

Latin America and the Asian Giants

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China's and India's fast economic growth during the past decade is paralleled only by their growing presence in policy discussions throughout the Latin America and the Caribbean (LAC) region. The success of these Asian countries is looked upon with admiration, but there is also concern about the effects that growing Chinese and Indian exports may have on the region's manufacturing and services sector. China and India's growing share in world markets is often blamed for the poor performance of the private sector in LAC.

A superficial look at trends might suggest that China and India have been pushing Latin American out of world markets. That probably accounts for the defensive reaction in the region. However, China and India's rapid growth could have actually been helping LAC economies

Part of the frustration in LAC can be attributed to the region's loss of economic importance vis à vis the two Asian economies, in spite of a broad range of reforms in the region that started in the mid to late 1980s. In 1980 LAC's economy was twice as large as those of China and India, which jointly represented 3% of world GDP. Today China is the sixth largest economy in the world, when measured in terms of GDP, and India the tenth. Together they account for 6.4% of world GDP, while LAC's economy is 20% smaller.

Falling behind

China and India's fast economic growth was accompanied by their rapid integration into world markets, while LAC lagged behind. Today China and India's share of world exports is 50% larger than LAC's share, whereas in 1990 the opposite was true. In the late 1980s LAC had a trade-to-GDP ratio roughly equal to China's and twice as large as India's. By 2004, China's trade-to-GDP ratio was 35% larger than LAC's, and India's was only 14% smaller than LAC's. China is now the third largest

trading economy in the world (just behind the United States and Germany), while India ranks 25th.

Similar trends can be observed in inward flows of foreign direct investment (FDI) and trade in services and innovation. In 1990, the OECD's stock of foreign capital in LAC was five times larger than their stock in China and India. By 2004, it was only twice as large. China and India's exports of services to the United States increased more than threefold during the period 1994-2004, whereas LAC exports increased twofold. Similarly, in terms of innovation, the number of patents registered in the U.S. by China and India was 75% smaller than the number registered by LAC in 1990. By 2004, China and India together were patenting twice as much as LAC.

A superficial look at these trends would suggest that China and India's growth has been pushing LAC coun-

Box 1: The impact of China's growth as seen by public opinion in LAC

"[We] must not repeat the mistakes of the nineties, when an 'invasion' of Chinese products destroyed entire sectors of our industry [...]." Communiqué of CAME (Medium Enterprises Association of Argentina), April 6, 2004.

"Countries around the world are bracing for a surge of cheap imports from China, which benefits from cheap, union-free labour and rising productivity." Taipei Times, January 2, 2005.

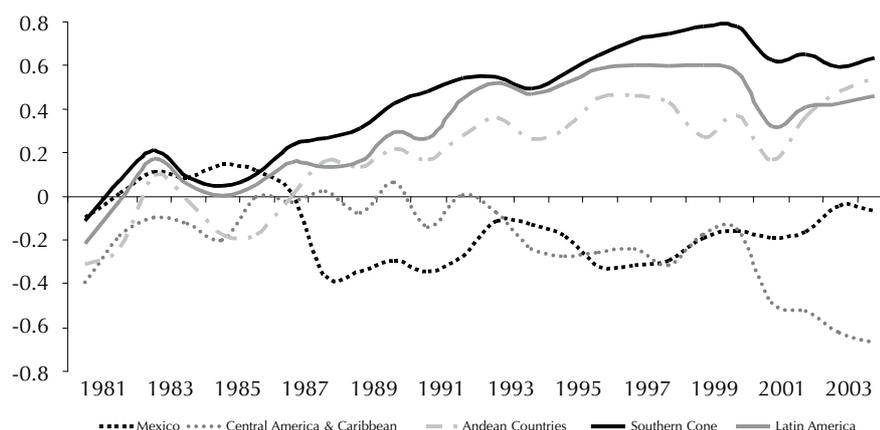
"Textiles and shoes are the sectors most harmed by the Chinese," says Dilma Rousseff (Brazilian President Lula's chief of staff), Bloomberg, September 29, 2005.

"CAFTA backers say this will help American nations compete with cheap imports from China and other Asian nations." AFP, July 30, 2005.

"I made it very clear to Minister Bo Xilai that we will take the legal steps to give Brazilian industry the right to protect itself." Luis Furlan, Brazilian Minister for Industry, Development and Commerce after meeting with his Chinese counterpart, October 4, 2005, as reported by Yahoo!

"It is not clear whether or not China is actually competitive. Perhaps it is, but perhaps its current success is based on the fact that they do not respect a series of rules that other countries, such as Mexico, do respect." President Fox at the October 2002 APEC summit, as reported on October 22 by Reforma.

Figure 1 Output correlation between Latin America and China, 1980-2003 (10 year window rolling correlations)



tries out of world markets, and that is probably why defensive strategies dominate policy discussions in the region. However, China and India's rapid growth could have actually been helping LAC economies.

The World Bank has conducted extensive research on this subject for the upcoming edited volume titled *Latin America's Response to China and India*, which seeks to disentangle these forces and assess how the overall growth of trade, FDI and innovation in China and India has affected LAC, and how LAC firms and governments have adjusted.¹

Not a zero-sum game for Latin America

The main findings of the study indicate that the growth of China and India is not a zero-sum game and there is evidence of positive effects for LAC economies associated with China and India's greater presence in world markets. As shown in Figure 1 the correlation between Chinese and LAC growth is positive and has been rising since the early 1990s. This has been driven mainly by demand externalities and higher prices for commodities, where LAC's comparative advantage naturally lies.

Indeed, Calderon (2007) found that there has been a significant increase in the correlation between the price of commodities exported by LAC and China's industrial production index. This was especially the case with metals and minerals (driven by copper, and since 2004 by iron ore and zinc) as well as beverages (driven by coffee). The correlation between Chinese industrial output and the world price of crude oil is also large and increased significantly between 2000 and 2005. Sugar prices have also benefited from the growth of China and India, whereas the price of soybeans and wheat shows a strong and rising correlation with the Chinese production index until late 2004, but has been declining since then. Similar patterns are observed in the correlation between Indian industrial output and world commodity prices, with the exception of mineral and metals.

These results are not surprising given that China and India's share in world markets for most of these commodities has more than doubled between 1990 and 2004 and is currently as high as 25% of world con-

sumption. Even though the absolute level is still small for some commodities (e.g., petroleum), for some commodities they account for a very large share of the total increase in world markets as illustrated in Figure 2.

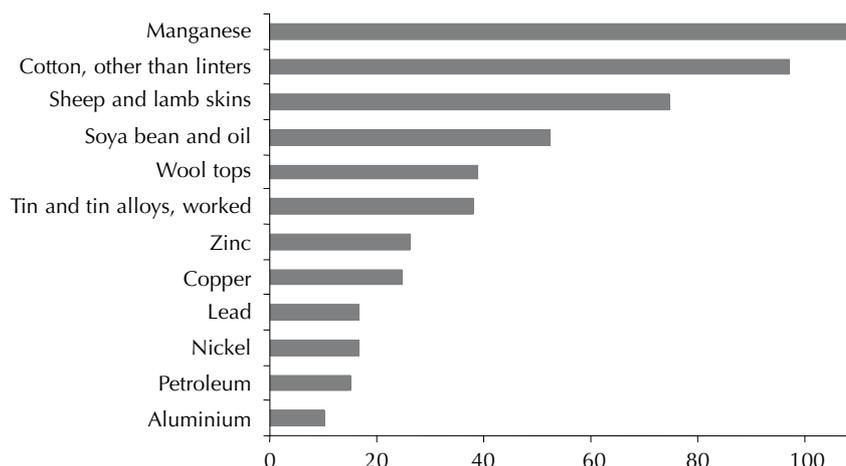
In sum, most studies found that at the aggregate level, higher levels of Chinese and Indian trade, inward flows of FDI, and patents are found to be generally associated with higher levels for LAC economies as well. The growing presence of intra-industry trade and production networks around the world is one of the channels through which these positive externalities affect LAC's firms. Also, Lederman, Olarreaga and Soloaga (2007) found a positive and statistically significant impact of Chinese exports to LAC on LAC exports to third markets, suggesting that imports of a larger variety of cheaper Chinese intermediate goods are positively affecting LAC's competitiveness in third markets. There is also evidence of 'learning by exporting', as LAC exports to China have a positive and statistically significant impact on LAC exports to third markets. The growth of China and India's own markets and their demand for Latin America's products over the period 2000-2004 accounts for 8% of LAC exports in 2004 (mainly driven by China). However, this remains an untapped opportunity that has not been fully exploited. Latin American exports to China and India could double if they were to take advantage of the increase in Chinese and Indian demand for their products, especially for exporters in the Southern Cone and among Andean countries.

Some pain within industries in some countries

If, at the aggregate level, the rapid growth of China and India seems to be helping LAC, or at worst has no impact, this is not necessarily the case when measuring the impact within industries, when positive externalities (complementarities) across industries are not taken into account. When focusing the analysis at the industry level the potential for substitutability between LAC exporters and Chinese and Indian exporters to third markets is much stronger.²

¹ All background papers are listed at the end and are available at www.worldbank.org/lac

² For example we exclude the potential positive impact on the competitiveness of domestic downstream sectors when they are able to import a larger variety of Chinese and Indian inputs.

Figure 2 China and India's contribution to the growth in world demand, 1990-2004: selected commodities

Using a gravity-type empirical model for bilateral exports at the industry level, based on a monopolistic competition model of trade, and abstracting from general equilibrium effects, Hanson and Robertson (2007) explored the impact of the increased supply capacity of China on Argentina, Brazil, Chile and Mexico's manufacturing exports at the industry level. Their analysis focused on the top manufacturing exports of these four countries which represent at least 85% of their manufacturing exports (metals, machinery, electronics, transport, and industrial equipment).

Within manufacturing industries, Latin America's export capabilities tend to be relatively strong in industries in which China's export capabilities are also strong. This suggests that the region is relatively vulnerable in these specific sectors to export-supply shocks from China

More specifically, they ran a regression of bilateral sectoral exports on importer country dummies, exporter country dummies, and factors that affect trade costs (bilateral distance, sharing a land border, sharing a common language, belonging to a free trade area, import tariffs). When these importer and exporter dummies are allowed to vary by sector and by year, they can be interpreted as functions of structural parameters and country-specific prices and income levels that determine a country's export supply and import demand. They then decompose manufacturing export growth for the four LAC countries into three components: (a) changes in sectoral export-supply capacity, (b) changes in import-demand conditions in a country's trading partners, and (c) trade costs and other residual factors. Changes in import-demand conditions can, in turn, be decomposed into two parts, one of which captures changes in income levels in import markets and another of which captures changes in sectoral import price indices for those markets, which are themselves a function of other countries' export-supply capacities, including China.

Results suggest that within manufacturing industries, Latin America's export capabilities tend to be relatively strong in industries in which China's export capabilities are also strong, suggesting the region is relatively vulnerable in these specific sectors to export-supply shocks from China. While changes in Latin America's export-supply capacities have contributed to growth in exports, changes in Latin America's import-demand conditions have not, at least since 2000. They examined two sources of negative import-demand shocks: China's growth in export supply, which may have lowered import prices in destination markets and diverted import demand away from Latin America; and the slow-down in the growth of the U.S. economy, which may have reduced growth in demand for the region's exports. The results suggest that had China's export-supply capacity remained constant after 1995, exports for the four Latin American countries would have been 0.5 to 1.2 percentage points higher during the 1995-2000 period and 1.1 to 3.1 percentage points higher during the 2000-2004 period. Had U.S. GDP growth been the same over the 2000-2004 period as it was over the 1995-2000 period, Latin American manufacturing exports would have been 0.2 to 1.4 percentage points higher (see Table 1).

Had China's export-supply not grown since 1995, exports for the four big Latin American countries would have been 0.5 to 1.2 percentage points higher during the 1995-2000 period and 1.1 to 3.1 percentage points higher during the 2000-2004 period

In another background paper for this study, Freund and Ozden (2007) undertook a similar exercise covering all manufacturing and agricultural goods. They estimated a trade-gravity model in first differences, where the change in LAC exports by country at the industry level is explained by exporting country dummies that vary by year to capture changes in export supply conditions and importing country dummies that also vary by year to

Table 1 Counterfactual decompositions of Latin American export growth

Period	Actual growth in manufacturing exports	Counterfactual Growth in Manufacturing Exports	
		Exporter coefficients in China constant over time	US GDP growth 2000-2004 =1995-2000
Argentina			
1995-2000	0.081	0.085	--
2000-2004	-0.045	-0.034	-0.043
Brazil			
1995-2000	0.130	0.137	--
2000-2004	0.111	0.125	0.119
Chile			
1995-2000	0.071	0.079	--
2000-2004	0.053	0.076	0.060
Mexico			
1995-2000	0.165	0.177	--
2000-2004	0.024	0.055	0.038

Notes: This table reports actual and counterfactual export growth in Latin American countries based on two scenarios: U.S. GDP growth over 2000-2004 equals that for 1995-2000, and China's export-supply capacity remains constant over the sample period (1995 to 2004) at levels equal to 1995 values.

Source: Hanson and Robertson (2007).

capture changes in overall demand conditions in each market, as well as product dummies that vary by year but only at the two-digit level of the ISIC. The impact of China on LAC exports to third markets is captured by the change in China's exports to third markets. A negative and statistically significant coefficient on this last variable would indicate that in that industry Chinese exports are hurting LAC exporters of the same products.

China had a large negative impact for Mexico in electronics and telecommunications equipment. In other industries, such as textiles, they found smaller numbers which indicate that Mexico's exports are 1 percentage point smaller in the absence of China's export growth to third markets

In spite of the differences in specification and estimation techniques, the results by Freund and Ozden are qualitatively similar to those estimated by Hanson and Robertson. Freund and Ozden found large impacts for Mexico in electronics and telecommunications equipment. In other industries, such as textiles, they found smaller numbers which indicate that Mexico's exports are 1 percentage point smaller in the absence of China's export growth to third markets. Freund and Ozden do report some negative impacts for other LAC regions (i.e., Central America), and again for manufacturing exports only, but the impacts are not economically meaningful. When focusing on the impact by industry (two digits of the Harmonized System), they found that of the 97 two-digit industries only 16 experienced a statistically significant decline in exports to third markets due to growing exports of those same products by China to these same markets. Overall, the results of Hanson and Robertson and Freund and Ozden suggest that there is some evidence of substitutability between LAC exports

and Chinese exports to third markets 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.

Services trade

Services is a sector where India in particular has outperformed LAC in terms of export growth. However, LAC's exports of services to the United States are still seven times larger than exports of services by China and India combined (see Figure 3). This partly reflects the importance of proximity for the delivery of services, for example in tourism, which is particularly important for the Caribbean region, and where Indian and Chinese competition may not be very strong.

Overall, there is evidence of some substitutability between LAC exports and Chinese exports to third markets 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

Using a similar approach to the one in Freund and Ozden (2007) described above, Freund (2007) explores the extent of substitutability between LAC and Indian exports of services to the United States. Using panel data on business, professional, and technical services, she finds no evidence that Indian exports have significantly displaced LAC exports of services. When the analysis is undertaken by service industry, she finds robust evidence of displacement in only one sub-sector, namely other business, professional and technical services, where a one% increase in growth from India has been associated with a 0.3% decline in growth from LAC. However, this is a 'catch all' category so it is difficult to pinpoint the true economic importance.

In the other eight service sub-sectors considered, there is either no impact or a positive and statistically significant impact on LAC exports to the U.S., again suggesting some complementarities. Nonetheless, when India's export growth is weighted by the importance of India in each market, Freund finds a negative and statistically significant impact in four sub-sectors (legal services, research and development and testing services, industrial engineering, and other business, professional and technical services), and a positive and statistically significant impact in one sub-sector (construction and engineering services). In the other four industries there is no statistically significant effect.

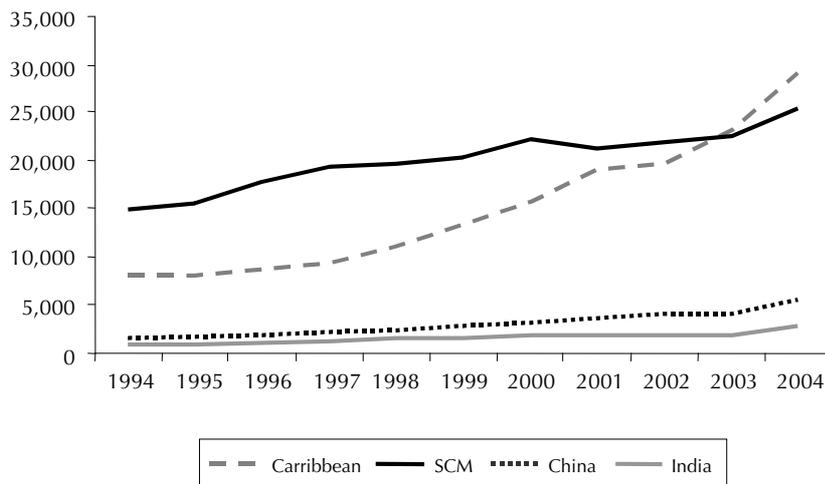
Extensive margins and gains not gotten

China's export growth to third markets may not only be hurting existing LAC exporters (the so-called intensive margin), but also exporters of goods and services that have not yet been exported (the so-called extensive margin). In a background paper for this study, Feenstra and Kee (2007) focus on the extent to which the growing export variety from China to the U.S. market

decreased the extent of export variety from Mexico.³ They found that every 1 percentage point increase in export variety from China (which has been growing at an average of 3% per year) has led to a half percentage point reduction in export variety from Mexico. However, this has been more than compensated by Mexico's preferential access to the U.S. market which has led to a 2 to 4% increase in export variety from Mexico for every percentage point reduction in preferential tariffs. In fact, the semi-elasticity between tariff cuts and export variety estimated by Feenstra and Kee is higher when the competition from Chinese exports is taken into account. This result has long-term implications, as increases in export variety have been shown to positively affect total factor productivity and growth in a sample of developing countries (Feenstra and Kee, 2006).

³ Causality is derived using Chinese tariffs as instruments for Chinese export variety.

Figure 3 United States' Imports of Services by Region, 1994-2004



Notes: SCM stands for South America, Central America and Mexico.

Source: Freund (2007).

Figure 4 OECD Stocks of FDI in LAC relative to their stock of FDI in China and India, controlling for host country economic size, 2003

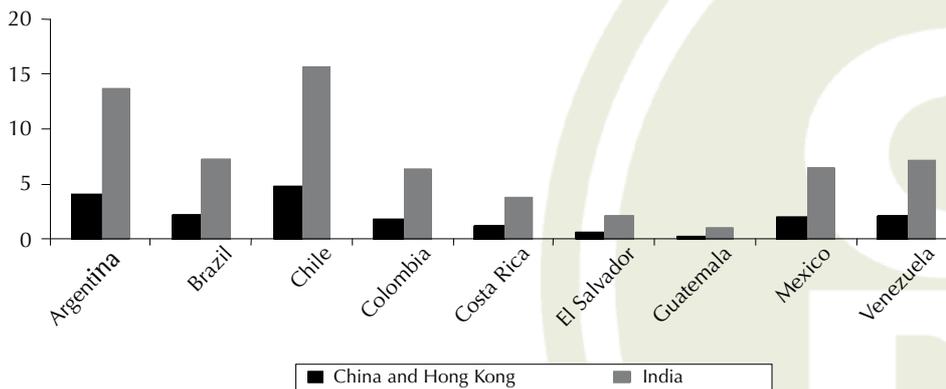
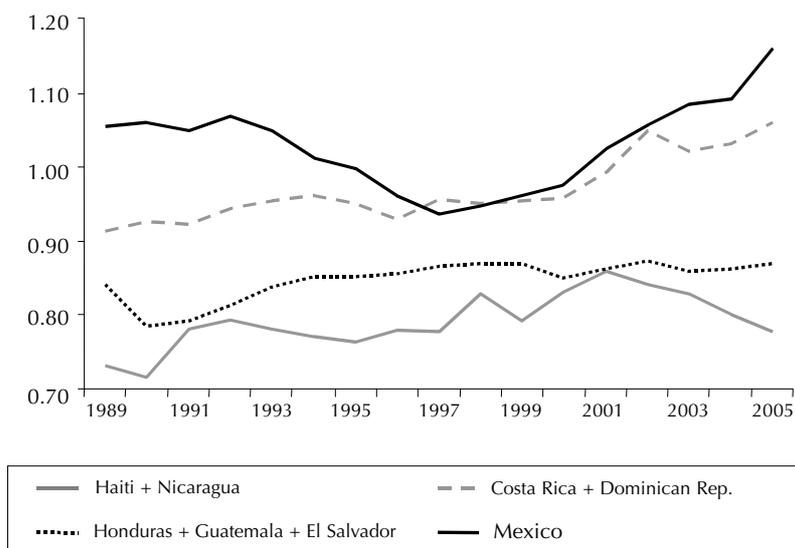


Figure 5 Relative export prices of apparel, 1989-2004

Note: Export prices for each group are calculated relative to the average U.S. import price.

Source: Ozden (2006)

Foreign direct investment

In terms of FDI substitutability and complementarities within industries, Figure 4 provides some numbers regarding the relative importance of OECD's stocks of FDI in LAC's manufacturing sector relative to OECD's stocks of FDI in China and India. With the exception of El Salvador and Guatemala when compared to the aggregate of Hong Kong and China,⁴ all countries in LAC have a larger stock of U.S. manufacturing FDI. Cravino, Lederman, and Olarreaga (2006) use the KCM model we described above for aggregate FDI to measure the extent of substitutability with respect to U.S. FDI in the manufacturing sector. As mentioned, these authors found no robust evidence of substitution or complementarities between LAC's stocks of U.S. FDI in the manufacturing sector and China and India's. Fears of losing foreign capital in the manufacturing sector to China and India seem unfounded. However, given that at the aggregate level they found strong complementarities, the fears may be explained by the relative performance.

Factor adjustment and Policy Responses

Positive impacts of China and India's growth at the aggregate level in LAC, together with some negative impacts at the industry level, suggest within- and across-industry adjustments, as well as some potential policy responses by LAC's governments.

Focusing on the apparel industry, which has been hit strongly by competition from China and India after the removal of GATT's Textiles and Clothing Agreement quotas under the Multi-Fiber Agreement, Ozden (2006) observes that different countries have shown different adjustment patterns. Costa Rica, the Dominican Republic, and Mexico took advantage of the Caribbean

Basin Initiative preferences and NAFTA to initially increase their export volume. However, with the removal of MFA quotas, they moved to higher priced/quality exports (see Figure 5).⁵ El Salvador, Guatemala, and Honduras did not seem to implement any structural changes in their apparel industry but simply increased their production and exports at the same quality/price level. Nicaragua and Haiti were new entrants to the apparel markets and their exports increased dramatically, but under competition from Asian countries they moved down the quality ladder to lower priced/quality exports.⁶

Each one percent expansion of Chinese export variety to the US reduced Mexico's export variety by half a percent

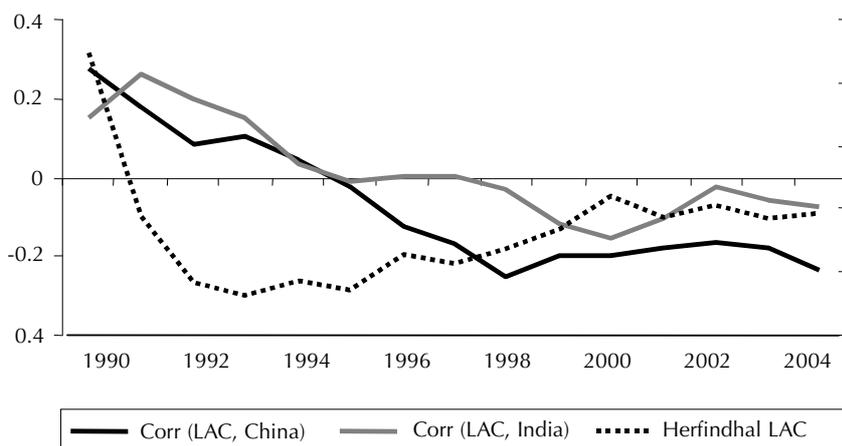
Across industries it also seems that the specialisation pattern of Latin American economies is moving a part from the specialisation pattern of China and India. Figure 6 shows the evolution of the correlation between Chinese and Indian Revealed Comparative Advantage (RCA) and the RCAs for an aggregate of thirteen LAC countries between 1990 and 2004.⁷ At the beginning of

5 Part of the higher price of Mexico, Costa Rica, and the Dominican Republic in Figure 11 is explained by their increasing preferential access to the U.S. market, but results regarding quality upgrading for Costa Rica and Nicaragua hold after controlling for tariff preferences.

6 One has to be careful in attributing these changes to the removal of the MFA quotas and the growing presence of China and India in these markets. Other factors such as preferences to the United States markets (which Ozden controls for in his econometric framework) may be partly driving these results.

7 The RCA index used corresponds to the Vollrath (2001) measure, which captures the net comparative advantage of a country in a given industry by also taking into account imports. The RCA index is also normalized by the country-year means so that it is comparable across time and countries.

4 We compared with OECD's FDI in China and Hong Kong because for administrative reasons a large share of the FDI in China is incorporated in Hong Kong. Ignoring OECD's FDI in Hong Kong will downward bias its measurement.

Figure 6 Is LAC competing in the same products as China and India?

Source: Authors' Calculations

the period, the correlation between Chinese and Indian RCAs and LAC RCAs was positive but modest (around 0.2), suggesting that China and India were specializing in the same products as LAC. However, the trend is clearly downwards and by the end of the period, the correlation with China was around -0.2 and the correlation with India was close to zero. This suggests that by the end of the period, LAC's trade specialisation pattern was complementary to the Chinese specialisation pattern and unrelated to the Indian one. The same pattern is observed for all countries with the exception of Mexico.

Figure 6 also shows the evolution of an export concentration Herfindhal index (higher values indicate a more concentrated export bundle), where the vertical axis on the right provides the scale and the line with triangles shows the evolution of the index. The evidence suggests that LAC as a whole has been moving towards higher concentration of its export bundle since the mid-1990s.⁸ During the same period China has moved towards a more concentrated export bundle, in particular since the mid-1990s, whereas India has shown some diversification. Overall this suggests that the explanation behind the falling correlation between LAC and China is that LAC and China are moving towards more specialisation but in a different set of products. In the case of India, the trend would also be explained by the diversification of India's export bundle.

But towards which industries is LAC moving to? Using an index of potential industry wages -measured by the export weighted sum of GDP per capita- Freund and Ozden (2007) observed that LAC is moving toward higher-wage products, though at a rather slow rate, especially when compared with China. There is also some evidence that China is depressing LAC's upward movement, as China is displacing LAC in some relatively high-wage industries. This is also confirmed by Lederman,

Olarreaga, and Rubiano (2007), who found that LAC and China's specialisation patterns exhibit some substitutability for skilled-labour-intensive industries but appear unrelated in unskilled-labour-intensive industries. In the case of India, however, there are signs of strong substitutability in both unskilled and skilled-intensive industries suggesting that India is putting pressure on labour at both ends of the skill spectrum.

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Lederman, Olarreaga, and Rubiano also found evidence of strong complementarities between LAC's and China and India's specialisation pattern in natural-resource-intensive industries and to some extent industries intensive in scientific knowledge. Without China and India's growth, and the induced increase in their demand for commodities since the mid-1990s, LAC's revealed comparative advantage in natural resources would have been 30% smaller, and the revealed comparative advantage in scientific-knowledge-intensive industries would have been 17% smaller. This suggests that the growth of China and India may be pushing LAC towards sectors intensive in these two factors and away from both skilled- and unskilled-labour-intensive industries.

Concerns about the potential adjustments costs faced by Latin American firms subject to increased import competition from China and India in their domestic market led Casacuberta and Gandelman (2007) to examine whether firms that were exposed to competition from the two Asian economies were subject to higher adjustment costs for unskilled labour, skilled labour, and capital. They measured the impact of adjustment costs on firms' behaviour by looking at the

⁸ There is a move towards export diversification at the beginning of the 1990s, probably prompted by LAC's trade reforms in the late 1980s and early 1990s, as also shown in De Ferranti et al. (2002), but this has been followed by a move toward specialization as trade theory would predict, but also partly explained by the commodity boom. The trends in Figure 12 are dominated by the large LAC economies, Brazil and Mexico.

extent to which firms adjust to their factor shortages from one period to the next. Factor shortages are defined as the difference between actual levels of factor employment and desired levels of factor employment; the latter are given by optimal factor demands derived from a Cobb-Douglas production framework in a frictionless world.⁹ Casacuberta and Gandelman found that only a small share of factor shortages or surpluses are addressed by firms from one period to another, which they interpret as a signal of large adjustment costs in a sample of Uruguayan manufacturing firms. However, increasing competition from China and India only marginally changes the extent of the adjustment.

Impact on employment

An important concern for policymakers associated with the growing presence of China and India in LAC markets (see Figure 7) is the impact this competition may have on employment, and in particular labour-intensive manufacturing employment, where China and India's comparative advantage lies. Manufacturing employment has significantly declined in the region, while imports from China and India were growing. A quick back-of-the-envelope analysis would suggest that the two Asian economies carry the blame for the loss of employment opportunities in manufacturing activities in LAC.

The evidence is that increased trade with China can only explain a negligible share of the decline in Argentina's manufacturing labour demand

A more careful analysis suggests otherwise. Castro, Olarreaga, and Saslavsky (2007), explored the impact that growing imports from China and India had on manufacturing employment in Argentina, which is

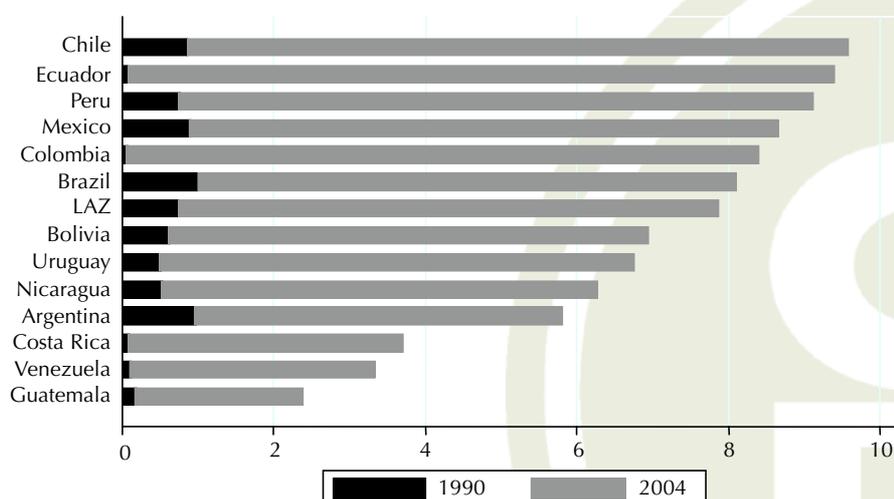
among the countries in the region that experienced the largest declines in manufacturing employment over the last decade (31%), while experiencing an important increase in import penetration from China (see Figure 7). These authors built a dynamic econometric model where labour demand in each industry is a function of wages, the capital stock, prices, and productivity. The last two (prices and productivity) are a function of import and export penetration, which allow them to identify the impact that trade with China and India is having through these two channels on labour demand in Argentina's manufacturing sector.¹⁰

Results suggest that increased trade with China can only explain a negligible share of the decline in Argentina's manufacturing labour demand. Moreover, the increase in overall import penetration during the period could only explain a relatively small share of the decline in manufacturing employment. To be more precise, a 1% increase in import penetration leads to a 0.07% decline in labour demand. Given that import penetration increased by 79% over the sample period (1991-2003), the decline in labour demand that can be attributed to the increase in import penetration is around 6%. As manufacturing employment declined by 31% over the sample period, the increase in import penetration can at most explain 20% of the observed loss in manufacturing employment. The other 80% had other causes (labour legislation, privatisation, technological change, etc...). Moreover, the increased importance of China as a source of imports had an almost negligible marginal impact on the decline in labour demand associated with the increase in overall imports. An increase in the share of imports from China of 1 percentage point led to an additional 0.02% decline in the growth of Argentina's labour demand. Thus, the six-fold increase in the share of imports from China over the period (from 1 to 6%) could only explain an additional 0.1 to 0.2% of the observed decline in labour demand.

9 This assumes that production and adjustment costs are separable. But without this assumption it is impossible to estimate factor shortages without having a measure of adjustment costs.

10 Wages, capital stock, and import and export penetration are instrumented using lagged values, the share of unskilled labor in the industry, and a proxy for transport costs.

Figure 7 Share of China and India in Latin American imports, 1990 versus 2004



Source: United Nations' Comtrade

Results for India suggest that the increase in its share of Argentina's imports has had no impact on labour demand (beyond the overall impact of import penetration on labour demand).

In terms of LAC governments' responses to the growth of imports from China and India into the region, Facchini et al. (2007) found that tariffs tended to be higher on products heavily imported from China, but lower on goods imported from India. The evidence they provide is not limited to tariffs, however: non-tariff barriers have become a predominant form of protectionism and Chinese exporters have been particularly hit by LAC countries, while Indian exporters enjoyed below-average levels of protection in LAC. For example, Brazil initiated 15 antidumping cases against China as notified to the WTO; Argentina, 40 cases; and in the early 1990s

The evidence suggests that Latin America should reshuffle their development-policy priorities in response to the emergence of China and India in global markets. ... countries should improve their natural resource management and rural development policies, while at the same time strengthening policies and institutions for the promotion of skills and innovation

Mexico imposed antidumping duties over 1,000% on imports of shoes, toys, and textiles from China. Together they have initiated more cases against China than the European Union, the United States, or Canada.

They explained the differences in protection levels vis à vis China and India using a lobbying model with imperfect substitution between domestically produced goods and imported goods. They found that incentives to lobby were higher when products were close substitutes to the ones domestically produced, resulting in higher tariffs in equilibrium. After bringing the model to the data, they found that this was a reasonable explanation for the higher tariffs observed on goods imported from China, as estimates suggest that they are closer substitutes to domestically produced goods than goods imported from the rest of the world. Similarly, it can also explain the lower levels of protection on goods imported from India, as estimates suggest that goods imported from India are more distant substitutes to domestically produced goods than goods imported from the rest of the world. However, given that production efficiency losses are likely to be higher in goods with higher substitution, this suggests that the protectionist response is occurring in sectors where they most hurt.¹¹

¹¹ Protectionist responses can also occur behind the border. Baroncelli, Krivonos and Olarreaga (2007) found evidence of discrimination vis à vis Latin American applicants in the trademark registration process in China, and India, as well as for Chinese applicants in Latin America.

Policy implications

In general, the evidence discussed suggests that LAC countries should reshuffle their development-policy priorities in response to the emergence of China and India in global markets. The higher correlation between the business cycles of LAC and the two Asian economies is mainly driven by demand spillovers, largely explained by the high correlation between China and India's industrial output and world commodity prices. This suggests that the current commodity boom that is benefiting LAC is largely dependent on the continuing growth of the two Asian economies. Fragilities in China and India's economies, or changes in consumer preferences, should therefore be tracked with particular attention by those LAC economies that have a large share of their economy attached to natural-resource-intensive products.

As indicated, partly under pressure from China and India, LAC's specialisation patterns have been shifting towards higher natural-resource and knowledge-intensive activities and products. To facilitate this shift and increase the potential benefits from it, LAC countries should improve their natural resource management and rural development policies, while at the same time strengthening policies and institutions for the promotion of skills and innovation (patentable or not).

In terms of trade policies, both at the border and behind the border, there is evidence that there has been a protectionist response on the part of LAC governments to the growth of imports from China in particular, partly due to the larger vertical and horizontal product substitutability between domestically produced goods and goods imported from China. This is costly in terms of efficiency and also for users of imported intermediate goods, who cannot take full advantage of cheaper inputs to improve their competitiveness in world markets. Giving more weight to consumers and users of imported intermediate goods in the trade policy formation process may yield better outcomes.

Latin America is under-performing is on bilateral exports to the two Asian giants. Negotiating free trade agreements (as some countries are already doing) and export promotion activities focused on these two markets may help reverse this trend.

One area where some LAC countries seem to have been under-performing is on bilateral exports to the two Asian economies. Negotiating free trade agreements (as some countries are already doing) and export promotion activities focused on these two markets may help reverse this trend.¹² Also, special attention should

¹² As shown by Lederman, Olarreaga and Payton (2006), 'Export Promotion Agencies: what works and what doesn't' export promotion agencies in Latin America have been particularly successful at promoting exports in recent years. However, their focus has been almost exclusively on the Western Hemisphere and Europe to some extent. Addressing the Asia deficit would help them take advantage of the growing opportunity that China and India represent.

be given to integration into global production networks that involve Chinese and Indian firms.

In terms of FDI promotion via specialised agencies, it seems that there is no need for a change of course as LAC has benefited from growing FDI to China and India. LAC has been quite successful in attracting FDI and should continue to improve the overall investment climate and the role of specialised promotion agencies in order to maintain their lead.¹³ It is unfortunate that a couple of countries in the region have been recently

Adjustment assistance for workers may need to be considered. For those countries adjusting towards skilled-intensive and scientific-knowledge-intensive industries, short-term adjustment policies should focus on helping unskilled labour in the transition, while focusing on skill improvements and innovation policies in the long term

backtracking from the generalised open environment towards FDI in the region.

In services, there may be a need for enhancing the relative competitiveness of LAC vis à vis India in business, professional and technical services (as well as legal and industrial engineering services). The literature suggests that this could be achieved by developing internet penetration through investment in telecommunication infrastructure and reforms that expand internet access, but also correctly aligned exchange rates that correct, in particular, for over-valued exchange rates.

Also, in order to exploit the evidence of synergies in innovation patterns between LAC and India, governments may want to consider scaling up scientific exchange programs and cooperation in R&D programs. The same may eventually also be useful in some areas with China.

As some industries are negatively affected by the growth of China and India, and these tend to be labour-intensive industries, adjustment assistance for workers may need to be considered. For those countries adjusting towards skilled-intensive and scientific-knowledge-intensive industries, short-term adjustment policies should focus on helping unskilled labour in the transition, while focusing on skill improvements and innovation policies in the long term. For the few countries adjusting towards unskilled-intensive industries, the short-term adjustment policies should probably focus on the higher end of the skill spectrum, while also trying to improve the overall endowment of skilled labour and scientific knowledge in the long term.

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¹³ For a recent study on the role of FDI promotion agencies in attracting FDI, see Harding, Javorcik and Sawada (2006).

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