Chang, Mateus; Bacha, Carlos

Conference Paper

Analysis of Brazilian exports to Eastern Asian Countries - time period from 1980 to 2008

50th Congress of the European Regional Science Association: "Sustainable Regional Growth and Development in the Creative Knowledge Economy", 19-23 August 2010, Jönköping, Sweden

Provided in Cooperation with:

European Regional Science Association (ERSA)

Paper to be presented in the 50th European Congress of the Regional Science Association International (ERSA 2010) to be held at Jönköping, Sweden, August 19th to 23rd, 2010.

Analysis of Brazilian exports to Eastern and Southeastern Asian Countries – time period from 1980 to 2008

Mateus Silva Chang[1]

Carlos José Caetano Bacha[2]

Abstract

The last decade of the 20th century and the first decade of the current century have seen a continuous shift of the economic growth from North American and European countries to the pacific countries, especially the ones located on Eastern Asia, highlighted by the Chinese economic growth. However, Brazil has not established any formal, substantial trade policy to take advantage of this situation, despite China buying an increased amount of Brazilian products. This paper aims to analyze the evolution of Brazilian exports to the Eastern and Southeastern Asian countries, focusing on the time period from 1980 to 2008 and discussing (1st) the facts that motivate or raise difficulties trading amongst Brazil and Eastern Asian countries and (2nd) evaluating how important this trade is for the Brazilian development. Applying both statistics and econometric methodology on secondary data, the following findings arose: (a) China bought only 1.19% of the Brazilian exports in 2008 and Japan bought 0.8%, however, Japan and China have become important buyers of some specific Brazilian commodities, affecting some Brazilian regional growth; (b) China has become the biggest Eastern Asian buyer of Brazilian products, accounting for half of the Brazilian exports to that region in 2008; (c) the Japanese share on Brazil's exports to Eastern Asian countries dropped from 47% in 1990 to 17% in 2008; (d) no trade policy has been established by the Brazilian Government to stimulate its trade with Eastern Asian countries; (e) over half of Brazil's exports to Japan and China are comprised of iron ore, steel and agro-food products, with the first two standing out in the Brazilian exports to Japan and the third one dominating the Brazilian exports to China; (f) econometric equations dictate supply and demand curves of Brazilian products exported to Japan and China that elucidate policies that can improve trade and development between Brazil and its two major partners in Eastern Asia.

Key words: international trade, regional differences, *commodities*, Brazil, China, Japan.

1 - Introduction

Recently, many scholars have asserted the idea that the twenty-first century will be remembered by the shift of the global economic center. Since the commencement of the Chinese market in the late 1970's and the entry of the People's Republic of China[3] (PRC) into global trading, the economic center - once centered in the Atlantic axis comprising of the United States and Europe - has shifted to the Pacific area, composed of the United States,

[1] MSc student in Applied Economics, "Luiz de Queiroz" College of Agriculture, University of Sao Paulo, Brazil. E-mail mateus.chang@usp.br

[2] Professor of Economics, "Luiz de Queiroz" College of Agriculture, University of Sao Paulo, Brazil. E-mail cjcbacha@esalq.usp.br

[3] People's Republic of China includes Mainland China, Hong Kong and Macau.

Japan and PRC. This has occurred due to China's large number of consumers, with over 1.3 billion inhabitants, and because the PRC has kept high rates of economic growth for over the last three decades, with an average above 10% per year (CIA - The World Factbook). Consequently, the Pacific axis now has the three largest economies in the world[4], the United States, Japan and the PRC[5].

The importance of Chinese growth is not limited to its domestic growth. The latter also creates spillover effects in the neighboring countries and even in the world economy. Spillover effects take place because the PRC has demanded a series of products, mainly raw materials and foodstuffs, further creating trade opportunities between China and different countries.

In this context, Brazil has adopted the role of a global player by diversifying its exports, trading with all countries and avoiding distinctions or preferential agreements, except the ones inside the Mercosur (Southern Common Market among Brazil, Argentina, Uruguay, Paraguay and Venezuela). By doing so, trade with the countries of Eastern and Southeastern Asia, particularly with the PRC and Japan, is an important way to diversify exports and increase the ties with the region that has the most potential and dynamic economic growth.

Being a country with a strong agriculture-based industry and exploitation of minerals, Brazil has the capacity to supply the imports of goods from the countries inside the aforementioned region. In addition, many products of such countries, especially the PRC, are being exported to Brazil, disrupting the Brazilian trade balance. Thus, increasing Brazilian exports to China and Japan must be followed closely because, according to Araújo and Schuh (1988, p. 271), the supply of foreign exchange is one of the specific roles of agriculture that contributes to the domestic development, being the main or one of the major sources of exchange revenues for many countries.

The idea exposed above raises two basic questions: (1st) what are the evolution of Brazil's foreign trade with Eastern and Southeastern Asian countries? And, (2nd) what are the factors that determine these evolution?

The answers to these questions motivate the present paper which has the main objective to analyze the Brazilian export evolution to Eastern and Southeastern Asian countries, trying to identify changes related to the values and products being exported. The

[4] Taking into account the GDP of the EU as a whole, then we have the EU as the world's largest economy, according to IMF calculations.

[5] If we calculate the GDP of these countries using the purchasing power parity, PPP, then we have an exchange of positions between Japan and China, with China occupying second largest economy rank and Japan the third rank.

secondary objectives are the following: first, examine the basket of products that is imported by the PRC and Japan from Brazil; and second, run equations to estimate supply and demand curves of Brazilian goods exported to the PRC and Japan. To reach these purposes, databases related to the Brazilian exports, collected every three years, will be analyzed. This data covers the period from the early 1980s, when Brazil's economic liberalization started, to 2008.

This paper is organized into six sections, including the introduction. The second section reviews important remarks about Brazilian policies regarding international trade, industrialization and exchange rate policy. The third section presents the methodology used, and the fourth section analyzes the trend and links between Brazil-PRC and Brazil-Japan trading. The fifth section presents the estimated equations for supply and demand curves, and the sixth section brings the paper to a conclusion.

2 – Brazil and the International Trade

Since the arrival of the Portuguese, the Brazilian economy has always been characterized by the production of agriculture-based products and minerals for export. The cycles of Brazilwood (*Caesalpinia echinata*) exploitation, sugar cane and coffee have lasted centuries, making Brazil a major exporter of low-added-value products. Throughout Brazil's history, the primary products were responsible for generating foreign currency that would be spent on the purchase of manufactured goods. According to Carvalho and Silva (2005, p. 16), this trade pattern was harmful to the Brazilian economy since the income elasticity of manufactured goods demand was higher than the similar elasticity for the primary products. This resulted in a deterioration of relative prices, leading the country toward a deficit in the balance of payments. Furthermore, the authors stressed that as the price elasticity of primary products lowered, the exporting country of the primary goods decided to increase their production in a proportion higher than the demand increase of the importing countries. Consequently, an oversupply occurred, resulting in a fall in prices in such a way that profit was reduced to the exporting country.

To avoid the aforementioned trap, Brazil implemented, during the second half of the 20th century, an importing substitution policy, initiating a period of sharp reduction in the share of agriculture in the Gross Domestic Product (GDP). Agriculture shares in Brazil's GDP dropped from 20.7% in 1947 to 5.8% in 1993. The surplus generated by importing substitution policy permits, since the 1970's, an increase in the Brazilian exports, both in terms of value and diversification (VEIGA, 2009).

Despite its reduction in the GDP share, agriculture has increased its production and enlarged the number of markets catered during the 1990's trade liberalization, allowing the entry of manufactured goods in Brazil to have more competitive prices than those produced domestically. Thus, the products that are not competitive in the free market are no longer being produced into Brazil.

According to Palmas (2005, p. 21), this movement has mainly affected Brazil and the Southern Cone countries (such as Argentina, Chile and Uruguay):

> The end of industrial and trade policies, coupled with changes in relative prices, in effective exchange rates, at the institutional structure of economies, the structure of property rights and market incentives in general have led these countries back to their "natural" Ricardian position, which means, those more in line with its traditional endowments of resources.

Carvalho and Silva (2008, p. 55) state that the strong recovery of the Brazilian agribusiness during the last two decades is due to the fact that Brazil is a country with an abundance of natural resources and manpower, in addition to fertile soil and favorable climatic conditions for planting, which gives the country a competitive advantage in farming activities.

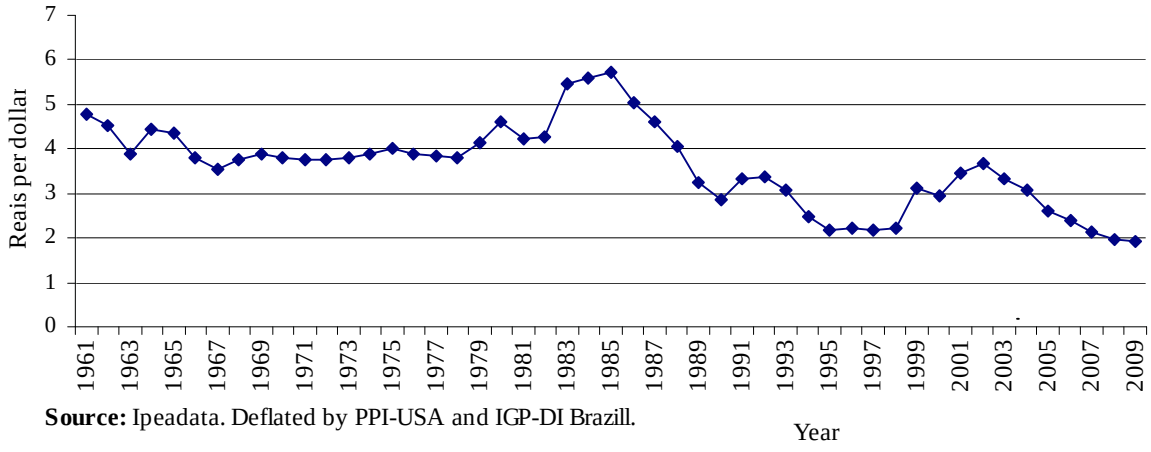
Given this characterization of the Brazilian economy, the next step is to analyze the influence of exchange rate policy on the performance of Brazilian exports. First, keep in mind the difference between the concepts of real exchange rate and real effective exchange rate. The first concept refers to "the deflated value of the price in national currency of one unit of foreign currency taken as a reference (in the case of Brazil it is U.S. dollars)" (ALMEIDA and BACHA, 1999, p. 6), while the second refers to "the deflated value of the price in national currency to a weighted average of foreign currencies basket" (ALMEIDA and BACHA, 1999, p. 6). The distinction between these concepts is important because:

> If the rule of devaluation is just based on the currency of one country, e.g. U.S. dollars (as has been the case for the Brazilian exchange rate policy until the 1980's), an appreciation of the dollar against other major currencies, like the European or Japanese currencies, everything else remaining constant, produces the following effect on the trade relations of the country that keeps its currency "pegged" to the dollar - if one takes into account the concept of effective rate: induces an appreciation of the currency of the country facing the European and Japanese currencies, damaging trade relations with these countries. This is because everything else remaining constant, European and Japanese consumers would have to pay more in their respective currencies, for the same amount of imported products from the country which keeps the domestic currency attached to the dollar. Therefore, an appreciation of the dollar against the currencies of trading partners of Brazil, *ceteris paribus*, increases the need for the country rely on currency devaluations to maintain competitiveness of their exports (ALMEIDA and BACHA, 1999, p. 7).

Therefore, changes in the exchange rate - not only of the Brazilian currency against the dollar, but also of the dollar against other major currencies - may lead to losses or gains in Brazilian exports.

During the past fifty years, the exchange rate policy in Brazil has underwent major changes (see Graph 1) with the adoption of five different exchange rate regimes since 1961, and the persistent influence of the Central Bank in this rate determination.

Graph 1 - Exchange rate (reais per dollar) - from 1961 to 2009 (purchasing power December 2009).



Source: Ipeadata. Deflated by PPI-USA and IGP-DI Brazill.

According to Baer (2001), from March 1961 to July 1968, the maxi devaluation exchange rate policy was used as a way of adjusting the Brazilian exchange rate, that is, from time to time there was a considerable upgrade from the Brazilian exchange rate. However, this policy was harmful to the country because it allowed currency speculation, introducing uncertainty in exporting and importing activities.

In August 1968, the mini devaluation exchange rate policy was adopted, allowing the exchange rate to suffer minor updates for shorter periods. This scheme reduced the speculative activities, and allowed stability of the real exchange rate between 1968 and 1978 (see Graph 1). Deviation from this stable value was, however, created by the first and second Oil Shock in 1973 and 1979, respectively, destabilizing the world economy, and in the early 1980's when there was a strong recession in Latin America.

The mini devaluation exchange rate regime ended in March 1990 with the adoption of the dirty exchange rate fluctuation system, which continued until June 1994 when the limited flexible exchange rate regime was implemented together with the Real Plan. In January 1999, the use of dirty exchange rate fluctuations system returned and continues today.

Besides the exchange rate regime changes, the Brazilian exchange market was affected by the Mexican financial crisis, which occurred between 1994 and 1995, and the Eastern Asian financial crisis that began in 1997 in Thailand that affected other countries in the region, leading to big falls in the growth rate of GDP in these countries, even reaching Japan. In the following year, Russia also experienced a financial crisis that led to a major devaluation of its currency. According to Roberts (2000, p. 32), "the Latin American countries suffered the 'contagion' from Asian and Russian crises, experiencing capital leakage and devaluation of their currencies." The author also claims that Brazil was one of the most affected countries in Latin America, having to ask loans from the International Monetary Fund to avoid requesting a moratorium in its debts. The author argues that this crisis period triggered by speculative attacks resulted in a major devaluation of the Real, the loss of one third of its value against the dollar. According to Roberts (2000 p. 33), "the financial turmoil of 1997-99 discredited the anchored exchange rate regimes adopted by several countries in Asian and Latin America countries in the 1990s," leading to the demise of the exchange rate regime in Brazil and introducing a new model, the floating exchange rate.

During the first decade of the 21st century, the Brazilian exchange rate oscillated greatly due to events like the Argentine Crisis and the September 11th attacks in the USA, both in 2001. Another speculative attack happened during the second half of 2002 during Brazil's Presidential Election. However, during the last seven years, Brazilian currency has strongly appreciated in relation to the dollar due to higher international liquidity and stronger confidence in the Brazilian economy which allowed larger dollar inflows into Brazil.

Being a major exporter of agricultural products, a category that suffers with protectionist policies adopted especially by the major economies (such as the European Union, the USA and Japan); Brazil has joined with other agricultural exporting countries in order to contest inside the World Trade Organization (WTO) for the reduction of barriers to trade their products.

Due to a historical and cultural proximity, the EU has always been an important trading partner for Brazil, buying much of its exports. Another important partner is the United States due to its geographical proximity, economic and geopolitical power in relation to Brazil. To understand the weight of these countries in the Brazilian exports one can observe the development of trade between Brazil and the United States from 1990 to 2008 shown in Table 1.

In 1990, the European Union countries plus the United States accounted for 57.43% of the Brazilian exports. However, these countries have reduced their impact in Brazilian exports, although they still remain important. In 2008, the United States and European Union countries together accounted for 37.29% of Brazilian exports.

Table 1 – Shares of the United States and European Union in the Brazilian exports (selected years)

Year	Percentage of the European Union countries in the Brazilian exports	Percentage of the United States Participation in the Brazilian exports
1990	33.26	24.17
1993	27.15	20.34
1996	27.84	19.23
1999	29.57	22.23
2002	25.83	25.44
2005	22.81	19.01
2008	23.44	13.85

Source: http://aliceweb.desenvolvimento.gov.br/

Besides these traditional partners, Brazil has developed a policy of new approach with its regional neighbors in South America, particularly with Argentina, Paraguay, Uruguay and Venezuela, which along with Brazil form the Mercosur. However, it is important to note that Brazil has adopted the policy of a global player, trying to trade with the largest possible number of nations.

In regards to trading with Eastern and Southeastern Asian countries, due to the geographical and cultural distances, this region has not yet enjoyed great prestige among those responsible for formulating Brazilian trade policy. However, it should be noted that the trend, in the forthcoming years, could encounter modifications due to the high economic growth in that region.

3 - Methodology

Aliceweb is the Ministry of Development, Industry and Foreign Trade of Brazil's information system, which is available on the internet and permits the collection of data in terms of values, quantities and type of exported products to the Asia-Pacific Economic Cooperation (APEC) countries, which consists of Brunei, Singapore, South Korea, The Philippines, Indonesia, Japan, Malaysia, China, Thailand, Taiwan and Vietnam. This data was organized in tables and graphs for analysis.

After a brief analysis of the trade impacts between the eleven-APEC countries and Brazil, a deeper examination must be conducted concerning the two biggest economies and main economic partners of Brazil: the PRC and Japan. The first step was to identify the main products imported by each country from Brazil in the years 1990, 1999 and 2008. In sequence, the shares of Brazilian products in the total imports of such products by the PRC and Japan were calculated.

The following variables are calculated and analyzed per year from 1980 to 2008: the amount of Brazilian products exported to Japan and the PRC (in U.S. dollars), the average price (US$/Kg) of the total exports to Japan and the PRC, the value of the exchange rate of Brazil (Real/US$), and the values for GDP at current prices (US$) of these two Brazilian partners. This information will be used to run demand and supply equations.

Demand and supply equations to be run are:

$$Q_{di} = a_o + a_1 \cdot PM_i + a_2 \cdot PIB_i \qquad (1) \text{ Demand equation}$$

$$Q_{si} = b_o + b_1 \cdot PM_i + b_2 \cdot TC \qquad (2) \text{ Supply equation}$$

Where:

i = Japan or the PRC

Q_{di} = Amount demanded by country i

Q_{si} = Amount supplied to country i

PM_i = Average price of the total imported by country i

PIB_i = GDP of country i

TC = Brazilian Exchange Rate

The equations assume the demand for a country is a function of the average price of all imported products and the country's GDP, while the quantity of goods offered for such a country is the function of the average price of the products sold to this country and the exchange rate of the exporting country, which in this case is Brazil.

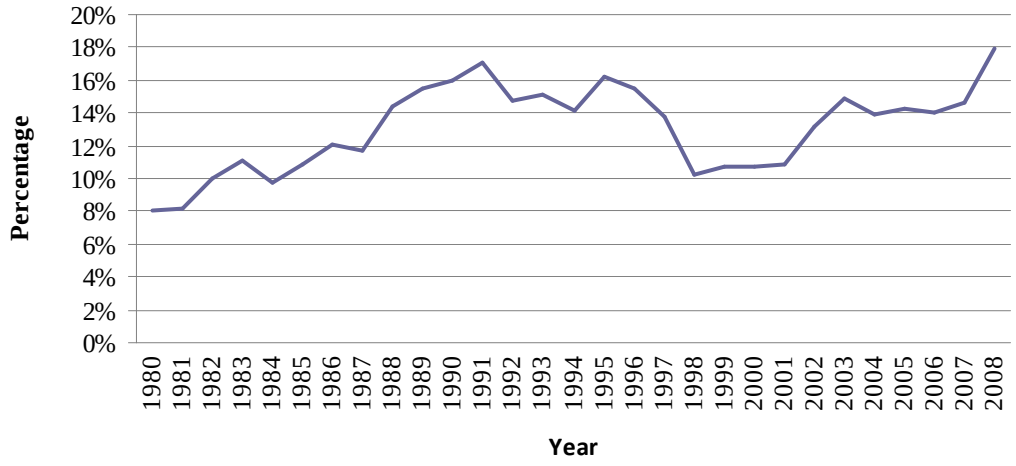
It is assumed that the commodity markets between Brazil and Japan and between Brazil and the PRC will reach equilibrium points, which means that the quantity of commodities exported, or offered, from Brazil to Japan and from Brazil to the PRC are equal to the quantities of commodities imported, or demanded, by Japan or the PRC.

If the balancing market has been reached, then, $Q_{si} = Q_{di}$. The model of structural equations can be used, where demanded or offered quantities are explained by the average price. Thus, demand quantity, offered quantity and average price are endogenous variables while the GDP and exchange rate are exogenous variables. The parameters of the structural equation model were estimated by the two-stage least squares method with the help of the statistical program EViews 5.0.

4 - Data Analysis

Dataset on Graph 2 shows that the shares of Eastern and Southeastern Asian countries on Brazilian exports have fluctuated considerably from early 1980s to 2008, but with an uptrend. In 1980, the selected region acquired about 8% of total Brazilian exports. However, over the years there was a growth of this share, culminating with a peak in 1991 of almost 17%. From 1990 to 1995 there was a small oscillation, followed by a sharp decline. It was in 2002 that a resumption of growth took place, with stabilization in the period between 2003 and 2007, followed by strong growth in 2008.

Graph 2 - Eastern and Southeastern Asia Countries Share in Brazilian Total Export



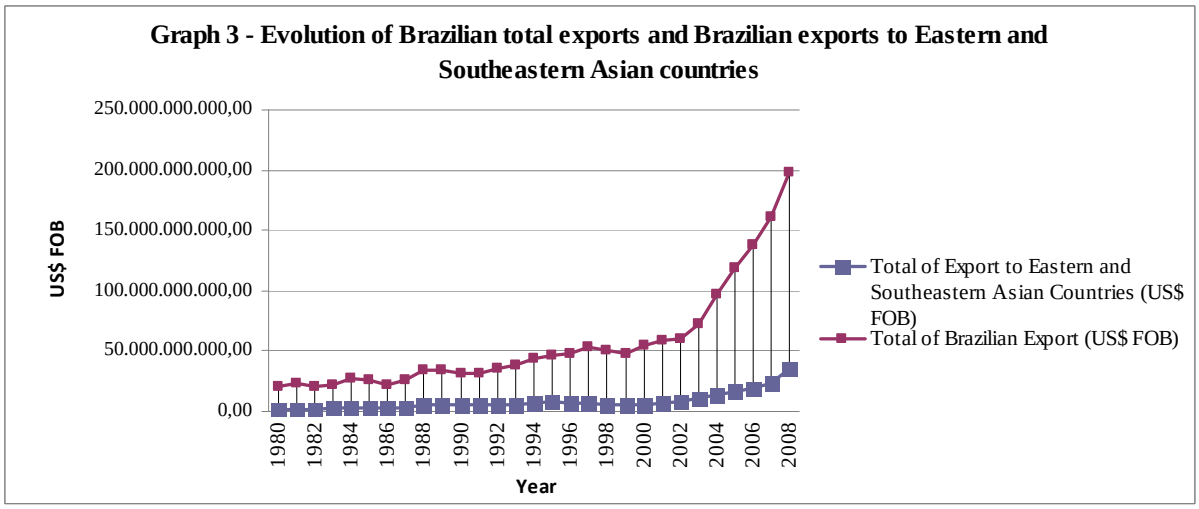
Source: graph prepared by authors with data from Aliceweb.

Graph 3 illustrates the evolution of Brazil's total exports and Brazilian exports to the analyzed region for 28 years finishing in 2008. From 1980 to 1987, exports to this region increased in spite of variations in the total exported by Brazil. In 1987, there was a slight increase in the region's demand that stabilized from 1988 to 1994. In 1991, Brazil increased its total exports, which reflects on the period of oscillation in Graph 3 until the year 1995. In

1996 and 1997, the region's demand still increased slightly, but it was in smaller proportions than the increase in total and it ends up being reflected in Graph 2 as a sharp drop in the shares exported to Asia. From 1997 to 2002, the proportion of exports to this region remained lower, primarily because during this time period there was a reduction in demand from Asia and supply by Brazil. This dynamic was changed in 2002, when exports to Southeastern and Eastern Asia started to grow again. However, the increase in Graph 3 was soon translated into a new stabilization, since there was a large increase in exports. It was only in 2008 that exports to the region had a large increase, while the growth of overall exports from Brazil was continuous, which reflected an increase in the shares showed in Graph 2.

The 1980's, a period that became known as the "lost decade" for Latin American countries, appear in graph 3 as a period when Brazilian exports grew ever smaller. Furthermore, after early 1990's, a time when there was trade liberalization, Brazil began a new process of export growth that may have to do with the process mentioned by Carvalho and Silva (2005) about the deindustrialization of the country followed by the return to production and export of agribusiness products. The years from 1998 to 2002 are an exception in this long period of growth. With respect to the Asian countries, it is worth mentioning that demand reduced during the years of 1997 and 1998 when the Asian Crisis took place. Graph 3 shows that in 1997 there was a drop in demand, and only in 2002 did it start to grow again, indicating that after some years the crisis had been overturned.

Graph 3 - Evolution of Brazilian total exports and Brazilian exports to Eastern and Southeastern Asian countries



Source: Graph prepared by authors with data from Aliceweb.

Another important fact is that in 2002, Brazil's exports began to show an increase in production. In the same year, the devaluation of Brazilian currency (Real, R$) set a new record, with an exchange rate of one dollar buying almost R$ 3.75 against R$ 3.00 in 2000

(Graph 1). Perhaps, this strong devaluation may have been one reason for the rapid increase of Brazilian exports.

Table 2 shows the share of each Southeastern and Eastern Asian country in Brazilian exports in selected years from 1990 to 2008. In the early 1990's, Japan dominated the purchase of Brazilian products, importing 47% of everything that Brazil exported to APEC countries. The PRC was the second largest customer, receiving 13% of Brazilian exports of those countries. South Korea came in third place with just 2 percentage points less than the PRC. However, as the years passed, Japan began to lose ground to the PRC, with a reversal of positions between the years of 1999 and 2002. The reversal of positions is even clearer if we confirm that the configuration of the other countries' shares during the period remained basically the same. With the exception of Taiwan - which has had its share reduced almost by half, with a reduction of 9% in 1990 to 4% in 2008 - the other countries showed variations from 1 to 2 percentage points. Graph 4 shows clearly the PRC displacing Japan as the largest importer of Brazilian products in the Southeastern and Eastern Asia.

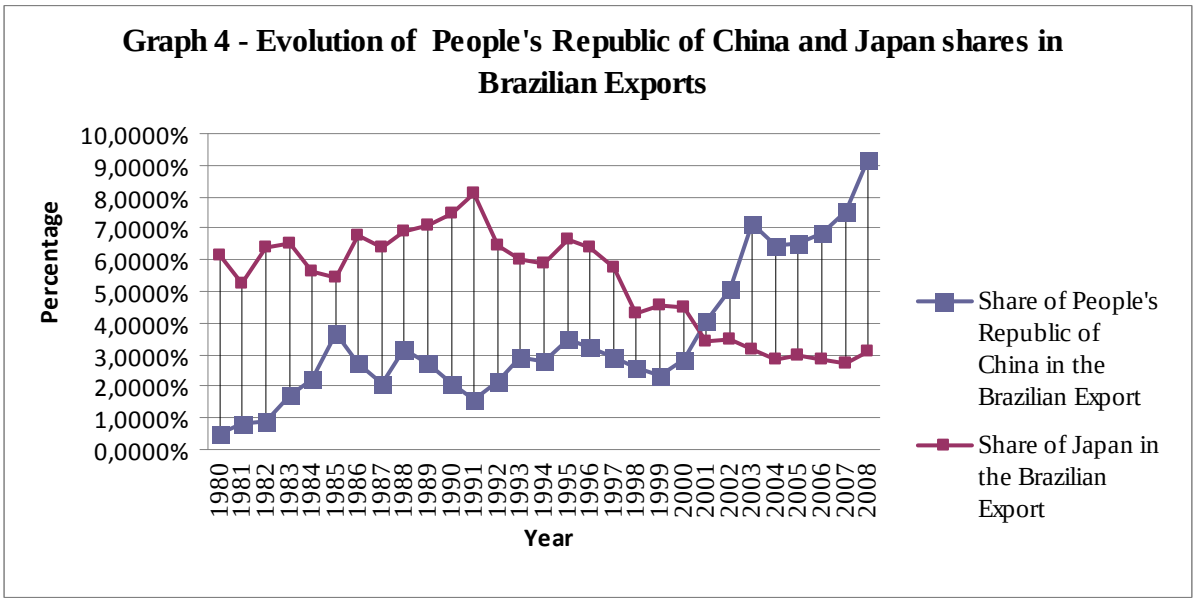
Table 2 - Shares of Southeastern and Eastern Asian countries in total exports from Brazil to APEC countries – selected years (percentage values)

Countries	1990	1993	1996	1999	2002	2005	2008
Brunei	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Singapore	5.0	5.0	5.0	4.0	6.0	5.0	6.0
South Korea (ROK)	11.0	9.0	11.0	12.0	11.0	11.0	9.0
Philippine	3.0	4.0	4.0	2.0	2.0	2.0	2.0
Indonesia	3.0	4.0	4.0	4.0	3.0	3.0	3.0
Japan	47.0	40.0	41.0	43.0	27.0	21.0	17.0
Malaysia	4.0	4.0	3.0	3.0	4.0	2.0	3.0
People's Republic of China	13.0	19.0	21.0	22.0	38.0	46.0	51.0
Thailand	5.0	5.0	5.0	3.0	4.0	5.0	4.0
Taiwan	9.0	10.0	6.0	7.0	5.0	5.0	4.0
Vietnam	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Table prepared by authors with data from Aliceweb.

As the PRC and Japan are the two biggest importers of Brazilian goods in the region under consideration, together dominating almost 70% of total exports to that region, we chose to perform a more detailed analysis of Brazilian export and trade in regards to these two countries. We start our analysis with Japan, since it has been a traditional partner of Brazil in

Eastern Asia. Subsequently, we will examine the PRC, which can be considered the new strategic partner of Brazil in Eastern Asia.



Source: Graph prepared by authors with data from Aliceweb.

4.1 - Japan

By the end of the 1960's, Japan had economically recovered from the World War II and its economy had been booming until the 1990's, allowing the country to assume the position of Brazil's main trading partner in Asia since the early 1970's. According to Torres Filho (1996, p. 101), the time period from 1973 to 1983 was an important era for the Japanese-Brazilian relationship. According to the author, the main factor responsible for guiding the bilateral relationship was the existence of complementarities between the two economies. Brazil is a country with abundant land and raw materials, while Japan is a highly industrialized country that had a great restriction of space and raw materials. Moreover, Torres Filho (1996) mentions that in the 1970's Japan was not seen as an ally by many European countries, Asian neighbors and even by the United States, suffering because of their conduct in WWII. Thus, the abundance of natural resources coupled with the fact that Brazil did not impose restrictions against the Japanese and still had the largest Nikkei community outside Japan contributed to make Brazil a potential partner for Japan.

In 1974, Japan reached the position of the second largest trading partner of Brazil, importing mainly raw materials. According to Barros and Ishii (2008), at the first half of the

1970's the Cerrado Project was developed, aiming to transform Brazilian Cerrado[6] into a space able to produce soybeans in order to meet Japanese needs. Also, in that same time period, Japan started to invest in a range of other projects in Brazil, which made possible for Brazil to become the third largest recipient of Japanese investment.

The Brazil-Japan relationship was developing well until the early 1980s, when the U.S. decided to raise interest rates, causing an appreciation of the dollar and adversely impacting the link between Brazil and Japan. Japan took advantage of the recently-risen dollar to adopt a new policy aiming to export its products to the United States. In the following years, Japan achieved a large accumulation of foreign exchange resulting from exports to the United States. Consequently, during the second half of the 1980s, the yen started to appreciate against the dollar and this appreciation of the yen allowed Japan to change its strategies for international insertion, transferring the production of less added-value components to other Asian countries. According to Torres Filho (1996), Brazil had a currency crisis that resulted in economic stagnation, inflation raise and the need of renegotiating its foreign debt.

The second half of the 1980s was marked by an interruption in Japan and Brazil's increasing relationship, since Japan began to turn again to Asian countries, while Brazil suffered from high rates of inflation that caused macroeconomic instability, averting investment from Japanese companies

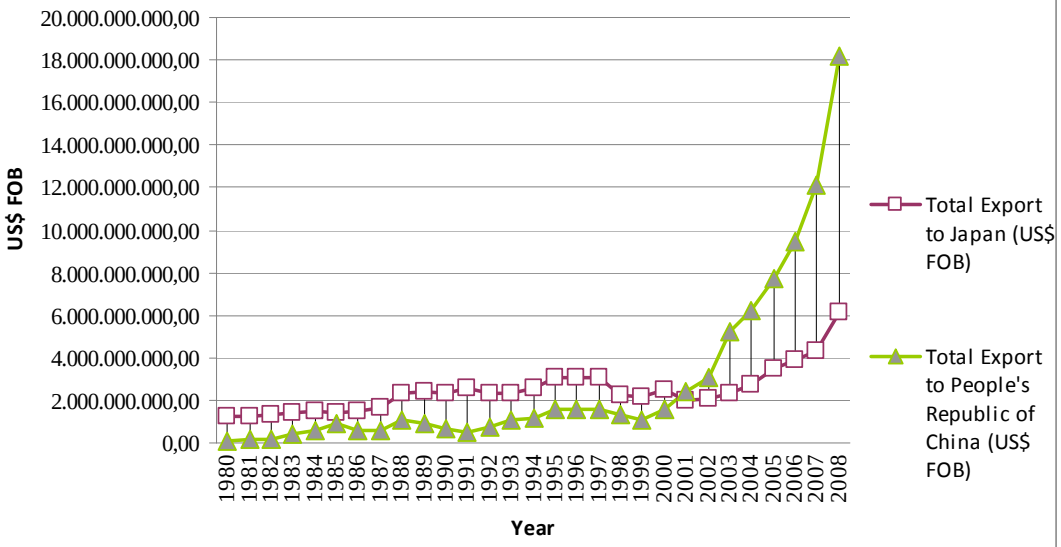
Despite the mentioned difficulties, Japan has maintained the value of its imports from Brazil, with small increases between 1988 and 1997, followed by a decline between 1998 and 2002, the period when the Asian Crisis happened. This can be seen in graph 5. Since 2003 there has been an increase in Japanese imports of Brazilian products. However, as Barros and Ishii (2008) had already mentioned and has been seen in Table 2, the volume of Brazilian exports to Japan has increased in recent years, but the relative trade has been reduced, failing to follow the growth rate of total Brazilian exports. The following three facts can, together, explain this tendency: (1) Japan's increased interest in developing partnerships in Asia, (2) Brazil not favoring and not endeavoring to develop policies to ensure trade with Japan, and (3) the Japanese market being extremely protectionist.

According to Barros and Ishii (2008, p. 21-22), the first fact is reflected in an "increase of trade between Japan and the Asian countries that went through the process of trade liberalization, or even have just signed or are negotiating bilateral trade agreements". Thus, Brazil is going to be left out of Japanese trade policy. Moreover, Torres Filho (1996) argues

[6] Cerrado is a vast tropical savanna eco-region in Brazil

that Brazil failed to develop a policy aiming to promote trade with Japan, having always depended on Japanese efforts, while developing policies to ensure trade with Western countries. Furthermore, the author argues that since the 1960's Japan has always been more interested in trading with Brazil than the opposite, being responsible for the efforts of new approach between the two countries, in most cases.

Graph 5 - Evolution of Brazilian Products Export to Japan and People's Republic of China



Source: Graph prepared by authors with data from Aliceweb.

Finally, Barros and Ishii (2008) point out the fact that the Japanese market is extremely protectionist, hindering further development of Brazilian exports. In the words of the authors:

> According to SEBRAE (2008), there are difficulties to enter into the Japanese market due to regulations and standards (technical barriers). Because the Japanese standards are private and therefore different from the international, or even, there is a lack of harmonization with international standards [...] In addition to the technical standards; Japan imposes high tariffs for foreign goods (BARROS ISHII, 2008, p. 23).

Given the presented evolution of trade, the next step is to raise the composition of exported products to Japan. In order to compare this composition, we selected the exporting basket of three years: 1990, 1999 and 2008.

In 1990, Japan imported mainly minerals, steel and agribusiness goods produced in Brazil. Seeing only the 21 main imported products, the minerals and steel products accounted for approximately 58.6% of the exporting basket, while agribusiness products represented

approximately 22% of total exports. In 1998, the composition of the 20 main products exported from Brazil to Japan was 43.3% mainly minerals and steel, while approximately 38.8% was for agribusiness products. For the year 2008, minerals and steel detained 53% of the exporting basket, while the products of agribusiness accounted for nearly 21.5%. Brazilian exports to Japan are composed primarily of commodities with low added-value, which was expected, since there is certain complementarities between Brazilian and Japanese economies, with the first having certain comparative advantage in producing goods that use lots of energy, labor and natural resources, while the second has a comparative advantage in production of industrial products with high added-value.

Table 3 shows the importance of Brazil as Japan's supplier and the importance of Japan as a Brazilian goods' buyer for the first five major products traded between the two countries. Brazil has diminished its dependence from Japan, and the latter has increased their dependence on Brazil for the analyzed products. In 1990, more than half of Brazil's aluminum exports went to Japan and 18 years later this percentage has dwindled to 38%. On the other hand, Japan has increased its dependence on Brazilian iron ore from 34% in 1990 to 79% in 2008.

Table 3 –Importance of Japan in Brazilian exports and of Brazil in Japanese imports – selected products and selected years

year	Product	Market share of Japan in the Brazilian exports (values in %)	Market share of Brazil in the Japanese imports (values in %)
1990	Aluminum (unwrought and unalloyed)	53.24	14.44
	Iron ore (not agglomerate)	28.11	25.42
	Soybeans	18.09	17.69
	Pig iron	32.13	34.44
	Iron ore agglomerate	21.01	31.77
1999	Aluminum (unwrought and unalloyed)	41.39	12.71
	Iron ore (not agglomerate)	20.13	21.65
	Green coffee	8.19	23.33
	Bleached chemical pulp	13.26	31.24
	Frozen chicken parts	33.73	18.43
2008	Iron ore (not agglomerate)	13.13	26.59
	Frozen chicken parts	32.08	94.70
	Iron ore agglomerate	10.98	79.19
	Aluminum (unwrought and unalloyed)	38.15	11.42
	Green coffee	7.20	23.75

Source: dataset collected from Aliceweb system and UN Comtrade.

Brazil has 27 states clustered in five regions (see map 1). Brazilian producers of the major importing goods from Japan are concentrated in various parts of Brazil. The main Brazilian regions supplying chicken products and soybeans to Japan are located in the Southern and Central-Western regions while the State of Minas Gerais is the main supplier of

coffee to the Japanese. Ore and steel products are coming from states of Pará, Minas Gerais, Espírito Santo and Maranhão. Thus, Brazilian-Japanese trade has impacts on specific areas of Brazil, allowing for their economic growth.

Map 1 – Brazil's territory and its 27 states grouped in five regions.

4.2 – People's Republic of China

Until the late 1970s, the People's Republic of China had no ties to the rest of the world, due to the implementation of the communist regime in 1949. Only after the Mao Tsé-Tung death and Deng Xiaoping era, the PRC has initiated its trade liberalization. First, the so-called Special Economic Zones (SEZs) were installed in some Eastern coast-Chinese cities, encouraging export production (MORAES, 2004). In just a few years, China has successfully developed considerable technology, moving from simple production of plastic products with questionable quality, to industrial products with high-added value.

With abundant and cheap labor, the PRC has managed to impose a strong production of goods with high competitiveness in the international market, since the large supply of labor allows its remuneration to fall in an average below those in other countries around the globe. Thus, the PRC managed to secure strong economic growth, keeping annual growth rates in double digits for three decades. Another factor that should be highlighted is the fact that the

Chinese government has maintained, artificially, the Chinese currency. Yuan is undervalued in order to make Chinese products more competitive in the international market.

If on one hand, the entry of the PRC and its products on the world market represent intensification in the competition for markets, on the other hand, it represents a great opportunity to trade, since the PRC's growth withdrew thousands of people from the poverty line and increased the demand for food, clothing and other commodities. Moreover, the strong Chinese growth dynamic generated a huge demand for products needed for the construction of Chinese infrastructure, such as cement, iron and other minerals.

In this scenario, Brazil emerged as a strong candidate able to feed Chinese demand for raw materials and foodstuffs. Furthermore, it is important to note that in many sectors, the Chinese economy is complementary to the ones existing in Brazil, which creates the possibility of exchange of investments (FUJITA, 2001). Thus, the PRC began investing in Brazil in the late 1990s and the 2000s, mainly in steel and energy sectors, in order to ensure the supply of steel products for its economic expansion and, recently, financing Brazilian oil company (Petrobras) to drill into deeper sea areas to produce petroleum. The loan payments are guaranteed by exporting petroleum-made oil to China.

Due to the rise of the PRC, Brazil is still looking to adapt to the Chinese demand. The proof is the fact that Brazil has only begun to benefit from strong Chinese growth in the late 1990s and early 21st century.

According to Moraes (2004), the PRC has structural constraints to agricultural growth, due to limitations on the availability of water and arable land (only 40% of the arable area is irrigated). In addition, rapid urbanization and the pollution resulting from this process have exacerbated the situation.

Graph 5 shows the PRC had slightly increased its import from Brazil from the late 1980s to the late 1990s. During the first decade of the 21st century a boom in the Brazilian imports took place, which resulted in the PRC replacing Japan as the largest Brazilian partner in Asia. According to Moraes (2004, p. 79):

> the performance of Brazilian exports to China is an indication of the possibilities of expanding the Sino-Brazilian trade, which appears to be promising thanks to the improvement of access to that market, continued rapid growth of Chinese economy and its growing dependence on foreign markets to supply the domestic market for certain agricultural products such as pork and poultry meats, fruits, tobacco, oilseeds and soybeans.

Analyzing the exporting basket from Brazil to the PRC in 1990, of the top twenty products, approximately 30.6% of the total exported products were from agribusiness, while

approximately 32.5 % were minerals and steel. In 1999 there was an increase in the Brazilian exports to the PRC, with a rise of involvement of agribusiness in the top 20 products exported by Brazil, making the equivalent of 38.3% of Brazilian exports to the PRC, while the minerals and steel products had their share reduced to approximately 30%. By doing so, there was an exchange of positions between minerals and steel products versus products of agribusiness. In 2008, after the boom of Brazilian exports to the PRC, the share of agribusiness exports reached 48.2%, while minerals and steel increased its stake to 40.25%. There was clearly a greater concentration of export products in a smaller number of products. Moreover, one of the main causes for the growth of Brazilian exports to the PRC was the production of soybeans, which alone accounts for about 30% of the total exports by Brazil to China.

Even with an increase in value and quantity of products exported to the PRC and maintenance of these to Japan, observing Table 4, it is evident that Brazil has not developed a policy to encourage trade with the countries of Eastern and Southeastern Asian countries. Observing the Brazilian participation in imports from Japan and the PRC, it is realized that this is minimal given the importance of Brazil in the international arena. It is evident that geographical, cultural and ideological distances are still major barriers that need to be addressed. It is undeniable that any country wishing to establish itself as a global player can not fail to seize the opportunities of trade with two of the major economic powers in the world.

Table 4 – Brazilian *Market Share* on PRC and Japan purchases

Year	Brazilian *Market Share* on PRC purchase	Brazilian *Market Share* on Japan purchase
1990	-	1.00%
1993	0.45%	0.96%
1996	0.45%	0.87%
1999	0.32%	0.71%
2002	0.60%	0.62%
2005	0.80%	0.68%
2008	1.19%	0.80%

Source: Table prepared by authors with data from Aliceweb and UN Comtrade.

Table 5 shows the first five major products traded between China and Brazil. Comparing tables 3 and 5, China and Japan import similar products from Brazil, however, China imports a little more value-added products in comparison to Japan. For example, Japan imports more soybeans and iron ore (not agglomerate) than China, which prefers to import more soybean oil and iron ore agglomerate.

Chinese imports from Brazil have the same regional producers as the major products that are exported to Japan.

Table 5 –Importance of China in Brazilian exports and of Brazil in Chinese imports – selected products and selected years

year	Products	Market share of China in the Brazilian exports (values in %)	Market share of Brazil in the Chinese imports (values in %)
1990	Soybean oil	37.96	n.a.
	Iron or steel bars	31.63	n.a.
	Pig iron	13.55	n.a.
	Cotton (neither carded nor combed)	20.42	n.a.
	Iron ore (not agglomerate)	4.57	n.a.
1999	Iron ore (not agglomerate)	9.57	19.72
	Soybeans	7.09	19.31
	Iron ore agglomerate	7.46	40.94
	Frozen chicken parts	14.93	11.75
	Beached chemical pulp	4.47	13.51
2008	Soybeans	48.65	33.38
	Iron ore (not agglomerate)	37.22	24.20
	Crude petroleum-made oil	12.44	1.46
	Soybean oil	41.52	28.05
	Iron ore agglomerate	14.07	34.20

Source: dataset collected from Aliceweb system and UN Comtrade.

5 – Demand and Supply Equations

The 29 observations related to the endogenous and exogenous variables of the structural equation system of supply and demand curves for the two markets (Japan and People's Republic of China) were processed by EViews 5.0 using the two-stage least squares method and through vector autoregression (VAR) model.

5.1 – Japan – Demand and Supply Equations

Chart 1 shows the results for the data processed through the simultaneous equations model for supply and demand curves of Brazilian products exported to Japan. Explanatory variables had different signals in relation to the expected ones in the demand curve and the ones expected in the supply curve. However, only average prices were statistically significant at the 5%-level in both curves despite the F statistic being statistically significant (Probability of F *statistic* = 0.000000 in both equations).

Due to the prices being the main explanatory variable explaining the quantities supplied and demanded to Japan, we tried to use the auto regression vector to explain these quantities. According to Hill et al (1999, p. 378):

> The VAR model is related to the models of simultaneous equations because the variables are considered endogenous and jointly determined. Unlike the models of simultaneous equations, however, the VAR model only uses past patterns and regularities of historical data as a basis for prediction.

Gujarati also states that (2004, p. 837):

> VAR methodology resembles simultaneous-equation modeling in that we consider several endogenous variables together. But each endogenous variable is explained by its lagged, or past, values and the lagged values of all other endogenous variables in the model; usually, there are no exogenous variables in the model.

Chart 1 – Demand and Supply of products (Japan) - simultaneous equations model

Dependent Variable: Q=Quantidade Demandada
Method: Two-Stage Least Squares
Date: 04/12/10 Time: 11:13
Sample: 1980 2008
Included observations: 29
Instrument list: Constante PIB TC

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constante	-2.35E+08	3.51E+08	-0.669785	0.5089
PM	3.65E+10	1.46E+10	2.500763	0.0190
PIB	-3.47E-05	0.000235	-0.147914	0.8836

R-squared	0.950552	Mean dependent var	2.46E+09
Adjusted R-squared	0.946748	S.D. dependent var	1.05E+09
S.E. of regression	2.42E+08	Sum squared resid	1.52E+18
F-statistic	136.7748	Durbin-Watson stat	0.920070
Prob(F-statistic)	0.000000		

Dependent Variable: Q=Quantidade Ofertada
Method: Two-Stage Least Squares
Date: 04/12/10 Time: 11:18
Sample: 1980 2008
Included observations: 29
Instrument list: Constante PIB TC

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constante	-2.87E+08	7.26E+08	-0.394890	0.6961
PM	3.50E+10	5.23E+09	6.686462	0.0000
TC	323890.9	2337106.	0.138586	0.8908

R-squared	0.943672	Mean dependent var	2.46E+09
Adjusted R-squared	0.939339	S.D. dependent var	1.05E+09
S.E. of regression	2.58E+08	Sum squared resid	1.73E+18
F-statistic	120.0681	Durbin-Watson stat	0.816439
Prob(F-statistic)	0.000000		

Source: Results from Eviews 5.0.

Chart 2 shows the VAR equations for supply and demand according to the quantities demanded and supplied in two periods before (Q (-1) and Q (-2)), and average prices in two periods earlier (PM (- 1) and PM (-2)), respectively. In both equations the adjusted R^2 is 0.836220 and 0.824169, i.e., the explanatory variables explain 83.62% and 82.42% of the variance of the dependent variables (Q demanded and Q offered). Tests with values of F at 34.18747 and 25.37392 indicate that the regressions are statistically significant at 5%. Thus we can adopt the following expressions as significant:

$$Q_{djp} = 1,34Q(-1) + 0,69Q(-2) + 3,13*10^{9}\,PM(-1) - 3,9*10^{10}\,PM(-2) + 0,000128PIB$$
$$(0,55)^{2,46} \quad (0,55)^{1,24} \quad (2,0*10^{10})^{0,16} \quad (1,8*10^{10})^{-2,20} \quad 0,00013^{1,01}$$

$R^2 = 0.8362$

$F = 34.18747$

$$Q_{sjp} = 4,69*10^{8} + 1,22Q(-1) + 0,71Q(-2) + 8,51*10^{9}\,PM(-1) - 3,87*10^{10}\,PM(-2) - 1877927TC$$
$$(8,6*10^{8})^{0,54} \quad (0,57)^{2,13} \quad (0,57)^{1,25} \quad (2,1*10^{10})^{0,41} \quad (1,9*10^{10})^{-2,02} \quad (2883333)^{-0,65}$$

$R^2 = 0.8242$

$F = 25.37392$

Chart 2 - Demand and Supply of products from Japan - VAR (vector autoregressive)

Vector Autoregression Estimates
Date: 04/13/10 Time: 01:08
Sample (adjusted): 1982 2008
Included observations: 27 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Q Demandada

Q(-1)	1.340633
	(0.54548)
	[2.45773]
Q(-2)	0.688104
	(0.55315)
	[1.24397]
PM(-1)	3.13E+09
	(2.0E+10)
	[0.15910]
PM(-2)	- 3.97E+10
	(1.8E+10)
	[-2.19673]
PIB	0.000128
	(0.00013)
	[1.01009]

R-squared	0.861417
Adj. R-squared	0.836220
Sum sq. resids	3.81E+18
S.E. equation	4.16E+08
F-statistic	34.18747
Log likelihood	-571.402
Akaike AIC	42.69644
Schwarz SC	42.93641
Mean dependent	2.55E+09
S.D. dependent	1.03E+09

Determinant resid covariance (dof adj.)	3.95E+12
Determinant resid covariance	2.62E+12
Log likelihood	462.6601
Akaike information criterion	35.01186
Schwarz criterion	35.49180

Vector Autoregression Estimates
Date: 04/13/10 Time: 01:07
Sample (adjusted): 1982 2008
Included observations: 27 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Q Ofertada

Q(-1)	1.221095
	(0.57259)
	[2.13259]
Q(-2)	0.714701
	(0.57280)
	[1.24773]
PM(-1)	8.51E+09
	(2.1E+10)
	[0.41240]
PM(-2)	3.87E+10
	(1.9E+10)
	[-2.02292]
C	4.69E+08
	(8.6E+08)
	[0.54474]
TC	-1877927.
	(2883333)
	[-0.65130]

R-squared	0.857983
Adj. R-squared	0.824169
Sum sq. resids	3.90E+18
S.E. equation	4.31E+08
F-statistic	25.37392
Log likelihood	-571.7324
Akaike AIC	42.79500
Schwarz SC	43.08296
Mean dependent	2.55E+09
S.D. dependent	1.03E+09

Determinant resid covariance (dof adj.)	3.93E+12
Determinant resid covariance	2.38E+12
Log likelihood	-461.3397
Akaike information criterion	35.06220
Schwarz criterion	35.63813

Source: Results from Eviews 5.0

Both supply and demand show an inertial effect from one period lag. In other words, as higher demand or supply in period *t* as higher demand or supply in period *t+1*. Demand is affected negatively by prices in period *t-2* and supply is positively impacted by prices in period *t-1*. Gross domestic product has no positive impact lag on demand and the exchange rate has a negative impact on supply. The latter is explained due to the strong oscillation of real bilateral Exchange rate showed in Graph 1.

5.1 – People's Republic of China – Demand and Supply Equations

Chart 3 shows the results for the data processed through the simultaneous equation model for supply and demand curves of Brazilian products exported to China. Similar to the Japanese results, demand curve shows positive effect of price, different from the expected one. GDP is now positive and has statistically significant effects on demand. Coefficients of explanatory variables in the supply curve had the expected signals, but it is not statistically significant.

Chart 3 – Demand and Supply of products (PRC) - simultaneous equations model

Dependent Variable: Q Demandada
Method: Two-Stage Least Squares
Date: 04/12/10 Time: 13:11
Sample: 1980 2008
Included observations: 29
Instrument list: Constante PIB TC

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constante	-3.95E+09	8.63E+08	-4.573974	0.0001
PM	1.06E+10	3.52E+09	3.016657	0.0057
PIB	0.004295	0.000291	14.75614	0.0000

R-squared	0.898865	Mean dependent var	2.85E+09
Adjusted R-squared	0.891086	S.D. dependent var	4.19E+09
S.E. of regression	1.38E+09	Sum squared resid	4.97E+19
F-statistic	125.0595	Durbin-Watson stat	0.896118
Prob(F-statistic)	0.000000		

Dependent Variable: Q Ofertada
Method: Two-Stage Least Squares
Date: 04/12/10 Time: 13:14
Sample: 1980 2008
Included observations: 29
Instrument list: Constante PIB TC

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constante	-2.86E+11	1.14E+12	-0.250549	0.8041
PM	7.61E+11	3.05E+12	0.249664	0.8048
TC	2.70E+10	1.06E+11	0.255644	0.8002

R-squared	0.2558829	Mean dependent var	2.85E+09
Adjusted R-squared	0.1878739	S.D. dependent var	4.19E+09
S.E. of regression	7.98E+10	Sum squared resid	1.66E+23
F-statistic	0.037535	Durbin-Watson stat	1.291257
Prob(F-statistic)	0.963212		

Source: Results from Eviews 5.0.

Chart 4 shows the VAR equations for quantities demanded and supplied in the previous period 1 [Q (-1)] and average prices in the previous period 1 [PM (-1)], respectively. In both equations the adjusted R2 is 0.976811 and 0.979473 (the explanatory variables

explain 97.68% and 97.95% of the variance of the dependent variables (Q and Q defendant offered)). F tests with values of 569.6647 and 645.1719 indicate that the regressions are statistically significant at 5%. Thus we can adopt the following expressions as significant:

$$Q_{drpc} = 1,38Q(-1) - 5,16*10^{8}\,PM(-1) - 5,21*10^{-5}\,PIB$$

$$(0,14)^{10,1} \qquad (6,8*10^{8})^{-0,76} \qquad (3,4*10^{4})^{-0,16}$$

$R^2 = 0,976811$ F = 569.6647

$$Q_{srpc} = 1,41Q(-1) + 6,58*10^{7}\,PM(-1) - 5,15*10^{7}\,TC$$

$$(0,04)^{32,9} \qquad (6,6*10^{8})^{0,10} \qquad (2,8*10^{7})^{-1,81}$$

$R^2 = 0.979473$ F = 645.1719

Chart 4 - Demand and Supply of products from Japan - VAR (vector autoregressive)

Vector Autoregression Estimates
Date: 04/13/10 Time: 01:11
Sample (adjusted): 1981 2008
Included observations: 28 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Q Demandada

Q(-1)	1.375904
	(0.13560)
	[10.1469]
PM(-1)	-5.16E+08
	(6.8E+08)
	[-0.76440]
PIB	-5.21E-05
	(0.00034)
	[-0.15556]
Q(-1)	1.375904
	(0.13560)
	[10.1469]

R-squared	0.978528
Adj. R-squared	0.976811
Sum sq. resids	1.04E+19
S.E. equation	6.45E+08
F-statistic	569.6647
Log likelihood	-606.1072
Akaike AIC	43.50766
Schwarz SC	43.65040
Mean dependent	2.95E+09
S.D. dependent	4.23E+09

Determinant resid covariance (dof adj.)	5.26E+15
Determinant resid covariance	4.19E+15
Log likelihood	-583.0608
Akaike information criterion	42.07577
Schwarz criterion	42.36125

Vector Autoregression Estimates
Date: 04/13/10 Time: 01:12
Sample (adjusted): 1981 2008
Included observations: 28 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Q Ofertada

Q(-1)	1.406382
	(0.04272)
	[32.9225]
PM(-1)	65806448
	(6.6E+08)
	[0.09939]
TC	-51474962
	(2.8E+07)
	[-1.80827]

R-squared	0.980994
Adj. R-squared	0.979473
Sum sq. resids	9.20E+18
S.E. equation	6.07E+08
F-statistic	645.1719
Log likelihood	-604.3999
Akaike AIC	43.38571
Schwarz SC	43.52844
Mean dependent	2.95E+09
S.D. dependent	4.23E+09

Determinant resid covariance (dof adj.)	3.93E+12
Determinant resid covariance	2.38E+12
Log likelihood	-461.3397
Akaike information criterion	35.06220
Schwarz criterion	35.63813

Source: Results from Eviews 5.0.

Price has the expected signal in both supply and demand curves, however, GDP has no expected signal in the Chinese expected curve and the exchange rate has the same negative impact on supply curve that appears in the Japanese VAR model.

The econometric models indicates the Brazilian exports to Japan and Chinese show an inertial process, which suggests contracts and exporting-oriented production, better explaining Brazilian exports to these countries. This situation happens with minerals, steel and agribusiness products. They have exporting-oriented production and are selling basing on contracts.

6 - Conclusion

The analysis of data concerning Brazilian exports to Eastern and Southeastern Asian countries has identified the main Brazilian trade partners in the region, as well as the evolution of Brazilian exports to these partners. Japan and the People's Republic of China have dominated nearly 60% to 70% of total Brazilian exports toward to APEC-countries. The remainder of exports is divided into small proportions among the other countries. Taiwan and South Korea have differed somewhat, since their shares in Brazilian exports to APEC countries are slightly higher than others.

Despite the stability in the absolute value exported to Japan for almost the entire period, the commencement of the Chinese economy and its strong demand for raw materials and foodstuffs have allowed, since 2000, the PRC to surpass Japan in values imported from Brazil. This has led to a reduction in the Japanese share in the Brazilian total exports to the region, especially since the PRC started to demand 50% of Brazilian exports to APEC region in 2008.

A deepening evaluation of the exporting basket to Japan and the PRC showed a strong concentration in agribusiness products, minerals and steel. Masiero (2007) highlighted that, compared with Brazilian exports to the United States and European Union, the Brazilian exporting basket to Eastern Asian countries is predominantly based on primary products or products of low-added value, thereby constituting a disadvantage to Brazil. Carvalho and Silva (2005) confirm this idea, arguing that global demand for agricultural products grows less than that of industrialized products, and Brazil has placed reliance on agricultural products as a source of foreign exchange. Thus, one can say that after the economic liberalization, Brazil has been a victim of the de-industrialization process in the development of agribusiness.

On the other hand, Moraes (2004) argues that agriculture and agribusiness have been major:

> [Brazilian] trumps because these activities are labor intensive, thereby contributing to greater employment generation and less use of capital, released for other uses; their investments are more responsive, high capital ratio and lower product term maturation relation to other sectors and, finally, are highly competitive.

Moraes (2004) also concludes that, despite the distortions in the international market for agribusiness, generated by protectionism, this sector has managed to keep a stable performance in world trade, taking advantage of the competitive advantages of Brazil.

Brazil has not developed a policy to encourage trade with the countries from Eastern and Southeastern Asian countries. Observing the Brazilian participation in imports from Japan and the People's Republic of China, one realizes that this is small given the importance of Brazil in the international arena. It is evident that geographical, cultural and ideological distances are still major barriers that need to be addressed.

Econometric results suggest that the way to increase exports to Japan and China is to involve these countries in the production of Brazilian goods exported to them. It has been done in the past with Japan, which afforded the Cenibra pulp plant in the state of Minas Gerais (and what has exported most of its production, mainly to Japan) and recently with China, which is financing Brazilian petroleum company (Petobras) to drill deeper into sea waters to produce oil, and a share of it will be exported to China. Brazil needs to again resume loans or international direct investment from Japan in exporting-oriented production and from China, especially in agribusiness investments.

BIBLIOGRAPHY

ALMEIDA, C. O. de; BACHA, C. J. C. Evolução da Política Cambial e da Taxa de Câmbio no Brasil, 1961-87. **Revista Pesquisa e Debate**, São Paulo, n. 2, vol. 10, 1999.

ARAÚJO, P.F.C.; SCHUH, G.E. Desenvolvimento econômico e agricultura. In: BARROS et al. **Fundamentos de Economia Agrícola**. FEALQ, Piracicaba, julho de 1988, p. 227 a 277.

ASSOCIAÇÃO BRASILEIRA DO ALUMÍNIO - ABAL. Disponível em: <http://www.abal.org.br/industria/estatisticas_bauxita.asp>. Acesso em: 25 jan. 2010.

BAER, W. The Brazilian Economy: Growth and Development, 5th edition, Praeger Publishers, Westport, CT, USA, 2001.

BARROS, G. S. C., ISHII, K. S. Agronegócio Brasil-Japão. **Revista de Política Agrícola**, Brasília, n. 3, jul./ago./set. 2008. Disponível em: <http://www.embrapa.br/publicacoes/tecnico/revistaAgricola/RPA%203%202008.pdf>. Acesso em: 3 dez. 2009.

CARVALHO M. A. de, SILVA C. R. L. da. Vulnerabilidade do Comércio Agrícola Brasileiro. **Revista de Economia e Sociologia Rural**, Rio de Janeiro, n. 1, vol. 43, 2005.

_____. Mudanças na Pauta das Exportações Agrícolas Brasileiras. **Revista de Economia e Sociologia Rural**, Rio de Janeiro, n. 1, vol. 46, 2008.

CENTRAL INTELLIGENCE AGENCY. **The World Factbook**. Disponível em: <https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html>. Acesso em: 2 dez. 2009.

FUJITA, E. S (Org.). **O Brasil e a Ásia no Século XXI**: ao encontro de novos horizontes. Brasília: Instituto de Pesquisa de Relações Internacionais – Departamento de Ásia e Oceania, 2001.

GUJARATI, Damodar N. **Basic Econometrics**. 4th edition. New York: Mcgraw Hill, 2004.

HILL, C.; GRIFFITHS W.; JUDGE G. **Econometria**. São Paulo: Editora Saraiva, 1999.

INSTITUTO DE PESQUISA ECONÔMICA APLICADA. **IpeaData**. Disponível em: < http://www.ipea.gov.br/default.jsp>. Acesso em: 23 jan. 2010.

INTERNATIONAL MONETARY FUND DATA AND STATISTICS. **World Economic Outlook Database, October 2009**. Disponível em: <http://imf.org/external/pubs/ft/weo/2009/02/weodata/index.aspx>. Acesso em: 21 jan. 2010.

MAGALHÃES, L. J. D. Comércio Internacional, Brasil e Agronegócio. **Texto para Discussão**, Brasília, n. 16, 2003. Disponível em: <http://www22.sede.embrapa.br/unidades/uc/sge/texto16.pdf>. Acesso em: 5 dez. 2009.

MASIERO, G. **Negócios com Japão, Coréia do Sul e China**: economia, gestão e relações com o brasil. São Paulo: Editora Saraiva, 2007.

MINISTÉRIO DO DESENVOLVIMENTO, INDÚSTRIA E COMÉRCIO EXTERIOR. **Aliceweb**. Disponível em: <http://aliceweb.desenvolvimento.gov.br/>. Acesso em: 30 out. 2009.

MORAES, A. L. M. de. A Liberalização Econômica da China e sua Importância para as Exportações do Agronegócio Brasileiro. **Texto para Discussão**, Brasília, n. 22, 2004. Disponível em: <http://bbeletronica.sede.embrapa.br/cgi-bin/load.cgi?http://bbeletronica.sede.embrapa.br/bibweb/bbeletronica/2004/texto/sge_texto_22.pdf >. Acesso em: 5 dez. 2009.

ROBERTS, Richard. **Por Dentro das Finanças Internacionais**: guia prático dos mercados e instituições financeiras. Rio de Janeiro: Jorge Zahar Editor, 2000.

TORRES FILHO, E. T. Auge e Declínio – Impactos da Reestruturação Japonesa sobre as Relações Econômicas Nipo-Brasileiras. In: NINOMIYA Masato (Org.). **O Desenvolvimento das Relações Brasil-Japão à Luz da Expansão Econômica da Região Ásia-Pacífico**. São Paulo: Kaleidos-Primus Consultoria e Comunicação Integrada S/C Ltda., 1996.

UNITED NATIONS COMMODITY TRADE STATISTICS DATABASE. **UN COMTRADE**. Disponível em: <http://comtrade.un.org/>. Acesso em 9 dez. 2009.

VEIGA, P. da M. **Políticas Comerciais no Brasil**: Características, Condicionantes Internos e Policy-Making. Disponível em: <http://www.iconebrasil.com.br/arquivos/Outros%20documentos/Livro%20DFID/Cap1%20-%20Brasil.pdf>. Acesso em: 5 dez. 2009.