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Some Recent Features of Brazil-China Economic Relations

Preliminary version

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The views expressed in this work are those of the author and do not necessarily correspond to the official position of the institutions involved.

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I - Introduction

The five-letter BRICS acronym increased the focus on a specific set of countries. Brazil and China, in particular, are considered in a different way as they used to be: both have become – although in different magnitudes - for several analysts not only ‘another developing economy’, but rather candidates to play a major role in the international scenario in the near future.

This change of perspective is not only a matter of semantics. Recent economic performance and macroeconomic indicators of these economies contribute to a more careful consideration of their possibilities. Large domestic market makes it more likely to obtain ‘growth-led exports’ rather than ‘export-led growth’, which implies a pro-active role in international relations.

China’s recent performance surpassed every forecast and has converted the Chinese economy into one of the most powerful in the world. High growth performance, large domestic market, significant changes in the consumption pattern of the Chinese population, all of these have attracted economic agents from many countries. Bilateral trade perspectives and potential investment opportunities have led several countries to negotiate preferential trade agreements with and to invest heavily in China, aiming at the benefits that could follow from this peculiar situation. Brazil is no exception, and has been trying to intensify its links with the Chinese economy.

The first Chinese-Brazilian project dates back from 1812, when the Brazilian emperor imported Chinese workers to develop a plantation of tea near Rio de Janeiro. In 1900 a new wave of Chinese migrated to São Paulo¹. Economic relations were sporadic and remained until 1949, when the change in government in China led to a breakdown of bilateral relations. Diplomatic relations between Brazil and China resumed again in 1974.

China became a full member of the World Trade Organization in December, 2001. Started in 2002, the process of reducing taxes on export operations continued and was implemented parallel to Brazilian government’s strategy of prioritizing trade with non-traditional markets. Since its admission to WTO China has consolidated its position as Brazil’s major trading partner in Asia.

* From UN/ECLAC and Universidade de Brasília. Opinions here are my own and might not correspond to the official position of these two institutions.

¹ Shin (2008)

Be it for the increasing relevance of the two economies in the international scenario, for the need of a better understanding of common features among BRIC countries (as this has apparently become a category of analysis) or as an effort to identify the potential for bilateral relations, little doubt remains about the opportunity and importance of analyzing the economic relations between Brazil and China. This is the purpose of the present paper. The work discusses bilateral relations, but adds as a peculiar complement some information about economic relations between Brazil and the Chinese Province of Shanghai. Also, the paper discusses the experience of a large Brazilian private firm acting in China.

Following this Introduction, next Section shows the evolution and main features of the bilateral economic relationship of Brazil and China. As shown, figures are remarkable in terms of trade performance and investment, but relations are not free from some conflict. So the third Section discusses some bilateral problems, mostly (but not exclusively) with regard to trade barriers. Section IV brings some of the rather scarce information regarding economic relations between Brazil and the Province of Shanghai. The following Section discusses the experience of the Brazilian company Vale, one of the major mining producers in the world, with several projects in China. Section VI brings some final remarks.

II - The Evolution and Character of the Economic Relationship between Brazil and China

In order to understand bilateral economic relations between Brazil and China it helps to see them in comparison to the overall relations between China and the whole Latin American region.

China's output has increased 15-fold in real terms in the last three decades, thus becoming the third largest economy in the world at official exchange rates, what means that this is a market which no serious trading economy can disregard.

Trade between China and Latin America has grown ten-fold over the past decade and is now worth over US\$ 100 billion. However, China is much more significant to Latin America than the region is for China: Brazil, the largest exporter in the region to China, ranks fourteenth amongst China's suppliers, while no other country in the region is in the top twenty import sources.

Latin America is even less significant as destination from China's exports. The region as a whole accounts for only 3% of China's exports and supplies 3.8% of its imports.

The economic relations between Brazil and China are a bit different from the relation between China and the rest of Latin America, as well as from Brazilian

relations with other BRIC countries. As a matter of fact, Chinese relations with every other BRIC differ from all other bilateral flows within this group of countries.

As illustrated by Table 1, each of the other four members of the set of BRICS have more intense relation with China – be it in terms of the weight of the Chinese market to each country's exports (the upper part of Table 1) or (even more significantly) the share of Chinese products in total imports by Brazil, Russia, India and South Africa.

Exports Percentage of other BRICS on total exports of:	2000					2007				
	Brazil	Russia	India	China	S.Africa	Brazil	Russia	India	China	S.Africa
Brazil	„	0.2	0.1	0.4	0.1	„	2.3	0.6	6.7	1.1
Russia	0.3	„	1.0	5.1	0.0	0.3	„	0.9	4.3	0.0
India	0.5	2.0	„	3.4	0.7	1.3	0.6	„	6.5	1.5
China	0.5	0.9	0.6	„	0.4	0.9	2.3	2.0	„	0.6
S.Africa	0.8	0.1	1.4	1.3	„	0.8	0.2	2.1	6.5	„
Imports Percentage of other BRICS on total imports by:										
	Brazil	Russia	India	China	S.Africa	Brazil	Russia	India	China	S.Africa
Brazil	„	0.3	0.1	0.5	0.1	„	1.4	1.8	10.5	0.4
Russia	1.1	„	1.6	2.8	0.2	2.1	„	0.7	12.2	0.1
India	0.5	1.0	„	2.6	2.0	0.4	1.2	„	11.2	1.5
China	0.7	2.6	0.6	„	0.5	1.9	2.1	2.5	„	0.7
S.Africa	1.1	0.3	0.9	3.7	„	2.1	0.7	2.2	10.7	„

Source: UN/COMTRADE Database

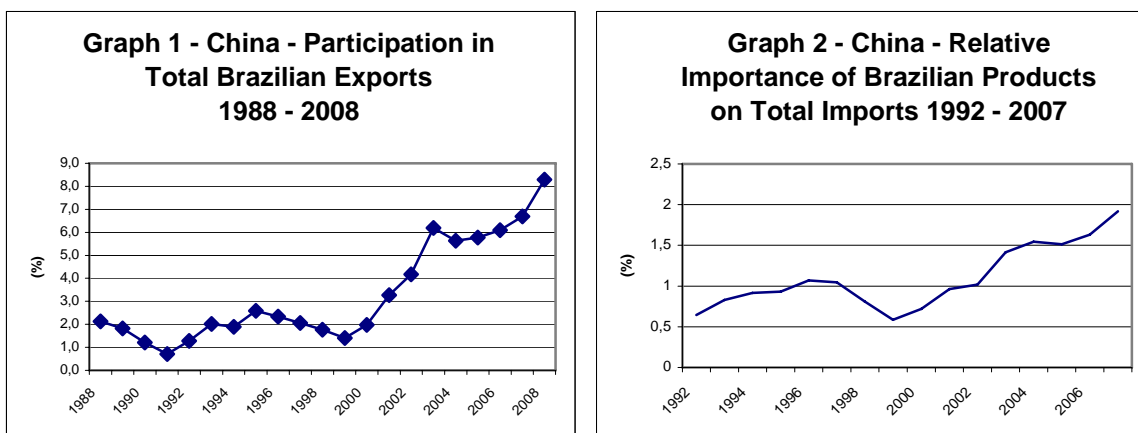
As Table 1 shows, in 2000 China was relevant (accounting for more than 3%) to exports from Russia and India and imports by South Africa. Between 2000 and 2007 the major variation was the increase in the weight of China in total external trade (exports and imports) of every other country in this group.

In 2007 China became quite important for every other BRICS, with higher weight in imports (over 10% in every case) than exports (less than 7%). In the trade flows among all other BRICS the percentage of both exports and imports does not surpass the 2.5% level.

These numbers indicate that China is a large-market developing country with not only substantially different characteristics. It is also far more aggressive in commercial terms. These numbers by themselves justify the analysis of economic relations with this new powerhouse of international trade.

The importance of China as a market for Brazilian exports has boomed in the present decade. Since China accession to WTO in 2001 and the government's

strategy of prioritizing trade with non-traditional markets, the share of the Chinese market for total Brazilian exports, which varied around 2% between 1988 and 2000, started to increase and accounted for over 8% in 2008. Graph 1 shows the trajectory.



Source: UN COMTRADE Database

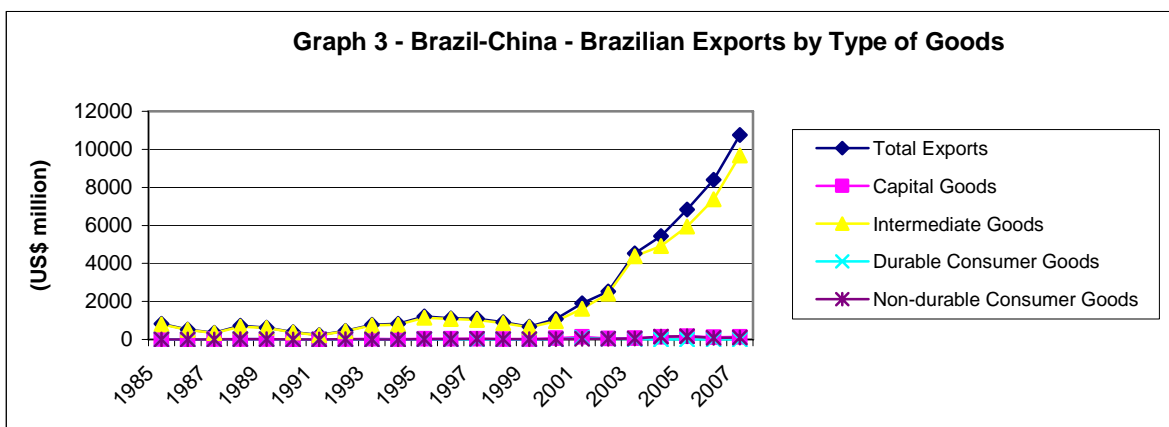
On the opposite direction, the relative importance of Brazilian products for total Chinese imports is quite limited (Graph 2), having varied to a minimum of 0,5% in 1999 to about 2.6% in 2008. This should hardly be a surprise, given the actual size of Chinese trade, but also the fact that foreign-owned firms operating in China (mostly of Asian origin) are major drivers of the country's external trade².

The bilateral trade balance has, for most of the 1988-2008 period, favored Brazil: in 14 out of these 21 years (1988 to 1995 and again from 2001 to 2006) Brazil exported a higher value than it imported from China. In recent years, however, this situation has reversed, and as a matter of fact Chinese trade surplus against Brazil was in 2008 twice its value of 2007.

The present decade is also the moment when Brazilian exports increased at high pace, with yearly growth rates averaging 42%. This reflects an average growth rate of 44.4% for basic products, a 39.7% yearly growth for semi-manufactures and 36.6% for manufactures. Graph 3 shows the trend. The pace of intermediate goods is remarkable, clearly the most significant determinant of total export growth.

With limited amount of arable land and insufficient supply of water, and experiencing a fast process of urbanization with sharp increase in wages China is likely to remain a net importer of food and raw material. This is, in itself, good news for Brazilian and Latin American exports as a whole. Chinese output growth – even at a lower pace than before – shall also be a source of demand for raw material, minerals in particular.

² Main traders are Japanese, Korean, Taiwanese, Malaysian, Singaporean, Philippine and Thai firms. See, in this regard, CEPAL (2008)



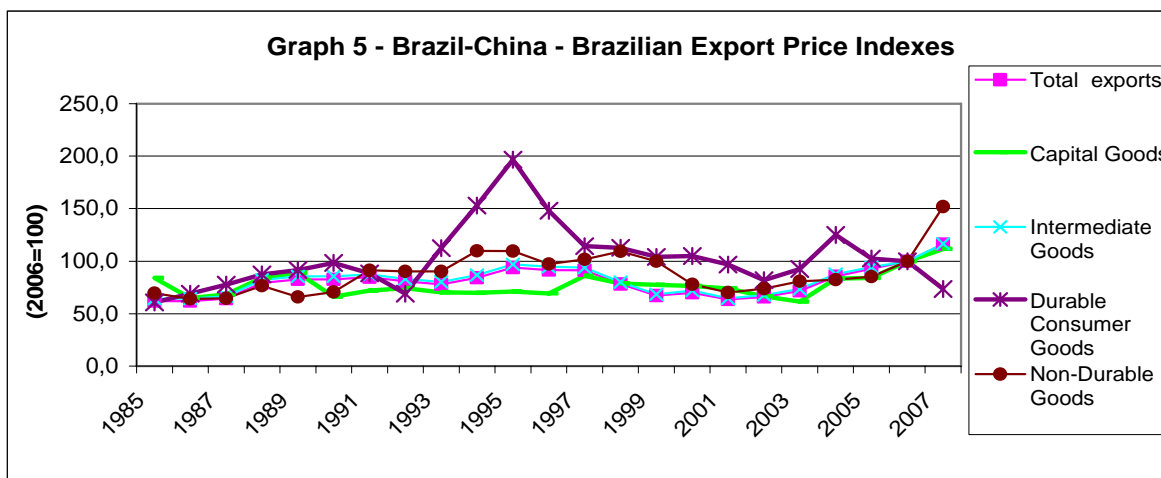
Source: FUNCEX

Graphs 4 and 5 indicate that most of the export dynamism from the viewpoint of Brazil is related to favorable export prices than to volume³.



Source: FUNCEX

³ Brazilian export volume index for durable consumer goods to China reached an exceptional maximum of 5815 in 2001.



Source: FUNCEX

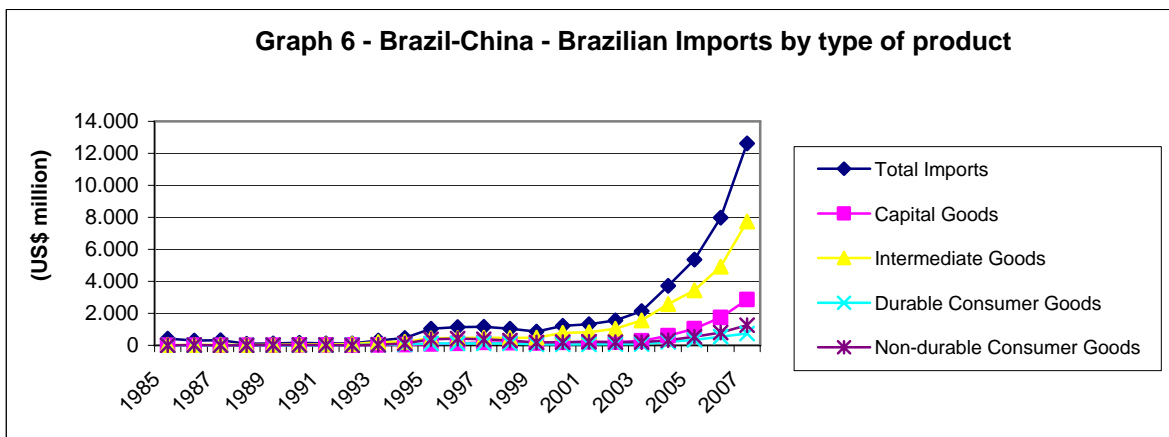
The change in rhythm in recent years has also corresponded to a significant change in the composition of the Brazilian export structure to China. From 1985 to 1994 some 41% on average of total bilateral exports were steel products, and vegetable oil would add another 20%. Between 1994 and 1998 almost half (48%) of Brazilian exports were vegetable oils. Since 1998, however, about 56% of Brazilian exports comprise mineral products (especially iron ore) and farm products.

In 2008 not less than 68% of Brazilian exports to China corresponded to iron ore, soya and oil. This means that exports became over time increasingly concentrated in a few merchandises and intensive in natural resources, with low technological content: 78% of total Brazilian exports are basic products.

Be that as it may, the share of Brazilian products in total Chinese imports reached 2.6% in 2008, almost a four-fold increase in eight years. For some specific products Brazilian exports account for more than half of Chinese total imports – iron-niobium (95%), orange juice (84%), cast iron (71%), granite (65%) and unprocessed tobacco (58%)⁴.

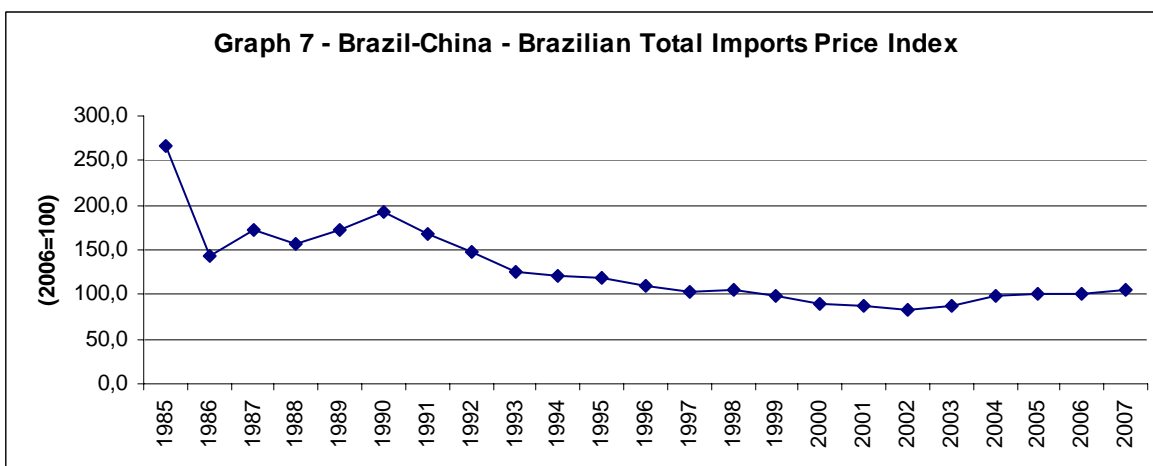
A rather different story can be told with regard to Brazilian imports from China. Graph 6 shows the remarkable increase in bilateral imports. Comparing with Graph 3 the first point to notice is that the increase in import value is not concentrated in one type of product. Rather, there has been remarkable variation in recent years in all categories considered.

⁴ CNI (2008 a).

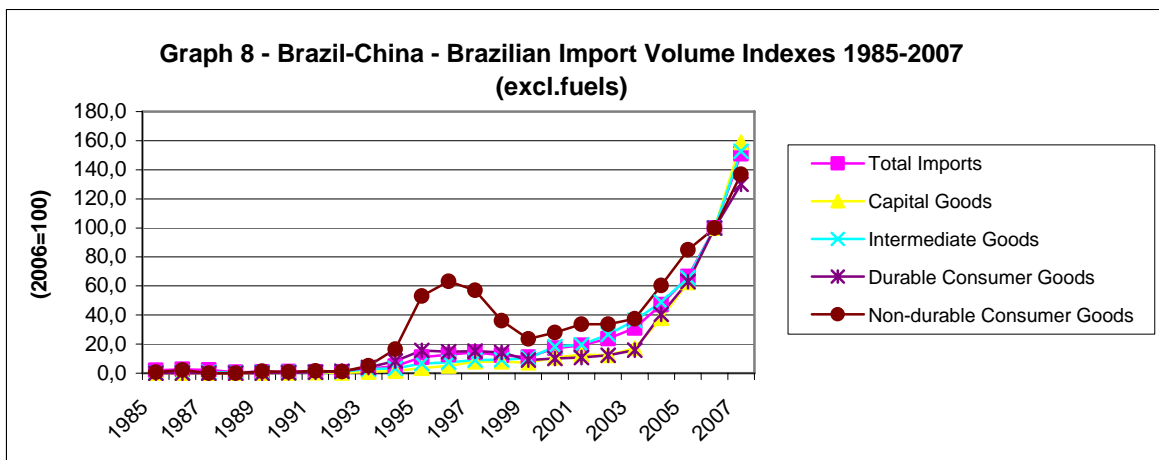


Source: FUNCEX

Graphs 7 and 8 show yet another difference in comparison to Brazilian exports. Growth of Chinese exports to Brazil is clearly more an outcome of a sharp increase in volume than variation in prices, and once again this applies to all types of groups of products considered.

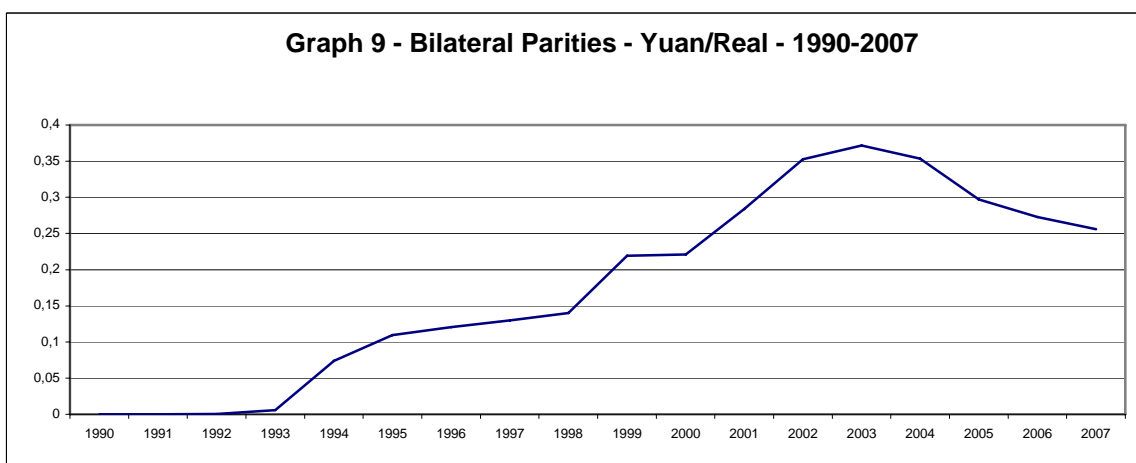


Source: FUNCEX



Source: FUNCEX

Since 1994 and until 2008 some 37.7% of Brazilian imports from China corresponded to electronic equipment and miscellaneous industries. Electric appliances would add another 9.5%. The remaining products come from no less than other 16 industrial sectors. This means that the Chinese export bill to Brazil is far more diversified than its imports, comprises mostly processed products⁵ and Chinese export policy and/or strategy has been far more effective, in that the actual penetration in the Brazilian market is clearly more significant than the other way round, reflecting a sharp increase in the volume of trade.



Source: Ipeadata

A good deal of the recent boom of Brazilian imports of Chinese products is partially explained by the appreciation of the exchange rate. As Graph 9 shows, the bilateral exchange-rate reached a peak in 2003, falling rather sharply since then.

⁵ Manufactures (mostly machinery and electrical and mechanical equipment) account for 94% of the total imported by Brazil, according to CNI (2008 a).

China is becoming a leading investor among developing countries, with investments comparable to those of Republic of Korea. By 2006 it is estimated that the stock of China's Foreign Direct Investment amounted to US\$ 90.6 billion. About 48% of non-financial China's FDI has been directed towards the economies of Latin America and the Caribbean, mainly Brazil, Mexico and Argentina⁶.

Nevertheless, the total stock of Chinese FDI in Latin America by the end of 2007 accounted for less than 1% of all China's FDI stock. Furthermore, investment flows from China into Latin America in 2007 totalled only US\$ 400 million, much less than Latin American imports of China that year, which passed US\$ 50 billion⁷.

Investment is not only concentrated in natural-resources-intensive sectors, but also in manufacturing. As a matter of fact, it is conceded that the driving forces stimulating Chinese FDI in the region are access to natural resources, expansion of overseas markets (market-seeking) and improvement of production and administration efficiency (efficiency-seeking).

In the manufacturing sector Chinese industries – mainly textiles, paper, automobile, electronics, information technologies and telecommunication – have selected some countries (Brazil is clearly one of them) as a stepping stone to enter the regional market.

Chinese automobile companies are establishing production bases in Latin America to reduce production costs and acquire new markets. In electronics there are three determining factors: a) domestic demand has been sluggish and domestic competition has decreased profits, so Chinese manufactures are seeking new markets in Latin America where a large middle class is emerging; b) most of the antidumping cases brought against Chinese products in the region refer to white goods, so the establishment of a production base can help Chinese companies attenuate such trade conflicts; c) Chinese companies do not have the capacity to establish production bases in developed countries, so Latin America (and Africa) have become popular destinations for these firms.

Chinese production is more widely known for the supply of consumption goods. The production of these goods by Chinese firms in Brazil is concentrated in a few plants, by Lenovo (computers), AOC (computer screens and LCD television sets), Gree (air conditioner), Jialing (motorcycles) and a few others⁸.

Lenovo started operation in Brazil in 2005. AOC, who also started by the same time, is the third biggest producer of computer screens in Brazil. The producer of air-conditioners Gree started operating in Manaus in 2001.

⁶ CEPAL (2008)

⁷ R.Jenkins (2009).

⁸ Shin (2008)

But the Chinese presence in the Brazilian market is also impressive in the supply of machinery and equipment. Shin (2008) indicates that Chinese equipment (Citic group) has been used in steel plants, such as the ThyssenKrupp's Companhia Siderúrgica do Atlântico, in Rio de Janeiro, a new plant that will produce 5 million tons of steel plates for export (a 40% increase in the Brazilian export capacity), in Gerdau's Açominas plant in Minas Gerais (China Minmetals Corporation/China Metallurgical Construction Group), in Usiminas plant, also in Minas Gerais (Minmetals/China Metallurgical Construction Group), as well as in a cement plant by Companhia Siderúrgica Nacional (Shenyang Heavy Machinery/Chengdu Design Institute).

Chinese equipment has also been used in gas pipeline (Sinopec) and telephone companies (Huawei and ZTE). China had founded tens of firms in Brazil, and Brazil has invested in hundreds of projects in China. China companies are mainly engaged in electrical household appliances, microscope assembling, lumber processing, transport, health and catering. The Brazilian projects include water conservancy engineering, railway project and catering.

Major Chinese companies operating in Brazil⁹ are:

- .Petroleum and gas – China Petrochemical Corporation and China National Offshore Oil Corporation
- .Mining – China Minmetals Corporation, Shanghai Baosteel Group and Sinosteel Corporation
- .Forestry – Shanghai Anxin Floors Co. Ltd.
- .Transportation Services – China Shipping Group, China Ocean Shipping Group
- .Motorcycles – China Jialing Industrial Corporation
- .Telecommunication – Huawei Technologies
- .Electronics – TTE (TCL Thomson), SVA, Gree

There were a number of mergers and acquisitions operations between Brazilian and Chinese firms in 2001-2007¹⁰. The latter have been more active, acquiring six Brazilian firms, twice the number of such operations by Brazilian firms:

⁹ CEPAL (2008a)

¹⁰ According to Revista Mundo Corporativo No. 10, in www.deloitte.com.br.

<u>Firm</u>	<u>Origin of capital</u>	<u>Buyer</u>	<u>Origin of Capital</u>	<u>Date</u>
Mhag Serviços & Mineração	Brazil	Noble Group Ltd	Hong Kong	07/2007
Usina Petribu Paulista	Brazil	Noble Group Ltd	Hong Kong	02/2007
Bluestar Silicones Brasil Ltda	Brazil	China National Bluestar Corp	China	01/2007
Yankuang Group	China	Cia. Vale do Rio Doce	Brazil	12/2006
Guizhou Aviation Industries Corp	China	Aeromot Aeronaves e Motores	Brazil	11/2006
Neusoft Inc.	China	Politec	Brazil	07/2006
Brascabos Componentes	Brazil	Solartech Intl. Holding Ltd	Hong Kong	04/2006
Kasinski	Brazil	Lifan Group	China	03/2006
CVRD – Água Limpa Iron Complex	Brazil	Shanghai Baosteel Corp	China	08/2001

Brazil is the major Latin American investor in China. Between 2002 and 2007 total Brazilian FDI in that country amounted to a total of US\$ 175 million¹¹.

In 2002 EMBRAER created with the state enterprise China Aviation Industry Corporation II (AVIC II) a joint venture called Harbin Embraer Aircraft Industry, to produce in Harbin small and medium-sized aircraft. Embraer holds 51% of the capital.

The largest Brazilian producer of electrical engines in Brazil, Motores Weg, created in 2005 a producing unit in Jiangsu, called Weg Electric Motor Manufacturing Co.

The first Brazilian firm to make a joint venture with a Chinese firm was Compressores Embraco, producer of compressors. The association with the Chinese group Snowflake allowed it to install a producing unit in Beijing. In 2006 the firm inaugurated its second producing unit in China, in the outskirts of Beijing.

Other, smaller firms operating in China are Politec (information technology), in association with Neusoft, the agro-industrial Bertin Group started operating in 2007 a processing unit in Guangdong to process raw leather, the shoemaker Strada Shoe has five producing units in China, Arezzo, also a shoemaker, has made an association with the Chinese group Prime Success for the commercialization of its products in the Chinese market and Aeromot, producer of small aircrafts made a

¹¹ Jenkins (2009).

joint venture with Guizhou Aviation Industries Corporation in 2006 to produce small airplanes in China.

In May 2004 (the 30th anniversary of establishing diplomatic ties between Brazil and China) President Lula paid a state visit to China, with more than 400 Brazilian entrepreneurs. In November 2004 President Hu Jintao visited Brazil. China and Brazil signed a memo in Brasília, in which Brazil said it recognized China's full market economy status.

During President Lula's visit to China special emphasis was given to priority sectors, such as infrastructure, mining, furniture, logistic and agro-business. Related events had the participation of some 1700 entrepreneurs.

Brazil has explicit interest in fostering exports of coffee, meat, fruits and processed fruits, medical equipment, furniture and timber, stones, marble, software and biotechnology. Negotiations about sanitary measures would allow for bigger exports of meat and fruits to China.

President Lula's visit to China resulted in the signing of several agreements: 1) the formation of joint venture between Vale and Baosteel for the construction of a steel plant in São Luis¹², the implementation of a carrier line between Brazil and China and the joint production, in China, of coal to be exported to Brazil; 2) strategic cooperation between Vale and the Yankuang Group for the production of coal to the Chinese market and export to Brazil; 3) cooperation in investment by Yongcheng Coal & Electricity Group Co. Ltd., Shanghai Baosteel Group Corporation and Vale, to form a joint venture for the production, processing and sale of coal; 4) agreement between Vale and Aluminum Corporation of China, for a joint venture to exploit bauxite and alumina in Brazil, to export to China; 5) contract between Petrobras and Sinopec for the joint exploitation of oil in third countries, in particular Ecuador and Iran; 6) contract between China National Machinery and Equipment Import and Export Corporation (CMEC) and Central Termelétrica do Sul (CTSUL) for the construction of a thermo electrical plant in Cachoeira do Sul, Rio Grande do Sul; 7) contract between Companhia Siderúrgica do Pará (COSIPAR) and Minmetals Trading Co. Ltd., for the acquisition of Chinese equipment and technology to export ore to China; 8) contract of trade cooperation between COMEXPERT – Companhia de Comércio Exterior and China Brazil Investment, Development & Trade, for trade in steel products, cotton and sugar; 9) agreement between BNDES and CITIC Group for the development of projects to finance Brazilian-Chinese joint-ventures in the export sector; 10) agreement between Companhia Brasileira de Bicletas (CBB) and Jinan Qingqi Motorcycle Co. for a joint venture to produce motorcycles in Brasil; 11) agreement between TELEMAR NORTE LESTE and China Mobile, for the establishment of a preferential international roaming system; 12) agreement between Confederação Nacional da Indústria and China Enterprise Confederation for a systematic exchange of information and experiences in the industrial sector; 13) letter of intention between

¹² Discussed in Section V ahead.

Três Marias Exportação e Importação and Chinapack Hua Yuan International Economic Cooperation Co. for the sale of soluble coffee in the Chinese market.

A second State visit by the Brazilian President is scheduled to take place in May, 2009. One issue that might be considered then is the proposal made by the Brazilian President during the G-20 Summit in London, in early April: Brazil and China should consider adopting their own currencies as means of payment in their bilateral trade, although this has already led to some fierce reaction by a number of Brazilian entrepreneurs.

III – Bilateral problems

The Chinese trade performance has provoked in recent years a number of situations, creating a substantive agenda in the bilateral relations with Brazil. Brazilian producers have been affected in two dimensions: competition with Chinese products in third, important markets and competition with Chinese imports in the domestic market.

Starting with the loss of market-share, in three relevant markets for Brazilian exports there has been indication of loss of competitiveness of Brazilian exports.

In the US, Chinese products account for over 16% of total imports, whereas the Brazilian share is a little over 4%. Even with such disparity, a comparison of years 2003 and 2007 would show that in only 7 of the 30 most important products exported by Brazil have Brazilian producers surpassed their Chinese competitors in increasing their participation. Between 2007 and 2008 in 15 of the 19 product groups where Brazil lost market-share Chinese exporters have increased their participation in that market¹³.

Argentina is the most important Latin American partner of Brazil. Trade between the two countries is the central axis of the Mercosur integration process, and presumably most of the bilateral takes place under considerable margins of preference. Yet the difference between the market-shares of Brazil and China in the Argentine market was over 30 percentage points in 2004 and 2005, but has been reduced to only 18 percentage points in 2008.

The participation of Brazilian products in the Argentine market reached a maximum of 36.4% in 2005, and was only 30,8% in 2008. In the same period the Chinese presence went up from 5.3% to 12.4%. A comparison between 2003 and 2008 shows that Brazil lost market-share in 19 of the 30 groups of products most relevant for her exports to that market; in the same period China increased her participation in all 30 groups¹⁴.

¹³ CNI (2008 a).

¹⁴ CNI (2008 a).

A similar story is found in the commercial relations with Mexico. Brazil accounted for only 1.7% of total Mexican imports in 2008, whereas China represented 11.2%. Yet comparing 2003 and 2007 it turns out that China gained participation in 17 out of the 30 groups of products most important for Brazilian exports to that market.

In 2004 Brazil has formally declared China as a 'market economy', but this has never been translated into legal instruments. Pressure from Chinese authorities has been mounting, but Brazilian authorities argue that China has also failed to its commitment to invest in the country and to give support to the Brazilian candidacy to a permanent position in the UN Security Council. Chinese reaction argues that investing is a low process, depending on specific projects and that it supports the Brazilian candidacy, provided that it is not presented together with the Japanese candidacy, vetoed by China.

There are, hence, indirect points of attrition, following from the trade deviation that has been affecting Brazilian exports as well as direct unresolved problems on the political-diplomatic scenario.

Other problematic area is related to commercial defense measures. There are now some 22 anti-dumping measures that Brazil applies on Chinese products; in all of them the Foreign Trade Chamber (the ministerial forum that authorizes the adoption of such measures) has based its estimates of additional taxes on the grounds that China is not a market economy. As a consequence, levies applied on imports from China are calculated in comparison to prices in third markets, not prices in the Chinese domestic market, thus leading to high burden on importers.

The first measures – safeguards – adopted by Brazil on Chinese products date from 1992. Until the end of 2008 Brazil had opened 123 processes of investigation of anti-dumping. From these, 43 (34.9% of total) have China as the investigated country. In 2008 alone 10 new investigations against China were initiated. Products affected by additional duties comprise bicycle parts, iron board, hair brushes, loudspeakers and glasses. Antidumping taxes have been imposed on as varied products as ventilators, bicycle tires, thermos, hair brushes, lockers and garlic.

Trade barriers are found also on the Chinese side. Since the divulgation in 2005 of foot-and-mouth disease China prohibited imports of Brazilian meat. This has been one sensitive issue in bilateral relations, since the disease was located in one specific area in the country, soon isolated, yet the prohibition remains, affecting all Brazilian exporters.

The agenda of bilateral trade relations is, therefore, varied and comprise some rather sensitive issues.

IV - The Evolution and Character of the Economic Relationship between Brazil and the Shanghai Region

The analysis of trade relations involving sub-national units is always challenging. Determining factors might differ from those at the national level, relative indicators often differ from nationwide figures and, last but not least, trade between neighboring countries is often affected by what happens at the frontier.

This is an even harder task when the comparison involves two markedly different systems, as the Brazilian and the Chinese.

To start with, availability of information is scarce for trade between Brazil and each Chinese province. Even more so with regard to investment flows.

Furthermore, Brazilian states have some degree of autonomy and the degree of involvement with the exporting activity differs among them. Chinese provinces, differently, have to pursue growth targets determined in accordance to a central planning mechanism, and this determines, among other aspects, the intensity of their relation with the external sector.

In Brazil, with perhaps the unique and remarkable exception of Petrobras, most trading firms are private companies. Their performance corresponds, therefore, to their own private perception with regard to the economic situation and its perspectives at each moment.

Shanghai is a large province widely recognized as being well-administered. Its growth and external trade depends to a large extent to the performance of public firms. The private sector is largely surpassed by government-owned enterprises (GOEs). Among other GOEs one finds Baosteel, the largest client of the Brazilian largest producer of iron ore, Vale, the subject of the fifth section of this paper.

There are a few Brazilian firms installed in Shanghai. Among others, offices of some of the largest Brazilian banks, such as Banco do Brasil and Itaú. Also, representation offices of large mining firms, such as Vale, and producers of basic inputs (such as pulp and cement), like Votorantim. There are also some lawyers' offices.

Although Brazil has made some large investments in China of lately (with producing plants by some of the largest Brazilian groups, like Embraer (planes), Marcopolo (buses), Sabo (autoparts), WEG (electrical machinery) and others, this has apparently not been the case in Shanghai, although figures are hard to obtain, as already mentioned. In any case, the lists presented in the previous Section are indicative that most Brazilian investment has taken place elsewhere in China.

Trade between the Shanghai Province and Brazil has shown, in any case, quite an impressive dynamism, increasing not less than 60.2% in total terms between 2007 and 2008, as shown in Table 2.

Table 2 - Bilateral Trade Brazil – Shanghai Province – 2007 and 2008 (yuans)			
		<u>2007</u>	<u>2008</u>
Shanghai	Imports from Brazil	248539	338857
	Exports to Brazil	70515	172433

Source: Brazilian Consulate in Shanghai

Figures in Table 2 show that, by and large, Shanghai is a net importer in this bilateral flow. This situation has changed very rapidly, however, between these two periods: Brazilian surplus decreased from 178 to 166 thousand yuans, or from 55% to 33% of the total volume of bilateral trade in each year.

It is well known that a significant share of total Chinese exports corresponds to subsidiaries of transnational corporations installed in that country, in particular in the dynamic export processing zones.

As different from the national picturing, however, another characteristic that is noticeable in Shanghai's external trade is the overwhelming presence of GOEs. As a matter of fact, data for 2007¹⁵ indicate that imports by private firms accounted for only 4.2% of total imports, and for 26.6% of total exports by the Shanghai Province.

This means that – apart from bilateral negotiations between Petrobras and some Shanghai's GOES – most of the Brazilian trade with the Shanghai Province is an exercise of relationship looking for convergence between the usually profit maximizing rationale of private-owned firms and the centrally determined political goals of Shanghai's GOEs.

V - One Case Study: Vale

Vale is the largest mining firm in Brazil. It was created in 1942, as the State-owned enterprise Vale do Rio Doce, and was privatized in 1997. Nowadays it employs over 100,000 employees in five continents and operates in as diversified fields as mineral research, production of iron ore and pellets, nickel, coal, aluminum, potassium, copper, manganese and Ferro-alloys, kaolin and steel.

¹⁵ According to the Brazilian Consulate in Shanghai.

Vale operates in some 30 countries (apart from Brazil). It is also Brazilian biggest net exporter, having in 2008 presented net exports worth US\$ 16.2 billion, a noticeable contribution to Brazilian trade balance in that year, which has totaled US\$ 24.8 billion.

China is the largest market for Vale's iron ore. At the same time, Vale is the largest supplier of raw-material to Chinese steel plants. Operations with China have contributed in a significant manner to Vale's gross revenue: in 2002 gross revenue stemming from operations with China was worth US\$ 330 million, or 7,7% of total Vale's gross revenue. In 2008 that figure had mounted to US\$ 6,706 million, not less than 17.4% of total Vale's gross revenue. In this same period productivity (US\$ million of revenue per employee) increased 6.6 times.

Vale's relation with China dates back from the early 1970s. In 1973 it started selling (basically iron ore) to China. In 1994 it opened an office in that country. Since 2002 Vale operates joint-ventures with China in a number of projects. It is the first company to invest in coal and pelletizing assets in China.

In 2001 Vale and the Shanghai Baosteel Group Corporation (Baosteel¹⁶) signed a set of contracts for the formation of a mining company in Brazil, to produce 8 million tons of iron ore and the supply of 6 million tons of iron ore per year by Vale to Baosteel, for 20 years. An addendum to these agreements was signed in 2003, raising the commitment of shipped iron ore to 20 million per year after 2010.

It is expected that this relationship will not only help add to the supply of iron ore in the Chinese market. The superior quality of Vale ores can also help the Chinese steel mills to reduce energy consumption and emissions

In 2004 Vale signed an agreement with Baosteel and Yongcheng Coal&Electricity Group (Yongcheng) to form a joint venture for the yearly production of eight million tons of coal and anthracite in the Henan Province.

Also in 2004 Vale signed an agreement with Yankuang Group Co., Ltd and the Japanese trading Itochu Corporation to create a joint venture Shandong Yankuang International Coking Co., Ltd, in Shandong, to produce two million tons of coke and 200 thousand tons of methanol, starting in 2006, an investment of US\$ 27 million. In the same opportunity Vale signed an agreement with Yankuang for the exploitation of a coal mine in Zhaolou, with an estimated production of three million tons of coal per year.

In that same year Vale and Baosteel started to evaluate the possibilities of building a steel plant in São Luis, Maranhão, Brazil, to produce 3.7 million tons of steel

¹⁶ Between 1973, when Vale started its commercial relations with China, to 2008 Vale increased its total annual production of iron ore almost ten times (from 32 million tons to 296 million tons). In the same period Baosteel increased its production by twice as much, from 25 million tons to 500 million tons.

plates. Studies about implementing this project were later transferred to Espírito Santo, another Brazilian state but later (early 2009) Baosteel gave up the whole initiative.

In 2006 Vale signed addendums to previous agreements, increasing the agreed shipment of iron ore to China to 19.4 million tons per year between 2007 and 2017, and 8.1 million tons per year between 2018 and 2031.

Transportation is a vital issue for Vale, as it competes with Australian producers in the Chinese iron ore market. In 2007 Vale signed a contract with the ship maker Bergesen Worldwide for the construction of four large ships, each one with capacity for 388,000 tons. Together with the existing Vale fleet these units will allow for an exclusive line of shipment of iron ore from Brazil to Asia, China in particular.

In 2008 Vale signed an agreement with Rongsheng Shipbuilding and Heavy Industries, from China, for the construction of twelve very large ore carriers, each one with capacity for 400 thousand tons. These new units will add to the existing Vale fleet and Brazil will have 18 vessels, reaching the capacity to ship yearly some 30.2 million tons of iron ore.

In 2007 Vale sold a total 300 million tons of iron ore, of which some 100 million tons went to Chinese steel producers. China accounts for 18% of Vale's total revenue. Vale's gross revenues from China increased 20 times, from US\$ 330 million in 2002 to US\$ 6706 million in 2008. To Vale, this corresponded to an increase from 7.7% to 17.4% of its total revenue.

Vale's Inco, a subsidiary company, maintains majority of stocks in a number of joint ventures in Asia. In China these comprise Jinco Nonferrous Metals Co., Ltd, in Kunshan, together with Jike Mining Co., Inco Advanced Technology Materials (Dalian) Co, Ltd, in Dalian, Liaodong Peninsula, and Inco Advanced Technology Materials (Shenyang) Co, Ltd, in Shenyang.

This position as one of the major players in the international iron market stimulated Vale on February, 2008 to force steel producers in Japan, Korea, and Germany to accept a 65% price increase.

Vale had also asked its Chinese clients to pay about 12 to 13% more for iron ore under 2008 term contracts to bring their FOB prices in line with those paid by European steel mills, after the 71% increase it won in iron ore term negotiations with Baosteel was beaten by rival miners in Australia. As it turned out, the additional price increase did not materialize. Vale retreated from its demand for a price rise in its iron ore supplies and agreed to pay freight for some of its Chinese customers.

Rising freight costs for the 45-day journey around Africa's southern tip are becoming a bigger disadvantage for Vale than for rivals in Australia. So Vale is seeking to sell more ore to the US and Europe.

As the pace of economic activity affected also the market for raw materials since late 2008, China started to demand a reduction of 40% in Vale's iron ore prices. Vale, on its turn, accepted a cut of only 10%. This tug-of-war has led the Chinese to buy steel plants, mines in Peru and mining companies in Australia. China has limited grounds to increase its production in significant terms, because of increasing environmental problems, and also because its reserves of iron are of lower quality (mining provides only 20-30% of iron, as compared to 60-67% obtained in Brazil).

VI – Final remarks

J.R. M. Barros/ L.C. M. Barros/ P.P. Miguel (2008) propose a picturing of China as a three-headed dragon: the first head swallows huge quantities of energy, industrial raw material and agricultural commodities, the second head is the one producing manufactured goods in high scale and at low costs, and the third head is the Chinese population as consumers.

According to their reasoning, relative prices of commodities have increased thanks to the demand by developing countries (China in particular) and supply has been constrained by the rapid increase in marginal cost of new projects, thus maintaining low stocks of natural resources, which means enormous opportunities for investment in new products, in applied information technology, research and services linked to biotechnology, petroleum exploitation, and others. Also, the derived demand for equipments and qualified personnel is very big. Brazil is particularly well-placed to meet these needs, since most recent investment takes place in these productive chains.

Competition with Chinese manufactured goods is more challenging. Although the Brazilian industry has started to compete, using foreign suppliers (even with significant investment abroad), aiming at reducing production costs and maintaining competitiveness, Chinese production has gone up in industrial sophistication, becoming a tough competitor in consumption goods of high value (electronics, automobiles) and capital goods (telecommunication equipment), whereas light manufactures lose weight in exports (textiles). It also has an increasing presence in knowledge chains (research, industrial design and marketing).

The slower pace of the US economy forces China to look for alternative markets. Using its agreement with Chile, China is entering the South American market, and the competitive pressure on the domestic market is bound to be increasingly sharp from now on.

Local productive sector in China will have great difficulty in meeting the demand in most sectors and the opportunities for an economy such as the Brazilian economy are enormous. In recent years China has incorporated some 15 million workers per year into the labor market. But the speed of this incorporation is likely to reduce in coming years. This will tend to raise real wages and reduce the deflationary impact of the Chinese economy, despite the expected gain in productivity. The outcome is the emergence of the third dragon head – China as a consumer.

This picturing is very helpful in suggesting routes for Brazilian production, as well as identifying aspects where the challenges imposed by Chinese competition are more intense.

It does not take into account, however, a fourth head: Chinese competition leading to trade diversion, and negatively affecting Brazilian exports. This has been clearly the case in the Argentine market where, in spite of the preferential access Brazilian products benefit for the country being a member of Mercosur the share of Chinese products has increased significantly in recent years, displacing Brazilian suppliers.

This paper has shown that the Brazilian economic relations with China are intensifying at an unprecedented pace. This obviously brings about new challenges and opportunities.

The paper has also shown that relations with specific provinces in China vary significantly, as illustrated by the available indicators for Shanghai, in comparison to other provinces.

Last but not least, the paper shows the rich recent experience of one Brazilian company that has benefited from the sharp increase of Chinese demand for raw materials. This is a typical case of a new scenario for Brazilian firms, one where the firm has to learn how to flex its muscles as one of the major players in the international market, and in particular to learn in its dealing with its main client. The relationship between one of the major suppliers and the most active demander is of particular interest in itself.

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