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The Deepening China Brazil Economic Relationship

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CESIFO WORKING PAPER NO. 3289
CATEGORY 8: TRADE POLICY
DECEMBER 2010

CESifo *Working Paper No. 3289*

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Abstract

We document key features of the deepening economic relationship between Brazil and China. This is evident from sharply increased bilateral trade and foreign direct investment flows and also from enhanced cohesion of negotiating positions in international fora. Data presented show bilateral trade between Brazil and China surging after 2001 and China is now Brazil's largest export market while Brazil's export share to the US has halved. The number of bilateral cooperation agreements between the two countries has also significantly increased in recent years. Projections of future trade flows using current growth rates suggest that China will become the dominant trade partner for Brazil surprisingly soon.

JEL-Code: F10, F13, F19.

Keywords: economic relationship, trade, policy, China, Brazil, deepening.

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December 2010
We are grateful to the Ontario Research Fund (ORF) for financial support and to Wang Jing and Mohan Agarwal and a seminar group at Western Ontario for comments.

1. Introduction

The China-Brazil bilateral economic relationship is rapidly deepening. China and Brazil both now play an increasingly important role in the global economy. According to the World Bank 2009 GDP data, measured in purchasing power parity terms China has the 2^{nd} largest economy in the world while Brazil is 9^{th}. Since 2000, before China became a member of the World Trade Organization, bilateral trade between Brazil and China has increased by a factor of 15, and in 2009 China became Brazil's largest trading partner, ahead of the US. For bilateral foreign direct investment (FDI) flows the increase is also dramatic, around 15 fold over the same period, although from a small initial base.

Brazil and China's bilateral relationship also builds on complementary economic structures. Brazil is rich in natural resources and exports raw materials and agricultural products, and China imports these products (De Souza, 2008). With low wage labor and large pool of skilled workers China uses these products since China has become a major centre worldwide for manufacturing. With expanded involvement in global markets, China's demand for raw materials has increased significantly in the last two decades. Brazil has competitive raw materials and agricultural products.

Brazilian trade structure has undergone major change reflecting this growth in trade and FDI with China. In the early 2000's China was seen in Brazil mainly as a competitive threat in third country markets, and especially the US. Since then the Brazilian share of exports to the US has halved confirming this fear, but growing direct bilateral trade with China has more than compensated for these losses and China is increasingly seen in positive terms as Brazil's future. In 2000 manufactures were around 80% of Brazilian exports. In 2009, their share was only 20%; with soybeans and minerals each with a 30% share and China their major destination markets. This rapid change in trade composition is indication of the depth of change in economic activity that engagement with China has brought to Brazil. 10 years ago, Brazil's dominant trade interest was improved and more secure access to OECD markets for exports of manufactures and agriculture. Today, in contrast, while the interest remains in secure access to these markets it is almost as much for China and continued Chinese growth to further fuel Brazilian bilateral exports to China as it is for Brazilian exports.

Brazil today is portrayed in some circles as the latest member of the high growth club of the large population lower wage economies along with China and India. Over the last thirty years, China has maintained an average growth rate of 10% while for Brazil this has only been 4%, but since the 2008 financial crisis Brazilian growth has accelerated. Forecasts by the Brazilian Central Bank are for a 7.6% growth rate for 2010[2]. Time will tell if high growth in Brazil persists, but today Brazil and China are thus among the fastest growing economies globally and the gap between them and the industrial economies will further narrow (and likely rapidly) if they both maintain current growth rates.

Brazilian and Chinese shares of global trade are also rapidly increasing. Since 2000 their joint share of global trade has increased from 4.6% to 10.1%. Policy coordination between them is also increasing; the number of bilateral agreements signed by these countries, both among them and with regional neighbors, is also growing[3][4]. This growth in bilateral trade is also accompanied by a decline in the share of global trade of the industrial countries of 14% from 2000 to 2009, an indication of the growing role globally of the countries of the Larger South (China, India, and Brazil). They have joint common interests in global climate change policy.

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[2] See Bank of Brazil (2010) *Focus-Market Readout, November 12, 2010*

[3] See Whalley J. (2006) *China in the World Trading System* CESifo Economic Studies, vol 52(2) pp. 215-245.

[4] See Antkiewicz A. and J. Whalley (2006) *Bricsam and the Non-WTO*" Review of International Organizations, vol 1(3) pp. 237-261.

2. Brazilian and Chinese Growth

Brazil and China today are often grouped together as fellow high growth large population lower wage economies. But they have had very different growth experiences over the last 3 decades. Brazil grew at high rates from the 1940's through the years of military rule until the debt crisis of 1981. The severity of adjustments to the crisis that followed resulted in a decade of economic underperformance, and over the decade that followed growth both of GDP and GDP/capita were negative. In the 1990's a succession of anti inflation plans were adopted with little success, and large public sector deficits prevailed.

It is only in the last few years that there has been a return to the high growth in Brazil of the 1940's-1970's and this has been accompanied by growing fiscal soundness, a drop in inflation rates, and strong export growth. Brazilian growth rates have increased through the period of recent financial crisis, and the latest release from the Brazilian Central Bank further upward revises forecast growth for 2010 to 7.6%[5]. Some optimistic Brazilian commentators even talk of Brazil joining the China-India 10% annual growth club. This may be excessively optimistic, but were it to occur the income gap between China-India-Brazil on the one hand and the OECD would narrow even more quickly.

In China, when the Cultural Revolution ended in 1976, China's GDP growth rate was -2%. But since then China has progressively raised its growth performance while changing its economy from central planning to market orientation. During the growth process excessive inflation, budget deficits and unemployment have been contained. Large inward foreign direct investment has also been key to the high growth.

China's average growth rates between the late 70's and today have been much higher and more stable than Brazil's, while at the margin after the 2008 financial crisis Brazil's growth rate is edging up towards Chinese rates. China has experienced no recent periods of negative growth, but growth performance has travelled much further and faster in recent decades. Starting from a much lower base than Brazil in the late 1970's reforms in agriculture after the Cultural Revolution lead the way to 7% growth. Major acceleration then occurred in growth rates in the early 1990's with manufacturing growth and growing inward FDI. This yielded a roughly 10% annual growth regime for the last 2

[5] See Bank of Brazil (2010) *Focus-Market Readout, November 12, 2010*

decades, which in the three years before the 2008 financial crisis produced 12-13% growth. A recovery in growth to 9.1% occurred in 2009. Growth in early 2010 showed a resurgence in the first quarter and a slight lowering in Q2.

Fig. 2.1 reports Chinese and Brazilian growth rates. After 1978 China's growth rate was consistently higher and more stable than Brazil's. Brazil's growth rates of both GDP and GDP/capita in US$ in various periods (2006, 1994-1996) are also heavily influenced by exchange rate movements. If GDP per capita is measured in purchasing power parity (PPP), GDP per capita is still higher in Brazil than in China; but, the difference in GDP per capita between the two countries is today much smaller than a few decades prior. In 1980, GDP per capita in China was $524, and in Brazil $7,572; the GDP per capita ratio was 1:11 in Brazil's favour. In 2009 the picture is quite different. GDP per capita in China has increased to $5,712, less than half of GDP per capita in Brazil of $9,559.[6]

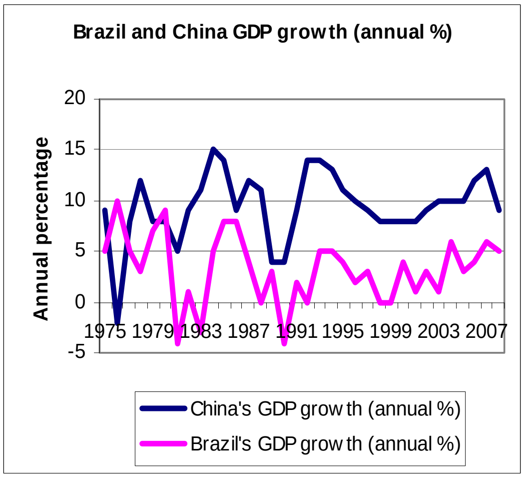
Brazil has also been subject to both more volatility and severity of external shocks than China. The Brazilian economy was heavily affected by the oil price shock in 1973 since at that time Brazil's oil imports accounted for more than 80% of its oil consumption. The current account deficit increased from US$1.7 billion to US$7.1 billion (Werner, 2008). After the oil price shock, Brazilian economic growth started to decline and in the 1981 debt crisis there was negative GDP growth. Brazil's economy then experienced instability with increases in foreign indebtedness, currency devaluations, and inflation. In the 1990's the Brazilian economy stabilized, and economic growth started to pick up. Growth increased reaching levels of 5% in 2008. The most recent increase in Brazil's GDP growth has been aided by high world demand for commodities which has led to an increase in prices.

Up to the 1990's direct economic interactions between China and Brazil were small, and dominated by competition in third country export markets (especially in the US and the EU). As a result initially high Chinese growth was seen in Brazil as threatening as the concern was that this would take away Brazilian export markets. But while this has happened (and especially so in the US), bilateral trade has grown to the point that the competitive threat that China poses in third country markets has become

[6] World Development Indicators (WDI), World Bank, at www.worldbank.org.

outweighed by the positive joint mutual beneficial gains possible from export of commodities and resources to China and imports of manufactures from China.

Fig. 2.1 Brazil's and China's GDP growth (annual %) 1975-2008

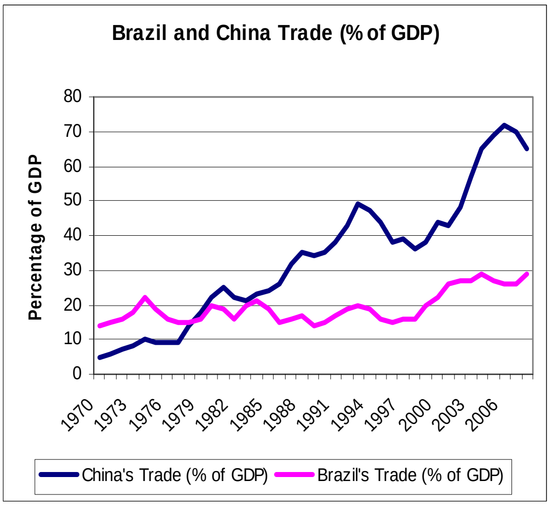


Source: World Development Indicators (WDI), World Bank, at www.worldbank.org.

3. Brazil and China's Trade

Both Brazil and China have high trade (exports plus imports) shares in GDP. For Brazil this has edged upwards from around 20% in the 1970's to around 30% today. For China it has climbed from 5% in 1970 to 65% today (see Fig 3.1). This 1200% increase in China's trade/GDP ratio, reflects the rapid integration of China into the global economy while Brazil's slow changing trade percentage in GDP reflects much slower growth.

Fig 3.1 Brazil's and China's Trade (% of GDP) 1970-2008



Source: World Development Indicators (WDI), World Bank, at www.worldbank.org.

Brazil and China also both run trade surpluses. From 2000 to 2009, China's trade surplus grew from US$24 billion dollars to US$197 billion dollars and peaked in 2008 at US$297 billion dollars. China's major regional trade surpluses in 2009 were with Developed North America (a trade surplus of US$149.2 billion) and Developed Europe (a trade surplus of US$101.6 billion). China's major regional trade deficits in 2009 were with Developed Asia-Pacific and Eastern Asia with trade deficits of US$52.2 billion and US$40.6 billion respectively.[7]

Although the 2008 financial crisis slowed the growth of Brazilian exports, Brazil's trade surplus occurs across its key trading partners in a different form. In 2009, Brazil had a trade surplus with Latin America and Caribbean (US$12.7 billion dollars),

[7] See United Nations Commodity Trade Statistics (2010) *International Trade Statistics Yearbook 2009* Country Trade Profiles.

Developed Europe (US$4.8 billion dollars), Eastern Asia, Southern Asia, Western Asia. On the other hand, Brazil had a trade deficit with Developed North America and Developed Asia-Pacific.[8]

China's trade is also more regionally concentrated than Brazil's. In 2008, 46.5% of China's exports went to Asia and 65.5% of China's imports were from Asia. China's large trade share with Asia in part reflects China's large processing trade, but also China's Free Trade Area agreements with Asia including the Closer Economic Partnership Arrangement with Hong Kong and Free Trade Agreement with Asean. As processing exports of manufactures have grown, China's exports to Asia as a percentage of total world exports have decreased since 1996 from 61.6% to 46.5% in 2008 while China's imports from Asia have increased from 61.1% to 65.5%. Thus in China's large processing trade components imported from Asia are processed and shipped out elsewhere. China's exports (as a % of world) to Asia-Pacific and Eastern-Asia have thus decreased since 1996 and increased to Europe, North America, Africa, Latin America and The Caribbean, Southern Asia and Western Asia.

Brazil's trade, in contrast is more regionally diversified. In 2009 Brazil's exports to Latin America and The Caribbean accounted for only 23.5% of total exports and imports from Latin America and the Carribean accounted for only 17.8% of Brazil's imports. (see Table 3.2)

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[8] See United Nations Commodity Trade Statistics (2010) *International Trade Statistics Yearbook 2009* Country Trade Profiles.

Table 3.1 China's merchandise trade with the world (%) 1996-2008

	Exports		***Imports***	
	1996	2008	1996	2008
Asia-Pacific	21.7	9.8	23.8	16.8
Europe	14.4	20.7	15.3	12.5
North America	18.8	19.2	13.5	8.3
Subtotal Developed Countries	54.9	49.8	52.6	37.6
Africa	1.6	3.6	1.1	4.9
Latin America & The Caribbean	2.0	5.0	2.6	6.3
Developing Asia	39.9	36.7	37.3	48.7
Others	1.6	4.9	6.4	2.5
Total:	100.0	100.0	100.0	100.0

Source: International Trade Statistics Yearbook, Country Pages. United Nations International Merchandise Trade Statistics at http://comtrade.un.org and China Statistical Yearbook 2009, National Bureau of Statistics of China at http://www.stats.gov.cn

Table 3.2 Brazil's merchandise trade with the world (%) 1996-2009

	Exports		***Imports***	
	1996	2009	1996	2009
Asia-Pacific	7.0	3.1	5.9	4.9
Europe	29.1	24.2	28.7	24.9
North America	20.6	12.2	24.7	17.0
Subtotal Developed Countries	56.7	39.5	59.3	46.8
Africa	3.2	5.9	3.2	6.6
Latin America & The Caribbean	24.4	23.5	21.8	17.8
Developing Asia	13.2	28.5	13.0	28.3
Others	2.5	2.6	2.7	0.5
Total:	100.0	100.0	100.0	100.0

Source: International Trade Statistics Yearbook, Country Pages. United Nations International Merchandise Trade Statistics at http://comtrade.un.org and Economic Indicators, Banco Central do Brasil at http://www.bcb.gov.br.

4. The Growth and Composition of Bilateral China-Brazil Trade

4.1 Growth of Bilateral Merchandise Trade

China and Brazil bilateral trade has increased at a faster pace since 2000 than global trade. China's share in global exports increased from 3.91% to 9.71% from 2000 to 2009; a 2.48 fold increase. Brazil's share in global exports increased in the same nine years from 0.86% to 1.23%, a 1.43 fold increase. China's trade growth rate has been double that of Brazil.[9]

China is also now bilaterally a more important partner for Brazil than the US. This is in sharp contrast to 2001 when the US accounted for 25% of Brazilian exports and China only 3% (Table 4.1). Among Brazil's major export partners, China ranks 1st with 13% of Brazil's total exports in 2009 (also Table 4.1), and 15%, in the first 6 months in 2010. China's imports from Brazil, however, were only 2.82% of total Chinese imports in 2009, although, China's imports from Brazil increased from 0.5% to 2.82% between 2000 and 2009.

Table 4.1 Brazil's major export partners (%) 2001-2010

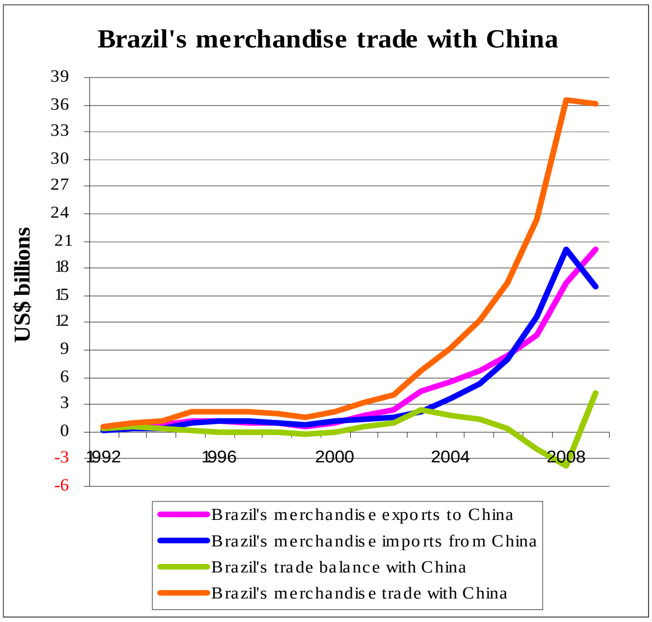
Rank in 2009	Country	2001	2003	2004	2006	2008	2009	First ½ 2010
1	China	3	6	6	6	8	13	15
2	United States	25	23	21	18	14	10	10
3	Argentina	9	6	8	9	9	8	9

Source: Economic Indicators, Banco Central do Brasil and International Trade Center, at www.bcb.gov.br and http://www.intracen.org/menus/countries.htm

Fig 4.1 shows that trade between Brazil and China has been increasing rapidly since 2001, while bilateral trade imbalances have been oscillating in sign. Between 2000 and 2009 bilateral merchandise trade increased from US$2.3 billion to US$36.1 billions, a 15 fold increase in trade in only 10 years. This period coincides with China becoming a member of the World Trade Organization (WTO). Brazilian exports to China grew at 40% per year between 2001 and 2009, with the highest growth rates in 2001 (75%), 2003 (81%) and 2008 (53%).

[9]See United Nations Commodity Trade Statistics (2010) *International Trade Statistics Yearbook 2009*

Fig 4.1 Brazil's merchandise trade with China 1992-2009



Source: Sistema Aliceweb, Brazilian Ministry of Development, Industry and Trade, at www.mdic.gov.br.

Brazil's trade surplus with China totaled US$6 billion dollars over the last decade. However, it was only in the period 2004 to 2008 that imports from China grew at a faster rate than exports, 57% versus 30%. As a result, Brazil began to record a trade deficit with China in 2006 which increased in 2008.

While Brazil's global exports decreased in 2009 by 22.7%, exports to China increased by 23%. Brazil's bilateral trade with China has thus not been significantly affected by the recent financial crisis. The import main items for China from Brazil in 2009 were soya beans and iron ore. Soya beans are used in China's food industry and iron ore is primarily used to manufacture machinery. China's machinery exports in 2009 fell at a slower rate (-12%) than total exports (-16%) and China's demand for iron ore remained high despite the crisis.

Brazil's imports from China declined during the financial crisis by 20.6% in 2009. Electrical equipment imports from China fell by US$1 billion, a 25% decrease. Falls in other products in decreasing order on importance were: mineral fuels, oils, distillation products (mainly coke and semi coke of coal, lignite, peat; retort carbon), nuclear reactors, boilers and machinery imports. (International Trade Center data)

More than 50% of Brazil's imports from China are electronic equipment and machinery which as durable goods were more volatile in trade in the financial crisis. A decrease in Brazilian demand in the crisis and the depreciation of the Brazilian Real further reduced Brazil's 2009 imports. The Brazilian Real depreciated by 16% during the financial crisis.

4.2 Product Composition of Bilateral Trade

The composition of Brazil's trade with China has also changed in recent years, since imports of manufactures increased sharply from 55.4% in 1992 to 97.6% in 2009, and imports of primary goods decreased from 44.6% to 2.4%. Table 4.2 indicates that almost all manufactured products with the exception of chemicals and related products, increased their import shares. In contrast, the share of Brazilian exports of manufactured goods to China decreased from 58.8% to 14.5% and the share of exports of primary goods increased from 41.2% to 85.5%. This change in the composition of Brazil's exports to China is a reflection of China's change in production structure as China became an even larger consumer of raw materials and a larger exporter of manufactured goods.

China's exports to Brazil have also shifted more from final assembly stages of manufacturing to trade that reflects products that are used through all stages of production[10]. Table 4.2 reports import shares of semi manufactured goods, showing shares of manufactured goods classified chiefly by material decreased and import shares of primary goods increased between 1992 and 2009. A comparable but different pattern occurs in Brazil's exports to China. Labour is more expensive in Brazil than in China, and Table 4.2 shows a sharp decrease in the share of manufactured goods in exports by Brazil to China from 49.3 % to 8.8%.

[10] See Li, C. and M. Syed (2007) *The Shifting Structure of China's Trade and Production* IMF wp 07/214.

Table 4.2 Brazil's trade composition with China in 1992-2009

Product	*Exports (%)* 1992	2009	*Imports (%)* 1992	2009
Primary goods				
Food and live animals	2.8	1.0	0.7	1.2
Beverages and tabacco	0.0	1.8	0.0	0.0
Crude materials, inedible, except fuels	27.8	73.9	14.2	0.6
Mineral fuels, lubricants and related materials	0.0	6.6	23.8	0.7
Animals and vegetable oils, fats and waxes	10.5	2.0	5.8	0.0
Subtotal primary goods	41.2	85.5	44.6	2.4
Manufactured goods				
Chemicals and related products	6.8	2.4	14.1	11.1
Manufactured goods classified chiefly by material	49.3	8.8	4.2	14.8
Machinery and transport equipment	2.1	3.1	32.1	55.9
Miscellaneous manufactured articles	0.6	0.2	5.1	15.8
Subtotal manufactured goods	58.8	14.5	55.4	97.6

Source: United Nations Commodity Trade Statistics Database /UNcomtrade, at http://comtrade.un.org.

Table 4.3 Major Brazilian Exports and Imports to/from China by value 1992 and 2009

Commodity Description	*Value (millions)* 1992	2009	*% Share* 1992	2009
Exports				
Metalliferous ores and metal scrap	99	7,231	21.5	35.8
Oil-seeds and oleaginous fruits	0	6,343	0.0	31.4
Petroleum, petroleum products and related materials	0	1,342	0.0	6.6
Pulp and waste paper	11	1,097	2.5	5.4
Iron and steel	94	1,045	20.5	5.2
Total Major Exports	205	17,058	44.5	84.5
Imports				
Electrical machinery, apparatus and appliances	1	2,652	1.0	16.7
Telecommunications and sound-recording and reproducing apparatus and equipment	2	2,422	2.6	15.2
Office machines and automatic data-processing machines	0	1,638	0.4	10.3
General industrial machinery and equipment, and machine parts	3	1,048	5.4	6.6
Organic chemicals	4	964	7.2	6.1
Total Major Imports	10	8,723	16.6	54.8

Source: United Nations Commodity Trade Statistics Database /UNcomtrade, at http://comtrade.un.org.

Brazil is now the second largest world supplier of soya beans after US, and China is one of the largest global consumers. In 2008, Brazil accounted for 31% of soya beans world exports and China accounted for 50% of soya beans world imports. As a result, in

2009 Brazilian exports to China were heavily concentrated in two products, iron ore (35.8%), and soybeans (31.4%). These are both raw materials and agricultural products with low fabrication. Brazilian iron ore and soybeans exports to China now account for 14% and 34% respectively of total Chinese imports of iron ore and soybeans.

In contrast, Chinese exports to Brazil are more diversified. The sharp growth in China's overall trade since the mid 1990's has been in electronic technology products (See Table 4.3). Although, machinery and transport equipment represent 55.9% of exports, this category comprises a variety of high technology and mechanical products such as electrical machinery, apparatus, appliances, telecommunications apparatus, sound-recording apparatus, office machines, and automatic data-processing machines etc.

The decrease in Brazilian share of manufactured exports to China by more than 75% has forced many Brazilian manufacturing businesses out of business and has seen a shift to resources sectors which are more profitable. The positive side for Brazil of the increased demand for raw materials by China has been a surge in the price of such products on world markets which has also resulted in income gains for Brazil.

4.3 China-Brazil Trade in Global Context

Brazilian trade with other regions of the world has also changed sharply over the last decade. In particular, Brazil's exports to Europe and the US as a share of Brazil's total exports have decreased as Brazil's exports to China have increased sharply. Brazil's market share in China has increased from 0.5% to 2.9% (Fig 4.4).

As can be seen from Fig 4.3, between 2000 and 2010, the percentage of Brazilian exports going to the US decreased from 24% to 10% and to Europe from 30% to 24%. Brazil has had difficulty competing with China in third markets, as have other countries.

Fig 4.3 Brazil's Exports to Europe, US and China (% share) 2000-2010

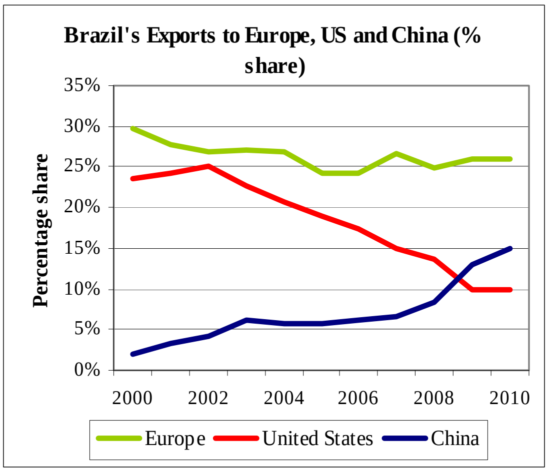
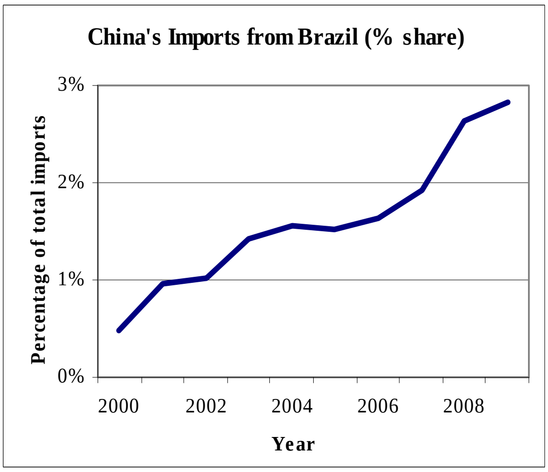


Fig 4.4 China's imports from Brazil (% share) 2000-2009



Source: International Trade and Tariff data/Statistics Database (WTO), World Trade Organization, at www.wto.org and Economic Indicators, Banco Central do Brasil, at www.bcb.gov.br.

After 2001, China gained market share in Brazil in 80 out of 97 products on an SITC (Standard International Trade Classification) classification. In particular, China's share of Brazil's imports from the world in electrical and electronic equipment increased from 3.9% in 2001 to 33.9% in 2009 and in nuclear reactors, boilers and machinery from 1.9% to 15.3%. China has more than a 50% market share in Brazil in 15 products and between 10% and 50% of the market in 28 products.[11]

Brazil has increased market share in China in 45 out of 97 products. However in 2009, Brazil had only 6 products with a market share in China of between 10% and 50%. These products were (in decreasing order): tobacco, soya beans, fruit and vegetable juices, iron ore, cane or beet sugar and wood pulp.[12]

Batista (2008) argues that Brazil lost competitiveness in the manufactured sector in the US against other developing countries, and when the North American Free Trade Agreement came into force in 1994 Brazil lost US share to Mexico because the United States eliminated import tariffs on Mexican goods. However the changing US and China shares in reality are driven more by the growth of Chinese demand for Brazilian raw material exports and resource switching out of Brazilian manufactures.

[11] See International Trade Center (2010) available at http://www.intracen.org/menus/countries.htm
[12] See International Trade Center (2010) available at http://www.intracen.org/menus/countries.htm

4.4 Services Trade

Trade in services is proportionally larger in Brazil than for China. Transportation, travel and other business services account for more than two thirds of total trade in services in each country. Services trade in financial sector products is small in China, but larger in Brazil. In China, exports of financial services account for 0.2% of total service exports and imports of financial services account for 0.4% of total service imports, since the financial sector is restrictive to foreigners. In Brazil, exports of financial services account for 4.1% of service exports and for 2.4% of imports of financial services. Imports of computer and information services, royalties and license fees and government services are 17.5% of total service imports; in China they account for only 9.1%. The share of insurance imports is higher in China than in Brazil with a share of 8% versus 3.5% of total service imports.[13] Bilateral data on services trade between Brazil and China is not available.

Trade in services (exports and imports) accounts for 18% of total Brazilian trade and 11% of total Chinese trade and these shares were relatively stable between 2001 and 2008. China's accession to the WTO implies that China must undertake liberalization in services; China is also committed to open service markets for foreign providers.[14]

Between 2000 to 2008 services trade composition was more stable in Brazil than in China. In China the share of travel imports in total service imports dropped from 36.4% in 2000 to 22.8% in 2008. Similarly, the share of travel exports dropped from 53.3% to 27.8%. On the other hand, in China the share of transportation exports increased from 12.1% to 26.1% of total service exports and the share of construction services exports increased from 2% to 7%.[7]

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[13] See International Trade Center (2010) available at http://www.intracen.org/menus/countries.htm

[14] See Whalley J. (2006) *China in the World Trading System* CESifo Economic Studies, vol 52(2) pp. 215-245.

5. Foreign Direct Investment (FDI) flows between China and Brazil

Since 1990, Brazil and China have also seen remarkable growth in inflows of foreign direct investment. Fig 5.1 shows that in 2008 FDI inflows into Brazil increased from US$0.98 billion to US$45 billion, a 45 fold increase from 1990 to 2008. Similarly, in China FDI inflows increased from US$3.4 billion to US$147.7 billion, a 42 fold increase.

Fig. 5.2 shows that China experienced a surge in FDI at the beginning of the ‘90s reaching levels of 6% of GDP which helped the Chinese economy to grow at a high rate. During that period, GDP growth reached 14% per year. The high labor productivity in the foreign invested enterprises (FIEs) was factor that fuelled this spectacular growth (Whalley & Xin, 2006). However, net inflows into China of foreign capital as a % of GDP decreased after 1995 and stabilized around 3% to 4% of GDP, since GDP increased faster than FDI. Similarly, Brazil experienced a surge in net inflows of foreign direct investment (% of GDP) from the end of the ‘90s, but at a lower level than China. But foreign direct investment in Brazil fell after 2001, and it now fluctuates between 2% to 3% of GDP.

Brazil’s relative FDI’s performance also reflects China’s rapid integration into the world economy from the early 1990’s on. In the ‘90s, average growth rates of Brazil’s foreign direct investment inflows were 57.2%, while for China were lower at 40.7%. After 2000 the situation reversed with average growth rates for China of 18.3% and of 13.3% for Brazil. China’s policy was to attract FDI and China offered tax incentives to foreign invested entities and preferential terms for land-rental and utility rates.[15] Fig 5.2 shows that in 2000 OECD FDI flowing into Brazil was US$32.7 billion and this fell to US$10 billion in 2003 and US$15 billion in 2005. Foreign invested entities were also attracted to invest in China because labor costs were still low in China.

[15] See Naughton, B. (2007) *The Chinese Economy. Transitions and Growth* MIT Press Cambridge, Massachusetts London England

Figure 5.1 Foreign Direct Investment (net inflows) 1990-2008

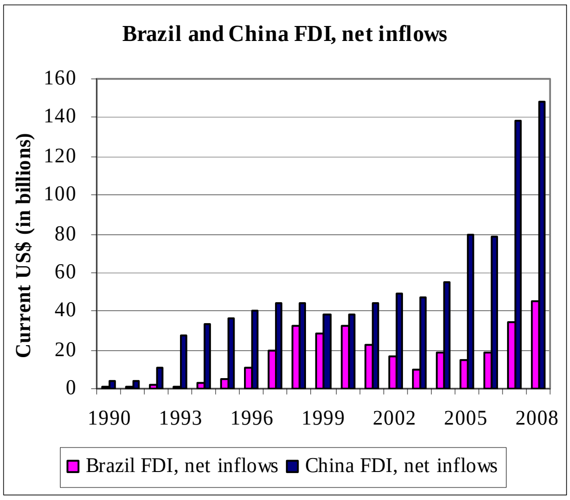
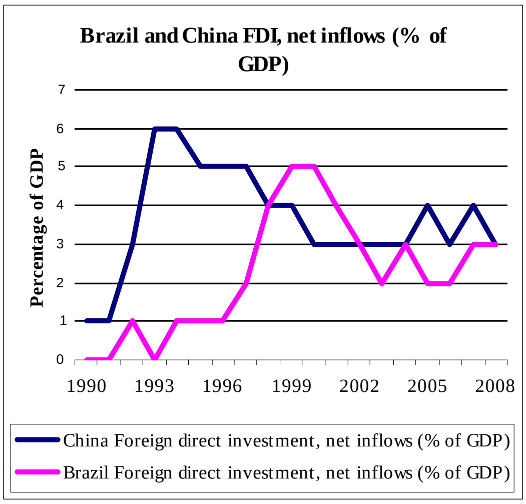


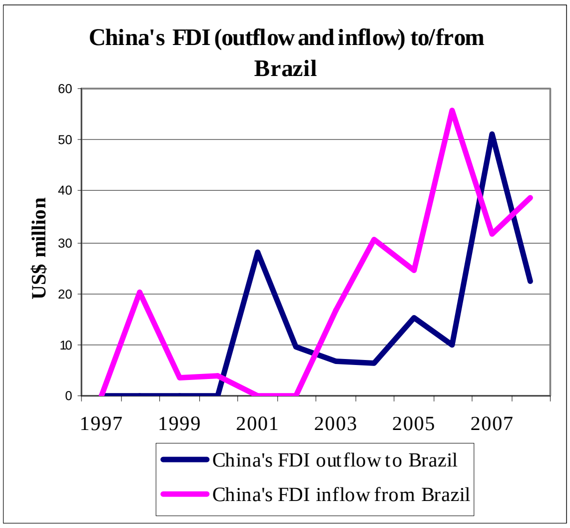
Fig 5.2 Foreign Direct Investment (net inflows % of GDP) 1990-2008



Source: World Development Indicators (WDI), World Bank, at www.worldbank.org.

Since the main destination for China's FDI outflows is Asia, bilateral FDI flows between China and Brazil are still small. Fig 5.3 shows that during 1997 to 2008 China's investments in Brazil increased sharply in total terms from a small amount to US$22 millions and also Brazil's investments in China increased similarly.

Fig 5.3 China's Foreign Direct Investments to/from Brazil 1997-2008



Source: China Statistical Yearbook 2009, at www.stats.gov.cn and UNCTAD FDI Statistics, at www.unctad.org.

China's major overseas investments are in natural resources, since China is a growing user of natural resources to process into manufactured goods. China's government encourages outward FDI in oil and other mineral sectors. The government has also made the approval process for outward FDI easier and in addition offered incentives for FDI in targeted industries and countries.[16]

Major Chinese investments in Brazil are in petroleum and gas, mining, forestry, transportation services, motorcycles, telecommunication, and electronics.[17] Also, Brazilian firms such as CVRD, Embraco and Embraer from industries such as steel, refrigeration equipment and aviation are now invested in China.[18] Companhia Vale do Rio Doce (CVRD) is the largest producer of iron ore in the world. CVRD is also a large producer of pellets and nickel. In 2006, CVRD made its first investment in China through its subsidiary Mineracoes Brasileiras Reunidas which processes nickel and also in coal mining. It plans to provide 70% of its iron ore to China during the next 30 years.[19] In 2002, Embraer established a joint venture in China to manufacture commercial jets.

[16] See Cheng K.L. and M. Zihui, 2010 *China's Outward Foreign Direct Investment* in China's Growing Role in World Trade, edited by Robert C. Feenstra and Shang-Jin Wei, Chicago: National Bureau of Economic Research. Pp 545-580.
[17] See Baumann R. (2009) *Some Recent Features of Brazil-China Economic Relations* CEPAL. Economic Commission for Latin America and The Caribbean.
[18] See Dominguez I. J. et al. (2006) *China's Relations With Latin America: Share Gains, Asymmetric Hopes* Inter-American Dialogue, wp.
[19] See Schneiderman, R.M. (2006) *CVRD goes to China* Forbes.com

6. Policy Coordination Dimensions in the Chinese Brazilian Relationship

China and Brazil have in recent years also been moving closer together in international policy coordination. In the period before 2001 when China was not a WTO member Brazil was active in both UNCTAD and G77 and also in the GATT; and later in the WTO jointly with India. After China joined the WTO, China remained largely passive in the early stages of the Doha Round negotiation, but has since become more active. Brazil and China both have strong interests in improved and more secure access for exports of manufactures to the OECD, but with the sharp rise in Brazilian exports of resources Brazil has a growing and now even dominant interest in continued Chinese growth and hence China's access to OECD markets.

Common positions at international negotiations are also evidence that Brazil and China are developing a partnership of potentially global significance. Along with growing bilateral trade and foreign direct investment economic cooperation agreements between Brazil and China have also increased significantly. Also, the two countries have taken joint positions and supported each other at the World Trade Organization, and at the Copenhagen climate change negotiations. Brazil and China have also signed several bilateral cooperation agreements since 2000.

These deeper economic and political relations date back to 1974 and bilateral agreements have flourished since then. The most recent were signed during Brazil's president Lula's visits to China in May 2009, when Brazil and China signed 13 cooperation agreements and a Joint Action Plan 2010-2014.[20]

The Joint Action Plan signed in May 2009 involves cooperation in the following areas: political, economic and trade, energy and mining, financial, agricultural, industry and information technology, space cooperation, cultural and educational. According to the Joint Action Plan, Brazil and China will cooperate in World Trade Organization negotiations, especially in agriculture and also jointly oppose protectionism[21]. There are, however, also challenges facing the Brazil China relationship. China failed to support Brazil's request for a permanent position in the United Nations Security Council; also

[20] See The Economist (2010) *Brazil/China economy: Deeper inroads* Country analysis & Forecast.
[21] See Ministry of Foreign Affairs of the People's Republic of China (2010) *Joint Action Plan Between The Government of the People's Republic of China and The Government of The Federative Republic of Brazil, 2010-2014*

China still challenges Brazil's competitive trade position in North and Latin American markets.

6.1 Trade Agreements

Brazil and China have signed several cooperation agreements to increase trade, investment and economic cooperation between the two countries, but they have not signed a formal bilateral trade agreement with each other. The negotiation of a bilateral trade agreement between China and Brazil has been further complicated by the Mercosul, Brazil's regional trade agreement between Argentina, Brazil, Uruguay and Paraguay. Signed in 1991 this embodies a common external tariff applied by all members in their trade with other countries outside Mercosul. A potential free trade agreement between Brazil and China thus must be negotiated along with other Mercosul countries. In this, all members of Mercosul would have the same preferential tariffs with China which would then also weaken Brazil's trade with the region.

China and Brazil have however negotiated (or are negotiating) Free Trade Agreements with other countries close geographically. Under Mercosul Brazil is negotiating a Free Trade Agreement with the EU and the Free Trade Area of the Americas agreement involving 34 countries from America. Brazil and US are co-chairs for the negotiations on a Free Trade Area of the Americas (FTAA). In addition, Brazil is involved in IBSA a coordinating mechanism between India, Brazil and South Africa created in 2003. Also, China signed six regional trade agreements with Hong Kong, Macao, ASEAN, Australia, New Zealand and Pakistan. These agreements involve the reduction/elimination of tariffs, new investment arrangements and economic integration more broadly.[22]

6.2 Negotiations at the World Trade Organization (Doha Development Agenda)

Brazil, China, India and South Africa are also the joint leaders of developing countries in the WTO negotiations on a Doha Development Agenda. The main objective of the DDA is the further liberalization of trade barriers globally, but there have also been

[22]See Antkiewicz A. and J. Whalley (2006) *Bricsam and the Non-WTO*" Review of International Organizations, vol 1(3) pp. 237-261.

controversies in the DDA regarding agricultural subsidies, intellectual property rights and services. Developing countries have aimed to increase market access for agricultural products in developed countries and developed countries have aimed at increased market access for services in developing countries along with increased protection for intellectual property.

The DDA negotiations stalled in 2008 over the issue of reduction in agricultural subsidies and tariffs. China supported India's position on this matter. Brazil, being a major exporter of agricultural products, however, pushed for negotiations to start again. Brazil would benefit from a reduction in such subsidies because, as a major exporter of agricultural products, its products would become more competitive in developed countries markets.

6.3 Copenhagen Climate Change Negotiations

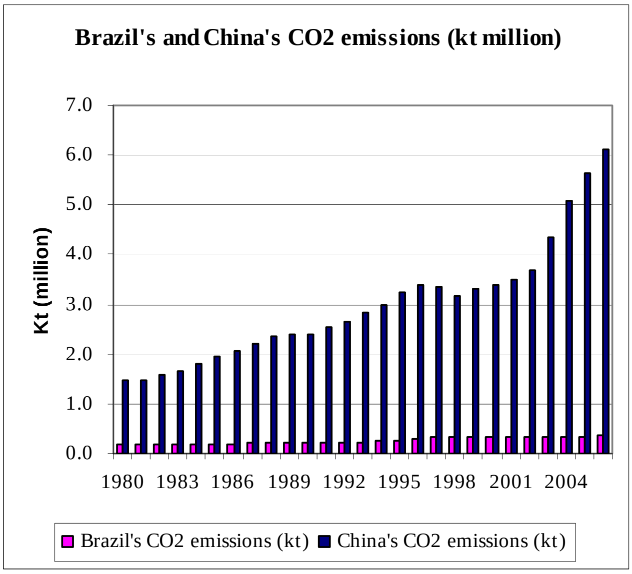
China has become one of the largest emitters of CO2, almost at the same scale as US. Fig 6.1 shows that in 2006, China's CO2 emissions were 17 times higher than Brazil's CO2 emissions. Moreover, China's CO2 emissions growth has been accelerating. Between 1980 and 2006, CO2 emissions by China increased by a factor of 4 from 1.5 million kt to 6 million kt, while in Brazil they increased by a factor 2 from a much lower base of 0.2 millions kt to 0.35 millions kt. Foreign direct invested entities from industrialized countries which moved their factories in China to take advantage of the cheap labor force also fueled an increase in CO2 emissions in China.

China, Brazil and India adopted a joint position at the Copenhagen negotiation on global climate change policy in December 2009 and this is further evidence of Brazil-China coalitional activity. They did not accept emissions reductions proposed by developed countries because they would constrain their economic growth[23]. However, they signed a draft of the Copenhagen Accord in which China, Brazil and India agreed to voluntarily reduce carbon emissions by 2020. Brazil committed to a 38-40% emissions reduction by 2020 below 2020 projected levels, China committed to 40-45% emissions' reduction in intensity by 2020 relative to 2005 base and India committed to 20-25%

[23] See Whalley, J. and S. Walsh (2009) Bringing the Copenhagen Global Climate Change Negotiations to Conclusion CESifo Economic Studies, 55(2) pp. 255-285.

carbon emissions' intensity reduction by 2020 relative to 2005 base. Brazil's position was proactive in so far as Brazil planned to reduce deforestation, to use cleaner technologies in agriculture and implemented the use of biofuels. China argued that the emissions' reduction should be based on consumption instead of production. They claimed that more than a third of China's carbon emissions are related to production activities for exports to developed countries.

Fig 6.1 Brazil's and China's CO2 emissions (kt) 1980-2006



Source: World Development Indicators (WDI), World Bank, at www.worldbank.org.

6.4 Anti Dumping

Antidumping provides an area where non-cooperation rather than cooperation is present. Both developed and developing countries use protectionist antidumping duties against China and Brazil is no exception, although their use against China does not equal that of India. Table 6.1 shows that during 1995 to 2009, China was subject to 761 antidumping investigations. Brazil accounted for 5.4% of these investigations and ranks 6th after India with 17.2% of investigations, United States (13%), European Union (12%), Argentina (10%) and Turkey (7.4%).

One reason for the high number in anti-dumping investigations is that China has experienced a 9 fold increase in the trade with the world since 1995 and in 2009 it became the second largest trade country after United States. In addition, India, US and European Union do not recognize China as a market economy.

Table 6.1 Anti-Dumping initiations against China (%) 1995-2009

Rank	Country	Share %	Number of investigations
1	India	17.2	131
2	US	13.0	99
3	European Union	12.0	91
4	Argentina	10.5	80
5	Turkey	7.4	56
6	Brazil	5.4	41
7	South Africa	4.3	33
8	Australia	3.9	30
9	Mexico	3.5	27
10	Canada	3.3	25
11	Colombia	3.2	24
12	Others	16.3	124
	Total	**100.0**	**761**

Source: World Trade Organization, at www.wto.org.

7. Forward Projections of Brazil China Merchandise Bilateral Trade

Table 7.1 reports some simple forward projections of Brazil and China bilateral merchandise trade which suggest large future further increases in bilateral trade. The estimates we report here are based on simple forward projections 2000-2008 growth rates of Brazil China bilateral trade. Compounding of growth assuming 2000-2008 growth rates suggests that Brazil will export US$1,110 billion to China by 2020. Similarly, China will export US$722 billion to Brazil by 2020. Brazil's exports to China will account for 68.1% of total Brazilian exports and China's exports to Brazil will account for 5.3% of total Chinese exports. Under these calculations China will become increasingly important for Brazil's global trade, and Brazil will grow together with China.

Table 7.1 Forward Projections of Brazil China Bilateral Trade 2010-2020 (in % and US billions)

	2009	2012	2015	2018	2020
Brazil's Exports to China					
Value	20	60	179	536	1,110
Share	13.2	23.8	39.1	56.9	68.1
China's Exports to Brazil					
Value	14	41	121	353	722
Share	1.2	1.8	2.7	4.0	5.3

Source: Author's calculation based on United Nations Commodity Trade Statistics Database /UNcomtrade, at http://comtrade.un.org.

8. Concluding Remarks

Brazil is an important and growing trading partner for China because it is rich in natural resources and China needs these resources. If China continues to grow at current rates and with it more urbanization occurs, China will continue to increase its use of natural resources. Brazil also has great potential in providing agricultural products to China. China is also an opportunity for Brazil because it is a large and rapidly growing market. Bilateral foreign direct investments between China and Brazil are also increasing at a fast pace. While before 1997, FDI were almost inexistent, now bilateral investments are occurring and growing quickly. In the political arena, increased cohesion between China and Brazil is evident in their increased bilateral cooperation agreements and their joint positions in international negotiation fora.

China and Brazil, along with India, are two key pillars of the larger South. These are the large population, rapidly growing, low wage economies to which world production of manufactures is gravitating. Brazil and China are not only key pillars of this structure; Brazil is now also a key resource provider to China within the larger South. China is already the most important trading partner for Brazil, and simple forward projections of future trade flows at current growth rates for China and Brazil show that by 2020, China's share in Brazil's total exports will reach around a third. China and Brazil will thus likely become increasingly ever more important trading and political partners in the years ahead.

References

Antkiewicz, A. and J. Whalley (2006) *BRICSAM and the Non-WTO* Review of International Organizations, vol 1(3) pp. 237-261.

Baer, W. (2008) *The Brazilian Economy, Growth and Development*, sixth edition.

Batista, C. (2008) *Competition between Brazil and other exporting countries in the US import market: a new extension of constant-market-shares analysis* Applied Economics, vol 40 pp. 2477-2487.

Bank of Brazil (2010) *Focus-Market Readout*, November 12, 2010.

Baumann, R. (2009) *Some Recent Features of Brazil-China Economic Relations* CEPAL, Economic Commission for Latin America and the Caribbean.

Brazilian Ministry of Development (2010) Industry and Trade.

Cheng, K. L. and M. Zihui (2010) *China's Outward Foreign Direct Investment.* In China's Growing Role in World Trade, edited by Robert C. Feenstra and Shang-Jin Wei, Chicago: National Bureau of Economic Research pp 545-580.

De Souza, A. (2008) *Brazil and China: An Uneasy Partnership* Center for Hemispheric Policy, University of Miami.

Domoniguez, J. et al. (2006) *China's Relations with Latin America: Share Gains, Asymmetric Hopes* Inter-American Dialogue, Working Paper.

International Trade Centre (2010). Available at http://www.intracen.org/menus/countries.htm

Li, C. and M. Syed (2007) *The Shifting Structure of China's Trade and Production* IMF wp 07/214.

Ministry of Foreign Affairs of the People's Republic of China (2010) *Joint Action Plan Between The Government of the People's Republic of China and The Government of The Federative Republic of Brazil, 2010-2014.*

Naughton, B. (2007) *The Chinese Economy. Transitions and Growth* MIT Press Cambridge, Massachusetts London England.

Schneiderman, R.M. (2006) *CVRD goes to China* Forbes.com.

The Economist (2010) *Brazil/China economy: Deeper inroads* Country analysis & forecasts.

United Nations Commodity Trade Statistics Database (2010). Available at http://comtrade.un.org.

Whalley, J. (2006) *China in the World Trading System* CESifo Economic Studies, vol 52(2) pp. 215-245.

Whalley, J. and S. Walsh (2009) *Bringing the Copenhagen Global Climate Change Negotiations to Conclusion* CESifo Economic Studies, vol 55(2) pp. 255-285.

Whalley, J. and X. Xin (2010) *China's FDI and Non-FDI Economies and the sustainability of future high Chinese growth* China Economic Review vol 21(1), pp. 123-135.

World Bank (2010) *World Development Indicators*. Available at http://data.worldbank.org/data-catalog/world-development-indicators.

World Trade Organization (2010) *Statistics Database*. Available at http://www.wto.org/english/res_e/statis_e/statis_e.htm