Asian Opportunities?
An Outlook for Latin American Trade

OECD Emerging Markets Network
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Growing trade with China and India offer an array of new export opportunities for Latin America, yet it also poses new challenges. Heightened demand for raw materials accentuates the need for industrial diversification, while the new competition environment raises the stakes for investment in infrastructure and innovation.

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China’s emergence from state-controlled autarky and consequent rapid integration into the global economy has become one of the defining features of our decade. With an average growth of near 10% since 1978, China overtook Germany as the world’s third biggest economy in 2006. Its economic ascendance continues to raise very important questions, not least as to its impact on the rest of the world.

China’s rise has partly overshadowed that of another giant, namely India. Since about the mid-1990s, average Indian growth has been twice that of the global average. A remarkable dimension of Indian growth has also been the integration of Indian firms into world markets and their success in competing against large developed-country multinationals on their own turf. In 2007-08, Indian overseas investment is expected to reach nearly $15 billion thanks to the remarkable boom of deals in various sectors. One example is Tata Steel, which in early 2007 secured a 12 billion dollar bid on the Anglo Dutch Corus. In May of the same year, Suzlon Energy won a bid for German REpower after French Areva decided not to top the Indian wind-turbine maker’s $1.8 billion offer.

The rise of China and India in the global economy has had important effects on Latin America and has been the subject of passionate public debate. Both these Asian giants have outperformed Latin America since the mid-1990s in terms of growth, exports, FDI attraction and innovation, giving rise to some apprehension in the region. While there are many examples of business co-operation between Latin America and the Asian giants, and trade agreements are being signed between their governments, public opinion has at times seen Asia’s increased presence as a threat to national industries. A closer look at the real impact in Latin America of the world’s rapidly growing trade with China and India nevertheless offers a much more encouraging assessment.

The main findings in this EmNet Working Paper indicate that most Latin American countries are not particularly threatened by China and India, and are likely to see their incomes rise as commodities exports become more valuable. Closer inspection shows that only a few countries in Latin America face much trade competition with China and India, and that the latter do not constitute a significant threat to Latin America as a whole. Already, the Asian
drivers’ heightened demand for oil and minerals has increased both revenues, through rising prices, and direct trade with Latin America.

However, the current commodities boom also intensifies the need for both governments and firms in Latin America to redirect windfall revenues towards strategic growth enhancing activities in order to maintain growth beyond the natural resource bonanza. These activities include building up capabilities in innovation, education, and physical infrastructure.

For the industries competing against Chinese and Indian exports, such as the bulk of Mexican and Costa Rican export industries and also many labour-intensive sectors in the rest of Latin America, it is particularly important to focus on their competitive advantages and capitalise on their favourable geographic position. Here too, investment in infrastructure is a golden opportunity for improving export competitiveness.

What’s in the Trade? Comparing Trade Structures to Assess Competition

- While Latin America’s export-market shares have remained stable, India’s have increased and China’s have skyrocketed.
- Chinese and Indian exports are largely made up of manufactures.

China’s and India’s contribution to global output growth is remarkable. In 2007, 27.9% of world growth could be attributed to China and 7.9% of it to India (OECD Development Centre 2007). Since 2001, their combined contribution to global output growth has been around 35%. Growth in both countries has been accompanied by growing export market shares towards both emerging and OECD economies. In 2006, China was the world’s third biggest merchandise exporter after Germany and the United States, with a global market share of 8%, and in the second half of that year, its exports were exceeding even those of the United States (WTO, 2007). OECD estimations project that by 2025, China will represent 17% of world trade. Furthermore, Chinese export volumes are estimated to grow at nearly twice the speed of global export-market growth, whereas OECD economies are facing a gradually declining export performance (Hervé et al., 2007).

India has also increased its export performance considerably. Although its share of world exports – 1% in 2006 – is substantially lower than China’s, it has more than doubled during the past 25 years. Moreover, its commercial-service sector is probably the world’s most dynamic, and service exports have strengthened steadily, growing by 34% between 2005 and 2006, making India the world’s 10th largest service exporter. As its economy is also more restrictive to trade than China’s, there is substantial room for further economic and export growth through trade reform (OECD, 2006a).

These developments in India and China have impacted other emerging markets. Indian as well as Chinese companies are flocking to Latin America and Africa, their interest centred on raw materials (Santiso, 2006a, Goldstein et al., 2006). The China Development Bank is extending its financial presence, especially in Africa, accompanying the commercial
penetration of Chinese enterprises. Recently, for instance, China began releasing a $3 billion loan to Angola, its biggest oil supplier (IEA, 2006a). At the same time, India has changed into a main source of low-cost technology for Africa, and a group like Tata Steel has undertaken a large number of investments in the continent. Chinese investments have also reached Latin America. In 2004, nearly 50% of Chinese foreign direct investment (FDI) went to the region. The following year, the figure was down to 16%, but of a record Chinese total outward FDI of $7 billion. In the realm of trade, both Chinese and Indian exports to Latin America have been increasing, as can be seen in Figure 1.

Figure 1. Latin America and the Caribbean’s Trade with China and India

Source: OECD Development Centre, 2008; based on World Integrated Trade Solution (WITS) and Comtrade.

Increased Chinese and Indian exports have at times been met with apprehension. China’s increasing market shares, in particular, have led countries to fear for their own exports. Some voices have expressed concern that China’s growth would be achieved to the detriment of other emerging countries (Lora, 2007). As shown by Figure 2, however, while China – and to some extent India – have captured world markets, Latin America has maintained its share of world trade, albeit relatively low.

Figure 2. Development of Export Market Shares

Source: OECD Development Centre, 2008; based on WITS and Comtrade data.
A more in-depth study of trade structures can shed light on the accuracy of the perceptions of Chinese and Indian trade. By comparing them, it is possible to identify the strengths and weaknesses of specific sectors, as well as upcoming opportunities. Trade structures do not tell the whole story, though, since the effect of the Asian drivers is produced not only directly, through increasing demand, but also indirectly, through increasing prices. Trade structures do, however, serve as an important starting point for further analysis.

An examination of China’s trade structure (OECD Development Centre, 2007) shows that its exports are concentrated in three key sectors: manufactured goods, machinery and transport equipment, and miscellaneous manufactured goods. Together, these amounted to 88.7% of total exports in 2005. The evolution of machinery and transport equipment is particularly noteworthy, as this sector contains numerous products that require relatively high technological standards. In fact, export earnings from this sector have nearly doubled in the past few years, from only about 28% in 1998 to more than 46% in 2005. Another interesting development is the increasing similarity of China’s export and import structures, suggesting mounting intra-industry trade and indicating China’s new role as a regional production centre.

In India, too, the machinery and transport-equipment sector is gaining ground, albeit on a lower scale (Statistical Annex Table 3b). The primary exports are still manufactured goods and machinery. It is also worth noting that food and livestock, which was India’s third largest export sector in 2000, was only the sixth most important in 2005. The two sectors that have seen the most remarkable growth in India, however, are those of mineral fuel and lubricants, and crude material. Altogether, the Indian economy is also moving towards higher use of technology and increased intra-industry trade. In spite of this, India is still considered to be largely reliant on labour-intensive industries for its most important exports (Qureshi and Wan, 2006). Trade in services, where India has been a prime mover, is not captured in the above overview. Recently, India was termed the most dynamic service exporter by the World Trade Organization (WTO). Both China and India have been outpacing world growth in commercial-service exports to the United States, while the growth of Latin American service exports has lagged behind (Freund, 2006). This is especially the case in the business, professional and technical services (BPT) sector, where Argentina and India were exporting about equally to the United States in 1994. Since then, United States imports from India have increased by 2400%, compared with 200% from Latin America as a whole. In the same time period, however, there has also been a sharp decline in similarity between Latin American and Indian service exports, suggesting that competition is becoming less fierce.

How exposed is Latin America to competition from China and India?

- Most Latin American countries have little to fear from trade competition with China and India, because Latin America is mainly exporting commodities.

The extent to which domestic firms will suffer from increased Asian competition is a central issue for Latin America. Competition is the fiercest in the United States, which alone received 57% of Latin American exports in 2006, and where China and India have been
increasing their market shares, and – in China’s case – overtaken Latin America. However, compared to most Asian and Eastern European countries, most of Latin America has little to fear from increased trade with China and India.

Figure 3. Export Competition with China for Selected Countries (2000-05)

Average coefficients of specialisation (CS) and coefficients of conformity (CC)

Source: OECD Development Centre, 2008; based on WITS and Comtrade data.

Figure 3 shows export competition with China for selected Latin American and emerging economies. Export competition is measured by comparing the trade structure of each country with China’s. A high measure indicates similarity in export structures, as determined by the specialisation and conformity coefficients (see Statistical Annex, methodological note). If export structures are similar – as in Mexico’s case, where Chinese and Mexican exports resemble each other closely – export competition is assumed to be high. For most of Latin America, however, there is little to support the perception of China and India as threatening competitors.

In fact, Latin American states are among the least exposed. Other emerging economies such as Thailand, Hungary, and Malaysia are facing substantially tougher competition from Chinese exports. There are some exceptions to this general trend: Mexico, as mentioned above, as well as Costa Rica, and to a certain extent Brazil and El Salvador. The specific challenges for Mexico and Brazil will be discussed further below. Not surprisingly, countries that export mainly commodities face lower competition, as China is a net importer of these products. Paraguay, Venezuela, Bolivia, and Chile suffer the least from Chinese trade competition.

Competition with India is also relatively low (Figure 4). As with China, emerging countries in other parts of the world are more exposed to Indian export competition. El Salvador, Brazil and Argentina are among the Latin American countries faced with the most competition, but even here, competition is not very high.
China and India are promising export destinations for Latin America

- China’s and India’s growth can also be seen as an opportunity, even for the countries facing increasing competitive pressure.

China and India are the world’s two most populous countries, and with rapidly growing internal markets accompanying increasing living standards, they are also very promising as export destinations.

Source: OECD Development Centre, 2008; based on WITS and Comtrade data.
At first glance (Figures 5 and 6), however, these results do not seem to suggest very strong complementarities for most of the Latin American countries. East Asian economies, such as Korea, Thailand, Japan and the Philippines, seem to have much stronger complementarities with China. This is not actually due to a lack of trade opportunities, but rather to the fact that potential trade is concentrated in a relatively small basket of goods. Many Latin American countries are commodity exporters. The main complementarity thus arises from Latin American export of commodities, given the low prevalence of manufacturing-type goods in the exports of most countries in the region. The strong complementarity of Venezuela’s exports with India, for instance, originates primarily from potential trade in oil. The fact that China’s import growth is concentrated mainly in commodities suggests that its demand for these goods will have a positive impact on the region even if direct trade does not increase. Since commodities are almost homogenous goods, global prices would increase as China’s demand rises, providing export opportunities to Latin American producers.

Yet for the countries with the largest trade potential with India and China, there are also substantial opportunities for intra-industry trade. Mexico, for instance, has considerable exports in telecommunications equipment and electric circuit equipment, sectors where China’s and India’s imports are also high, but where little trade is currently taking place. For Brazil, beyond the large potential in commodities exports, other sectors also represent trade potential with China, including aircraft, telecommunications equipment and motor-vehicle parts. Colombia, both in relation to India and China, enjoys considerable trade potential in its natural-resource sectors, including oil and coal, but also in its manufacturing sectors. Argentina’s main export opportunities are mainly found in natural resources, yet there could be substantial future opportunities in the export of processed food. Agriculture and agribusiness are probably among the most promising areas for Latin America in terms of trade.
potential with China and India. As Chinese and Indian consumption behaviour evolves, new opportunities will appear insofar as Latin American agro-exporters manage to move up in the value chain, and diversify, brand and innovate in their export products. Argentina, Brazil, Chile and Uruguay all have established agricultural industries with expansion potential. They will also need to have open access – and perhaps negotiate collectively – to the Asian Giants’ agro-product markets.

Our findings thus far indicate that Latin America has little reason to feel threatened by the growth of the Asian giants and that significant trade opportunities do, in fact, exist, including in more “sophisticated” parts of the value chain. There are, however, countries that will have to contend with increased Indian and Chinese competition, and some sectors are likely to face difficulties.

Cornered? The Risks of Natural-resource Specialisation and How to Overcome Them

- China’s and India’s high demand for commodities has benefited Latin American exports.
- On the other hand, increased specialisation could be weakening Latin American manufacturing sectors.

Trade complementarities and opportunities between Latin America and Asia do not only have an impact on exports and commercial imbalances. There are also important side-effects that impact Latin American economies and pose new challenges to economic policy. Two of the main dimensions of these challenges are the danger of excessive specialisation in commodities and the need to take advantage of synergies between trade development and infrastructure."

Of the 19 biggest Latin American and Caribbean exporters, 11 are specialised in commodities (Mulder, 2006), while both China and India are prime importers of these products. This sector is thus representing export opportunities for Latin America. In spite of the overall positive outlook, however, countries with an export structure that relies primarily on commodities run the risk of being cornered into natural-resource exports to the detriment of its other industries.

Latin American specialisation in the production of raw materials and their derivatives has increased in the past years, while manufacturing sectors have lost ground. Latin American comparative advantage in soft commodities, such as grains and sugar, and hard commodities, such as metals and oil, increased between 2000 and 2005” (OECD Development Centre, 2007). At the same time, comparative advantage in the manufacturing sectors weakened. Even Mexico, which had a strong relative position in manufacturing in 2000 and which from the mid-1980s managed an impressive trade diversification towards manufactures, has seen its comparative advantage diminish in this area. With the exceptions of Peru and Chile, Latin American specialisation in chemical products has also waned.

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China’s and India’s strong demand could lead to even higher commodity concentration in Latin American exports. The four main Latin American commodity exports – oil, copper, soy and coffee – amount to 66% of total Latin American raw material exports (Blázquez-Lidoy, Rodríguez and Santiso, 2007). China absorbs an important share of these products, coffee excepted. Since 2003, it has been the world’s first importer of copper and soybeans, and the fourth importer of oil, another sector that has benefited Latin American exports. Today, it is the second largest importer of oil, having overtaken Japan and Germany. The country accounted for 30% of the growth of demand for oil in 2005 (IMF, 2006). Furthermore, with the Chinese private-car market expanding rapidly, the OECD International Energy Agency predicts that China will need to import 80% of its oil by 2030 if current policies continue (IEA, 2006b). In addition, in the three years leading up to 2005, China accounted for 50% of the increase in world consumption of copper and aluminium, and for almost all the growth in nickel and tin consumption (IMF, 2006). Figure 7 shows how Latin American commodity prices have risen as the Asian drivers’ demand for commodities has increased. As the Indian industrial sector is smaller than China’s, India is likely to have less impact on the metal prices than its northeastern neighbour (IMF, 2006). Nonetheless, India was the world’s sixth importer of oil in 2005 and has also been stepping up its demand for important Latin American commodities.

Figure 7. China and India as Drivers of the Resource Boom

China and India are affecting Latin American commodity exports both directly and indirectly. The growth in Chinese demand has already been reflected in the direct exports of several Latin American countries. Venezuela, for example, saw its crude shipments to China double between 2004 and 2005. Even in cases where direct trade has not grown, there is a favourable impact due to the rise in commodity prices. China’s growing thirst for oil has certainly contributed to the current high oil prices. Furthermore, China’s and India’s overall contribution to world growth has helped maintain global output growth far above the 4% threshold considered necessary for improving the terms of trade for primary-commodity producers.

Source: OECD Development Centre, 2008; based on WITS and Comtrade data, Oxford Latin America Economic History Database and Thomson Datastream.
The keys to overcoming the adverse effects of specialisation

- **Specialisation in commodities is known to have adverse effects on the rest of the economy, both because of an appreciated exchange rate and political economy effects.**

- **Avoiding the adverse effects of specialisation implies investing in innovation, involving the private sector in R&D and implementing good fiscal policy.**

Increased commodity exports and windfall earnings bring about a number of risks. Political-economy perspectives include increased rent seeking, loss of fiscal control and higher inflation, as well as an exacerbation of transparency and accountability problems, and thus increased opportunity for corruption and inefficient governance.

From the purely economic perspective, the “resource curse” is primarily the case of so-called Dutch disease, whereby the appreciated exchange rate subsequent to high demand for the commodity sector causes crowding out of non-commodity sectors. Linked to this, is the fact that a Dutch-disease-type crowding out of the remaining sectors can instigate increased protection of these industries. Such subsidies are likely to be unsustainable when revenues fall, leaving the protected sector companies in great difficulty. In addition, increased specialisation in natural resources entails an increased risk of volatility in the longer term. The Latin American region has experienced cases of Dutch disease in the past. One example is Colombia’s coffee windfall between 1975 and 1980. Mexico, Venezuela, Brazil, Ecuador, Bolivia and Peru can also be said to have endured excessive specialisation in the past and seen their non-commodity export sectors suffer (Mulder, 2006).

So what is the current Chinese and Indian demand for commodities doing to Latin American economies? Is there indeed a risk of excessive commodity specialisation, Dutch disease, and longer-term problems? Currently, the terms of trade have risen considerably in some countries, such as Colombia, Chile and Uruguay, indicating that the prices of their main exports are increasing faster than their imports (OECD Development Centre 2007). This export-sector boom could lead to a rise in real exchange rates, discouraging the development of non-commodities sectors and promoting both non-tradables and imports. The manufacturing industry in Latin America could therefore be adversely affected.

With few exceptions, notably Costa Rica and Argentina, most Latin American countries today are showing a higher degree of export concentration than at the beginning of the century (Figure 8). The most revealing cases are Venezuela, Ecuador, Bolivia and Chile, where product concentration has been increasing substantially.

Though there has been increased export specialisation, the current macroeconomic measures taken by Latin American countries appear to have been relatively successful in dealing with strong commodity demand. In general, the picture that emerges is one of macroeconomic stability, with inflation and real effective appreciation well contained (OECD Development Centre 2007). This has been accompanied by a recent strengthening of fiscal positions, a consequence not only of the beneficial external trading climate, but also of a deep
reform of fiscal institutions (Lora and Cárdenas, 2006; Singh, 2006, Filc and Scartascini, 2006), although several of these reforms have not yet been completed. In addition, 12 Latin American countries have recently introduced laws and regulations for free access to information and fiscal results, moves which should work to further stimulate accountable and responsible policies.

Figure 8. Export Concentration in Products for Selected Latin American Countries
Herfindahl-Hirschman index by product (2001 and 2005)

Source: OECD Development Centre, 2008; based on WITS and Comtrade data.

In spite of this positive picture, some challenges remain. Specialisation in natural resources underscores the need to innovate, yet Latin American countries’ do not invest sufficiently in innovation. Latin American R&D is also largely focused on basic research and has relatively little private-sector participation. Furthermore, a good record in educational attainment is imperative for improving R&D performance and represents a challenge, even for the best performers in Latin America.

The natural resource bonanza is also a good context in which to introduce measures for such a focus (Larrain, 2006), given that higher commodity revenues enable investment in innovation and in human capital. This, together with investment in infrastructure, would improve the competitive position of the economy’s exporters and offset the negative impact of any exchange-rate appreciation.
Box 1. Profiting from Export Opportunities while Avoiding Excessive Specialisation: Two Latin American Examples

Chile: Successful macro management and emphasis on innovation

As the world’s largest producer of copper, Chile is one of the countries with clear export opportunities to the Asian giants. Its copper industry has benefited greatly from the soaring copper prices. Yet Chile has also been successful in reducing its reliance on mining over time: from making up 89% of merchandise exports in 1973, the mining content in exports decreased gradually to 41% in 2001. Copper is, however, still a significant export: copper earnings constituted 15.5% of government revenues in 2005 (OECD, 2007a). The Copper Stabilisation Fund, established in 1987, has helped to alleviate the negative effects of the copper cycle. What has been particularly important is the introduction of the fiscal rule, first adopted in 2000, that requires a structural surplus, adjusted both for trend GDP and for the long-term copper price. Chile has also been strengthening its fiscal institutions with, among other features, increased and more transparent reporting. At the same time, monetary policy has consisted of full-fledged inflation targeting and exchange-rate flexibility (Mello and Moccero, 2007). This policy has so far been successful in limiting the unwanted consequences of the copper price boom.

There is still room for increasing the positive effects on growth of higher value-added sectors surrounding the copper industry, through for instance mining consultancy and mining-machinery production. Chile has, however, done a very good job in diversifying well beyond copper and developing other industries, including fresh fruit, wine and salmon production, in particular. In these sectors, there has also been innovation, though technologies in Chile have been mainly adopted from abroad (OECD, 2007b). The introduction of new berry species, quality-wine production and quality control and certification of fruits for export have been among the achievements of Fundación Chile, a front-runner in innovation partnerships. In 2005, the Chilean government introduced a mining tax to boost public R&D spending and also set up a National Innovation Council. One of the chief remaining challenges is to incorporate the private sector into financing innovation, as well as to achieve higher tertiary-education attainment in order to offset the lack of skilled personnel. Shortages in human resources are also one of the main reasons why the relationships between industry and science are not meeting their potential. Significant measures are being implemented, and quality has increased but there is still room for improvement (OECD, 2005, 2007b).

Brazil: Seizing the benefits from export opportunities

Brazil is Latin America’s largest economy, and has one of the highest rates of GDP per capita and the most diversified economy, both in terms of products and export destinations. Brazil is one of the Latin American countries that have gained significantly from increased trade with China, yet it is also exposed to Chinese competition.
A particular concern is that trade with China could lead to excessive specialisation in commodities. The country has seen an increase in its export earnings, partly due to an increase in quantity but for the most part (70%) due to an increase in price. The real exchange rate has also recently appreciated. On the other hand, the Brazilian economy is still highly diversified and so are its marginal exports (Schwartsman, 2006). An economy affected by Dutch disease can normally be identified by one product, or a narrowly defined group of products, making up the bulk of exports and of export growth. At the same time, manufactured products would be losing ground in exports. This is currently not the case in Brazil. None of the largest growth sectors feature much more than 20% of export growth – and none of the biggest groups in export growth are commodities. In fact, the textiles sector’s share of exports is still growing in spite of sharp competition from China and India. As can be seen in Figure 9, exports of agricultural raw materials, ores and metals have increased in the past years, but so have other, higher-value-added sectors.

![Figure 9. Revenues from Brazilian Commodities Exports](image)

On the positive side, China has become Brazil’s fastest-growing export market. From 2002 to 2003, for instance, Brazil’s exports to China increased by 80%. Altogether, exports to China make up 6.2% of Brazilian exports, up from 1.4% in 1999. Five Brazilian products have benefited particularly from Chinese demand: soybeans, soy oil, iron ore, steel and wood, accounting for 75% of Brazil’s exports to China last year.

Brazil has been able to develop a strong manufacturing and industrial base, but this does not mean that there is reason for complacency. The aircraft manufacturer Embraer’s 2006 mega contract with China for the supply of 100 jets is a good sign. If in the future, China continues to expand its exports and to gain market shares in third markets for a wider range of products, Brazil might have to face changing economic dynamics. The low-technology sectors are those particularly facing the strongest competition from China (Paiva de Abreu, 2006). In the longer term, this threat could also be extended to the automobile industry.

There are also problems in trade policies that need to be resolved. Brazil’s and China’s profiles in agriculture are quite complementary, so they have an opportunity to strengthen...
bilateral trade and investment. Chinese agricultural imports from Brazil have skyrocketed since the mid-1990s, yet not without problems. Soybean exports were blocked from entering China in 2002, 2003 and 2004 because of allegations of genetically modified grains and of fungus contamination (Queiroz de Monteiro Jales et al., 2006).

A persistent challenge for Brazil is to maintain the same type of exports to China as to other regions and to avoid excessive specialisation in commodities. To do so, it will be crucial to upgrade Brazil’s infrastructure, which is suffering from severe inefficiencies. In addition, although Brazil has realised the importance of innovation and although it is among the best performers in Latin America (OECD, 2006b; World Economic Forum, 2006), there is still room for improvement. R&D spending is still consistently lower than in OECD countries and is concentrated in the public sector. The latest OECD review of Brazilian innovation policy found that the country is beginning to focus on potential synergies among science and technology promotion, R&D support and trade competitiveness (OECD, 2006b), but these policies will need to be supplemented by measures aimed at tackling the shortage of skills in the labour force. There is particular need for increased higher-education attainment, and the gap in this sector is getting larger relative to the OECD area.

While China’s and India’s heightened demand has induced increased commodity specialisation, it has, by contrast, reduced specialisation in terms of export destinations (Figure 10). This means that Latin American countries are becoming less dependent on just a few trading partners and are hence less exposed to external shocks emanating from these economies. In fact, this is the first time in its history that the region is dealing with three main trading centres – the United States, the European Union and Asia – although the United States is still by far the most important export destination, receiving over 50% of Latin American exports on average.

Figure 10. Export Concentration by Destination for Selected Latin American Countries
Herfindahl-Hirschman index by destination (2000 and 2005)

Source: OECD Development Centre, 2008; based on WITS and Comtrade data.
Infrastructure in Latin America: A Serious Drawback and a Golden Opportunity

- Latin American countries, and Central America in particular, have a tremendous geographic comparative advantage, but it needs to be enhanced by infrastructure investment.
- The solution lies in attracting private investment through the implementation of a stable legal framework.

One of the prime competitive advantages of Latin America is its relative proximity to its main markets, particularly for the countries closest to the United States. Not only do Chinese exporters suffer higher transport costs, but long-distance transport also involves delays that contribute to raising freight and transaction costs (Hummels, 2001). This is particularly important in sectors where time is a strategic advantage.

Good infrastructure can contribute to strengthening Latin America’s competitive trade position, yet investment in these sectors remains inadequate. The consequences of a weak infrastructural setting are not negligible and can seriously affect competitiveness.

Latin American countries facing competition from the Asian drivers would benefit from identifying sectors and products where distance and time are key comparative and competitive assets, and would do well to capitalise on these sectors by improving their infrastructure. In most cases, transport costs actually pose higher barriers to the United States market than do tariffs (Clark, Dollar and Micco, 2004). Surprisingly, Latin American average freight costs are similar or even higher than those of China, Mexico excepted. For some countries, such as Chile or Ecuador, transport costs exceed by more than 20 times the average tariffs they face in the United States. A recent study shows that due to the low development of roads and ports in some countries, inventories there tend to be twice as big as in some industrialised economies (Guasch, 2004).

High transport costs are not only due to distance but – crucially – to the quality of infrastructure. In a detailed analysis of shipping costs to the United States market, port efficiency is identified as an important determinant of shipping costs (Clark, Dollar and Micco, 2004). It is found that improving port efficiency, as defined by the *Global Competitiveness Report*, will considerably reduce shipping costs. In the case of Mexico, which benefits from United States proximity, an improvement in port efficiency to the levels observed in countries such as France or Sweden would reduce transport costs by about 10 per cent. In the case of Brazil or Ecuador, it would reduce their maritime transport costs by more than 15 per cent.

Competitiveness indicators underscore the large heterogeneity in performance across Latin American countries (Figure 11). With China seeming to outperform most countries, the geographic advantage of Latin America is not reflected in the data. Certainly, the relevance of infrastructure investment differs for each sector of the economy. Commodity-intensive economies such as Chile and Venezuela focus their infrastructure investments on transport,
whereas other countries relying increasingly on manufacturing, such as Mexico, focus on developing energy-related improvements. On the whole, it is estimated that for coastal countries, about 40 per cent of predicted transport costs are related to the quality of onshore infrastructure (Limao and Venables, 2000).

Figure 11. Infrastructure for Trade in Latin America


Infrastructure problems persist in several areas. There are twice as many roads per capita in Asia, for instance, as in Latin America. In Brazil, only 5 per cent of roads are paved and both railroad and fluvial systems are underdeveloped. Port efficiency differs drastically across regions, and the ports of Hong Kong and Singapore dramatically surpass most Latin American ports. Telecommunications, on the other hand, are a relatively well-developed field (OECD Development Centre 2007). Investments in this sector have been higher (Calderón and Servén, 2004), particularly due to very high private investment following liberalisation and privatisation, and appropriate regulation mechanisms have been adopted.

The challenges of Latin American infrastructure are also reflected in the views of the private sector. Latin American businesses are very preoccupied by infrastructure. In a recent Investment Climate survey, over 50 per cent of Latin American businesses considered infrastructure to be a serious problem (Fay and Morrison, 2006). In contrast, in East Asia and South Asia, under 20 per cent and 30 per cent agreed to the same statement, respectively.

The main explanations for deficient infrastructure are low investment rates and flawed project implementation. Although the successful examples of Chile and Colombia have confirmed the importance of transforming high growth rates into high infrastructure-investment rates, other countries have not followed. On average, Latin American countries are spending considerably less on infrastructure than what is required. A recent World Bank study on infrastructure in Latin America and the Caribbean concludes that while 4 to 6 per cent of GDP would have been needed as investment in infrastructure to catch up with the Asian tigers,
Latin American countries are only spending around 2 per cent of GDP in that area (Fay and Morrison, 2006).

Figure 12. **Perception of the Infrastructure per Region (2005)**

Percentage of businesses seeing infrastructure as a serious problem

![Figure 12](chart.png)

Source: OECD Development Centre, 2008; based on Investment Climate survey (2005) data.

An important dimension in the implementation of infrastructure projects is also the success of public-private partnerships. Chile, and to some extent Colombia, have used these to their advantage, and it is precisely in these two countries that significant infrastructure investment has taken place since the mid-1990s (Calderón and Servén, 2004).

Efficient export infrastructure is particularly important for the exporting sectors facing increased competition, often, precisely, as a result of the Asian tigers’ emergence. Deficient infrastructure can also create problems for the sectors benefiting from the current global economic climate. Argentina, for instance, is one of the main exporters of soy oil, but the country’s shortcomings in its ports and waterways are likely to be a limiting factor for these exports (World Bank, 2006).

**Finding solutions**

Although Latin America has authored some successful stories with privatisation policies, for instance in telecommunications, these have occasionally been overshadowed by unsuccessful experiences in partnerships for infrastructure projects. As a result, emphasis on privatisation policies has weakened in recent years, accompanied by a decline in resources devoted to infrastructure by the private sector (Leipziger, 2004). Any attempt for improving infrastructure levels in the region cannot be accomplished without private participants engaging, and – as shown above – it is in their interest to do so. The promotion of national
projects”, such as the Panama Canal, can also be important, but investment projects need to be profitable and well-monitored in order to be attractive to investors. Substantial foreign investments have already taken place in the telecommunications sector of Latin America (OECD Development Centre 2007), and infrastructure can become a solid candidate for FDI from enterprises based in OECD countries. France, Spain and Germany all have major corporate players in this field.

Regulation, too, is important for infrastructure policies, and legal stability is necessary to attract the private sector. Frequent renegotiations of infrastructure-concession contracts are a common problem in the region, and it should be minimised with the help of adequate regulation policies and their implementation. To make infrastructure projects attractive to the private sector, strengthening transparency in contract concessions is essential. This would also improve confidence in public-private infrastructure ventures. OECD’s FDI Regulatory Restrictiveness Index shows that Brazil, Chile and Mexico are relatively closed to FDI in the transport sector, both compared to the OECD average and to the 13 non-OECD countries considered in the index. Argentina, on the other hand, was more open than the OECD average, though FDI restrictiveness in roads was still quite high (Koyama and Golub, 2006).

Infrastructure therefore remains a critical part of the response to increased competition in the exposed sectors. A country like Mexico, in particular, needs to exploit its geographical position better by improving infrastructure, but in Latin America as a whole, infrastructure investment is a considerable opportunity that can serve to make exports more competitive. Investment in infrastructure is also likely to have significant impact not only on growth, but on inequality and poverty – and estimations show these to be of substantial potential for Latin America (Calderón and Servén, 2004). The challenge remains: increasing investment is crucial but is not the solution alone. It is vital to develop a strategic vision, and a well-organised public sector capable of managing infrastructure projects. Involving the private sector with public initiatives is essential for this purpose.

Box 2. Mexico: So Close to the Big Market but Lagging behind in the Race

The most eye-catching prey to Chinese export competition is Mexico, and this is also one of the countries where improved infrastructure would bring the most significant gains. Out of all the countries in our analysis, only South Korea, Hungary and Thailand suffer from tougher competition with the Asian giants. China’s and Mexico’s strong competition is focused on information technology and consumer electronics, electronic components, clothing and miscellaneous manufacturing, thus displaying significant manufacturing trade competition between the two economies.\textsuperscript{xi}
The United States market is at the heart of Chinese and Mexican export competition. It is by far Mexico’s largest export market, absorbing more than 85% of Mexican exports. Mexico’s share of U.S. imports has declined, however, while China’s has been increasing in recent years. In 2003, China surpassed Mexico for the first time in terms of exports to the United States market, achieving a share of 12.1% of U.S. imports, as compared to 11% from Mexico, and it has been progressively increasing its lead ever since (Figure 14).

Source: OECD Development Centre, 2008; based on WITS and Comtrade data.
For Mexico, the global emergence of China represents a challenge. It has been found that if Chinese export capabilities had remained unchanged, Mexico’s annual export growth rate would have been 3 percentage points higher in the early 2000s (Santiso, 2006b). This is also reflected in an OECD projection showing Mexico as one of the few OECD countries that stands to suffer from Chinese implementation of WTO commitments in all goods and selected services sectors (Greene et al., 2006). Although Mexico would gain on the services side, it would stand to lose $192 million in real income and welfare.

This has led to concerns that the Mexican export model itself is at risk. Mexican maquiladoras – factories mostly run by US, European and Asian enterprises, set up since the mid-1960s in Mexico near the United States border – are specialised in low value-added manufactures. Yet this is precisely the area where China can produce at even lower cost, and it is likely that Chinese competition will lead to changes in Mexico’s current export structure. Such changes have already taken place in countries like Singapore, Chinese Taipei and South Korea, which have reduced their exports of manufactured goods, machinery and transport equipment (Blázquez-Lidoy, Rodríguez and Santiso, 2007). As can be seen from Figure 14, Mexico’s trade competition with China has in fact decreased from 2001 to 2005. Moreover, North American Free Trade Agreement (NAFTA) regulations have required a phasing out of maquiladora benefits starting in 2001, leading maquiladora production to decrease (Engman, Onodera and Pinali, 2007). All this affects Mexican exports to the United States, and heightens the need to improve the competitiveness of Mexican firms.

Mexico has a significant advantage in its proximity to the United States market. It is clear that increased investment in infrastructure and focus on industries where timely delivery amount to a substantial strategic advantage would be to Mexico’s benefit.

Infrastructure therefore remains a critical part of the response to increased competition in the exposed sectors. A country like Mexico, in particular, needs to exploit its geographical position better by improving infrastructure, but in Latin America as a whole, infrastructure investment is a considerable opportunity that can serve to make exports more competitive. Investment in infrastructure is also likely to have significant impact not only on growth, but on inequality and poverty – and estimations show these to be of substantial potential for Latin America (Calderón and Servén, 2004). The challenge remains: increasing investment is crucial but is not the solution alone. It is vital to develop a strategic vision, and a well-organised public sector capable of managing infrastructure projects. Involving the private sector is essential, as is finding a balance between infrastructure expenditure and fiscal discipline.
Transforming Trade Competition into a Development Opportunity

- *Innovation, infrastructure and macroeconomic prudence are the keywords for using trade competition with the Asian giants as an opportunity for development in Latin America.*

The growth of China and India has impacted the trade relations of Latin American countries. While the giants’ surge in exports has been the cause of some apprehension, the results in this study show that it poses little threat to most Latin American countries. On the contrary, there are substantial benefits to be had – both directly through increased trade with China and India, and indirectly through the profitable export prices their rapid growth has offered to Latin American commodity exporters.

Although the growth of China and India is not an immediate threat to most of Latin America, it does emphasise a number of the challenges facing the continent. Increased trade with China and India is likely to increase export opportunities for the bulk of Latin American countries, but these exports will likely be concentrated in commodities. As a result, among the main challenges that are likely to arise are the questions of how to ensure continued diversification of the economy and how to manage fiscal revenues in a way that does not expose a country to Dutch disease. It is important to make sure that there are linkages between the commodity-export sectors and other parts of the economy, and in particular to encourage innovation surrounding the commodity.

For the non-commodity sectors of the economy to prosper, however, their competitiveness must increase. At the moment, one of the most serious drawbacks of Latin American economies is their lack of appropriate infrastructure. Inadequacies in the port system, and in the road and railroad networks hamper export potential. Substantial progress needs to be made by increasing investments in these sectors, yet such investment does not appear to be forthcoming. Part of the problem often lies in poor project implementation and inadequate regulation. For Mexico and the Central American countries, which are the most exposed to competition from China and India, it is particularly important to build infrastructure that will enable efficient trade, thereby allowing them to capitalise on their massive competitive advantage, namely their proximity to the world’s largest economy, the United States.
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i. The Caribbean region, on the other hand, has also seen growth in its service exports to the United States.

ii. For a specific analysis of the competition between Latin American and Chinese exports to the United States market, see López-Córdova, Micco and Molina (2007).

iii. Potential opportunities for trade were found by identifying the sectors where the large Latin American export shares corresponded to large Chinese import shares.

iv. These synergies are not specific to Latin America. For Africa, see Avendaño, Reisen and Santiso (2007).

v. The comparative advantage is calculated with the Balassa index, a measure of each country’s exports in a specific sector relative to global exports in the same sector.

vi. This is based on the International Energy Agency’s “reference scenario”, where current policies affecting energy use and production remain unchanged.

vii. Rent-seeking activity, in this case, can be described as seeking unproductive gains from natural resources through links with the state.

viii. This concentration measure takes into account the share of each exported product in total exports. Where export shares of single products are high, the indicator takes a higher value.

ix. For an in-depth study of the trade relations between Chile and China, see Claro (2006).

x. Web site of the Fundación Chile: www.fundacionchile.cl.

xi. Potential trade competition was found by identifying the sectors where the large Mexican export shares corresponded to large Chinese export shares. The results correspond to the comparison of the two countries’ Balassa indexes (measuring comparative advantage) in Blázquez-Lidoy, Rodríguez and Santiso (2007).