Volume 36, Number 2, February 2008 ISSN 0305–750X

WORLD DEVELOPMENT

The multi-disciplinary international journal devoted to the study and promotion of world development

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Indexed/Abstracted in: *British Humanities Index, CAB International, Current Contents, Geographical Abstracts, International Development Abstracts, Journal of Economic Literature, Management Contents, PAIS Bulletin, Sociological Abstracts, Social & Behavioral Sciences, Social Science Citation Index. Also covered in the abstracts and citation database SCOPUS®. Full text available on ScienceDirect®*

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World Development Vol. 36, No. 2, pp. 235–253, 2008

0305-750X/$ - see front matter

doi:10.1016/j.worlddev.2007.06.012

The Impact of China on Latin America and the Caribbean

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Summary. — The rapid growth of China and its increased integration with the global economy is having both direct and indirect effects on the Latin American and Caribbean region. The paper focuses on the impacts of China on Latin American trade and foreign direct investment flows. It identifies the main channels through which China's growth is affecting the region and undertakes a preliminary analysis of the impacts on development. It is shown that there are winners and losers in the region, both at the country and sector level.

Key words — China, Latin America, trade, foreign direct investment, competition

1. INTRODUCTION

China's rapid growth and increased openness over the past quarter century has led to its emergence as a key player in the global economy in the early 21st century. GDP has grown at over 9% per annum over the past two decades and China is now the fourth largest economy in the world in terms of GDP at official exchange rates (and the second largest at purchasing power parity rates). Its share of world trade has risen from less than 1% in 1980 to over 6.5% in 2005, making it the third largest trading economy. On current trends it could become the world's largest exporter by the beginning of the next decade (OECD, 2005).

The increased competitiveness of China and its expanded presence in world markets is having a major impact on both developed and developing countries. While this has been extensively analyzed from the point of view of developed countries (Cass, Williams, & Barker, 2003; Prasad, 2004), much less is known about the implications for Latin America. A decade ago trade between China and the region was limited but this has changed dramatically. Chinese firms are also beginning to invest in Latin America. These growing economic links have been reflected politically with the visit of Chinese President Hu Jintao to the region in 2004, while a number of Latin American leaders have been to Beijing.

As can be seen from Figure 1, the rapid growth of Latin American trade with China dates from the end of the 1990s. During

* An earlier version of this paper was presented at the Pre-Conference Workshop on Asian Drivers at the Global Development Network Annual Conference, St. Petersburg, January 2006. We are grateful to participants at the workshop, the editors and to two anonymous referees for their comments. Final revision accepted: June 4, 2007.

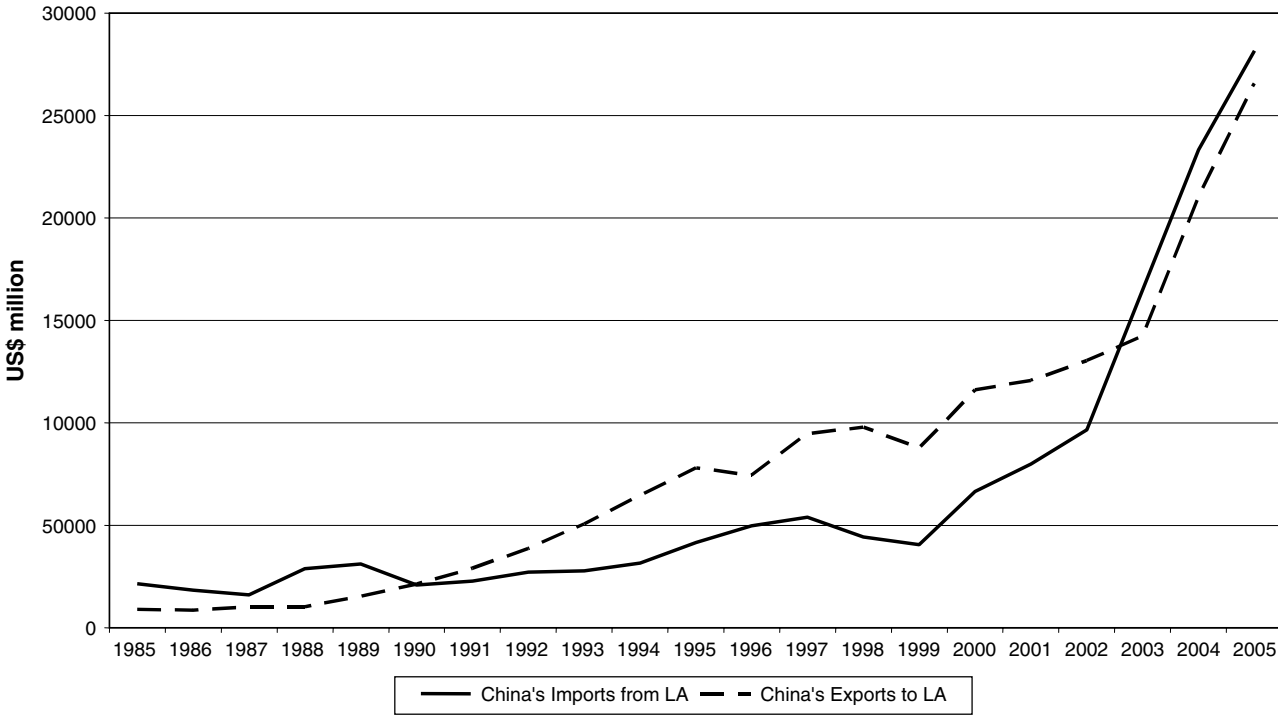


Figure 1. *China's trade with Latin America, 1985–2005. Source: own elaboration from IMF, Direction of Trade Statistics. Note: data includes trade of China and Hong Kong with 19 Latin American economies.*

1999–2005 China's imports from Latin America increased sevenfold while its exports to the region more than tripled. Starting in the mid-1980s most of the countries of the region had undertaken far reaching economic reforms, which included trade liberalization, privatization and reductions in fiscal deficits. By the end of the 1990s, inflation rates had been brought down, the Latin American economies were far more open than they had been two decades earlier and most countries had adopted exchange rate policies which avoided extremes of overvaluation (IDB, 1997). As a result exporters in Latin America were well placed to respond to the boom in import demand from China. At the same time, the increased openness of the Latin American economies enabled Chinese exports to penetrate the domestic market, especially after China joined the WTO in 2001, although some restrictions remained in a number of countries for several years after that.

As pointed out by Kaplinsky and Messner's introduction to the special issue, the impacts of China on other developing countries are not only direct but there are also important indirect impacts. A major concern for some Latin American countries has been the threat of increased competition from China in third markets, particularly since the latter's accession to the WTO in 2001 and the removal of MFA quotas at the start of 2005. China has been seen not only as a competitor in goods markets for those countries which have specialized in exports of labor-intensive manufactures in which China is highly competitive, but also as a competitor for foreign direct investment (FDI) as a result of the massive inflows to China since the early 1990s. This has given rise to concern that FDI is being diverted from Latin America to China.

Another important indirect impact is the effect that China's emergence has had on the terms of trade between primary commodities and labor-intensive manufactured goods. The booming demand for agricultural and mineral products (including oil) in China has contributed to rising prices for primary commodities (Kaplinsky, 2005; UNCTAD, 2005, Chapter II.D). On the other hand, the massive growth of Chinese production of labor-intensive manufactures has tended to push down the prices of such goods. Thus China's growth can have implications for Latin American and Caribbean countries even in the absence of bilateral links or competition in third markets.

It is important to bear in mind that because of the differences in size, China is economically much more significant for Latin America and the Caribbean than the region is for China. This is certainly true as far as individual coun-

tries are concerned. Brazil, the largest Latin American exporter to China, ranks 14th among China's suppliers accounting for 1.5% of total imports, while no other country in the region is in the top 20 import sources. Latin American countries are even less significant as destinations for China's exports with Mexico, the most important, ranked as 22nd with less than 1% of China's total exports. Even taking Latin America and the Caribbean as a whole, the region accounts for only 3% of China's exports and supplies 3.8% of its imports. China on the other hand is one of the top five export markets for Argentina, Brazil, Chile, Cuba, and Peru, and is one of the leading five sources of imports in these countries and Colombia, Mexico, Paraguay, and Uruguay (CEPAL, 2005, Table V.5).

In terms of the channels of interaction between the Asian Drivers and Latin America, this paper concentrates on the first two identified by Kaplinsky and Messner, trade and foreign direct investment (FDI). The next section focuses on the direct impacts and the following section on the indirect impacts of China on the region in terms of the competitive threats which it poses, both in terms of Latin America's exports to third countries and as a pole of attraction for FDI, as well as the impacts on the region's terms of trade. Where possible these sections identify the countries and sectors which are most affected by China. Particular attention is given to the two largest Latin American economies, Brazil and Mexico. These are often seen as having contrasting experiences, with Brazil having achieved major exports of primary commodities to China, while Mexico has been negatively affected by Chinese competition in export markets, particularly the United States. The penultimate section of the paper discusses the impacts which the growth of China is having on development in Latin America and the Caribbean with a particular emphasis on the possible implications for poverty reduction in the region. The concluding section identifies major policy challenges for Latin America arising from the growth of China.

2. THE DIRECT IMPACTS OF CHINA ON LATIN AMERICA AND THE CARIBBEAN

(a) *Exports*

As indicated above, Latin American and Caribbean exports to China have grown spectacularly in recent years. While trade with China was expanding during most of the 1990s, the really sharp increase in exports from the region has occurred since 1999 (see Figure 1). Since this pattern holds for all the major Latin American countries exporting to China, it would seem that the explanation must be sought in events in China rather than developments in the various Latin American countries. One possible explanation is that resource constraints really began to bite in China at the end of the 1990s. This view is supported by the sharp increase in China's net trade deficit in a number of primary commodities which feature prominently in Latin America's exports such as copper, iron ore, nickel, and soybeans from the late 1990s (UNCTAD, 2005, Figure 2.8). Furthermore the accession of China to the WTO in 2001 and the ensuing trade liberalization could have given an additional boost to the region's exports.

The extent to which Latin American and Caribbean countries have participated in this regional export boom varies considerably. While China accounted for 4.6% of the region's total exports in 2005, the shares for individual countries range from less than 1% of total exports in Colombia, Ecuador, and several Central American countries, to over 10% in Chile, Cuba, and Peru (see Table 1).

Exports to China have made a very important contribution to the growth of total exports since 2000 in Costa Rica and Cuba, where they accounted for a fifth of the total increase in exports, and a significant contribution in Argentina, Brazil, Chile, and Peru, where they contributed between 14% and 20% of export growth (Table 1). However in the other larger countries in the region, the impact of exports to China is marginal.

In terms of the composition of exports to China, the role of the region is clearly as a supplier of primary products and resource based manufactures with a relatively low degree of processing. These account for around three-quarters of total exports (CEPAL, 2005, Grafico V.5; Lall & Weiss, 2005, Table 9). The main products exported from the region are soya, iron ore, copper, pulp, fish meal, leather (CEPAL, 2005, Cuadro V.6).

It is also worth noting that for the major Latin American exporters to China, exports are concentrated on a very narrow range of products. Over 75% of China's imports from Argentina and Chile are of soya and copper, respectively. Two-thirds of imports from Brazil

Table 1. *Exports to China (Mainland and Hong Kong) of major Latin American Countries, 1995, 2005*

	Value ($ million)		Share of total exports (%)		Share of increase in exports (%)
	1995	2005	1995	2005	2000–05
Argentina	561.8	3657.6	2.8	8.8	18.3
Bolivia	0.3	31.6	0.0	1.3	2.9
Brazil	1608.9	9911.9	3.5	8.3	14.0
Chile	374.8	4471.3	2.3	11.3	17.2
Colombia	128.1	198.9	1.3	0.9	1.8
Costa Rica	55.0	1075.3	2.0	9.8	20.7
Cuba	196.1	225.7	13.1	10.0	20.7
Dominican Rep.	0.0	35.7	0.0	0.7	-8.2
Ecuador	7.2	50.4	0.2	0.4	-0.5
El Salvador	4.5	26.6	0.5	0.8	5.7
Guatemala	34.3	90.4	1.8	1.5	5.2
Honduras	0.0	14.5	0.0	0.3	0.4
Mexico	542.7	2216.7	0.7	1.1	5.9
Nicaragua	1.3	13.5	0.3	0.8	1.2
Panama	20.4	36.5	1.0	2.2	2.9
Paraguay	7.5	69.1	0.8	3.2	4.5
Peru	405.1	1914.8	7.3	11.1	13.9
Uruguay	173.9	172.3	8.2	4.7	4.3
Venezuela	6.5	1022.2	0.0	1.7	3.8
Total	4128.2	25235.0	1.9	4.6	10.6

Source: IMF, Direction of trade statistics.

are soya and iron and steel, while a similar proportion of imports from Peru are of copper and fishmeal (CEPAL, 2005, Cuadro V.6). Thus the major Latin American exporters to China have not so far been able to diversify their exports beyond a few primary commodities.

The current pattern of exports to China raises a number of questions. Why have some countries been more successful than others in taking advantage of China's booming market? Does it just reflect differences in comparative advantage or are there missed opportunities which some countries could exploit? According to the International Trade Centre's trade simulation model (SIM-3), Colombia and Mexico's exports to China are well below predicted levels indicating high untapped trade potential, whereas Argentina, Brazil, Chile, and Peru all show strong exports to China, above predicted levels. [1]

What other factors apart from comparative advantage have influenced the extent to which different Latin American and Caribbean countries have penetrated the Chinese market? Several of the smaller Latin American countries still maintain diplomatic relations with Taiwan. Indeed almost half of the countries world-wide, which recognize Taiwan, are in Latin America and the Caribbean (Dominguez, 2006, p. 15). There is some evidence to suggest that this tends to reduce their exports to the mainland. [2]

Despite substantial reductions in tariffs, elements of China's trade regime remain fairly protectionist, particularly with regard to agriculture, and this has impeded exports from some countries. In the case of Brazil, for example, Abreu (2004) has pointed out that most agricultural exports still face relatively high tariffs (the average tariff for agriculture in 2005 was 17.4%), tariff-rate quotas, import licensing, unduly stringent sanitary, and phytosanitary requirements, and centralized state trading. This is particularly the case for soybean oil, corn, sugar, cotton, and beef.

The predominance of primary products and resource based manufactures in the commodity structure of exports from Latin America to China is also partly due to China's pattern of trade protection. The obstacles are said to increase with the degree of processing of the good exported. For instance, it is much easier for Brazil to export soybeans than soybean oil to China, so that the former accounts for 28% of

exports in 2005 while the latter is only 2% (http://aliceweb.desenvolvimento.gov.br).

The market opportunities, which China represents for Latin American exporters, are a clear example of the complementary effects of the Asian Drivers on the region. However, while there is little doubt that in the short-run Chinese demand for primary commodities has been a boon to the region as a whole, there are concerns that this is leading to an overemphasis on the less dynamic primary sectors with only limited opportunities for increasing value added and technological change (IDB, 2006; Mesquita Moreira, 2007).

(b) *Imports*

Imports from China have also grown significantly in recent years although not as rapidly as exports. Figure 1 shows that imports from China grew steadily from the early 1990s, with a slight dip in 1999 after which they recovered and grew rapidly, particularly from 2003 onwards.

China's share in total imports by Latin America and the Caribbean increased from 1.8% in 1995 to around 5.5% in 2005 (Table 2). Table 2 also shows the increasing share of imports from China in individual Latin American countries. Although the share of China varies between countries, the differences are not as marked as in the case of exports.

In terms of the type of goods imported from China, the pattern is the reverse of that noted for Latin American exports to China. More than 90% of imports are manufactured goods and over 85% are non-resource based manufactures (Lall & Weiss, 2005, Table 8). Almost half of all imports from China are low tech/labor-intensive products but the technology level of imports is rising over time (Lall & Weiss, 2005, Table 8).

The composition of manufactured imports from China differs between countries. Imports of low tech products account for only around 20% of total imports from China in Argentina, Brazil, and Mexico in 2002 compared to 45% for the region as a whole (Lall & Weiss, 2005, Table 8 and Appendix Table A.6). Unskilled labor-intensive manufactures are about 20% of total imports from China in Brazil and Mexico, but much more significant (around 40–50%) in Bolivia, Nicaragua, and Peru (Jenkins & Edwards, 2004, Table A.5).

Another aspect of the structure of imports is whether they are predominantly of finished goods or intermediate inputs. Some authors have suggested that a significant share of

Table 2. *Imports from China of major Latin American countries, 1995, 2005*

	Value ($ million)		Share of total imports (%)	
	1995	2005	1995	2005
Argentina	667.8	1728.1	3.5	6.5
Bolivia	16.3	138.2	1.1	5.9
Brazil	1472.7	5835.1	2.7	6.8
Chile	498.3	2624.1	3.2	8.1
Colombia	92.6	1138.6	0.7	5.6
Costa Rica	40.2	284.6	1.3	3.1
Cuba	167.5	706.4	6.3	13.2
Dominican Rep.	0	302.1	0.0	2.6
Ecuador	0.4	548.8	0.0	5.7
El Salvador	22.9	298.3	0.9	4.9
Guatemala	26.5	635.7	0.8	6.6
Honduras	0	206.3	0.0	3.2
Mexico	680.0	6712.7	0.9	3.1
Nicaragua	20.9	176.9	2.1	5.3
Panama	28.3	4070.3	1.1	19.3
Paraguay	123.0	398.9	4.0	10.9
Peru	234.1	1140.9	2.8	8.6
Uruguay	72.4	321.5	2.5	7.2
Venezuela	56.8	958.1	0.5	3.8
Total	4220.6	28225.8	1.8	5.5

Source: IMF, Direction of trade statistics.

Chinese exports to Latin America is of intermediate goods (Freund & Ozden, 2006, Appendix). This opens up the possibility of a complementary relationship with access to cheap Chinese inputs leading to greater competitiveness on the part of local producers and increased exports. So far there is only limited evidence that this is occurring on a significant scale. [3]

A further factor in determining the impact of increased imports from China on the Latin American and Caribbean economies is whether they displace local producers or simply replace imports from other countries. In the latter case, there is a presumed benefit to the importing economy from the increased supply of cheap Chinese manufactures. If imports compete directly with local producers, however, account needs to be taken of the welfare losses arising from their displacement.

There are no detailed studies of this issue for Latin America and the Caribbean. Anecdotal evidence suggests that in the early stages of the growth of Chinese exports to the region, the impact was felt mainly by other exporting countries, but that more recently domestic producers have started to be affected. This appears to have been the case in Brazil where industrialists only began to realize the size of the challenge from China in 2005. The reasons for this can be seen with the help of import penetration indices shown in Figure 2. Whereas overall import penetration fell substantially after the 1999 devaluation, Chinese exporters managed to increase their presence in Brazil's market for manufactured goods by a factor of 3. Since they started from a very low base, their share is still modest, close to 1% of total domestic output, although this masks considerable variation across industries. The substitution effect *vis-à-vis* other exporters and the low base help to explain why Brazilian manufacturers took so long to wake up to the Chinese challenge. The recovery of overall imports in 2004 and 2005, driven, *inter alia*, by a big jump in Chinese imports (their share of total Brazilian imports climbed from 4.4% in 2003 to 7.2% in 2005), seems to have been the wake-up call.

One limitation of any analysis of the impacts of imports from China on the Latin American and Caribbean economies is the high level of smuggling in many countries, so that not all imports from China are reflected in the official trade statistics. The Mexican textile industry trade association, for example, estimates that illegal imports account for 60% of the local garment market and this has led to massive shut downs of firms (CANAINTEX, 2005).

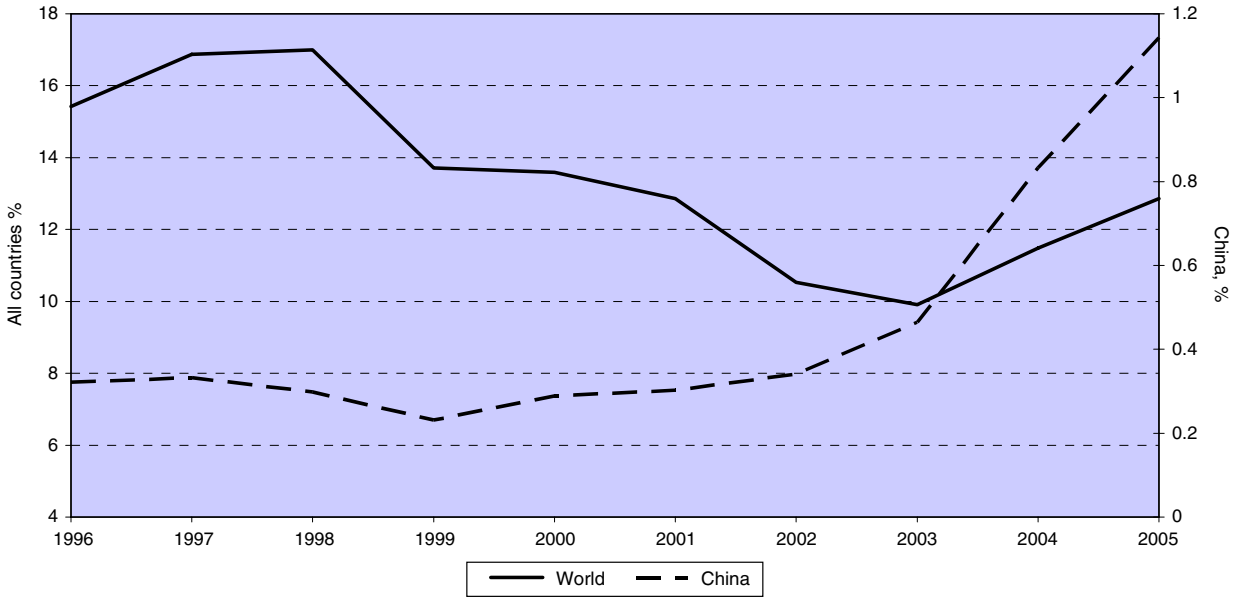
(c) *Foreign direct investment*

The role of bilateral FDI flows is not nearly as significant as that of trade in relations between China and Latin America. In 2005, Chinese FDI flows to Latin America came to $659 million but this included investment in Caribbean tax havens such as the British Virgin Islands and the Cayman Islands which accounted for the bulk of investment (Lunding, 2006, p. 8). Although China's FDI outflows have grown rapidly in recent years, this has been from a very low base.

Chinese FDI in Latin America is primarily of the "resource seeking" kind, particularly in oil and minerals. Geographically this investment has gone mainly to Brazil, Chile, Peru, and Venezuela (CEPAL, 2004, Cuadro V.5; Funakushi & Loser, 2005). There has also been some Chinese investment in manufacturing in Mexico.

The modest impact of Chinese investment in Latin America is confirmed by data on individual Latin American countries. According to Brazil's Central Bank, Chinese investment in the country in 2001–04 totalled US$58 million (mainly in consumer electronics and telecommunication), a rather modest figure given that Brazil's total inward FDI in this period amounted to U$S 78 billion. A number of high profile investment announcements last year hinted at stronger impacts on inward FDI. For instance, Shanghai Baosteel announced investment of roughly US$ 2 billion in the steel sector in a joint venture with CVRD (Brazil's leading mining company). Yet, most of these investments were later cancelled or postponed. Chinese investment in Mexico was equally limited. In the period 1999–2005 Chinese FDI in Mexico accounted for $41 million or 1.2% of FDI from Asian countries of which 52.7% was in manufacturing and 24.4% in services. Three hundred and thirty-nine firms with Chinese capital were registered in Mexico, accounting for 1.1% of foreign firms in 2005 (SE, 2005).

Latin American FDI in China is even less significant. This has mainly come from Brazil but only a handful of Brazilian companies have decided to invest in China. The pioneer was Embraco (compressors), which set up a joint venture with a Chinese company in 1995, and was followed by firms such as Embraer (aircraft), Weg (electrical motors), Sabo (auto-



* Import divided by output. Output data converted to US dollars using 1998 real exchange rate. Data for 2005

Source: own calculations based on IBGE and SECEX data.

Figure 2. *Brazil's Import Penetration* in Manufacturing goods. Worlds and China 1996–2005.*

parts) and Marcopolo (buses). The stock of investment of all these firms combined was not more than US$ 15 million in 2003 (the latest figure available), out of Brazil's US$ 43.4 billion stock of outward FDI (Abreu, 2004; Fleury and Fleury, 2006). A recent announcement by InBev, a Belgian–Brazilian brewer, of a US$ 750 million acquisition of a Chinese state company (New York Times, December 5) may signal greater investment of Brazilian companies in China, but then InBev can hardly be seen as a typical Brazilian firm. Mexican firms have also recently started to invest in China; Maseca has led this process with a $100 million investment in 2006.

3. INDIRECT IMPACTS OF CHINA'S GROWTH ON LATIN AMERICA AND THE CARIBBEAN

Two of the main concerns in Latin America and the Caribbean about the growing economic significance of China arise not from the direct effects of bilateral economic relations with China but from the indirect effects on the region's relations with third countries. In the case of trade, some countries see China as a serious competitive threat to their exports, particularly to developed country markets, while in terms of FDI there is concern that investment has been diverted from Latin America to China. This section will examine each of these threats in turn. It will also consider the possible impact of China on the terms of trade of the Latin American and Caribbean economies.

(a) *The threat to Latin American and Caribbean exports*

The effect on Latin American and Caribbean exports to third countries has been by far the most widely studied of the impacts of China on the region. Previous studies which have compared Latin America with other regions have found that, apart from Mexico, the countries of the region are less threatened by Chinese exports to third markets than are the Asian economies or the transition economies of Eastern Europe (Blazquez-Lidoy *et al.*, 2006; IDB, 2006, Chapter 5; Meller & Contreras, 2003). The optimistic view, as expressed in a recent World Bank report, is that "there is come evidence of substitutability between LAC exports and Chinese exports within industries, but these effects are limited to a few countries (mainly Mexico and to a minor extent, Central America) and a few manufacturing sectors" (Lederman, Olarreaga, & Perry, 2006, p. 26). It is also argued that over time "LACs trade specialization pattern is becoming more complementary to the specialization pattern

of China'' (Lederman, Olarreaga, & Rubiano, 2006, p. 17).

However there are reasons for believing that the threat to Latin American exports is more significant than this optimistic view would suggest. In terms of the countries affected, these are by no means restricted to Mexico. The Central American countries are also likely to have been negatively affected because they have specialized in exports of labor-intensive manufactures. One reason that this is missed by some studies is that the Export Similarity Index and related measures, which are commonly used to measure the extent of competition with China, tend to substantially underestimate the degree of competition faced by a small country with a high degree of specialization in a limited number of products, when compared with a much larger and more diversified economy such as China. [4] Thus the low figure for many Central American and Caribbean countries may simply reflect their small size relative to China. [5]

Several studies, using different methodological approaches, have found a significant threat from Chinese competition to the exports of some South American countries as well. One of the authors found that world market losses to China were higher in Mercosur and the Andean countries during 1990–2002 than for Mexico and the Central American Common Market (Mesquita Moreira, 2007, Figure 13). Hanson and Robertson (2006) found significant negative effects on Argentinean and Brazilian as well as Mexican exports to the United States, while Lall and Weiss (2005), (Figures 1 and 2) also found a number of South American countries among those facing the greatest competitive threat from China.

The view that Chinese competition is confined to a relatively narrow range of labor-intensive or low-tech products is also open to challenge. As Rodrik (2006) has argued, the structure of China's exports is heavily geared to high-wage/productivity products which partly explains its success in world markets. The share of high technology products in Chinese exports has increased significantly since 1990 (CEPAL, 2005, Gráfico V.2) suggesting that China is now internationally competitive in a wide range of products. [6] In addition, China is leading a significant group of new transnational corporations in electronics, telecommunications, and construction, among others, an issue that has not been analyzed in detail so far (Dussel Peters, 2007). Latin American and Caribbean export sectors which are threatened by China include not only the well known cases of relatively labor-intensive industries such as clothing, textiles, leather products, and footwear and furniture, but also capital-intensive ones such as iron and steel and aluminium (Lall & Weiss, 2005, Appendix Table 5; Stevens & Keenan, 2005). Indeed there is evidence that competition from China is mainly in the relatively high wage products that Latin America and the Caribbean export (Freund & Ozden, 2006).

Mexico faces competition in the US market from China not only in textiles and garments but also in electronics and auto parts. Although Mexico still seems to have a higher technological level in terms of its exports to the United States, China is rapidly catching up. In electronics, for example, Dussel Peters (2005a) finds that Mexico has lost production lines and FDI as a result of competition from Asia and particularly from China.

In Brazil, a constant market share analysis [7] indicates that low-tech industries suffered the highest losses of export markets to Chinese competition (7.2% of 2004 exports), followed by the high-tech (2.1%), medium-tech (1.4%), and resource-based industries (1%). Table 3 provides a breakdown of these categories and footwear clearly stands out with unmistakably high losses [8]—the type of dislocation that seems more consistent with the two countries' competitive advantages. The losses, though, in sectors such as pig iron, fruit juices, and in most of the high-tech sectors are a clear reminder that China's comparative and competitive advantages go well beyond cheap labor.

The final claim of the optimistic view is that competition between Latin America and China is decreasing and that their economies, again with the exception of Mexico, are becoming more complementary. Again there is evidence to contradict this. Mesquita Moreira (2007, Figure 12) indicates that the annual loss of world market share by Latin American countries to China has increased over time, particularly since 1999.

There are strong reasons why the threat from Chinese exports may have increased in recent years and will continue to do so in the immediate future. China's accession to the WTO in 2001 and the ending of the Agreement on Textiles and Clothing at the beginning of 2005 have created new conditions in terms of the competitive threat from China, compared to those that prevailed in the 1990s.

Table 3. *Brazil's World market losses to China by technology intensity (1990–2004)*

SITC Rev. 2		%	million US$
High-Tech			
751	Office machines	24.1	24.9
752	Automatic data processing machines	19.1	19.8
778	Electrical machinery and apparatus	14.5	15.0
764	Telecommunications equipment and parts	11.5	11.9
759	Parts of and accessories suitable for 751 or 752	9.8	10.1
	Total	2.1	
Medium-Tech			
671	Pig iron, spiegeleisen, sponge iron, iron or steel	23.6	79.6
672	Ingots and other primary forms, of iron or steel	19.5	65.9
762	Radio-broadcast receivers	12.1	40.7
775	Household type, elect. and non-elect. equipment	4.2	14.2
741	Heating and cooling equipment and parts	3.7	12.5
	Total	1.4	
Low-Tech			
851	Footwear	64.6	506.7
658	Made-up articles, wholly/chiefly of textile mats	4.2	32.9
651	Textile yarn	3.1	24.2
673	Iron and steel bars, rods, etc.	2.7	21.5
696	Cutlery	2.3	18.3
	Total	7.2	
Resource-Based			
058	Fruit, preserved, and fruit preparations	43.8	117.8
684	Aluminium	13.1	35.2
687	Tin	6.5	17.4
014	Meat and edib. offals, prep./pres., fish extracts	5.2	13.9
625	Rubber tires, tire cases, etc. for wheels	5.0	13.5
	Total	1.0	

Source: Comtrade with author's own calculation.
Note: Five sectors with largest losses in each category (losses as % of each category and losses in millions of US) $.

In conclusion the picture that emerges is far more worrying than the optimistic view suggests. Chinese competition affects more countries and more sectors than is often recognized and the threat to Latin American exports is real and likely to persist. Lall and Weiss (2005, pp. 180–182) found a correlation between the loss of market share by Latin America relative to China and the growth of world exports of the product concerned. This is particularly worrying since it suggests that the threat from China is greatest in the most dynamic products. In which sectors are Latin American exporters still able to compete with China? There is some evidence that Latin America (or at least Mexico and Central America) is relying on geographical proximity to the US market and tending to specialize in heavy, low value products with high transport costs (Hummels, 2006, p. 3; IDB, 2006, p. 65). Mexico and Central America may also enjoy a competitive advantage over China in terms of speed to market which can be significant for fashion items. Latin American exporters also increasingly rely on preferential trade agreements (NAFTA, DR-CAFTA) to give them a competitive edge over China in the US market.

In the long term, Latin America's trade pattern may indeed become more complementary than competitive with China's. This is exactly what would be expected if the region's exporters are losing out to China in world markets and have to concentrate on niches where China does not compete. In this case evidence of a reduced overlap between Chinese and Latin American exports should not be interpreted as a positive sign.

(b) *The threat of FDI diversion to China*

The second area of concern regarding competitive effects is that the increased attraction

of China as a host for foreign investors has reduced FDI flows to Latin America and the Caribbean. Compared to the literature on trade, there have been relatively few studies on this. The *prima facie* case is based on the rapid growth of FDI to China in the 1990s while investment in Latin America and the Caribbean lagged behind, [9] although this does not necessarily indicate any causal relationship. An alternative view is that FDI in China involves the development of global production networks and hence is complementary to investment flows to other countries as has been argued in the case of East Asia (Chantasasawat, B, Fung, Iizaka, & Siu, 2004).

In discussing foreign investment it is usual to distinguish between different types of FDI according to their motivation—natural resource seeking; market seeking; efficiency seeking. Diversion is most likely to occur in the last of these where FDI can reinforce changes in trade patterns as firms relocate to lower cost countries. It is less likely where investment is primarily resource seeking since these depend on the existence of natural resources and are much less footloose. Market seeking investments occupy an intermediate position where investors may consider the relative attractiveness of different markets in terms of their size and growth. Although a significant part of FDI to China can be regarded as efficiency seeking, this is less significant in Latin America and the Caribbean where natural resource and market seeking FDI have dominated (CEPAL, 2004, Table I.6).

Despite the rapid growth of FDI since the early 1990s, China only accounts for about 6% of world FDI inflows. In aggregate, therefore, even if there were some diversion to China, the effects on the availability of foreign capital for other regions such as Latin America and the Caribbean are likely to be limited. However if capital markets are imperfect there may be significant effects on flows in individual sectors and for particular countries (IDB, 2006, Chapter 6).

Some stylized facts suggest that diversion to China is not likely to have been very significant. First, in terms of sources of FDI, investment in Latin America and the Caribbean comes mainly from the United States and the European Union, while FDI in China is mainly from East Asia. Similarly the sectoral distribution of FDI is also different. US FDI in China is mainly in manufacturing while other sectors dominate in Latin America (IDB, 2006, Chapter 6). Although this makes diversion unlikely for the region as a whole, the situation does vary between countries. As with trade, Mexico appears to be the country most threatened by Chinese competition.

Four econometric studies have attempted to test the FDI diversion thesis more systematically with contrasting results. Chantasasawat *et al.* (2004) found that FDI in China has no effect on the level of FDI in Latin America but is significant in the share of Latin American countries in total FDI in developing countries (but is not the main determinant). Eichgreen and Tong (2005), using a gravity model, found no evidence of FDI diversion from Latin America to China in 1988–2002. Herrero and Sanatabárbara (2004) distinguished two time periods (1984–2001) when like Chantasasawat *et al.* they found no significant FDI diversion to China and (1995–2001) when they did find a significant negative effect on FDI in Mexico (and to a lesser extent Colombia). Finally Cravino, Lederman, and Olarreaga (2006b) found a positive impact of FDI in China on total foreign investment in Latin America, which suggests complementarity rather than competition for foreign capital. However they failed to find any relationship in the manufacturing sector where production sharing is most likely to occur.

These studies suffer from a number of limitations. The time period of the analysis may be important and even if it were the case that in the past there had been no significant diversion of FDI to China, this is no guarantee that it would not occur in the future. Herrero and Sanatabárbara (2004)'s findings concerning the effects on different Latin American countries also indicate that aggregate data on the region as a whole may hide significant impacts on individual countries. There may also be sector specific effects which are not captured in the very aggregated type of studies that have been carried out so far. This suggests a need for further work on this issue, particularly on the impacts on individual countries and sectors where diversion is most likely to occur.

(c) *China's impact on the terms of trade and the Latin American and Caribbean economies*

So far the paper has considered the impact of China as a bilateral trade and investment partner of Latin America and as a competitor in export markets and for FDI. However because China is such a large economy, its emergence

has impacts on world prices which also affect the Latin America and Caribbean economies indirectly through changes in their terms of trade.

One of the most commented upon aspects has been the impact of China on primary commodity markets. In recent years China has accounted for a significant share of world demand for a number of the major commodities exported from Latin America. In 2003 it accounted for a third of world consumption of tin, almost 30% of iron ore and zinc and over 20% for copper and aluminum (Winters and Yusuf, 2007, Table 1.4). China's growth of demand for zinc during 2002–05 was greater than the total increase in world consumption and it accounted for almost all the increase in world demand for tin, almost half the increase for aluminum, copper, and steel, and almost a third of increased demand for oil (IMF, 2006, Table 5.3). China also accounted for over 30% of the increase in global oil demand during 2003–04 (UNCTAD, 2005, p. 74).

As a result the prices of many primary commodities exported from Latin America have improved significantly. Oil prices increased by 157% during 2002–06 while the IMF metals index rose even more, by 180% (IMF, 2006). While it is difficult to estimate the precise extent to which these price increases have been the result of the growth of demand in China, there is general agreement that this has been a major factor (Gottschalk and Prates, 2005; IMF, 2006; UNCTAD, 2005, Chapter II).

The other aspect of China's impact on world prices is the effect on the goods which it exports, particularly those labor-intensive manufactures which have become "commodified." World manufacturing export prices have been falling since the late 1990s and this has been particularly marked for those goods which China exports (Kaplinsky, 2005). Those countries which are importers of such goods clearly benefit from an improvement in their terms of trade, whereas exporters will suffer. Identifying these effects is more difficult than in the case of primary commodities since manufactures tend to be less homogeneous. It is also less clear how changes in world prices will affect domestic prices where both protectionist policies and the degree of pass-through drive a wedge between world and local prices.

The combined effects of increased prices of primary commodities and falling prices for imports of many manufactures have led to an improvement in the terms of trade of most of the major Latin American and Caribbean economies in recent years. Argentina, Brazil, Chile, Peru, and Venezuela have all enjoyed increased terms of trade since 2002 (UNCTAD, 2005, Figure 3.4). The only large economies in the region where the terms of trade did not improve were Mexico and Colombia (UNCTAD, 2005, Figure 3.3). [10] When the sources of changes in the terms of trade are identified, the reasons for these intra-country differences become clear. Chile and Peru have benefited from increased prices for ores and metals, Venezuela from oil price increases, and Argentina from increased prices of agricultural products and fuels. Brazil has benefited somewhat less because as an oil importer increased prices for other commodities have been partly offset by the increased oil price. In the case of Mexico, despite increased oil prices, the negative effect on prices of manufactured exports has meant that the terms of trade have not improved significantly (UNCTAD, 2005, Figure 3.4). [11]

This suggests that although in aggregate the impact of China's growth on the terms of trade of the Latin American and Caribbean economies has been positive, at the level of individual countries, there have been winners and losers. Whether a country is a winner or a loser depends on whether it competes with China or has an economy that is complementary to the Chinese economy in terms of the structure of exports and imports. It is also important to put these developments in the terms of trade in a longer term context. The recent increase has so far been fairly short-lived and, despite this improvement, the region's terms of trade are 30% lower than the level in 1980 (UNCTAD, 2005, Figure 3.2).

4. MAJOR CONSEQUENCES OF CHINA'S GROWTH FOR LATIN AMERICA AND THE CARIBBEAN

The possible impacts of China's rapid growth and integration with the global economy for Latin America are many and varied. They depend in part on the relative significance of the different types of relationships described in Sections 2 and 3 for particular countries. Where the dominant relations are complementary then the Latin American country is likely to gain, whereas where competitive relations dominate, there are likely to be negative effects. This section considers the likely impacts of China on the region first of all on growth and then more

specifically in terms of the implications for the poor.

(a) *Growth impacts*

Most countries in Latin America and the Caribbean face serious balance of payments constraints so that a critical factor determining the impact of China on growth in the region is the effect that it has had on the balance of trade and the balance of payments. Table 4 shows that the overall trade balance of Latin America and the Caribbean with China has been in deficit in recent years. [12]

Table 4 also shows that the regional average hides considerable differences between countries. Some countries such as Argentina, Brazil, Chile, and Peru have trade surpluses with China while others, most notably Mexico and Panama, have deficits. The countries with large trade surpluses are those which, as was seen earlier, have been most successful in expanding exports of primary products to China. Even among these countries, there is concern that recently imports from China have grown rapidly and that these surpluses will not be maintained.

Bilateral trade balances only present a partial picture of the overall impact of China on Latin American and Caribbean trade. When account is taken of the effects of competition from China on exports to third markets, as well as the direct effects, the positive balances will be smaller and the deficits larger. Since the countries, which are generally regarded as facing most competition in third markets (Mexico and Central America), also have deficits in their bilateral trade with China, the differences between countries in terms of the effects on the balance of trade are likely to be accentuated.

As discussed in Section 3 above, one of the ways of looking at the indirect impacts of China on the Latin American and Caribbean countries is via the effects on the terms of trade. Although there are no studies that estimate the extent to which changes in the region's terms of trade are a result of China's growth, it is possible to suggest the likely direction of change. Again this tends to reinforce the differences between countries as those whose terms of trade have improved most strongly have been exporters of primary commodities while exporters of labor-intensive manufactures have experienced stable or deteriorating terms of trade.

In considering the balance of payments impacts on the region, account also needs to be taken of the effects on FDI flows. Bilateral investment flows are small relative to trade so that the balance of payments impacts are likely to be dominated by the trade impacts. The effects in terms of diversion of FDI to China are unclear, particularly at the level of individual countries, but if as one study suggests they have been negative for Mexico and Colombia (Herrero and Sanatabárbara, 2004), this would reinforce the negative trade impacts in those countries.

The effects of China on the trade balances of the Latin American and Caribbean countries will affect growth in the short run, but what of the longer term prospects? A concern expressed by several commentators is that the growth of China is leading to deindustrialization in the region with potentially deleterious effects on technological development and long-term growth (Blazquez-Lidoy *et al.*, 2006, p. 29; Lall and Weiss, 2005, pp. 184–185; Mesquita Moreira, 2007). Certainly the evidence presented earlier in this paper indicates that the pattern of specialization in trade between China and Latin America and the Caribbean is based on the exchange of Chinese manufactures for Latin American primary commodities. Moreover since it is Latin American and Caribbean exports of *manufactures* to third markets that are most threatened by Chinese competition, this tends to further threaten industrial production in the region. The emerging pattern of Chinese FDI in the region also tends to reinforce specialization in primary products.

Although there is a *prima facie* case for supposing that the growth of China is tending to change the structure of production in Latin America and the Caribbean and that the boom in primary commodity prices could lead to Dutch Disease effects in the region (IDB, 2006, p. 151), there are a number of questions that need to be analyzed further. More evidence is required on the effects of competition from Chinese imports on Latin American and Caribbean manufacturing. Most of the literature on the impacts of China on the region has focussed on competition in third markets, while the effects of competition in the domestic market have been relatively neglected. [13]

(b) *Poverty impacts*

A further question that needs to be addressed is the likely impact of the growth of China on the achievement of the Millennium Develop-

Table 4. *Trade balance of Latin American countries with China, 1995, 2000–05 ($ million)*

	1995	2000	2001	2002	2003	2004	2005
Argentina	−106.1	−333.5	114.8	833.8	1833.3	2217.8	1929.5
Bolivia	−16.0	−65.5	−82.0	−87.4	−73.8	−81.4	−106.6
Brazil	136.2	−17.2	695.3	1197.8	2828.8	2160.7	4076.8
Chile	−123.5	−33.5	7.1	89.9	561.5	1424.9	1847.1
Colombia	35.5	−219.8	−481.5	−531.5	−627.8	−954.2	−939.6
Costa Rica	14.8	−78.2	−101.1	−126.8	−162.0	−29.3	790.6
Cuba	28.6	−191.1	−267.6	−236.4	−147.1	−181.1	−480.7
Dom. Rep.	0.0	−129.5	−125.6	−145.3	−168.8	−234.7	−266.3
Ecuador	6.8	−27.0	−156.7	−238.0	−487.2	−672.8	−498.5
El Salvador	−18.5	−54.9	−77.5	−91.5	−105.2	−135.7	−271.7
Guatemala	7.7	−225.5	−239.7	−347.1	−431.9	−691.7	−545.4
Honduras	0.0	−25.6	−31.9	−36.1	−47.7	−75.7	−191.8
Mexico	−137.3	−2944.6	−4067.5	−5978.2	−8798.4	−13621.5	−4496.0
Nicaragua	−19.6	0.0	0.0	0.0	0.0	−148.9	−163.4
Panama	−7.9	−36.6	−35.5	−53.5	−48.4	−73.1	−4033.7
Paraguay	−115.5	−223.6	−208.5	−168.4	−217.8	−409.6	−329.9
Peru	170.9	124.7	25.5	298.6	313.4	795.6	773.8
Uruguay	101.6	−26.8	−18.3	−31.4	16.3	−132.9	−149.2
Venezuela	−50.3	−320.7	−429.3	−193.1	266.7	509.1	64.1
Total	−92.4	−4828.9	−5480.1	−5844.7	−5495.9	−10334.6	−2990.9

Source: IMF, Direction of trade statistics.

ment Goals, particularly the goal of poverty reduction, in Latin America and the Caribbean. Poverty impacts depend not only on the rate of growth but also on the nature of that growth in terms of distribution. As Alan Winters has argued, there are three main channels through which trade "shocks" can affect poverty [14]

- the enterprise channel
- the distribution channel
- the government channel

These correspond to the impacts on the poor as producers, consumers, and beneficiaries of government expenditure.

Only one study of the impacts of China on Latin America has focussed directly on the poverty issue (Jenkins and Edwards, 2004). This combined the Winters' framework with an analysis of the competitive and complementary effects of China's growth on six Latin American countries (Bolivia, Brazil, Honduras, Mexico, Nicaragua, and Peru).

As producers, the poor are more likely to benefit where new opportunities are created for unskilled workers and peasant producers. The growth of exports to China from the region is unlikely to have had positive effects. Mineral production is generally capital and skill intensive and creates little employment, except in the initial construction stages of opening a new mine. Although agricultural exports have more potential for creating employment or increasing peasant incomes, there are numerous historical examples where the expansion of export agriculture has had negative impacts on the poor as new commercial opportunities have led the rich and powerful to appropriate land previously occupied by low income rural households (Berry, 2001). Since the major agricultural export to China from the region is soybean, which is grown on commercial farms, this is unlikely to have had a positive impact on the poor. Indeed there are recent reports of 500 smallholders being relocated to make way for soybean production in Santarem, Brazil (Watts, 2005). Soybean production is also much less labor-intensive than alternative crops that it replaces and it has been reported that in Argentina more than 300,000 farm workers have lost their jobs (Observer, 2004). Unfortunately there is a lack of detailed studies on these effects.

In the case of manufacturing, it has been suggested that the growth of China as a major source of low wage labor may have been one of the reasons why the opening of the Latin American economies in the 1980s and 1990s was accompanied by a growing gap between the wages of skilled and unskilled workers (Wood, 1997). There is certainly anecdotal evidence of Chinese competition leading to job

losses in export industries. 300,000 jobs were lost in the Mexican *maquila* during 2000–02 and firms such as Phillips, Black and Decker, and Sanyo were reported to have relocated production to China (Santos Navarro, 2005). At the sectoral level, studies of the Mexican garment industry (CANAINTEX, 2005; CNIV, 2005; Cornejo, 2005; Dussel Peters, 2005a, 2005c; Rueda Rueda Peiro, Simón Domınguez, and González Marın, 2004) and the electronics industry (Dussel Peters, 2005a) found that employment had declined as a result of competition from China in the US market. There are also reports of plant closures and job losses in the Central American garments and textiles industry (see ILO, 2005, pp. 32–33; Thompson, 2005). Job losses in the garment industry are of particular concern because the industry is often a major employer of unskilled poor women workers who are often migrants from rural areas. There are few detailed studies which have analyzed the extent to which such job losses can be attributed to Chinese competition. [15] However there is enough evidence to raise questions about the viability of labor-intensive manufactured exports as a major strategy for poverty reduction in Latin America in the future.

The impact of the growth of China on the poor as consumers has not been studied in any detail. If Chinese imports significantly reduced the cost of living for low income families then there would be potential for poverty reduction. Jenkins and Edwards (2004, Table 10) find that the proportion of imports from China, which can be classified as basic consumer goods (food, beverages, tobacco, garments, and footwear) is relatively low in the six countries which they studied, although they did account for around a fifth of total imports from China in Bolivia and Nicaragua. There is no evidence, however, on the extent to which imports from China have led to reduced consumer prices in the Latin American countries. Thus the role of the distribution channel in terms of poverty is uncertain.

The third channel to be considered is via government expenditure. One of the potential benefits of increased trade for Latin America and the Caribbean is an increase in government revenues. [16] This raises the question of the extent to which governments in the region are able to capture some of the benefits from increased exports to China and from increased prices for primary products?

Rent appropriation by governments is potentially greatest for oil and minerals because of the extensive involvement of the state in these sectors, either through direct participation in ownership or through royalties and taxes. Studies of various Latin American countries show considerable variations in the degree of rent appropriation among oil and mineral exporting countries (Gottschalk and Prates, 2005, p. 23; UNCTAD, 2005, Annex to Chapter III). These reflect the extent of state ownership in the sectors and the incentives given to private investors. On the other hand, where exports are agricultural products, governments are less likely to appropriate significant rents.

Although the growth of China has clearly played an important part in the recent growth of primary product exports and the increase in their prices, there have been no studies which attempt to quantify the effect that this has had on government revenues in the region. The impact on poverty will also depend on the extent to which any increases in revenue will lead to greater pro-poor expenditures on the part of the governments of the region. There are positive signs in Chile where the newly elected President has plans to increase social expenditure from the large surpluses being generated by the state owned copper industry.

5. CONCLUSION: CHALLENGES FACING POLICY MAKERS

The growth of China has had both direct and indirect impacts on Latin America and the Caribbean. These are often complex and difficult to disentangle from other recent changes which have affected the region. They have also created winners and losers both in terms of countries and of sectors and groups within countries. There is a broad consensus in the literature arguing that producers and exporters of raw materials—particularly South American countries such as Argentina, Brazil, Chile, and Venezuela and sectors such as agriculture, agroindustry, and industrial inputs—have been the ''winners'' in terms of trade with China. On the other hand, Mexico and the Central American—countries specializing in commodity chains such as yarn–textile–garments, and also in electronics, automobiles, and auto parts—seem to be the losers against China both in domestic as well as in third markets. This consensus, however, has several limitations requiring further research in the future.

First it focuses only on the export integration of the Latin American countries and does not

pay sufficient attention to the impact of China's exports to the region, and the nature of the bilateral trade between Latin America and China which reproduces the core-periphery pattern of exchange of manufactures for raw materials. Second, it does not pay sufficient attention to the long-term ecological, social, and economic sustainability of exports of these "apparent" successful countries. Third, it is also questionable if these Latin American countries can continue producing and exporting these products with the same dynamism even in the short and medium run, that is, with two-digit growth rates as since the mid-1990s. Finally, this consensus does not take into account that Chinese manufactured export potential is enormous and that, so far, exports to Latin America are relatively low and the combination of a slow down in exports of raw materials and increased imports of Chinese manufactures can change the trade balance very quickly in favor of China. This has so far not been sufficiently discussed in Latin America.

As the previous discussion of the possible impacts of China's growth on poverty in Latin America illustrated, relatively little is known about the distributional effects within the Latin American countries. However there are grounds for thinking that the benefits of trade with China are highly concentrated and that the current pattern of trade does not benefit the majority of the population and that some relatively disadvantaged groups are being negatively affected. As former Inter-American Development Bank chief economist Guillermo Calvo stated recently, "if by development you mean better income distribution, then I'm not sure that China is a positive factor. Because when China imports soya, minerals, that sort of thing, that does not necessarily improve living conditions in Latin America. It doesn't improve the quality of life of the majority" (Calvo, 2007).

It is clear from the analysis in this paper that the emergence of China as an Asian Driver presents a number of challenges to Latin America as a whole and to particular countries within the region. This is not to deny that there are also opportunities that arise as a result of the growth of the Chinese economy but up to now the extent to which the region has been able to take advantage of these has been limited. So far, there has not been a regional agenda on China–Latin American topics. At the same time it is important to bear in mind that economic relations with China are still far less significant for the region, both as a whole and for individual countries, than relations with the OECD countries.

The main challenge for Latin American and Caribbean policy makers is how to respond to the increased competitive strength of China. This is not only an issue for those countries such as Mexico, which face competition from China in export markets, but for all countries as their domestic markets are increasingly subjected to competition from Chinese imports. There will be pressures to respond through protectionist measures against imports from China and where evidence exists of dumping by exporters, this is justified.[17] However this should not be used to hide an underlying problem of competitiveness in the region and will not help meet Chinese competition in export markets. In many ways the new challenges faced by Latin America as a result of China's growth are an "internal" problem, particularly if other "Asian Drivers" such as India, Vietnam, Indonesia also integrate rapidly with the world market and increase competition with Latin America. Here there is a need for countries to improve their capacity to differentiate and diversify their exports away from standardized labor-intensive products. Countries also need to exploit their geographical advantages, for example, in terms of their proximity to the US market. This is particularly true in the case of Mexico and the Central American and Caribbean countries.

The countries, which have become successful exporters of primary commodities to China, also face a number of challenges. They need to diversify what is still a very narrow range of products exported and find ways of increasing the degree of processing of some of the products currently exported. They also need to find mechanisms for dealing with the potential Dutch Disease effects associated with an export boom. In terms of achieving the poverty reduction targets of the MDGs, attention needs to be given to the distribution of the gains from increased exports, particularly ensuring that some of these go to benefit the poor through governments capturing part of the increased revenue and increasing pro-poor expenditures.

In addition, China's growth raises major questions for theory and policy. In terms of development theory China has granted a substantial role to the public sector in the last 25 years in terms of direct property and control of ownership, high levels of restrictions on the

capital account and exchange rate, and in other markets such as labour and agriculture. In terms of policy, China has implemented aggressive and long-term strategies in areas such as technology, R&D, education, infrastructure, trade, and industry. The global lessons of China's performance still have to be analyzed and discussed in detail in Latin America.

NOTES

1. Data available on the ITC website at http://www.intracen.org/menus/countries.htm.

2. Some econometric estimates by one of the authors find that having diplomatic relations with Taiwan tend to reduce the level of exports from a country to China and Hong Kong.

3. See Shigeoka, Verhoogen, and Wai-Poi (2006) for some suggestive findings for Mexico.

4. The intuition behind this statement is that the ESI measures the degree of overlap between the product structure of the exports of two countries. However where the two countries are of very dissimilar size, the overlap may cover a large proportion of the smaller country's exports but only a small proportion of the large country's. Since the index is calculated for the two countries together, it substantially underestimates the degree to which the small country faces competition from the large country's exports. For an elaboration of this point, see Jenkins (2007).

5. There are also problems with the data used in some instances. In the case of some Central American countries (e.g., Honduras, Nicaragua) exports from Export Processing Zones are not included in the trade statistics and since these are predominantly of clothing, which competes with Chinese exports, the threat from China is underestimated.

6. One qualification to this is that products classified as "high technology" do not necessary involve high technology production processes if only the more standardized parts of the value chain are located in China as a result of production sharing with other East Asian countries.

7. For the methodology, see Batista (2005). In this framework, a market share loss for Brazil (in any product or market) is understood as a reflection of the fact that its exports have grown less than world exports because they were (i) less dynamic than those of China and/or (ii) less dynamic than those of the rest of the world. The data estimated in Table 3 reflect the first of these effects.

8. For a case study of the response of Brazilian footwear producers to Chinese competition in the US market in the 1990s, see Schmitz (1998). Brazil has never been a major exporter of textiles and clothing so that the impact of Chinese competition in the US market has been much less significant for Brazil than for Mexico and the Central American economies.

9. Cravino, Lederman, and Olarreaga (2006a) point out that the lag was mainly during the period 1990–97 and that since 1997 Latin America has performed rather well relative to China in attaracting FDI.

10. Some of the smaller Central American and Caribbean economies such as Honduras, Haiti, and Jamaica did not share in this improvement in the terms of trade (UNCTAD, 2005, Figure 3.3).

11. UNCTAD (2005) does not provide a similar breakdown of the factors underlying changes in the overall terms of trade for other Latin American countries but it seems likely that the negative trends in the terms of trade of some of the Central American and Caribbean economies partly reflect their specialization in a narrow range of labor-intensive manufactures as well as their dependence on imported oil.

12. This contradicts the picture drawn in Figure 1 above which shows that since 2003 China has had a trade deficit with Latin America. This is because Figure 1 is based on the data reported by China, while Table 4 is based on data from each of the Latin American countries. Since exports are commonly measured FOB while imports are measured CIF, it is possible to obtain apparently contradictory results when flows are estimated from two different data sets. In the case of trade between China and Latin America this is accentuated by particularly large discrepancies for individual countries which cannot be explained by differences between FOB and CIF valuations. The most extreme case is that of Mexico. According to Mexican sources, Mexico had a trade deficit of US$ 14 billion with China in 2004, whereas the corresponding figure given by the Chinese authorities is only $2.8 billion (Dussel Peters, 2005b, Cuadro 1).

13. A few recent country case studies have begun to look at the impact of imports from China on domestic producers. See Casacuberta, Gandelman, and Olarreaga (2006) on Uruguay, Castro and Saslavsky (2006) on Argentina, and Shigeoka *et al.* (2006) on Mexico.

14. For a comprehensive development of this approach, see McCulloch, Winters, and Cirera (2001).

15. A study of Argentina found only a weak negative impact of Chinese competition on employment but this study focused on Chinese competition in the domestic market (Castro and Saslavsky, 2006).

16. Conservative commentators see this as a disadvantage since it may lend support to state industries and ruling oligarchies and delay the reforms that are required in the region (Johnson, 2005).

17. Where smuggling is a major problem and this harms domestic producers, action to tighten customs procedures and border controls is also necessary.

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