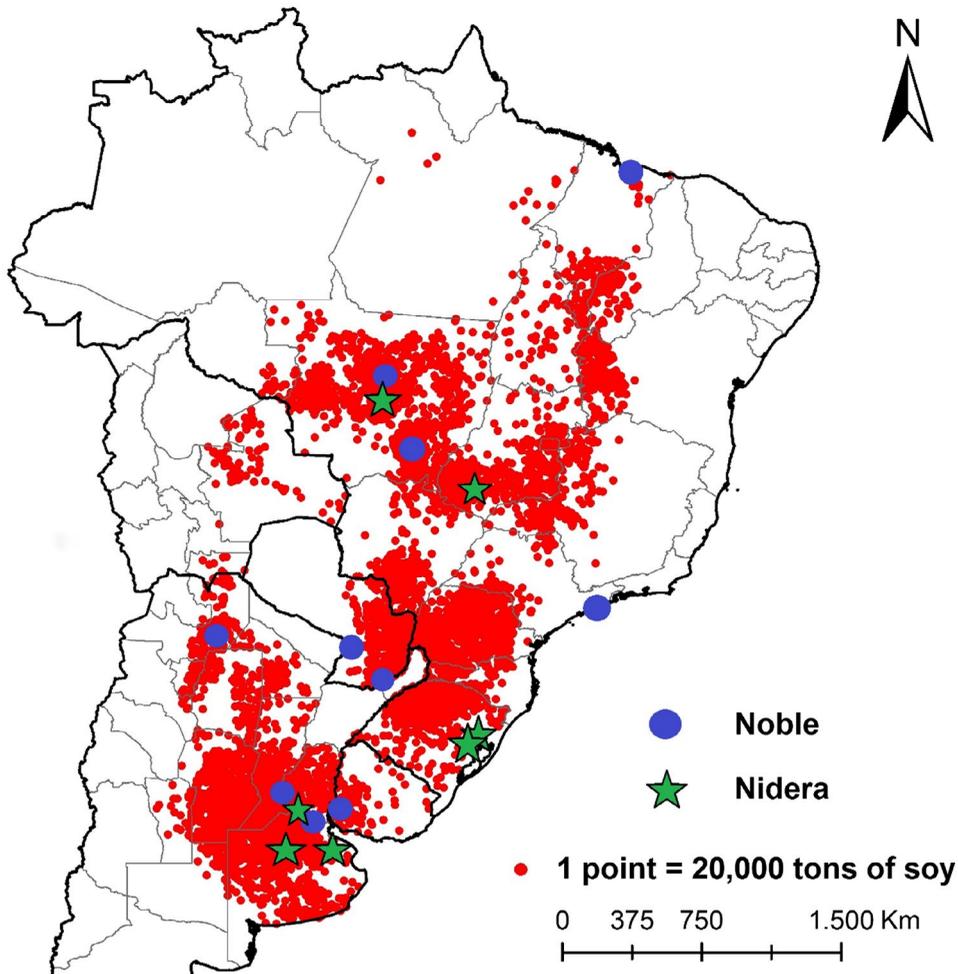


Figure 4. Soy production in the Southern Cone (2010/11) and location of Noble and Nidera's investments in the region. Source: Adapted from Wesz Jr (2014) and updated with news disclosed by the company.

continents. It is the largest commodity trader in Asia, and has one of the largest crushing capacities in China with five plants in this country. Noble is present in the four countries of the Southern Cone, beginning its investments in Argentina in 2000, with a focus on the construction of storage and port capacity which provided a basis for direct negotiations with farmers. In 2009, Noble inaugurated its first crushing plant in Rosario, the Province of Santa Fé, with a capacity for 9,500 tons/day, some 5.5% of Argentina's total crushing capacity and is now responsible for around 10% of Argentine's soy grain exports, 6% of its feed and 9% of soy oil.⁵³

In 2004, Noble began investments in Brazil employing the same strategy of constructing storage capacity in Mato Grosso and Paraná. This was followed in 2010 by the inauguration of a port terminal in Santos, São Paulo at a cost of USD100 million. A year later, Noble announced investments of some USD200 million for a soy crushing plant in Rondonópolis in Mato Grosso, with a capacity for 4,000 tons/day and 300 million tons/year of biodiesel.⁵⁴

In Paraguay, Noble has formed a joint venture with a local logistics firm, Baela, for the development of fluvial transport capacity for grains and built a crushing plant in the port of Villeta.⁵⁵ In Uruguay, Noble maintains a terminal in partnership with Barraca Jorge Erro e Evera in the Nueva Palmira Port, with a capacity for 14,500 tons.⁵⁶

In all these countries, Noble is also active upstream in the supply of fertilisers, technical assistance and finance, in a similar fashion to the other global traders. From 2005 to 2011, Noble's exports from the Southern Cone experienced explosive growth, increasing from USD 300 million to USD 3.7 billion, and which has now stabilised to between 2.7 and 3.2 billion in the last 4 years.⁵⁷

Nidera is present in 20 countries and operates in all sectors of agrifood, including seeds and has investments in all 4 Southern Cone countries. It accounts for some 8% of Argentina's crushing capacity and 10% of Brazil's transgenic seed supply. Nidera has two crushing plants in Argentina, in Buenos Aires and Santa Fé provinces, with a capacity for 11,000 tons/day, some 8% of Argentine capacity. In Brazil, Nidera acquired the Brasil Óleo de Mamona (BOM) firm in the State of Bahia and, in 2005, bought up Bayer's soy and corn seed operations in Patos de Minas (MG) and Rio Verde (GO) and formed Nidera Seeds, which now controls some 10% of the transgenic soy seed market in Brazil.⁵⁸ Nidera Brazil Grain and Oil (BG&O) operates in the marketing of grains and oils and Nidera Nutrientes e Proteção de Cultivos (Nidera NPC) in plant protection. In Uruguay and Paraguay, Nidera focuses on the supply of seeds. In contrast to Noble, Nidera's share in exports has increased significantly in the last 5 years and it now exports more than Noble (Noble with USD 2.7 billion and Nidera with USD 3.5 billion in 2015).⁵⁹

With these two purchases, COFCO has established a solid presence in a broad range of agricultural commodity markets, particularly in the soy complex in the Southern Cone, where its presence also in seeds may offer advantages in relation to the ABCD group. COFCO is now particularly strong in Argentina, with 12.8% of this country's crushing capacity,⁶⁰ and 12, 15 and 15%, respectively, of soy feed, oil and grains exports – leaving COFCO second only to Cargill, pushing Bunge and Dreyfus into third and fourth places.⁶¹ In 2015, COFCO occupied third place in volume of grain exports in Brazil (behind Bunge and Cargill) after years of Big Five supremacy – ABCD + Amaggi.⁶² In Mato Grosso, Brazil's leading agricultural State, total exports by Noble and Nidera increased 226% between 2009 and 2014, significantly more than the combined increase in the big five AABCD which was 27% for Brazil as a whole and 75% for the State of Mato Grosso. In addition, Noble controls some 10% of this State's crushing capacity and its biodiesel production.⁶³ Since 2011, the share of Brazil and Paraguay in the exports of these two firms has increased by 40%, whereas those from Argentina declined by 15%.⁶⁴

Trade and investments: from feed to meats

The challenges of transitioning to an animal protein diet in China, due to growing per capita income and urbanisation, translated itself into a policy of feed imports and the promotion of the intensive industrial meat production model. Two factors introduced the need for more specific policies to address rising meat consumption. In the first place, China's meat diet has been based on pork – producing and consuming 50% of the global supply. Even with the remarkable expansion of intensive production in China,⁶⁵ demand is outstripping supply. Although imports are currently marginal, at 2% of domestic consumption, China is now the world's second largest importer of pork, and the current volume of world trade in pork would quickly prove inadequate if China's import demands continued to increase. The purchase

of the U.S. company Smithfields, the world's largest hog firm, by Shuanghui (with the help of CDH Investments, a Chinese private equity firm, and the Bank of China), is a further indication of the degree to which China is looking beyond trade to ensure food security.

Although pork consumption is increasing in China, urbanisation and rising incomes are also bringing changes in the profile of food consumption (Figure 5). Per capita consumption of chicken has risen from 1 kg in 1990 to 9 kg in 2014. Here again, the industrial contract integration model has been diffused with the arrival of Tyson in the 1990s followed by the C.P. Thailand Group. The largest domestic group, Guangdong Wens Group, which has also adopted this model, now produces more than 700 million broilers per year.⁶⁶ Nevertheless, imports of half a million metric tons were reached in the early 2000s and are projected to reach this figure again in 10 years, in spite of the intense modernisation this segment has undergone in this period.⁶⁷ After two years of negotiations, China and Brazil resumed trade in poultry in 2008 with the authorisation of exports from 22 Brazilian plants. In 2010, a trade dispute between China and the US, which until then was responsible for 75% of China's broiler meat imports, shifted trade in Brazil's favour, and its exports to China exploded from 24,000 tons in 2009 to 196,000 tons in 2011. Brazilian firms Marfrig, through its acquisition of Keystone Foods which supplies food service chains, and Brazil Foods, (BRF) in a joint venture with Dah Chong Hong (DCH), have initiated investments in China.⁶⁸

Perhaps, most surprising has been the rapid growth in beef consumption (4.55 kg per capita in 2014) and beef imports (Figures 5 and 6). Given China's restrictions in terms of land and water, together with the effects of agricultural mechanisation and rural–urban migration, a modern beef industry will be very difficult to consolidate. Chinese cattle slaughter declined by 3.7 million (8%) between 2008 and 2013, and beef production also declined by a similar amount in the same period. Prices have increased by 81% between 2011 and 2014 and yet consumption per capita has continued to increase in this same period. At the same time, beef is a more attractive animal protein for the rising middle class and is more positively associated with health than pork. As a result, imports have exploded rising from 60,524

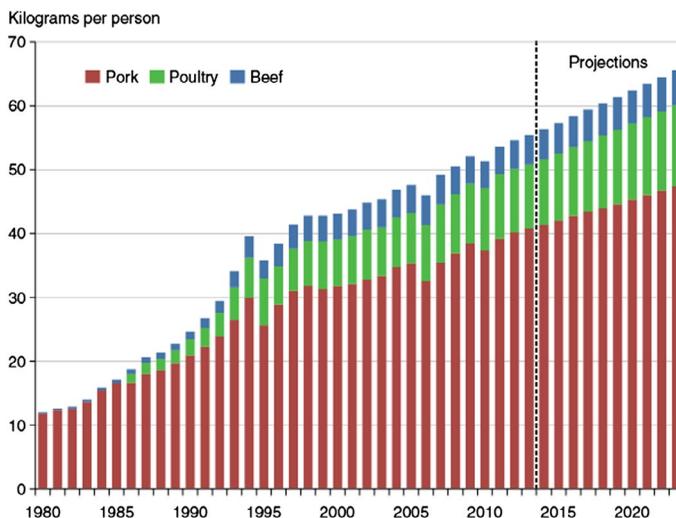


Figure 5. Continued growth projected in China's per capita meat consumption. Source: USDA Production, Supply and distribution database and projections.

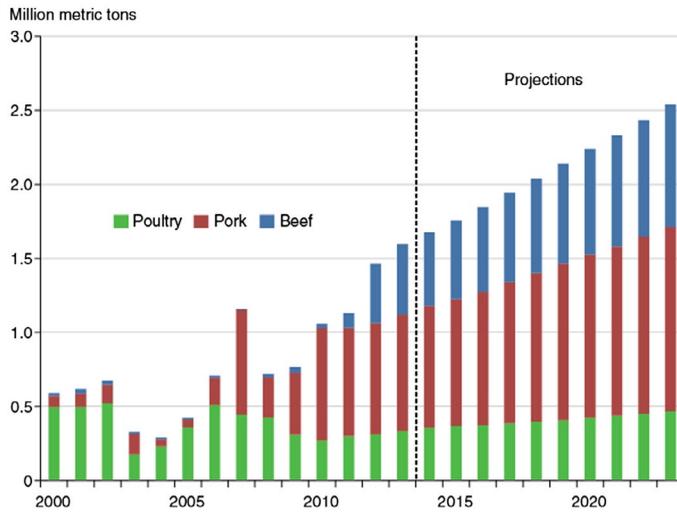
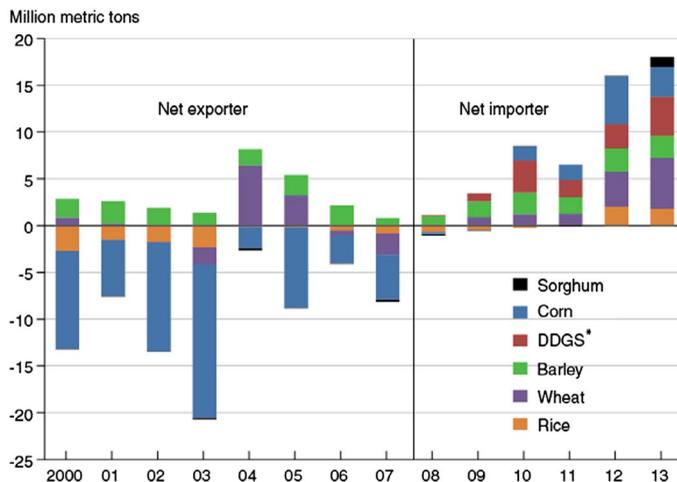


Figure 6. China’s global meat imports projected to continue upward trend. Source: USDA Production, Supply and distribution database and projections.



Note: Net imports = imports – exports. Data for calendar years.
 *DDGS= Distillers Dried Grains With Solubles.

Figure 7. China’s net imports of grains surged during 2012–2013. Source: USDA, Economic Research Service analysis of China customs statistics.

metric tons in 2012 to 295.011, metric tons in 2014.⁶⁹ If imports by Hong Kong and Vietnam are included, the total for the greater China region comes to 1.39 million metric tons, making this the world’s largest importer region.⁷⁰ Most imports have come from Oceania and Canada with the US excluded since the early 2000s because of the incidence of the Bovine Spongiform Encephalopathy (BSE).

In the more recent period, however China has been looking to the Southern Cone, not only for trade but also for direct investments in this sector. China is now Argentina’s third

largest beef export market after an agreement was signed for the export of frozen boned meat in 2012. Uruguay for its part is authorised to export chilled meat on the bone. Brazil's beef exports have been suspended since 2012 after an atypical case of BSE was identified, but renewed authorisation of exports is currently underway. Chinese investors are now in negotiations with middle-sized Brazilian slaughterhouses through the intermediation of CDH Investments, the private equity firm, worth US\$14 billion which was responsible for the Shuanghui, (now WH Group after launching an IPO on the Hong Kong stock exchange), purchase of Smithfield Foods.⁷¹

Conclusions

China's food and raw material security policies are in the process of revision as its dependence on global food and non-food flows deepens. The outsourcing of feed and oils (soybeans) marked a first move in this direction and was seen as a measure also to ensure basic food grain (corn) self-sufficiency. Membership of the WTO brought with it a more general commitment to open up trading relations. As the new millennium has advanced, we can see a shift to a broader recourse to basic food grain imports, including corn (Figure 7). Urbanisation and rising incomes have produced more diversified food consumption patterns and the increase in animal protein has also been accompanied by a relative decline in pork and increases in poultry and beef consumption. Both of these trends have reinforced the need to negotiate new sources of food supply.

We have traced China's evolving trade and investments relations in Brazil, with reference also to Argentina and the Southern Cone. A range of strategies has been deployed – land purchases, harvest contracts negotiation, direct client–supplier agreements, joint ventures, direct investments, promotion of infrastructure and logistics to improve and cheapen trade flows and the acquisition of global traders. All these initiatives reveal China's 'more-than-market' strategy to deal with dependence on outside sourcing which, even when proportionately modest, makes unprecedented demands on global trade. COFCO's purchase of Noble and Nidera exemplifies China's move to a 'hands-on' control of all the stages of global grains/oils production and trade flows as its dependence on food and raw material imports both widens and deepens. Its most recent advances into the Brazilian meats sector suggest that this strategy may only be in its initial stages.

In the early sections of this article, we called attention to the asymmetry between the 'partnership of equals' on the diplomatic 'development' front and the 'center-periphery' style of trade and investment relations between Brazil and China. It might be argued that it no longer makes sense to consider Brazil's soy complex within the framework of traditional commodity markets. It is certainly true that soy has become a high technology sector, increasingly dependent on advances in biotechnology and informatics. Nevertheless, it maintains the demand and price elasticity problems of a commodity which are now becoming evident as even China's demand slows down. When warning signals went out on the impending decline in demand for extractive raw materials, it was argued that demand for foodstuffs would keep the agricultural commodity markets buoyant for a considerable period to come. Since then, prices have plummeted and although in the years of boom there was significant scope for accumulation by large farming enterprises which then upgraded along the soy chain, even establishing partnerships with the Big Four, it is these latter, and now COFCO which will likely call the tune as margins tighten.⁷² Beyond the trade asymmetry of

commodity exports for manufacturing and technology imports, Brazil (and the Southern Cone) now faces moves to exert more direct control over their soy and eventually their meat complex, placing enormous strains on their continued diplomatic parity as leaders of the developing world.

In this article, we have provided a detailed analysis of the new strategies and policies which are redefining Brazil's and China's agrifood trading relations. In doing so, we have focused on the increasingly divergent forms of integration into global soy/grains/meat markets on the part of the Southern Cone countries, revealing their different strategies and institutional frameworks. In the Brazilian case, new actors are emerging, both Brazilian and global, as the soy/grains complex has moved up into the central and northern regions of the countries, who begin to challenge the monopoly of the ABCD traders. The principal source of change in the global soy/grains market and trading system, however, comes from China, which has moved beyond trade and land investment strategies to establish itself as a leading player in the global soy/grains complex marking the beginning of the end of the ABCD global trading hegemony.

Disclosure statement

No potential conflict of interest was reported by the authors.

Acknowledgement

The authors would like to acknowledge the valuable contributions made by our colleague Luciana Muniz.

Notes on contributors

John Wilkinson is an associate professor at the Graduate Center: Development, Agriculture and Society (CPDA), Rural Federal University, Rio de Janeiro, Brazil (UFRRJ), where he researches and lectures on the world of agrifood systems and economic sociology, about both of which he has published widely in Latin America, Europe and the US. Email: jhn.wlknsn@gmail.com.

Valdemar João Wesz Junior is a professor at the Federal University of Latin American Integration (UNILA) and a researcher at the Observatory on Public Policies for Agriculture (OPPA/CPDA/UFRRJ). He has master's and PhD degrees in social science in development, agriculture and society from the Federal Rural University of Rio de Janeiro (CPDA/UFRRJ), with undergraduate studies in rural development and agribusiness management at the State University of Rio Grande do Sul (UERGS).

Anna Rosa Maria Lopane is a PhD student in the Graduate Program in Development Social Sciences, Agriculture and Society of the Rural Federal University of Rio de Janeiro (CPDA/UFRRJ) with a scholarship from CNPQ (Brazil). She holds a master's degree in International Development and Cooperation (UNIBO/Italy) and a master in Development, Agriculture and Society (CPDA/UFRRJ). She is a research assistant of Markets, Networks and Value Nucleus (MRV/CPDA).

Notes

1. Argentina, Brazil, Uruguay, and Paraguay.
2. China National Cereals, Oils and Foodstuffs Corporation, is one of China's state-owned food processing holding companies.
3. CEBC, *Carta Brasil China* [Letter Brazil China] 2015.

4. Ibid.
5. In 2000, the US was the leading importer of Brazilian products, accounting for 23.9% by value, followed by Argentina (11.3%), Holland (5.1%), Germany (4.6%) and Japan (4.5%). China, which was in twelfth position in 2000, increased its position year-by-year and ended 2015 in first place accounting for 19% of Brazil's exports as against 12% in the case of the US. The same tendency can be identified in the case of Brazil's imports with China accounting for 18% and the US 15% by the end of the decade (MDIC, *Indicadores e Estatísticas de Comércio* [Trade Indicators Statistics]).
6. Wilkinson and Wesz Jr., "Underlying Issues in the Emergence of China."
7. CEBC, *Carta Brasil China* [Letter Brazil China] 2012.
8. Ibid.
9. The significance of strategic partnerships for China is analysed by Zhongping and Jing (2014) as a response to China's increasing involvement in a multilateral world. In the words of Wen Jiabão, China's Prime Minister from 2003 to 2013, strategic 'means that the cooperation should be long term and stable ... transcending differences in ideologies and social systems,' and 'partnership' means that the cooperation should be equal-footed, mutually beneficial and win-win.' (Zhongping and Jing, *China's Strategic Partnership diplomacy*, 7).
10. Cabral and Shankland, *Narratives of Brazil–Africa Cooperation*.
11. Wilkinson and Goodman, "Food Regime Analysis."
12. Aglietta and Bai, *China's Development*.
13. Naughton, *The Chinese Economy*.
14. Valor Econômico, *Notícias* [News].
15. APEX, *Brazilian Chicken*.
16. Sharma, *Evolution and Future Trends*.
17. HLPE, *Price Volatility and Food Security*; Fairbairn, "Like Gold with Yield"; and Isakson, "Food and Finance."
18. HLPE, *Biofuels and Food Security*.
19. Von Braun, *Rising Food Prices*.
20. MAPA 2016.
21. Wesz Jr., "Hybrid Dynamics of Soy Transnational Companies."
22. ABIOVE, *Estatística* [Statistics].
23. Wilkinson and Pereira, "Brazilian Soy. New Patterns of Investment."
24. Fearnside and Figueiredo, "China's influence on deforestation in Amazonia."
25. China National Agricultural Development Group Corporation.
26. See note 21.
27. D'Atri, "Análise econômica"; and Frischtak and Soares, "As relações Brasil China."
28. See note 20.
29. Putzel, Padoch and Pinedo-Vasquez, "The Chinese Timber Trade."
30. CEBC, *Carta Brasil China* [Letter Brazil China] 2015.
31. Ibid.
32. For a detailed analysis of these restrictions see Wilkinson, Reydon, and Di Sabbato, "Concentration and Foreign Ownership of Land."
33. Ibid.
34. See note 9.
35. OECD-FAO, *Agricultural Outlook*.
36. Wilkinson and Herrera, "Biofuels in Brazil."
37. Gomes, "Copersucar e Eco-Energy formam maior trading de etanol do mundo" (*Estadão*, October 5, 2012).
38. Oliveira, "Geopolitics of Brazilian Soybeans."
39. Murphy, Burch, and Clapp, *Cereals secrets*.
40. Turzi, "The Soybean Republic."
41. See note 20.
42. The Law Kandir, which came into force in 1996, eliminated taxes on the export of raw materials but maintained these for processed products. For the soy sector, this led to an immediate and

sharp increase in grain exports (from 5% to 30% in the years 1996–1998) and a proportionate decline in the export of soy oil and soy meal (Wesz Jr., “Strategies and Hybrid Dynamics.”).

43. Gutman, *Cadenas Agroindustriales en el Mercosul ampliado* [Agroindustrial Chains in the Extended Mercosul].
44. The advance of soy in Argentina was accompanied by the development of a new model of agricultural production whereby specialised logistical firms provided all the services for a fundamentally rentier farmer class. Los Grobos and El Tejar were the most notable firms promoting this model and their entry into Brazil seemed to mark an ‘Argentinization’ of Brazilian agriculture on the new soy frontier. The Brazilian farming model, however is more ‘hands-on’, owner-producer oriented. In addition, subcontracting what are seen to be activities essential to the farming operations are illegal in Brazil (an issue currently being heatedly debated in Congress). El Tejar (O Telhar in Brazilian Portuguese) has had to cut its operations back and its ownership has now changed hands. Los Grobos has also left Brazil, with its investments in soy in Brazil being acquired by the Japanese trader, Mitsubishi. In complementary fashion, Brazil’s largest soy farming group Maggi began operations in Argentina but then withdrew with complaints about the very different conditions under which Argentine soy producers must operate.
45. See note 29.
46. Lucena and Bennett, “China in Brazil.”
47. Revista Globo Rural, “Soja: China negocia parceria de US\$10 milhões com empresa argentina” [“Soy: China negotiate 10 million USD partnership with Argentine firms”] (July, 2, 2012).
48. Ellis, “Las iniciativas por parte de las firmas agrícolas chinas” [Initiatives on the part of Chinese agricultural firms].
49. Ibid.
50. Pires and Ribeiro, “Gigante chinês desembarca no país e investe em porto da WTorre” [Giant Chinese firm arrives in the country and invest in the WTorre Port] (*Valor*, May 13, 2016); and *valor econômico, Notícias* [News].
51. Ibid.
52. Ibid.
53. CIARA, *Estadísticas del Sector* [Sector Statistics].
54. See note 59.
55. Chicago Tribune, *Noble proyecta construir planta* [Noble plans to build industrial plant].
56. See note 59.
57. MDIC, *Indicadores e Estatísticas de Comércio* [Trade indicators and statistics]; INDEC, *Comercio exterior* [Foreign trade]; Capeco, *Estadísticas* [Statistics]; and CIARA, *Estadísticas del Sector* [Sector statistics].
58. Ibid.
59. *ibid.*
60. Hinrichsen, *Annual Yearbook on Oilseeds Markets*.
61. Clarin, “Los chinos ya se quedan con el 10% de los embarques de granos” [‘Chinese firms already account for 10% of grain exports’] (2014).
62. MDIC, *Indicadores e Estatísticas de Comércio* [Trade Indicators and Statistics].
63. See note 28.
64. The purchase of Syngenta, second only to Monsanto, (now Bayer), in the Brazilian market, by ChemChina enormously strengthens China’s presence in the upstream markets of the soy/grains complex.
65. Sharma and Schneider, *Agribusiness and Development in China’s Pork Industry*.
66. Poultry Production News, 2015.
67. Xie and Marchant, “Supplying China’s Appetite for poultry.”
68. www.marfrig.com.br.
69. “China’s Beef Imports Forecast to Increase in 2015” (*Food Alert, Irish Food Board*, February 6, 2015). <http://www.bordbia.ie/industry/manufacturers/insight/alerts/Pages/Chinasbeefimportsforecasttoincreasein2015.aspx?year=2015&wk=7>.
70. CEBC, *Carta Brasil China* [Letter Brazil China].
71. Ibid.

72. Prior to the rise of China, Japan was the largest grains/oils/meats importer in Asia. As we have mentioned, it was a key player in the development of the Brazilian soy frontier from the middle-70s onwards but has large relied on world trade for its supplies. Now faced with the challenge of Chinese demand, it is also adopting a more hands-on strategy investing in origination, storage and transport. Hall, "The Role of Japan's General Trading" provides an excellent analysis of Japan's traders in the recent period.

Bibliography

- ABIOVE - Associação Brasileira das Indústrias de Óleos Vegetais. *Estatística*. 2016. <http://www.abiove.org.br/>.
- Aglietta, Michel, and Guo Bai. *China's Development: Capitalism and Empire*. Paris: Routledge, 2013.
- APEX. *Brazilian Chicken*. Brasília, 2009.
- Cabral, Lidia, and Alex Shankland. *Narratives of Brazil-Africa Cooperation for Agricultural Development: New Paradigms?* 2013, March, Working Paper 05. Brighton: Future Agricultures.
- Capeco - Camara Paraguaia de Exportadores y Comercializadores de Cereales y oleaginosas. *Estadísticas*. 2016. <http://www.tera.com.py/capeco>.
- CEBC. *Carta Brasil China: Especial Agronegócio Brasil-China*. 2012, November. Rio de Janeiro: Conselho Empresarial Brasil China.
- CEBC. *Carta Brasil China: Visão do Futuro*. 2015, March. Rio de Janeiro: Conselho Empresarial Brasil China.
- Chicago Tribune. *Noble proyecta construir planta procesadora de soja en Paraguay*. 2012. http://articles.chicagotribune.com/2012-11-19/news/sns-rt-granos-paraguay-sojal1e8mj20n-20121119_1_oleaginosas-planta-cereales.
- Ciara – Camara de la Industria Aceitera de la Republica Argentina. *Estadísticas del Sector*. 2016. <http://www.ciaracec.com.ar/ciara/bd/index.php>.
- Clarín. *Los chinos ya se quedan con el 10% de los embarques de granos*. 2014. http://www.ieco.clarin.com/empresas/chinos-quedan-embarques-granos_0_1117088323.html.
- D'Atri, Fabiana. "Análise Econômica." In *Carta Brasil China: Visão do Futuro*. Rio de Janeiro: CEBC, 2015.
- Ellis, Evan. "Las iniciativas por parte de las firmas agrícolas chinas para establecer su presencia en América Latina y el Caribe." In *Política Exterior China: relaciones regionales y cooperación*, edited by R. I. L. Rosa and J. C. G. Maya (Coord.), 307–336. México: Puebla, 2015.
- Fairbairn, Madeleine. "Like Gold with Yield: Evolving Interests between Farmland and Finance." *Journal of Peasant Studies* 41, no. 5 (2014): 777–795.
- Fearnside, Philip M., and Adriano M. R. Figueiredo. "China's Influence on Deforestation in Brazilian Amazonia: A Growing Force in the State of Mato Grosso." BU Global Economic Governance Initiative Discussion Papers 2015-3, Boston University, Boston, MA, 2015, pp. 51.
- Frischtak, Claudio R., and André Soares. "As Relações Econômicas Brasil-China: trajetória recente e perspectivas." *Estudos e Pesquisas*, no. 510 (2013). Rio de Janeiro: INAE.
- Gutman, G. A. *Trajetorias y Demandas Tecnológicas de las Cadenas Agroindustriales en el Mercosur Ampliado: Oleaginosas, Soja y Girassol*. Montevideo: Procisur, BID, 2000.
- Hall, Derek. "The Role of Japan's General Trading Companies (Sogo Shosha) in the Global Land Grab." Conference Paper no. 3, *Land Grabbing, Conflict and Agrarian-environmental Transformations: Perspectives from East and Southeast Asia*. International Academic Conference Chiang Mai University, 2015.
- Hinrichsen, J. J. *Annual Yearbook on Oilseeds Markets*. Buenos Aires, Argentina, 2015.
- HLPE. *Price Volatility and Food Security*. Rome: HLPE FAO, 2011.
- HLPE. *Biofuels and Food Security*. Rome: HLPE FAO, 2013.
- Indec – Instituto Nacional de Estadística y Censos. 2016. *Comercio exterior*. <http://www.indec.mecon.ar/>.
- Isakson, S. Ryan. "Food and Finance; the Financial Transformation of Agrofood Supply Chains." *Journal of Peasant Studies* 41, no. 5 (2014): 749–775.
- Lucena, Andrea Freire de, and Isabella G. Bennett. "China in Brazil: The Quest for Economic Power meets Brazilian Strategizing." *Associação Brasileira de Relações Internacionais* 8, no. 2 (2013): 38–57.
- Marfrig anuncia joint-venture na China. 2011. www.marfrig.com.br/pt/documentos?id=137.

- MAPA – Ministério da Agricultura, Pecuária e Abastecimento. Agro Stat. 2016. <http://agrostat.agricultura.gov.br/> Accessed March 2016.
- MDIC - Ministério do Desenvolvimento, Indústria e Comércio Exterior. *Indicadores e Estatísticas de Comércio Exterior*. 2016. <http://www2.desenvolvimento.gov.br/sitio/secex/secex>.
- Murphy, Sophia, David Burch, and Jennifer Clapp. *Cereal Secrets. The World's Largest Traders and Global Agriculture*. Minneapolis, MN: OXFAM Research Reports, August, 2012.
- Naughton, Barry. *The Chinese Economy*. Cambridge, MA: MIT Press, 2007.
- OECD-FAO. *Agricultural Outlook, 2014–2023*. Paris/Rome: FAO, 2014.
- Oliveira, Gustavo de L. T. "The Geopolitics of Brazilian soybeans." *The Journal of Peasant Studies* 43 (2016): 348–372.
- Poultry Production News. "WENS Group to merge with Guangdong Dahuanong," August 7, 2015.
- Putzel, Louis, Christine Padoch, and Miguel Pinedo-Vasquez. "The Chinese Timber Trade and the Logging of Peruvian Amazonia." *Conservation Biology* 22, no. 6 (2008): 1659–1661.
- Rama, Ruth, and John Wilkinson. "Asian Agribusiness Investment in Latin America with case studies from Brazil." In *The Changing Nature of Asian-Latin American Economic Relations*, edited by G King, J. C. Mattos N. Mulder, and O. Rosales, 33–73. Santiago: ECLAC, 2012.
- Sharma, Shefali, and Mindi Schneider. *China's Pork Miracle? Agribusiness and Development in China's Pork Industry*. Institute for Agriculture and Trade Policy, 2014.
- Turzi, Mariano. "The Soybean Republic." *Yale Journal of International Affairs*, Spring/Summer (2011). <https://www.ucema.edu.ar/conferencias/download/2011/10.14CP.pdf>.
- Valor Econômico. *Notícias*. 2016. <http://www.valor.com.br>.
- Von Braun, Joachim. *Rising Food Prices: What Should be Done?* Washington, DC: IFPRI Policy Brief, April, 2008.
- Wesz Jr, V. J. "O Mercado da soja e as Relações de Troca entre Produtores Rurais e Empresas no Sudeste de Mato Grosso (Brasil)." PhD diss., CPDA/UFRRJ, Rio de Janeiro, 2014.
- Wesz Jr, V. J. "Strategies and Hybrid Dynamics of Soy Transnational Companies in the Southern Cone." *The Journal of Peasant Studies* 43, no. 2 (2016): 286–312. doi:10.1080/03066150.2015.1129496.
- Wilkinson, John. *Brazilian Cooperation and Investment in African Agriculture*. Rio de Janeiro: Actionaid, 2013.
- Wilkinson, John, and Selena Herrera. "Biofuels in Brazil: Debates and Impacts." *The Journal of Peasant Studies* 37, no. 4 (2010): 749–768.
- Wilkinson, John, and Paulo Pereira. *Brazilian Soy. New Patterns of Investment, Finance and Regulation*. Rio de Janeiro: Mimeo, 2015 (mimeo).
- Wilkinson, John, and V. J. Wesz Jr. "Underlying Issues in the Emergence of China and Brazil as Major Global Players in the South-South Trade and Investment Axis." *International Journal of Technology Management & Sustainable Development* 12, no. 3 (2013): 245–260.
- Wilkinson, John, Bastian Reydon, and Alberto Di Sabbato. "Concentration and Foreign Ownership of Land in Brazil in the Context of Global Land Grabbing." *Canadian Journal of Development Studies*, 33, no. 4 (2012): 417–438. doi:10.1080/02255189.2012.746651.
- Wilkinson, John, and David Goodman. "Food Regime Analysis: A Reassessment." In *La Grande Transformation de l' Agriculture Vint Ans Après (provisional title)*, edited by G. Allaire and D. Benoit, Paris (in press), 2015.
- Xie, Chaoping, and Mary A. Marchant. "Supplying China's growing appetite for poultry." *IFAMA* 18 (2015).
- Zhongping, Feng, and Huang Jing. *China's Strategic Partnership Diplomacy: Engaging in a Changing World*, Working Paper, June. Virginia, VA: ESPO, 2014.