

*Chapter 2*

## **Angel or Devil? China's Trade Impact on Latin American Emerging Markets<sup>1</sup>**

*by Jorge Blázquez-Lidoy, Javier Rodríguez and Javier Santiso<sup>2</sup>*

### **Abstract**

China's economy has expanded by leaps and bounds, with dazzling progress since it first opened to foreign investment and reform in 1978. Over the last 25 years and after a long period of economic autarky the country has emerged as a major player in world trade. Its accession to the World Trade Organisation (WTO) in 2001 was a milestone. China presents both a threat and an opportunity for Latin American emerging markets. On average and despite some exceptions, Latin America is a clear trade winner from Chinese global integration. This chapter studies China's exporting and importing structure, using a database of 620 different goods. It builds two indices of trade competition to compare Chinese impacts over 1998-2004 on 34 economies, of which 15 are Latin American. The results generally confirm that there is no relevant trade competition between China and Latin America products in the US market. Not surprisingly, countries that export mainly commodities face lower competition, because China is a net importer of raw materials and an exporter of manufacturing products. At the same time, China is a wake-up call. The country has emerged as a major exporter at both the labour-intensive, low technology and, increasingly, at the knowledge-intensive, higher technology end of the product spectrum. It is presenting challenges to all developing countries, and particularly other trade champions like Mexico in nearly all sectors, from textiles to other more value-added industrialised products.

## Introduction

Over the past two decades, China has become a major global economic player. Over the past twenty years its GDP has grown at the impressive rate of nearly 10 per cent a year according to official figures<sup>3</sup>. Its share of world merchandise trade has jumped from a meagre 1 per cent to more than 6.7 per cent in 2005. China's economic integration in the world economy has been impressive. In 2003, it was already the sixth-largest economy in the world at market exchange rates<sup>4</sup>, the fourth-largest global trader and the major recipient of global foreign direct investment (FDI). If its trade growth holds, China will soon emerge as the third-largest trading economy in the world, overtaking Japan to rank behind just the United States and Germany.

As almost all Wall Street analysts underline, China's emergence has become the issue of the decade. It has had a direct or indirect impact on all raw material markets and therefore all developed or developing countries. China is on a charm offensive worldwide and especially in Africa where the China Development Bank, whose assets are bigger than the World Bank and Asian Development Bank combined, is extending its financial presence, along with commercial penetration by Chinese companies. Extravagant terms are *de rigueur* for discussing the country's 1.3 billion consumers. Goldman Sachs predicts that by 2040 China will overtake the United States as the world's biggest economy<sup>5</sup>. Much of the analysis may be overly optimistic. Some wonder if China's growth surge is driven by an investment bubble while others ring the "hard-landing" bell or worry about the Chinese currency peg<sup>6</sup> and the banking system<sup>7</sup>. For still others, China's developing capitalism is not solidly based on law, respect for property rights and free markets. Finally, it is unclear whether Chinese public banks allocate their capital according to capitalist economic criteria or whether they are vulnerable to negative shocks. The return to capital in China does not look very impressive either (Chong-En Bai, Chang-Tai Hsieh, Yingyi Qian, 2006). Quite evident, however, is the rush to the Chinese "gold mines" in all markets. Consider Chinese international bond issuances, for example. In mid-October 2004, China issued a €1 billion 10-year bond that was more than four times oversubscribed by large European investors ranging from Finnish pension funds to Italian asset managers. The spreads of 50-60 basis points over US Treasuries were largely comparable to those of investment-grade Chilean bonds and even to those of OECD developed countries, such as the 20 basis points paid by the Kingdom of Spain the same week or the 100 basis points paid by Poland (on China – and India – financial integration related issues, see Lane and Schmukler, 2006).

Economic historians would suggest, however, that China's boom and its emergence on the world economic scene are neither new nor without precedents<sup>8</sup>. China was the largest economy for much of recorded history, and until the 15th century it had the world's highest income per head. Even in 1820, when Europe had long before overtaken it in terms of GDP per person, it still accounted for 30 per cent of world GDP. Moreover, as the IMF underlines, one can easily compare recent Chinese experience to that of Japan or the Asian emerging economies; indeed, China's share of world trade remains far below Japan's, for example (IMF, 2004). The same study emphasises that China's rising share in world output and economic integration has had significant impacts all around the world – in Asia (see also Ahearne *et al.*, 2003) but also further afield in areas such as Latin America and Africa (on China's rising world impact see Hausmann Lim, and Spence, 2006).

The growing impact on Latin America has raised the interest of major institutions involved in both Asia and Latin America. Lall and Weiss (2004; and also in this volume) and Lin (2004) are both studies from the Asian Development Bank (ADB). Its Latin American counterpart, the Inter-American Development Bank (IDB), has multiplied its studies of the Chinese impact on Latin America (Lora, 2004*a*, for example, and also in this volume) and has developed a dense research network and an agenda to encourage Asia/Latin America research<sup>9</sup>. At the 2004 Annual IDB Meeting in Lima, the candidacy of China as a new member of the institution was made official, and the 2005 Annual IDB Meeting took place in Japan. On 1 October 2004, the IDB in co-operation with the ADB organised a major event on China and Latin America in Washington and published an extensive report (IDB, 2004). As the then President of the IDB, Enrique Iglesias, underlined, this was the first time in the history of the institution that such an event took place. The following years, ECLAC (the United Nations Economic Commission for Latin America and the Caribbean), the CAF (*Corporación Andina de Fomento*) (ECLAC, 2004; CAF, 2006), the IDB (IDB, 2006; and Devlin, Estevadeordal, and Rodríguez-Clare, 2006) and the World Bank (Lederman, Olarreaga and Perry, August 2006) released their analyses along with other US based think tanks and scholars (Domínguez, 2006) of China's impact on Latin America. In November 2005 Chile reached a free trade agreement with China, the first ever between the Asian giant and a Latin American country. Chile exports 36 per cent of its products to Asia.

Banco Bilbao Vizcaya Argentaria (BBVA), a major European bank with a large Latin American franchise, has published several pioneering studies of which Chapter 2 is an updated and expanded version, assessing the impact of

China on the region. Among them were articles in two issues of the BBVA monthly review, *Latinwatch*. Its June, 2003 issue contained an article entitled "Mexico and China in World Trade" suggested that the emergence of China as a trade global player was negative for Mexico; another article, "China's Economic Potential and Opportunities for Argentina" (*Latinwatch*, April, 2004 expanded in Blázquez and Santiso, 2004) found results for Argentina to be quite the opposite. That the same review published two case studies with contradictory results is, at the least, surprising. Perceptions of the impact of the emergence of China on Latin America do seem rather contradictory. On the one hand, China's very low labour costs and therefore strong competitiveness present a risk for other economies; on the other, China's enormous domestic market presents an opportunity. Is China an angel or a devil for Latin America?

This chapter assesses the short-term and long-term trade impact of China on Latin America derived from the emergence of China as a global player. It follows similar methodologies to those used by Rumbaugh and Blancher (2004), which studied the risks and opportunities of China's emergence on a global scale, but unfortunately excluded Latin America. Most studies of China's trade impact on emerging markets tend to concentrate on Asia, where Chinese exports tend to crowd out those of other Asian countries, as stressed by Eichengreen *et al.* (2004). In fact, much of the increase in US imports from China has occurred at the expense not of countries like Mexico or Central America (protected by proximity) but of Asian economies like Japan or the emerging economies of the area. For example, nearly 60 per cent of US shoe imports in 1988 came from South Korea or Chinese Taipei, compared with a meagre 2 per cent from China. By 2003, China had gained a share of more than 70 per cent while US imports from South Korea and Taiwan had faded away.

China's emergence as a global trader is in many ways exceptional in its speed and depth. China is already a much more open economy than most emerging markets. In 2005, the sum of exports and imports of goods and services reached more than 70 per cent of GDP, as against 30 per cent or less in the United States, Japan or Brazil, according to WTO data. Chinese trade performance in these terms is comparable, however, to that of some Latin American countries like Chile or Mexico (60-65 per cent) and of some developed countries like Spain.

## The Emergence of China as a Global Trade Player

China's progress since it first opened to foreign investment and reform in 1978 has been dazzling. Its average annual GDP growth reached 9.7 per cent during 1978-2006<sup>10</sup>. Over the last 20 years and after a long period of economic autarky, the country emerged as a major player in world trade. During those years, China significantly reduced its tariffs and progressively joined the global trading system. Its 2002 weighted-average tariff was 6.4 per cent as against 40.6 per cent ten years before (Table 2.1). Its accession to the World Trade Organisation (WTO) in December 2001 was a milestone.

Table 2.1. **Chinese Tariffs**  
(Per cent *ad valorem*)

Year	Unweighted Average	Weighted Average	Dispersion (standard deviation)	Maximum
1982	55.6			
1992	42.9	40.6		220.0
1997	17.6	16.0	13.0	121.6
2002	12.3	6.4	9.1	71.0

Source: IMF, *World Economic Outlook 2004*.

With commercial opening, China's shares of global markets, especially the developed-country markets, grew quickly (Table 2.2). By definition, this occurred at the expense of other economies. Compared to some Latin American countries, however, China's export growth looks less impressive. During the 1990s, for example, countries like Mexico, Chile and Costa Rica registered export growth rates more impressive than China's (Lora, 2004*b*; and Lora's Chapter 1 in this book).

Table 2.2. **Chinese Export Shares in Major Developed-Country Markets**  
(Per cent)

	1960	1970	1980	1990	2000	2002
Japan	0.5	1.4	3.1	5.1	14.5	18.3
United States			0.5	3.2	8.6	11.1
EU	0.8	0.6	0.7	2.0	6.2	7.5

Source: IMF, *World Economic Outlook 2004*.

China's gain in market shares is one reason why most emerging countries perceive it as a tough trade competitor<sup>11</sup>. Some even blame China for the poor performance of their exports in recent years<sup>12</sup>. In fact, China is taking the place of other emerging countries in world markets (on this emergence and its impact see Bussière and Schnatz, 2006 for a good survey). This negative perception increased after 2001, when China finally joined the WTO. The accession opened global markets to Chinese goods, and the Chinese ability to compete successfully in those markets became even more obvious.

China's share of world merchandise exports has indeed increased rapidly over the last 20 years. It rose to 5 per cent in 2002 from 0.9 per cent in 1980, then climbed to 6.7 per cent in 2005. By the end of 2004 China had become the world's third biggest exporter after the United States and Germany. From 1990 to 2002, world exports grew by around 90 per cent and Chinese exports by around 425 per cent. China can produce goods of low added value at very low costs because it has a more abundant labour force than do other economies. For example, Chinese wages are one-fourth as high as those in Latin American countries on average. In 2005 the average Chinese monthly salary in manufacturing was \$112, as against around \$440 in Mexico and \$300 in other urban *maquiladoras* districts of Central America like Costa Rica, El Salvador or Panama. The picture is also rapidly changing: according to the investment bank CLSA (a subsidiary of Calyon), average wages for a factor worker in China, combined with social security costs, differ within the country. In areas like Shanghai the combined figure at the end of 2006 was already \$350 a month in 2005 and almost \$250 a month in Shenzhen.

Yet all these facts might be interpreted too naïvely in an exclusively negative way. On the positive side, there are benefits to be had from trade with China. China has an enormous and expanding domestic market. The emergence of China entails long-term benefits from trade. Developing countries like those of East Asia, which have established strong trade and investment relations with China, could gain from this process.

## **China's Trade Structure**

In order to analyse the short-term impact of China's evolving trade, it is first necessary to study the country's export and import structures. At the outset, however, one should note the gap between commodity exports and imports, which amounts to \$30.4 billion. As the previous section implies, this trade imbalance is temporary. One can expect a more sustainable trade balance in the long term.

The analysis here used the UNCTAD database<sup>13</sup>, which considers 620 different goods in the three-digit *Standard International Trade Classification*. We used the UNCTAD one-digit classification. On the export side (Table 2.3), three key sectors predominated in 2004: manufactured goods, machinery and transport equipment and miscellaneous manufactured goods. Together, they accounted for 87.4 per cent of total exports. Note the impressive evolution of machinery and transport equipment. In 1998 such merchandise amounted to 28 per cent of total exports. Six years later, it represented 46.6 per cent, i.e. an 18.6 per cent-point increase. In contrast, exports of miscellaneous manufactured goods are quickly losing their share.

Table 2.3. Exports

Exports	1998	1999	2000	2001	2002	2003	2004
Machinery & transport equipment	28.0	31.1	34.2	36.8	40.3	44.0	46.6
Miscellaneous manufactured goods	37.3	36.2	33.7	31.9	30.2	28.1	25.6
Manufactured goods	16.0	15.3	15.4	14.8	14.5	14.0	15.2
Chemicals products	5.4	5.1	4.6	4.7	4.5	4.2	4.2
Food & animals	5.8	5.4	4.9	4.8	4.5	4.0	3.2
Mineral fuel & lubricants	2.8	2.3	3.1	3.1	2.6	2.5	2.4
Commodities	2.1	2.1	1.9	1.9	1.8	1.6	1.6
Crude material (ex. Food&fuel)	1.7	1.8	1.6	1.4	1.2	1.0	0.9
Beverages & tobacco	0.5	0.4	0.3	0.3	0.3	0.2	0.2
Animal & vegetable oil/fat/wax	0.4	0.3	0.3	0.3	0.2	0.2	0.1

Source: Based on Intracen 2006.

For imports (Table 2.4), manufactured goods, machinery and transport equipment and chemical products are the relevant sectors. They accounted for 69.2 per cent of total imports in 2004. The relatively similar structures of exports and imports suggest that significant intra-industry trade takes place. This reflects how China has turned into a regional production centre and manufacturing point for re-exports. As with exports, imports of machinery and transport equipment are increasing rapidly, but manufactured goods are losing weight in the import structure. These data of course reveal no information on Chinese advantages or disadvantages. To study the impact on other countries, more detailed analysis is needed.

Table 2.4. Imports

	1998	1999	2000	2001	2002	2003	2004
Machinery & transport	38.8	40.5	40.3	42.3	45.3	45.9	44.4
Manufactured goods	22.5	21.2	19.0	17.7	17.2	16.2	13.6
Chemicals products	13.8	13.8	12.7	12.4	12.3	11.1	11.2
Miscellaneous manufactured	7.8	7.3	6.1	7.7	7.6	8.6	9.4
Crude material (ex. Food&fuel)	7.5	7.6	8.8	9.0	7.6	8.2	9.8
Mineral fuel & lubricants	4.9	5.5	9.2	7.2	6.6	7.1	8.6
Food & animals	2.7	2.2	2.1	2.0	1.8	1.4	1.6
Commodities	1.1	1.5	1.4	1.3	1.2	1.0	0.9
Animal & vegetable oil/fat/wax	0.6	0.4	0.2	0.1	0.2	0.3	0.4
Beverages & tobacco	0.1	0.1	0.2	0.2	0.1	0.1	0.1

Source: Based on Intracen 2006.

### The Short-term Costs of Chinese Trade Competition

Although one may think that China will benefit other emerging economies in the long term, some costs could arise in the short-term. China competes with those economies in developing markets. For the Latin American countries, anecdotal evidence suggests that Mexico is a paradigmatic example of these short-term costs<sup>14</sup>. In order to assess them the authors have constructed two indices of trade competition. Their purpose is to compare the export structure of China with those of other emerging economies in a particular period. If the structures of two countries are quite similar, then trade competition is more likely. These indexes were built using the UNCTAD database and are modified versions of the well-known coefficient of specialisation (CS) and coefficient of conformity (CC):

$$CS = 1 - \frac{1}{2} \sum_n |a_{it}^n - a_{jt}^n|$$

$$CCm = \frac{\sum_n a_{it}^n a_{jt}^n}{\sqrt{\sum_n (a_{it}^n)^2 \sum_n (a_{jt}^n)^2}}$$

where  $a_{it}$  and  $a_{jt}$  represent the shares of goods “n” in total exports of country “i” and country “j” in period “t”. One country will always be China and the other a selected economy. If two countries (i, j) have exactly the same exporting structures, then both indexes are equal to one.



In this case, the potential trade competition is high. Both indexes equal zero if there is no coincidence. The two indices, rather than one, ensure that the results are consistent<sup>15</sup>. CS and CC have been calculated to examine Chinese competition with 34 economies, of which 15 are Latin American, for each of the seven years from 1998 through 2004. To present the results simply, the two indices are combined; the result, labelled CI, is the arithmetic average of both indices (see Table 2.5 and Figures 2.1 and 2.2 below).

Table 2.5

	CS*	CC*	CI*	CI 2002**
<i>Paraguay</i>	0.08	0.02	0.05	0.07
<i>Venezuela</i>	0.10	0.03	0.06	0.10
<i>Bolivia</i>	0.12	0.04	0.08	0.11
<i>Panama</i>	0.11	0.06	0.08	0.11
<i>Chile</i>	0.14	0.04	0.09	0.11
<i>Honduras</i>	0.14	0.05	0.09	0.13
<i>Russia</i>	0.15	0.06	0.10	0.12
<i>Uruguay</i>	0.18	0.07	0.12	0.17
<i>Peru</i>	0.19	0.08	0.13	0.17
<i>Argentina</i>	0.20	0.08	0.14	0.17
<i>Guatemala</i>	0.24	0.11	0.17	0.16
<i>Colombia</i>	0.25	0.12	0.18	0.20
<i>El Salvador</i>	0.31	0.21	0.26	0.25
<i>Brazil</i>	0.30	0.21	0.26	0.28
<i>Pakistan</i>	0.30	0.26	0.28	0.32
<i>Slovakia</i>	0.40	0.23	0.31	0.33
<i>Spain</i>	0.42	0.22	0.32	0.34
<i>Costa Rica</i>	0.34	0.32	0.33	0.29
<i>India</i>	0.42	0.25	0.34	0.38
<i>Japan</i>	0.41	0.35	0.38	0.38
<i>Philippines</i>	0.40	0.37	0.39	0.33
<i>Bulgaria</i>	0.43	0.36	0.39	0.41
<i>Croatia</i>	0.45	0.34	0.40	0.42
<i>Poland</i>	0.44	0.35	0.40	0.46
<i>Turkey</i>	0.43	0.38	0.41	0.49
<i>Indonesia</i>	0.46	0.39	0.43	0.42
<i>US</i>	0.43	0.44	0.44	0.44
<i>Romania</i>	0.45	0.45	0.45	0.52
<i>Singapore</i>	0.45	0.52	0.48	0.43
<i>Czech R.</i>	0.50	0.52	0.51	0.43
<i>Malaysia</i>	0.48	0.57	0.53	0.46
<i>Mexico</i>	0.52	0.54	0.53	0.50
<i>Korea</i>	0.50	0.60	0.55	0.48
<i>Hungary</i>	0.54	0.66	0.60	0.55
<i>Thailand</i>	0.57	0.71	0.64	0.57

\* Average 2002-2004  
\*\* Average 2000-2002

Source: own data, 2006.

Figure 2.1. Chinese Trade Competition

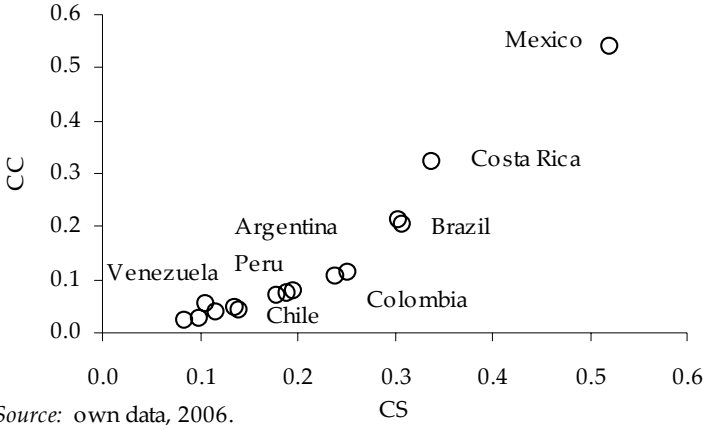
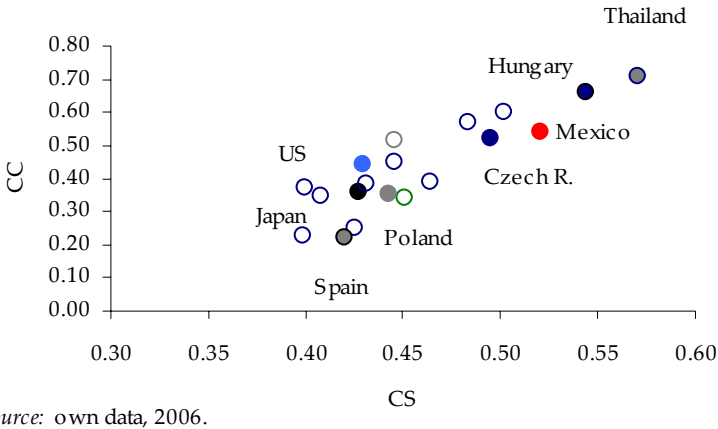


Figure 2.2. Chinese Trade Competition



The results show relatively low figures for all Latin American economies except Mexico and Central America. In general, they suggest no trade competition between China and Latin America. Not surprisingly, countries that export mainly commodities face lower competition, because China is a net importer of raw materials. Paraguay, Venezuela, Bolivia and Panama exhibit the lowest figures among the 34 economies, i.e. they suffer least from Chinese trade competition. Brazil appears as an intermediate case between Mexico and Venezuela.

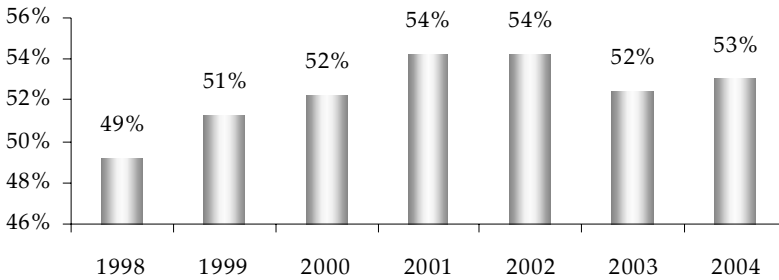
In a comparison of Latin American and other emerging countries, particularly in Asia, Chinese competition is not a problem in general terms with the possible exception of Mexico. Because of its comparative advantage in raw materials, Latin America is seemingly one of the most complementary regions for the Asian dragon. The value of Venezuelan crude shipments to China, for example, exceeded \$3 billion in 2005, or twice the year before. While the United States is still the largest importer of Venezuelan crude, growing Sino-Latin American relations, in particular between Beijing and Caracas, have not gone unnoticed. In 2006, Venezuela and China signed an agreement related to oil exports from the former to the latter. Galloping demand from China assures that these increasing linkages are likely to continue unabated. China is the second largest importer of oil in the world, having overcome Japan in 2003. With ever-more Chinese buying cars, the OECD International Energy Agency predicts that China will need to import 80 per cent of its oil by 2030. The same applies to other commodities as different as copper or soybean, all of them among the many primary products exported by Latin American countries. In the three years to 2005, China accounted for 50 per cent of the increase in world consumption of copper and aluminium, and almost all the growth in nickel and tin.

Thus, one may conclude that Latin America faces few if any short-term trade costs. In fact, most Latin American countries are enjoying a tremendous increase in their exports to China. China has become Brazil's fastest-growing export market, for example, purchasing 80 per cent more from Brazil in 2003 than in 2002. Their bilateral trade has more than quadrupled over the past four years. Five commodities – soybeans, iron ore, steel, soy oil and wood – accounted for 75 per cent of Brazil's exports to China last year. China bought 6.2 per cent of Brazil's \$73 billion of exports in 2003, up sharply from 1.4 per cent in 1999. Aracruz, Latin America's largest wood-pulp maker, has more than doubled its sales to China in the past two years to reach 12 per cent of the company's exports<sup>16</sup>. Another issue for Brazil is one of economic dynamics. China will continue to expand its exports, gaining market share in third markets for new products. From this perspective, as underlined by Brazilian economists (e.g. Paiva de Abreu, 2005), some Brazilian sectors like iron and steel products might face Chinese competition in the medium term. In a longer-term view, the automobile industry may do so as well.

Mexico clearly presents another story. The results (see Figure 2.3) show that Mexico faces strong commercial competition from China<sup>17</sup>. In fact, only Korea, Hungary and Thailand suffer from tougher competition. Anecdotal evidence supports this formal analysis. Moreover, Chinese trade competition

is increasing over time, as the synthetic index (CI) shows<sup>18</sup>. China could indeed jeopardise some Mexican exports in foreign markets. The United States is by far Mexico's largest export market. It absorbed more than 85 per cent of Mexican exports in 2005<sup>19</sup>. In 2003, US trade data showed China's market share at 12.1 per cent, beating Mexico for the first time in its history. The Mexican share of the US market decreased to 11 per cent in 2003 from 11.6 per cent in 2002. Berges (2004) also documents these trends in detail, while other recent studies, using gravity-model analysis, confirmed the trade impacts of Chinese booming exports on Mexico. Had China's exports capabilities remained unchanged, they conclude, Mexico's annual export growth rate would have been 3 percentage points higher in the early 2000s (Hanson and Roberston, 2006).

Figure 2.3. Chinese Commercial Competition with Mexico



Source: own data, 2006.

Mexico specialises in information technology (IT) and consumer electronics, electronic components, clothing, transport equipment and miscellaneous manufacturing, according to the Balassa index<sup>20</sup>, which measures revealed comparative advantage. It compares the share of a given sector in national exports with its share in world exports. If the index is above one then a country is specialised in that sector. Table 2.6 shows the index values for both Mexico and China in 2002 and 2004 for 14 different sectors. China specialises in IT and consumer electronics, electronic components, clothing, miscellaneous manufacturing, textiles, basic manufactures and leather products. China and Mexico therefore specialise in similar sectors. From the Mexican point of view, transport equipment is the only one in which Chinese competition is not relevant.

Table 2.6. Specialisation Index (Balassa)

	China 2002	China 2004	Mexico 2002	Mexico 2004
Wood products	0.45	0.43	0.26	0.26
Leather products	3.70	3.34	0.34	-
Chemicals	0.46	0.42	0.35	0.34
Processed food	0.57	0.47	0.57	0.56
Textiles	2.43	2.39	0.53	0.49
Minerals	0.29	0.28	0.83	1.06
Basic manufactures	1.01	0.96	0.76	0.69
Non-electronic machinery	0.52	0.52	0.82	0.84
Fresh food	0.77	0.68	0.69	0.80
<i>Miscellaneous manufacturing</i>	<i>1.59</i>	<i>1.48</i>	<i>1.08</i>	<i>1.07</i>
Transport equipment	0.25	0.27	1.43	1.34
<i>Clothing</i>	<i>3.65</i>	<i>3.46</i>	<i>1.39</i>	<i>1.29</i>
<i>Electronic components</i>	<i>1.04</i>	<i>1.04</i>	<i>1.49</i>	<i>1.53</i>
<i>IT &amp; Consumer electronics</i>	<i>2.00</i>	<i>2.43</i>	<i>1.81</i>	<i>1.75</i>

Source: Own data based on Intracen 2006.

Some economists argue that the Mexican exporting model could be at risk. After the North American Free Trade Agreement (NAFTA) came into force in 1994, Mexico specialised in low added-value manufactures, i.e. *maquilas*. China can produce these kinds of goods at lower cost than Mexico.

Chinese competition will probably cause Mexico's current export structure to change. Singapore, Chinese Taipei and South Korea have already made such moves by reducing their exports of manufactured goods, machinery and transport equipment. Chemical and energy products (gas, oil and electricity) are gaining weight in their exports. Nevertheless, it is difficult to foresee the direction of change in Mexico's trade and to assess the future impact of China if one considers dimensions other than production and labour costs. Mexico clearly has one major competitive advantage over China, namely proximity to the US market. Many economists have stressed the importance of transport and trade costs in order to capture the penalty of distance (see Hummels, 2001a). Distance introduces delays in trade and raises freight and transaction costs. As Harrigan and Venables (2004) and Hummels (2001b)

argue, an important element of distance costs in trade is time, i.e. the time needed to deliver intermediate and final goods. Time costs not only are quantitatively important, but also affect quality in terms of synchronising activities and delivery. Proximity thus creates incentives for clustering activities. Mexico probably should consider identifying sectors and products where distance and time are key comparative and competitive assets.

Evans and Harrigan (2003) developed a theoretical model in which timely delivery matters and products are therefore developed near the source of final demand, raising wages as a result. In their model timely delivery is a key asset, both because it allows retailers to respond quickly and efficiently to fluctuating final demand without holding costly inventories and because it is possible only where production located near final demand. This model is consistent with empirical examples and trends during the 1990s that witnessed some shifts in production locations away from lower-wage producers like China towards higher-wage locations like Mexico. This shift occurred, for example, in US apparel sourcing, and it is concentrated precisely on goods where timeliness of delivery is essential. Based on detailed empirical data from a major department store, the authors found strong evidence that nearby producers specialised in goods where time and timeliness matter as their model predicts.

One can argue that for Mexico reducing trade costs could restore a strategic NAFTA advantage because trade costs have become much more important than production costs (Deardoff, 2004). Some studies find a modest decrease in the elasticity of trade to distance, although most of them point to little or no change and more surprisingly to a modest increase (Disdier and Head, 2004). Gravity-equation estimates from panel data over long temporal horizons tend to find an increase (Brun *et al.*, 2005). Anderson and van Wincoop (2003) find trade costs on average nearly twice as large as production costs. This implies that trade costs are significant determinants of comparative advantage, perhaps even more than the production costs in which China has its competitive advantage.

In fact, and contrary to conventional wisdom, the effect of distance on trade has not only decreased but rather increased in recent decades (for a survey, see Anderson and van Wincoop, 2004). Hummels (1999) provided evidence using detailed data on shipping costs that ocean freight rates have increased while US air cargo rates indicate large cost reductions between 1955 and 1997 (a result confirmed for overland US transport costs by Glaeser and Kohlhase, 2003). Hence the reduction of transport costs does not seem uniform over time. Berthelon and Freund (2003) show that distance had a significant and increasing impact on trade in more than 25 per cent of 770 industries

studied, with almost no industries for which distance became less important. Carrère and Schiff (2003) reached a similar conclusion from examining the level and evolution of countries' trade distances. They found that the distance of trade (DOT), an indicator of a country's proximity to the world centre of economic activity, decreased over time for a majority of countries with the exception of the United States during 1962-2000. In other words, countries still benefit from proximity to the centre of world activity while others are penalised for being far from it. In a systematic survey of empirical research on how distance effects have fallen or not over time (856 distance effects examined in 55 papers), Disdier and Head (2004) found that the negative impact of distance on trade has not shrunk but increased over the last century.

An issue for Mexico as well as other Latin American countries will be to reduce transport costs and boost infrastructure efficiency. For most Latin American countries, transport costs present even greater barriers to US markets than import tariffs<sup>21</sup>. In a detailed analysis of shipping costs to the US market, using a database of more than 300 000 observations per year on product shipments, Clark *et al.* (2004) found that port efficiency is an important determinant of shipping costs<sup>22</sup>. This becomes more relevant with the lowering of average tariff barriers. In both Asia and in Latin America, the relative importance of transport costs as a determinant of trade has increased. Excluding Mexico, average Latin American freight costs are similar to those of Asian competitors and in some cases even higher.

For countries like Chile or Ecuador transport costs exceed the average tariffs they face in the United States by more than 20 times. Lowering transport costs and thereby increasing infrastructure efficiency could boost Latin American trade performance<sup>23</sup>. Focusing on the effects of port efficiency on transport costs, Clark *et al.* (2004) found that improving port efficiency from the 25th to 75th percentiles would reduce shipping costs by more than 12 per cent. For Mexico, which benefits from US proximity, an improvement in port efficiency to the levels of countries like France or Sweden would reduce transport costs by around 10 per cent. Brazil or Ecuador would find their maritime transport costs reduced by more than 15 per cent. Latin America is perceived as having some of the least efficient ports. It also has significant customs problems, with a median clearing delay of seven days (the worst performers being Ecuador at 15 days and Venezuela at 11 days), high costs of handling containers inside the ports and important organised-crime activity in the seaport infrastructure. Clearly there is scope for improvements. The more than 12 per cent reduction in shipping costs cited above would equal 8 000 kilometres in distance reduction according Clark *et al.* (2004).

## The Short-term Opportunities: China's Strong Demand

As we have seen, China's impact on Latin America is generally positive, with a few exceptions. Yet even for the exceptions – countries like Mexico that face increasing competitive pressure from China in the US market – China could, at least in theory, present opportunities as a potential export market for intra-industry trade exchanges. To assess such potential benefits from increasing Chinese demand, the analysis that follows uses two new indices based on the UNCTAD database described above. We compare the export structures of 15 Latin American countries with the import structure of China. If a particular country's exports are similar to Chinese imports (i.e. the index value approaches one), an obvious commercial opportunity and a potential trade gain would exist for the Latin American country, even if that country may not necessarily export to China currently. The indices are, again, modified versions of the well-known specialisation coefficient (CSm) and the conformity coefficient (CCm):

$$CSm = 1 - \frac{1}{2} \sum_n |a_{it}^n - a_{jt}^n|$$
$$CCm = \frac{\sum_n a_{it}^n a_{jt}^n}{\sqrt{\sum_n (a_{it}^n)^2 \sum_n (a_{jt}^n)^2}}$$

where  $a_{it}$  represents the share of goods "n" in total exports of the Latin American country "i" in period "t" and  $a_{jt}$  is the share of goods "n" in total Chinese imports in the same period. Both indices are equal to one if there is a perfect correspondence between Chinese imports and the exports of the Latin American country under consideration. Two indices again ensure consistency of the results, and the seven-year period is the same (1998-2004) with each year calculated separately. For presentation, a single aggregated index (Cim) is calculated in the same way.

Table 2.7 presents the results. Many Latin American countries are commodity exporters, and their potential trade with China concentrates in small baskets of goods. In other words, except for Mexico, intra-industry trade is not very likely with Latin America, given its export structure. Table 2.8 shows the Balassa export-specialisation indices for seven larger countries of the region:



Table 2.7. Potential Trade with China, 2002-2004

	CSm*	CCm*	Cim*	Cim 2002**
	0.09	0.03	0.06	0.08
Honduras	0.13	0.04	0.08	0.08
Paraguay	0.10	0.08	0.09	0.10
Peru	0.16	0.09	0.13	0.15
Bolivia	0.16	0.09	0.13	0.14
Uruguay	0.18	0.07	0.13	0.15
Chile	0.17	0.12	0.15	0.17
El Salvador	0.21	0.11	0.16	0.17
Guatemala	0.24	0.14	0.19	0.16
Venezuela	0.17	0.30	0.23	0.25
Costa Rica	0.24	0.25	0.25	0.25
Colombia	0.25	0.28	0.27	0.27
Argentina	0.31	0.23	0.27	0.30
Brazil	0.40	0.33	0.36	0.36
Mexico	0.44	0.50	0.47	0.47

\*Average 2002-2004                      \*\*Average 2000-2002

Source: Own data, 2006.

Table 2.8. Specialisation Index (Belassa)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Wood products	0.44	<b>2.13</b>	<b>4.53</b>	0.76	0.27	0.59	
Leather products	2.61	3.68		1.21	0.34		
Chemicals	0.75	0.63	0.63	<b>1.09</b>	0.35	0.35	0.48
Processed food	<b>5.57</b>	<b>3.11</b>	<b>2.68</b>	<b>1.50</b>	0.51	<b>5.24</b>	0.29
Textiles	0.34	0.60	0.25	0.88	0.52	0.80	
Minerals	<b>1.42</b>	0.69	<b>1.33</b>	<b>2.68</b>	0.67	<b>1.80</b>	<b>6.69</b>
Basic manufactures	0.79	1.44	3.68	0.92	0.74	3.18	1.30
Non-electronic machinery	0.30	0.75	0.08	0.11	0.75	0.14	
Fresh food	<b>5.58</b>	<b>3.84</b>	<b>4.01</b>	<b>4.24</b>	0.77	<b>2.49</b>	0.28
Miscellaneous manufacturin	0.30	0.34	0.20	0.49	1.10	0.33	0.06
Transport equipment	0.68	<b>1.13</b>	0.12	0.32	<b>1.43</b>		0.09
Clothing		0.15		1.47	1.52	2.73	
Electronic components	0.10	0.24	0.05	0.19	1.56	0.06	
IT & Consumer electronics		0.38			1.96		

Source: Own data based on Intracen 2006.

Argentina (1), Brazil (2), Chile (3), Colombia (4), Mexico (5), Peru (6) and Venezuela (7). The figures in bold type represent the sectors in which Latin America specialises and China does not, i.e. wood products, processed food, minerals and perishable goods – largely raw materials and their derivatives. Colombia also specialises in chemicals<sup>24</sup> and Mexico and Brazil in transport equipment. Table 2.9 indicates the shares of four broad commodity groups in Latin American exports.

Table 2.9. **Latin American Exports**  
(% of total)

	Foods	Fuels	Metals	Manufactures
Mexico	6	10	2	81
Brazil	31	1	9	54
Argentina	49	12	2	34
Colombia	32	31	1	31
Peru	35	7	39	17
Chile	25	1	48	16
Venezuela	2	83	2	12

Source: Based on LatinFocus 2005.

Furthermore, trade with China could entail deeper specialisation for most Latin American exports because of China’s current strong demand for commodities. In fact, China is becoming a global demander of raw materials. In 2003 it was already the world’s largest importer of cotton, copper and soybeans and the fourth largest importer of oil<sup>25</sup>. Its demand for raw materials has been growing (Table 2.10). The combination of heavy industrial expansion and a booming economy has also created a huge, escalating demand for oil that suppliers strain to meet; China has leapfrogged Japan to become the world’s second-largest oil consumer, just behind the United States.

Table 2.10. **Rate of Growth of Imports**  
%, yearly average 1997-2002

	China	World
Soybean	75	11
Copper	63	5
Oil	19	2

Source: Based on USDA, *World Metal Statistics* and BP, 2005.

With trade concentrated in a small basket of commodities, China's strong demand for raw materials is thus good news for Latin America, a positive demand shock<sup>26</sup>. Moreover, even if direct trade with China does not rise, the favourable effect remains because of commodity price effects. If China increases its demand for crude oil, for example, oil-producing countries will raise their production, or prices will increase. By 2006, China's growing thirst for oil, combined with other international factors, was driving oil prices to their highest levels since oil futures started trading on the New York Mercantile Exchange in 1983. China alone accounted for nearly 40 percent of the entire growth in world oil demand from 2000 to 2003 (CERA, 2004)<sup>27</sup>.

The four main Latin American commodities are copper, oil, soybeans and coffee. Together they account for 66 per cent of the region's total exports of raw materials. Excluding coffee, China absorbs an important share of these commodities. Latin America is also an important world producer of commodities. It produces 47 per cent of the world soybean crop, 40 per cent of global copper output and 9.3 per cent of crude oil output. Thus, to sum up, if vigorous Chinese demand continues to hold over time, a positive impact on the region is very likely, and one should expect deeper specialisation, with Latin America remaining exposed to terms-of-trade shocks.

## The Chinese Impact on Trade in the Long Term

In the long term, as economic theory predicts, Chinese growth and the resultant increase in world trade will benefit other countries. The IMF's *World Economic Outlook* (2004) presents alternative scenarios of China's impact on world trade and growth. Although they should be interpreted cautiously, both show positive impacts on the rest of the world in the long term. Most regions will benefit from stronger demand generated by China's rapid growth, although places where labour faces stronger competition from China will benefit less. This study emphasises that countries benefiting the most will be those that are structurally more flexible. Ianchovichina and Martin (2003) present similar results.

China's emergence as a global trade player is not without precedent<sup>28</sup>. Consider the Japanese experience of the 1950s and 1960s<sup>29</sup>. After WWII the country was devastated and certainly characterised by its relatively low salaries. For more than 20 years Japanese economic policy boosted growth and turned Japan into the world's second largest economy. By the beginning

of the 21st century, Japan was a key economy, representing around 9 per cent of world GDP (Figure 2.3). It is clear now that the performance of the Japanese economy benefited the world economy as a whole – Latin America included. In some ways, the evolution of the Chinese economy resembles the Japanese experience, with a clear correspondence between them. Both countries have had high-growth periods in which economic expansion averaged 8.5 per cent a year – 1952-1972 for Japan and 1979-1999 for China, with average annual growth of trade<sup>30</sup> at around 13 per cent<sup>31</sup>. Both countries gained weight in the world economy and contributed to it at similar rates. During 1952-1972, world GDP grew on average by 5.8 per cent, and Japanese GDP performance explained 0.6 points of that growth. During 1979-1999 China contributed 0.6 points of average annual world growth of 3.7 per cent.

Nevertheless, some outstanding differences appear in the Japan-China comparison. The composition of GDP was quite similar in the early 1950s in Japan and in the early 1980s in China (Table 2.11). Consumption accounted for around 60 per cent of GDP, investment for 15 per cent and net exports for over 25 per cent<sup>32</sup>. These shares changed with a significant divergence between the two countries. In Japan, the shares of consumption and net exports gave way to investment, but in China increases in both investment and net exports replaced a decreased consumption share. These figures reveal why China is perceived as a rival instead of a trade partner. China exports much more than it imports relative to GDP, so other countries perceive that Chinese growth is not spreading. This situation is not sustainable in the long-term. Eventually, China will import massively and net exports will fall<sup>33</sup>. According to the WTO database, China's merchandise imports in 2002 totalled 4.4 per cent of world imports, and its exports amounted to 5 per cent of world exports. The difference amounted to \$30.4 billion, similar to the nominal GDP of Ecuador. By the 2005/06 Chinese manufacturers were already lapping up imports and dictating global prices of nearly everything from iron ore to microchips.

In another important difference between the two countries, Japan began with a more developed economy. China was and still is a developing one (Figure 2-4). Chinese GDP per capita in 2000 was around 50 per cent below the world average, similar to that of Ecuador according to the Summers and Heston database<sup>34</sup>. This suggests that despite its impressive performance over the last 20 years, deeper convergence might take some time. In other words, China could still enjoy a high rate of growth for a long period. The simple projections in Table 2.12 suggest the future weight of China in the world economy<sup>35</sup>. In the 1990s China grew by 10.1 per cent a year on average, the world by 3.3 per cent and Latin America by 3.4 per cent. If these rates hold for

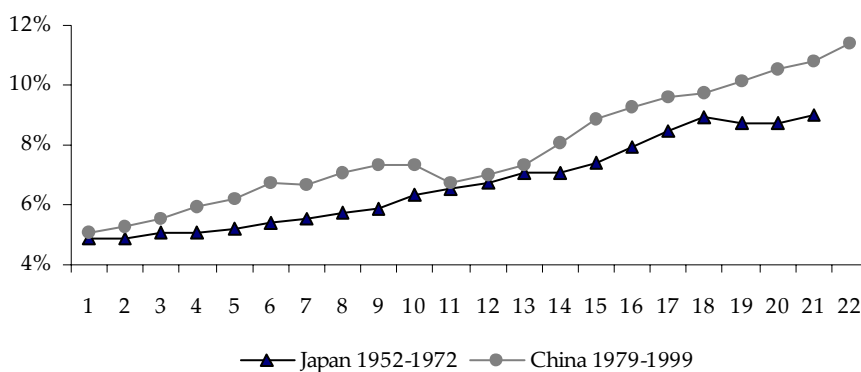
Table 2.11. **Components of GDP**  
(% of total GDP)

<b>Japan</b>	<b>1953</b>	<b>1972</b>
Consumption	60	53
Investment	14	35
Net Exports	26	11
<b>China</b>	<b>1979</b>	<b>1999</b>
Consumption	57	47
Investment	17	21
Net Exports	27	32

*Source:* Based on Summers and Heston database. See for a 2006 update of the database <http://www.bris.ac.uk/Depts/Economics/Growth/summers.htm>

the next 20 years, China will become the largest economy, beating by far the United States. One can also view the same kinds of simple projections from another perspective. Chinese imports of goods represent 4.4 per cent of world imports. During the 1990s, they climbed by around 16 per cent a year on average while world imports (ex-China) rose by about 7 per cent a year. If these figures hold, China will account for 8 per cent of world imports in 2010 and for 18 per cent of them in 2020.

Figure 2.4. **Share of World GDP**



*Source:* based on Summer and Heston database.

Table 2.12. Share of World GDP (%)

	2002	2010	2020
China	12.7	21.1	40.1
Latin America	7.9	7.9	8.0

Source: Own data, 2006.

While it is hard to foresee in detail the long-term impact of China’s emergence on other economies and on international trade, the aggregate impact has to be positive. It also could be asymmetric. Some sectors could benefit and others be harmed by Chinese competition. China has a competitive advantage in labour-intensive sectors, whose potential benefits are lower. The opposite applies to capital-intensive sectors (IMF, 2004).

## Conclusions

The Chinese trade impact on Latin America is generally positive in the short and medium term. These results are consistent with others (e.g. IMF, 2004; Lall and Weiss, 2004 and this volume). On average, Latin American trade will benefit from increased Chinese demand and growth. In comparative terms, as the IMF (2004) notes, the only net loser could be South Asia, while Latin America is likely to feel a positive effect. For a sector like Latin American agriculture, the estimated impact of faster Chinese integration by around 2020 is clearly positive, with output up by 4 per cent. Clear losers, however, will be sectors like textiles and countries specialised in exports of labour-intensive manufactures. More detailed analysis would be needed to assess China’s trade impact on the home markets of Latin American countries like Mexico. Clearly Latin American countries will have to upgrade their comparative advantage in proximity to the US, their major export market. For that they will need to boost the quality of their infrastructures. They will have also to concentrate on industries where this distance-time factor is an asset and try to move towards more value added products. At the same time, and for some of them, they will have to deal with the risks to be stuck in a raw materials corner that is also a poor provider of employment. Beyond China, the challenge will also come from India, a country that has been deepening its trade and financial ties with Latin America and its getting more integrated into the world. Using similar methodologies and approaches as those used in this chapter, Saaed Qreshi and Wan have analysed this growing impact (Saaed Qreshi and Wan, 2006).

In order to complete the picture, more studies will also be needed, and in particular studies looking at the growing intra-industry trade in intermediate goods and the opportunity that Asian drivers like China – and India – could represent for Latin American countries (for a specific case study focused on Argentina, see Castro, Tramutola, and Monat, 2005). Recent studies are also exploring how exploring the extent to which the rapid growth of China and India are affecting Latin America's trade specialisation (Lederman, Olarreaga, and Rubiano, 2006). Their results suggest that the specialisation pattern of Latin American economies, with the exception of Mexico, has been moving in the opposite direction to the trade pattern specialisation of China and India. Labour-intensive sectors, both skilled and unskilled, have been more negatively affected by the emergence of China and India, whereas natural resource and scientific knowledge-intensive sectors have been benefiting from their surge.

For countries like Brazil, for example, that have been able to develop a strong manufacturing and industrial base, a remaining challenge is to maintain the same type of exports to China as to other regions. While the evidence is inconclusive, studies from IPEA in Brazil suggest that so far Brazil has failed to do so (Fernanda de Negri, 2005). The mega contracts won in 2006 by Embraer, the jet producer (100 jet sales to China), might help to change this pattern. Research has also been conducted on employment showing that trade with China and India had only a small negative effect on industrial employment (see for Argentina Castro, Olarreaga, and Saslavsky, 2006).

China and Latin America have intensively developed their trade relations over the past decade<sup>36</sup>. Trade volume rose from \$2 billion in the early 1990s to \$15 billion in 2001, according to Chinese statistics. Since 2000, Brazilian-Chinese trade has leapt nearly threefold, a blessing for the indebted Brazilian economy and especially for exporters of soybeans, steel and iron ore, which accounted for two-thirds of the goods exported. In general, Latin America has a commodity endowment that boosts synergies with China's needs and its strategy to secure food and energy imports in order to avoid shortages.

One consequence of China's booming demand on Latin America might not be as positive, however. With increasing Chinese commodities demand, Latin American countries are deepening their trade specialisation toward commodities that have been characterised traditionally by strong price volatility (Devlin *et al.*, 2006; Gottschalk and Prates, 2005). Such exposure could also increase the volatility of fiscal receipts. Moreover, with the intensification of its links with China, the region is becoming more exposed to the Asian economy. In 2003 delivery bottlenecks and demand from China pumped up prices of raw materials and commodities. Chinese industrial use of them is susceptible to swings due to

recessions and booms. The growing Chinese dependence on Latin American exports also requires the area to be more aware of growth dynamics in Asia and China. In 2003, China became the second largest destination for Brazilian exports according to ECLAC (CEPAL, 2004). In 2004, China accounted for half the increase in Brazil's export earnings. China is therefore becoming a key driver of Brazilian growth dynamics, accounting for one-fourth of Brazil's officially targeted GDP growth. With China trying to cool down its overheated economy, Brazil's export growth could dampen.

An issue that deserves further analysis involves capital flows. While FDI to Latin America has been tumbling during the early 2000s, FDI towards China soared. Between 2001 and 2003, FDI into Mexico declined from nearly \$27 billion to \$11 billion – later it recovered in 2004, 2005 and 2006. Brazil also experienced an abrupt drop of 52 per cent in FDI between 2002 and 2003 (*versus* -30 per cent for Mexico). Meanwhile, China became the world's major FDI recipient with an inflow of \$55 billion in 2003, nearly twice the total flow of \$36.5 billion to all of Latin America that year<sup>37</sup>. The Chinese inflow reached around \$60 billion 2004 and in 2005 – i.e. more than \$1 billion per week over the past three years (in 2006, they reached \$63 billion)<sup>38</sup>. It is true that much FDI to China, estimated at one-fourth of total inflows, is in fact related to round-tripping (Xiao, 2005). FDI from other areas is increasing, however. By 2002, US firms were already investing ten times more in China than a decade before. The prospect of a huge domestic market of 1.3 billion consumers has lured countless companies to rush into China, despite the fact that the country's capitalism is not solidly rooted in law, protection of property rights and free markets<sup>39</sup>.

Some studies already suggest “flow diversion” in favour of China in the process of full integration of China's huge labour force into the international division of labour<sup>40</sup>. Asian countries like Indonesia, Malaysia, the Philippines and Thailand might suffer significant welfare losses if FDI is redirected away from them to China. They risk de-industrialisation and a return to their roles in the 1950s and 1960s as primary-commodity exporters (McKibbin and Thye Woo, 2004). Both studies and the data show that this impact is rather small for Latin America, however. For the long period from 1984 to 2001, García-Herrero and Santabárbara (2004; and one of the following chapters in this book) find no substitution effect from Latin American inward FDI to China, although they do underline that the Chinese effect became more significant towards the end of the period (1995-2001). Chinese inward FDI appears to have hampered FDI to Mexico and Colombia especially. As we have seen, the data for 2004 and 2005 are mixed, suggesting that, while China still had an FDI boom, Latin American countries were recovering from earlier floor levels. FDI in Brazil jumped by 80 per cent in 2004 to reach more than \$18 billion.



Mexico had a recovery of 23 per cent to \$13.6 billion in 2004, and Chile saw its FDI increase by 66 per cent to nearly \$5 billion. The 2006 data confirmed a seemingly booming trend: Mexico lured \$20 billion of FDI, a level on the rise when compared to the already very good year of 2005 (\$17.8 billion). The golden years of the FDI rush to Latin America in the 1990s might be over, at least until the processes of privatisation are reopened, but FDI is still flowing to Latin America.

The future development of Chinese foreign investment overseas may be a blessing in disguise. China is no longer only an FDI absorber; its foreign FDI has made a forward leap. Over the whole 1991-2003 period, cumulative outward Chinese FDI reached roughly \$35 billion. In 2003 alone, the annual outflow more than doubled to above \$2 billion and reached in 2005 a record of \$7 billion (for an analysis of the implications of Chinese buy outs in developed and developing countries see Antkiewicz and Whalley, 2006). In 2006, FDI from China reached \$16.1 billion according to official statistics. The need to secure food and commodities resources is boosting FDI through strategic international partnerships. Chinese firms have already targeted resource-sector investments in Angola, Algeria, Australia and Indonesia. Chinese companies are prominent investors in Africa, mainly in energy and raw materials. According to a survey of 100 investment-promotion agencies released by UNCTAD, China ranked fifth after the United States, Germany, the United Kingdom and France as one of the leading overseas investors in the near future (UNCTAD, 2004). In 2004 and 2005, Chinese corporations multiplied attempts to boost their investments overseas, not only in other emerging countries, but also in developed ones – as underlined by Lenovo's acquisition of IBM production units (for \$1.75 billion), attempts by Chinese firms such as Minmetals to acquire the Canadian Noranda for \$5 billion or the Chinese oil group CNOOC's bid to acquire the US Unocal for more than \$13 billion. They are not alone in this game; India is also emerging as a rising investor overseas. In 2006-2007, Indian companies would have invested more than \$11 billion outside India, had the take over of steelmaker Corus by the Indian giant Tata gone through, almost double the amount of inbound FDI over the same period. Colombia, Brazil and Bolivia, have been some of the major destinations of these investments abroad (see for a comparison between India and China's presences in Latin America and Africa, Goldstein, Pinaud, Reisen and Chen, 2006; Deutsche Bank Research, 2006; Zhang, 2006; Santiso, 2006).

Like the Japanese a few decades ago, Chinese firms seem to be looking for overseas expansion. This looks like an opportunity for Latin America. Not only are two big Asian countries, Japan and China, interested in the area, but both seek the same thing, i.e. to secure a continuous flow of raw materials and

agricultural products. To reach that goal, both have interests in reliable infrastructure in the Americas, including more efficient ports, roads and railways. This gives the region a unique opportunity to play a new competitive game. It encourages more thinking in terms of industrial strategies to avoid a re-deepening of commodity-trade specialisation and to stimulate (as in Trinidad and Tobago, for example) diversification towards more value-added industries, building on the commodity endowment.

Latin America seems to be on the radars of Chinese companies. By 2001, China had set up more than 300 enterprises in Latin America with contractual investments of over \$1 billion. In 2004, half of Chinese FDI went to Latin America, exceeding the 30 per cent that went to Asia (in 2005 16 per cent of a total record of \$7 billion went to Latin America). During the 2000s companies like Baosteel, China's biggest steelmaker, undertook China's hitherto biggest-ever overseas foreign direct investment (\$1.5 billion) in Brazil. China also announced plans to invest \$2 billion in the Brazilian aluminium industry. China already controls Peru's major iron-ore mine, through Shougang Group; it owns a major stake in an Ecuadorian oil field; and it is trying to produce fuel and to reactivate gold mines in Venezuela. Chinese investment is expected in railways and ports in Brazil and generally throughout Latin America, because Chinese interest in logistical infrastructure is high in order to facilitate the transport of commodities to ports. In Argentina, China is already committed to invest \$25 million in a grain port and another \$250 million in a road from Argentina to Chile for the export of Argentine raw materials from Chilean ports. The agreements between Chinese and Latin American companies exploded. The Chinese state oil company Sinopec, for example, invested \$1 billion in a joint venture with Petrobras for the construction of a gas pipeline linking south to northeast Brazil. Other deals the Chinese have recently signed included iron ore shipments from Companhia Vale do Rio Doce (CVRD), one of the world's largest mining concerns, for Shanghai's famous Baoshan Steel Mill. In 2005, Codelco, the Chilean copper giant signed an historical trade contract with Chinese Minmetals.

The region also started to witness agreements such as that signed in October 2004 by Telefónica, the leading Spanish firm with a regional Latin American franchise, and the giant Chinese telecommunication equipment maker Huawei; Telefónica offered Huawei facilities to enter the Latin American market in a move to sell products for all of Telefónica's Latin American subsidiaries<sup>41</sup>.

Latin American companies also seek business opportunities in China, as evidenced by the official trip to China by the Brazilian President Lula and nearly 400 Brazilian businessmen in 2004. Some large Latin American companies have already rushed to China, such as Embraer, a Brazilian aircraft-maker that sells and produces jets in China (for a case study see Goldstein, 2004) or Marcopolo, another Brazilian company, which makes bus chassis and is planning to set up a Chinese factory. Clearly, capital flows between China and Latin America deserve more analysis and invite further research, expanding on Chapter 1 of this volume.

Beyond the trade and investment impacts, there is perhaps a third and last Chinese impact: a cognitive effect (Santiso, 2006). China's very pragmatic economic development strategy attracts more and more attention. Leading economists like Ricardo Hausmann and Dani Rodrik have already emphasised the trade dimension of this unusual emerging giant, the Chinese economic miracle being a matter not only of export volumes but also and above all of their increasing quality (Rodrik, 2006; Hausmann *et al.*, 2006; Rodrik and Hausmann, 2006). The very pragmatic economic approach of the Chinese authorities is also catching the attention of policy makers around the world. The Chinese miracle is neither the result of some miracle driven by the Chicago Boys nor the output of a Kemmerer mission. No foreign advisor or economic development guru ever landed in China. If Jeffrey Sachs advised Bolivia, he never reached Beijing, at least with his advice. Another lesson from China teaches that there is no magic formula for development, no magical key to a unique paradigm that will open the doors of the miracle of development.

## Notes

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2. Respectively Advisor in the Economic Bureau of Presidency of Spanish Government (formerly, while conducting this research, Senior Economist at BBVA Research Department), Chief Development Economist and Deputy Director of the OECD Development Centre (previously Chief Economist for Latin America and Emerging Markets at BBVA Research Department) and Economist at BBVA. E-Mail: javier.santiso@oecd.org. Paper presented at the Centre for Latin American Studies of Georgetown University, Washington, D.C., 4 October 2004; at the Institute for Latin American Studies of Columbia University, New York, October 6th 2004; at the conference co-organized by The World Bank and Deutsche Bank, "Asia and Latin America: Opportunities and Challenges - The World Bank Ninth LAC Meets the Market Conference", New York, 26 October 2004; at the 9th LACEA Meeting, San José, Costa Rica, 4-6 November 2004; at the *Corporación Andina de Fomento*, Caracas, 1 December 2004; at the OECD Development Centre, Paris, 21 January 2005; at the Inter-American Development Bank 2005 Annual Meeting, Official Seminar on "Latin America and Asia in the world economy: Towards more interregional economic linkages and cooperation", Okinawa, 8 April 2005; at the Annual Bank Conference on Development Economics – Europe organised by The World Bank, Amsterdam, 23-24 May 2005; and at the Annual Bank Conference on Development Economics – Europe organised by The World Bank, Tokyo, 29 May-2 June 2006.

3. Uncertainties about Chinese statistics abound. In 2003, for example, the official GDP growth rate was 9.1 per cent, but almost all economists following China suspected that figure was over 11 per cent. On the contrary, Alwyn Young (2003) estimated that GDP growth over 1978-1998 was 1.7 percentage points below the official rate.
4. China is the second-largest economy, valued at Power Purchasing Parity (PPP), after the United States.
5. Goldman Sachs has had an aggressive strategy to enter China. This US-based global investment bank runs its business in the Asia-Pacific region with an office in Hong Kong as headquarters. Goldman Sachs also has offices in Beijing and Shanghai for China business contacts. In Asia it employs over 1 000 people and 150 of them deal with Chinese businesses. See Yao *et al.* (2003).
6. Worries about the Chinese currency intensified during 2003-04, the latter an electoral year in the United States (Eichengreen, 2004; Eichengren, March 2006).
7. On the Chinese banking system, see Deutsche Bank (2004) and Banco de España (2004). Over the past two decades the rush of foreign banks into the Chinese financial system has intensified, reflecting the deeper trade relations between China and the world. HSBC, Citigroup, Scotia, Crédit Lyonnais and BNP Paribas are among the foreign commercial banks with the greatest representation. Among the investment bankers, the most active are Goldman Sachs, Morgan Stanley, Deutsche Bank, JP Morgan, UBS and CSFB. In 2003, investment banks shared more than \$200 million in fees (not enough to cover their costs) for IPOs of China-based companies according to estimates by *Dealogic* reported in the *Financial Times*.
8. See Maddison (1998) for a historical perspective on the Chinese economy and Shiue and Keller (2004, February and September).
9. See LAEBA web site: <http://www.laeba.org/index.cfm>
10. On this performance and its sustainability, see Yifu Lin (2004) and Zijian Wang and Wei (2004).
11. One indicator of the increasing competitive tensions generated by the emergence of China is the increase in anti-dumping investigations against China. China has become the top anti-dumping target (Chua and Prusa, 2004).
12. For example, the poor performance of the industrial sector in the United States, despite its significant growth during 2002-2004, is attributed indirectly to China. There is an "off-shoring" process in which US corporations transfer their manufacturing activities to China due to its low labour costs. For the same reason, some analysts claim that the poor performance of Mexican exports in recent years is due to China.
13. This database can be found on line at [www.intracen.org](http://www.intracen.org).

14. See, for example, “El Ataque del Dragón” (“The Attack of the Dragon”), (26 December 2003), *America Economía.com* ([www.americaeconomia.com](http://www.americaeconomia.com)) and “Challenges from China Spur Mexican Factories to Elevate Aspirations”, (5 March 2004), *Wall Street Journal*.
15. The correlation between both indexes is 0.94. This shows that both indexes report the same information.
16. In May 2004, Brazilian President Luiz Inacio Lula da Silva took more than 400 executives with him to China, the biggest Brazilian official delegation ever to make a trade trip.
17. Soler (2003) reaches the same conclusion: China jeopardises Mexican exports; but the final impact on Mexico depends not only on trade competition, but also on the evolution of capital flows.
18. For other countries see Appendix 1.
19. The source is BBVA database.
20. This information is available on line at [www.intracen.org](http://www.intracen.org).
21. In this sense, the Panamá-Puebla highway – a new infrastructure project – could generate a significant increase of trade among Central American countries, Mexico and the United States.
22. They also show that distance matters and that it has a significant (1 per cent) positive effect on transport costs; a doubling in distance generates roughly an 18 per cent increase in transport costs. See the table in Appendix 2.
23. Limao and Venables (2000) showed that raising transport costs by 10 per cent reduces trade volumes by more than 20 per cent. They also underlined that poor infrastructure accounts for more than 40 per cent of the predicted transport costs.
24. China imports chemical products mainly from East Asian countries, however. This sector is one in which those Asian economies are specialised. See Ianchovichina and Walmsley (2003).
25. In 2002 China took 23.2 per cent of world imports of soybeans as against only 7.4 per cent in 1997. For copper the shares were 16.8 per cent in 2002 and 5 per cent in 1997. For oil they were 4.2 per cent and 2.3 per cent respectively.
26. See, for example, *Análisis Macroeconómico y Financiero* (2003). This issue analyses the benefits for Argentina of trade with China.
27. On the Asian oil market, see also the study carried out by the Honolulu based east-West Centre: <http://www.eastwestcenter.org/stored/pdfs/api070.pdf>
28. See, for instance, IMF (2004). This issue also analyses the emergence of East Asia.
29. This comparison is suggested by Yang (2003).

30. This chapter defines trade as the sum of exports and imports.
31. The source is the Summers and Heston database (PWT 6.1). See Heston and Summers (1997).
32. Net exports are defined as the difference between exports and imports in real terms.
33. Ianchovichina and Martin (2001) share this opinion about the future of net exports. They expect a significant increase in China's imports.
34. The GDP per capita is calculated in PPP terms.
35. IMF database.
36. Initial trade contacts between China and Latin America are far from new. They date back to the 1570s, when sino-Latin American trade started to flourish across the Pacific with Chinese exports of silk, porcelain and cotton yarn to Mexico and Peru *via* Manila. See Shixue, 2004.
37. See ECLAC (2004) report on FDI in Latin America: <http://www.eclac.cl/>. The 2003 FDI flows to China in fact reached nearly the record level of Latin American FDI inflows (\$88 billion in 1999).
38. On FDI in China see the research of MIT based economist Huang, <http://web.mit.edu/yshuang/www/publications/papers.html>. See also US Congressional hearing, <http://www.cecc.gov/pages/hearings/092403/huang.php>
39. Investing in China might become a risky business, however, as underlined by growing disputes between foreigners and their Chinese partners. In 2004, for example, Syngenta, a Swiss agrichemicals company, sued a Chinese competitor for allegedly pirating one of its patented insecticides, joining the growing club of foreign investors resorting to the courts to protect their intellectual property. The profitability of Chinese investments can also be questionable. Foreign brewers, for example, have squandered hundreds of millions of dollars in China over the past decade. The average net profit margin of these investments is meagre: for the top 400 brewers operating in China (including foreign joint ventures) it is just 0.5 per cent. Compared with Latin America the profitability data are interesting. Direct and indirect profits made by all American affiliates operating in China amounted to just \$2.8 billion in 2001, about half as much as the \$4.4 billion dollars made the same year in Mexico (with a population less than one-tenth as large). According to empirical studies of political control and firm performance in China's listed companies, the decision-making power of local party committees (relative to the largest shareholders) is positively associated with firm performance (Chang and Wong, 2003; Wong *et al.*, 2004).
40. For empirical analysis applied to Latin America see García-Herrero and Santabárbara (2004) and Chantasassawat *et al.* (2004). For analysis focused on Asia see Eichengreen and Tong, (May 2005 and December 2005) and Mercereau (2005).

41. Huawei is a clear example of the internationalisation of Chinese companies. The company hopes to increase its international sales from \$2.3 billion in 2004 to more than \$10 billion by 2008 as part of an ambitious global expansion strategy. In 2003, Huawei contracted 27 per cent of its \$4 billion in sales outside China, reaching markets such as Sweden and the Netherlands. The company is now present in more than 70 countries and over 3 000 of the group's 24 000 employees are based overseas. In 2004, two-fifths of its \$5 billion in revenues were generated outside China (*The Economist*, 8 January 2005; *Financial Times*, 11 January 2005). However Yasheng Huang underlines (*Financial Times*, 14 January 2005, p.13), most of the "Chinese champions" are in fact foreign companies. Lenovo, the purchaser in 2004 of IBM's personal computer business, is a clear example. Technically speaking it is a foreign company because it organised its operations in China as subsidiaries of its Hong Kong arm. The four Chinese companies listed in Forbes as the most dynamic all have their headquarters in Hong Kong. As Huang stresses, it seems that "China's success has less to do with creating efficient institutions and more about allowing such an escape from inefficient institutions." See also <http://web.mit.edu/yshuang/www/>



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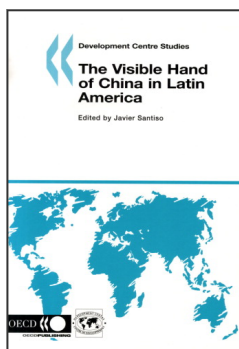
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