

# China's Emergence: A Wake Up Service for Latin America\*

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## I. Introduction

Despite East Asia's fast economic growth, impressive productive transformation and significant reduction of poverty since the 1960s, developing East Asia traditionally has not been on the Latin American radar screen either as an economic model, market, competitor or partner in cooperation.

Beginning in the 1960s developing East Asia moved to export-led growth from a base of import substitution, which had been partly inspired by Latin America's relative economic success during the interwar period and the 1950s. In contrast, Latin America persisted with its classic inward-looking substitution strategy, which worked well when international private markets were closed and in trauma, but became increasingly dysfunctional in a the post war era of fast growing, liberalizing and globalizing private markets. When crisis, structural reform and external opening emerged in the 1980s and 1990s, the region's approach was more textbook-like (caricatured in the so-called Washington Consensus) than the eclectic formulas observed in developing East Asia.

As for a market opportunity, developing Asia was largely a missing piece in the Latin America pie charts of the direction of trade. North America and Europe, and Latin America itself, traditionally were the places to be. During the reform period Chile, and to a lesser extent Peru, were exceptions in discovering an Asian market.

Meanwhile, developing East Asia was traditionally (with some product exceptions) viewed more as a source of cheap imports than a competitor at home and abroad. As a partner in cooperation, this was limited too. In the 1990s Chile, Mexico and Peru began to reach out through their participation in APEC in the 1990's.

All this of course has been dramatically altered in recent years. Developing Asia is clearly now on the region's mind in all four dimensions. And it is China's dramatic economic rise—thrust into the global public's eye in the late 1990s-- that has largely served as the catalyst.

Indeed, it is China, even more so than East Asia as such, that is on the mind of the region. China has become a major force in both real (and sometimes mythological) terms. Its growth is having a significant effect on the volume and prices of many commodities, which is good news for the region, especially raw material-intensive exporters in South America. There is much expectation about potential new and large flows of Chinese FDI to the region, especially in those countries where China can secure natural resources for its economic growth, or achieve its geopolitical goals.

Meanwhile, other countries, particularly in the Caribbean Basin, are feeling the pinch of Chinese competition in third markets for manufactures and all the region has experienced pressure at home in one economic sector or another.<sup>1</sup> Chinese cooperation initiatives, nearly non-existent before 1990, have been mushrooming in the region, even to the point of creating concern in certain circles in the U.S. where Latin America is traditionally considered its backyard (Johnson, 2005). And tellingly,

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<sup>1</sup> China has been a favorite target of anti-dumping initiatives (Finger and Nogués, 2005)

after the retreat of state interventionist model in the reform period, there are signs of growing interest in the region to bring back state action to enhance development.

Latin America's growing trade and investment relations with China are now already well documented (CEPAL 2005; Loser 2005; IDB 2006, Blázquez-Lidoy et. al., 2006, Castro, 2006, and Gottschalk and Prates, 2005; Jenkins and Dussel Peters, 2006). The conclusions tend to converge on China's emergence being both an opportunity and a challenge for the region's growth and development, with the following common highlights:

- ❖ The region's total trade with China is still relatively small for both parties, but has grown fast (Tables 1 and 2).
- ❖ Latin American exports to China are heavily concentrated and are in commodities. Indeed, when examining Latin American countries' top three exports to China only two countries—Mexico and Costa Rica--have non-commodities represented in their basket of top products. Meanwhile, China's export basket in Latin America has a larger representation of manufactured goods, which has intensified over time, and the basket is much more diversified too (Table 3 and 4).
- ❖ More generally most of Latin America seriously lags behind China in export diversification (Figure 1).
- ❖ A commodity boom—fed to a large degree by China's voracious demand for raw materials (China is the world's first, second or third largest consumer of wide range of commodities)-- has improved the region's terms of trade, with South America being the place where most of the winners are concentrated (Figure 2).
- ❖ Export similarity indexes suggest that China and Latin America do not compete much head to head in third markets, with the exception of Mexico and to a much lesser extent Brazil and Costa Rica (Table 5).<sup>2</sup>
- ❖ Even though China attracts FDI in excess of US\$ 1 billion per day, evidence suggests that investment diversion is not a serious problem (Saggi, 2006).
- ❖ Information on Chinese FDI in the region is somewhat murky. China is still a relatively small overseas investor. Officially approved direct investment in Latin America was only \$54 million in 2004, or less than 1.5% of China's total overseas direct investment that year. The stock in Latin America is about US\$ 700 million (Table 6). Latin America is, relatively speaking, a minor destination for China. The two most important destinations in 2004 were Asia followed by Africa. In a recent tour of Latin America, the President of China raised expectations with a promise to invest more than \$100 billion in the region over the next 10 years. Available information suggests that Latin America is still waiting.

In sum, as trade and investment partners today one observes both complementary and competitive effects at the moment, with South America currently enjoying more of the former and the Caribbean Basin feeling more of the latter.

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<sup>2</sup> Mesquita Moreira (forthcoming) estimates that loss of world manufacturing exports to China were quite modest between 199-2004, less than 2% of 2004 manufacturing exports. He is, however, concerned about more recent trends, including penetration of domestic markets.

However, the central relevance of China for the region's development perhaps is neither competition or complementarities, but rather "competitiveness": how to improve it and move up the export scale for growth. Indeed, it may be more useful to take a broader interpretation of China's economic surge and growing competitiveness as a motivational statement, or "wake up service," for the region, so that it will begin more serious thinking on how to better diversify and upgrade its exports for growth, economic transformation and poverty reduction in an era of globalization.

The paper is structured as follows<sup>3</sup>. Sections II- V focus on the Chinese economy, its impressive performance and the factors that are driving that performance and increasing competitiveness. Sections VI and VII use these chapters as a motivational statement for why and how Latin America might better follow China and East Asia more generally into the league of countries that are rapidly diversifying and upgrading exports for growth.

## **II. China's Economy Impresses**

In the early post war era the Chinese economy was very backward, suffering from rigid central planning, isolation and ideological turmoil, expressed in socially painful experiments such as the Great Leap Forward and Cultural Revolution. But since the late 1970s, the economy has been on the march with increasingly spectacular performance indicators (Table 7). This has attracted world-wide attention and explains why rarely a day goes by without a major story on the Chinese economy in the world's principal newspapers.

Economic growth has averaged more than 9% a year since 1978. China is now the world's fourth largest economy in market prices, second largest in PPP terms, and has moved into the ranks of middle income status, with a GDP per capita now at some \$1,700.

Moreover, thanks to China's surge, the world economy has its first non-OECD growth pole. In recent years China has been contributing about one-quarter of the growth of the world economy.

It also can be seen that behind this growth is unusually high savings/ investment ratios and a hyper-expansion of exports. The economy, unlike Japan and S. Korea in their earlier growth spurts, is moreover relatively open, with trade equivalent to more than 50% of GDP— high for a large continental-sized economy. Meanwhile, FDI inflows exceed more than US\$ 1 billion a day (more than all of Latin America). The economy has abundant "shock absorbers" in the form of very high rates of domestic savings, large international reserve cover, low foreign debt burden and a reasonable fiscal balance.

But perhaps the most impressive of all is that since the late 1970s growth has contributed to taking more than 400 million Chinese people out of poverty.

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<sup>3</sup> The paper further develops one of the paths found in Devlin, Estevadeordal and Rodriguez-Clare (2006)

### III. How Did China Do It?

In a simplified framework one can point to a “delta” of successful economic transformation (Figure 3). At the base of the delta is the interaction of an injection of market-based structural reforms —beginning in 1978-- with some initial conditions. At the top of the delta, and perhaps the most critical factor, was the interaction with the base of strategic policy implementation.

#### A. The Initial Conditions

Notwithstanding the poor state of the Chinese economy in the late 1970s, there were some initial conditions favorable to growth in the context of advancing market-based structural reform. Some of these were:

- ❖ *Extreme backwardness.* In 1978 China had an extremely backward economy. A common feature of economic development is that countries experience “catch up” growth spurts when institutional changes introduce more market action that allows gains in efficiency as a country moves to its production frontier.
- ❖ *Large, low-wage labor market.* A low wage industrial workforce of more than 400 million at the outset of reforms was conducive to manufacturing and assembly and the attraction of foreign investors.
- ❖ *Large domestic market.* An economy with nearly a billion consumers and opportunity for scale economies was also conducive to manufacturing and attraction of foreign investors.
- ❖ *A largely rural population.* This facilitated productivity gains through rural-urban migration.
- ❖ *Some relatively good social indicators.* While the economy was in dire shape, one legacy of socialism was some social indicators, such as income distribution, education, literacy, health, female participation, trends in birth and mortality rates, that were better than one would have expected in such a poor country.

#### B. Market-based Reforms

It is beyond the scope and purpose of the paper to enter into a detailed description of the reforms as these are now relatively well known and easy references to them are available.<sup>4</sup> Table 7 provides a chronological mapping of the reform process. It can be said that the reforms over the last 25 years have been broad in scope and deep in effect. Some of the highlights are:

- ❖ *Agriculture.* The reforms started in agriculture where commune farming underwent a quasi-privatization through relatively stable assignment of plots to farmers working the land and allowing them to produce and sell what they

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<sup>4</sup> For a concise overview see Devlin, Estevadeordal and Rodriguez-Clare (2006).

wanted at market prices after meeting planning targets. These micro incentives, coupled with investments in infrastructure and extension services, helped to significantly raise productivity, output and rural incomes in the 1980s.

- ❖ *TVEs.* Rural development and microeconomic incentives were also enhanced in the late 1970s by encouraging the rise in the communes of Town and Village Enterprises (TVEs). These were designed to produce goods and services for local demands. They benefited from rules that allowed household savings to be channeled into locally based commercial activity. These units—which were outside the planning process and parallel to the dominant large state enterprises—grew rapidly up through the mid-1990s, absorbing rural employment. In the 1990s TVE's also were encouraged to evolve into private enterprises, leading the way in the broader phenomenon of a fast-growing profile of private enterprise in China.<sup>5</sup>
- ❖ *Trade liberalization.* Initial policies in the late 70s that allowed small scale export processing contracts from Hong Kong to the mainland evolved in the 1980s to relatively unencumbered export processing zones where incentives attracted foreign investment. Today the zones account for around 60% of exported goods. The closed domestic economy began to open in the mid 1980s through tariff reductions that brought average tariffs down from over 40% to around 12% at the beginning of this new century (paralleling a similar process in Latin America, IDB, 2002). The last stage of the opening was the tough conditions accompanying WTO accession in December 2001.
- ❖ *Foreign Investment.* In contrast to Japan and Korea, China has relied heavily on direct foreign investment for its economic transformation. Foreign direct investment was initially restricted to export processing zones where they accounted for well over 50% of exports. In the 1990s China began opening up the domestic economy to foreign investors, a process that has been further cemented by WTO accession.
- ❖ *State Enterprises.* They account for big share of industrial output and 35% of urban employment. Traditionally they also have had an important role in fiscal income and social welfare systems. In the late 1990s reforms began to give them better micro incentives and a process got underway to restructure firms, sell off majority stakes, privatize, merge and close them down. Much of the focus has been on small and medium-sized firms where there was serious duplication. The large state enterprises have been subject to reforms, but not much privatization, in part because their employment and welfare systems are an instrument of social stability (Chong-En, Jiangyong and Zhigag, 2006).
- ❖ *Financial Sector.* The banking sector is also undergoing a process of consolidation and recapitalization, coupled with growing foreign competition.

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<sup>5</sup> The private sector's share of industrial firms is estimated by the OECD at 70%. Their share in non-farm business output is estimated at nearly 60%. Official figures based on a narrower universe of registered firms give a lower estimate of the output share, about a third (OECD, 2005).

There have been other reforms in the monetary and fiscal areas, exchange rates, stock markets and housing. But the basic point is that China has steadily marched towards a market-based economy over the last 25 years. Perhaps a good summary statistic of this advance is that the share of transactions in the economy based on market prices has risen from practically nothing in 1978 to over 90% today (OECD, 2005).

### **C. Implementation**

While reforms have been extensive and some initial conditions favorable to growth, the real secret to Chinese success may be in how reforms have been implemented. In effect, China's experience suggests that the "how" of implementing a reform may be as important, or more important, than the reform policy itself. The Chinese authorities have shown much creativity and local adaptation in introducing the market reforms. Indeed, the issue of implementation is so pronounced in the country's economic transformation that we will integrate it into the next section on the factors behind China's formidable and growing competitiveness.

## **IV. China the Formidable Competitor**

It is instructive to look at the factors driving China's ability to compete. These can be discussed in the form of intangible advantages, natural tangible advantages, and long term dynamic drivers of new advantage.

### **A. The Intangible Advantages**

#### **1. A Long-term Strategic Vision**

Economic actors in China display a strong economic culture of "ambition." This is largely manifest in a persistent drive to diversify and upgrade products and exports through learning and accumulation of new knowledge.

China moreover is a place where economic actors tend to know where they want to go, not only today and tomorrow, but also 10-15 years from now. In other words, there is a strategic long term vision at the level of government and enterprise in their respective ways. Latin America, in contrast, seems much less forward looking and more absorbed by "today" and the international conjuncture.<sup>6</sup>

The Chinese economy is clearly "goal-driven" with corresponding incentive structures. Indeed, reading interviews, whether with central or local government officials or businesspeople, the word "goal", pointing to a future economic or commercial objective, typically appears. As an example of goal setting, Shanghai apparel producers have the ambitious goal of creating an international design center on the level of Milan or Paris by the middle of the next decade. Meanwhile, major Chinese manufacturing firms, with government encouragement, are no longer satisfied with

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<sup>6</sup> One example is that there seemed to be less preparation than one would have expected for the effects of the end of the international multi-fiber agreement.

subcontracting. They are now driven by the very challenging goal of creating their own international brand recognition.<sup>7</sup>

Finally, success in meeting goals allows no time for “celebration”; new goals are established and profits reinvested to achieve them i.e., firms “invest without rest”. Indeed, the current very strong annual growth rate in China (>10%) is being largely driven by reinvested profits (World Bank, 2006).

## **2. Pragmatism**

The Chinese have been very pragmatic in introducing policy reforms. Radical swings in policy are rare. Rather, reforms tend to be introduced cautiously, gradually and in an evolutionary way. This certainly contrasts with the pendulum swings that so often plague Latin American policy.

One way to interpret the approach of reform policy implementation is “empirical experimentation” (Min Zhao, n.d.). In effect, incremental changes, often led by pilot programs, created lessons that allowed Chinese authorities to make adjustments/ mid-stream corrections and create or adapt institutions and administrative procedures in a way that sustained the march to more market activity without the crises that have plagued other regions, including Latin America.

Another angle from which to view the strategy is dualism (Qian, 2002; Prasad and Rajan, 2006). In effect, market structures come into play at the margin of the old planned economy and the latter is gradually absorbed by the former. This dualistic approach is observed on many fronts, whether it be the trade liberalization, capital account opening, exchange rate reform, state enterprise reform, etc.

A clear example is trade and investment liberalization, which began with enclave export processing zones. Only when there was considerable experience in exporting, more knowledge of foreign firms and markets, coupled with a cushion of accumulated international reserves, did a gradual opening of the highly protected domestic market begin. Moreover, capital account opening has been lagged (following the wisdom of good sequencing that emerged out of the Southern Cone crisis of the early 80s, ECLAC, 1995). Only now, after opening the current account, is China beginning to gradually reform capital account management.

## **3. A Government Economic Apparatus With A Capacity to Act Coherently**

Prior to the reforms, change in China at all levels was typically abrupt and disruptive. However, the reform era has been characterized by smooth transitions and continuity in the evolution of a forward-looking strategic economic vision. Moreover, the government has had a strong capacity to intervene in the market in an effort to achieve its goals; not always efficient or effective, but that capacity has been on balance an asset in keeping the economic transformation moving forward. Of course, in the long term, as the economy develops, it is unlikely that the same depth of state intervention

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<sup>7</sup> International Herald Tribune (2004) and Financial Times (2006).

would be functional at all, but at the early stages of transformation it probably has been an important asset.<sup>8</sup>

The power of the Communist Party government exceeds anything that could be imagined in democratic Latin America. However, coherence and capacity to implement policy is still a requisite for development. In Latin America government, coherence of policy over time has improved, especially at the level of macroeconomic management. That is not generally the case, however, with sectoral management and incentives, which are important for competitiveness.<sup>9</sup>

The Chinese public intervention, being pragmatic, is not based on any blueprint. But it is guided by clear priorities: (i) maintenance of sustained high growth, productive transformation and employment generation; (ii) social stability in the context of rapid social change and (iii) hegemony of the Communist Party.

#### **4. Competition**

There is considerable competition driving the Chinese economy. Chinese exporters must adjust to tough competition, especially in efforts to upgrade. Privatization, and opening the economy has been another source of competition. Localities also compete aggressively to attract investments.

#### **B. Natural Tangible Advantages**

##### **1. Abundant Low Cost Labor**

Mesquita Moreira (forthcoming) paints a vivid picture of the advantage vis a vis Latin America. China's massive industrial labor force of more than 600 million has much lower wages. In manufacturing, the difference is significant; e.g., Mexico and Brazil's wages respectively have been up to 8 and 6 times higher than China. In Central America, labor costs in the critical textile and apparel sectors are between 30% and 300% higher depending on the country (Condo, 2004). Blázquez-Lidoy et. al. (2006) point out that, on average, the region's wages are four times higher than China. Clearly, competing with China on the basis of labor costs alone will not work.

China has recently experienced wage pressure on the coast even with a large surplus labor force in rural areas. The reaction has been to simply move the lowest wage-based activities inland. But it must be remembered that more than low wages drives much of China's competitiveness, e.g., in the apparel industry the work force is young and fairly well educated with an average of 9 years education. Meanwhile Chinese

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<sup>8</sup> Of course an alternative argument is that all would have performed even better if the state had not intervened so much in the economy. Aside from being a much too broad counterfactual, in the face of the extraordinarily fast sustained growth and dramatic structural transformations that have taken place this argument, at least in its simplest form, would not be convincing. Looking toward the future, however, the tradeoff may be increasingly relevant for China.

<sup>9</sup> Baruj et. al. (2005) examine trade and investment incentives in the context of Mercosur integration and finds many dysfunctional public interventions that accumulate over changes in governments because of no consensual strategic national vision. Also see Peres (2005).

firms are noted internationally for their quality, reliability and full package operations (Yin 2006).

More generally, according to Mesquita Moreira (forthcoming), labor productivity in manufacturing in Mexico and Brazil is higher than China's. However, the gap in wages with China is greater than the productivity gap. Moreover, labor productivity is growing faster in China than in Latin America. So that productivity gap should be decreasing (Figures 4 and 5).<sup>10</sup>

## **2. Scale Economies**

Given the size of China it has the ability to capture the benefits of economies of scale at an early stage of development. Moreover, this serves as a bargaining chip to extract advantages from direct foreign investors and even "impose" standards based on Chinese technology.<sup>11</sup>

## **3. Regional disparities**

On average, China is a low wage country. However, there is serious regional segmentation of markets. The coast is quite dense in capital and skill, illustrated by the fact that per capita income in Shanghai is higher than most Latin American countries.<sup>12</sup> This partly could explain why at a still relatively low per capita income China's export structure has a surprisingly high profile of medium and hi-tech exports that are moreover growing fast and outdistancing Latin America. (Figure 6).

## **4. The Neighborhood**

China sits in the middle of "South East Asia Inc". This has created demonstration effects. Not surprisingly China's development approach has some similarities with a broader East Asian "model," inspired to some extent by Japan (IDB, 2006). The neighborhood also was conducive to China's increasingly penetration of East Asian production chains that are fragmenting as its neighbors move upstream. While the Caribbean Basin has exploited the North American neighborhood, production chains there in many cases are dependent on preferences, a vulnerability we will return to later.

## **C. Dynamic Productive Factors**

China certainly has some formidable natural advantages. But it also seems that its strategic policy is setting the stage to move upstream quickly in the years to come.

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<sup>10</sup> Szrimai, Ren and Bai (2005) point to a labor productivity spurt beginning in the early 1990s that has been fast enough to even reduce the productivity gap with the US, with it falling from 95% in 1995 to 86% in 2002. The appendix (to be completed) reviews some of the Chinese literature on estimates of the evolution of total factor productivity in China.

<sup>11</sup> Some industries, especially light ones, have not fully taken advantage of scale economies (Sun and Ren, 2005).

<sup>12</sup> Includes only people legally registered to live there.

## **1. Education**

There is an especially big push for higher education. Reflecting an ambition to adapt and innovate its way up the production chain, in recent periods the Chinese expenditure ratio per student between tertiary, secondary and primary education has been 10:2:1. This is extremely high compared to other countries, e.g., Korea, Chile, Mexico or the U.S. (See Devlin, Estevadeordal and Rodriguez-Clare, 2006).

Enrollments in higher education rose by a factor of 5 in the decade ending in 2004 and exceeds 13% (CSY, 2005). This is low for a middle income country (Mexico is 21%), but the absolute number of higher education graduates is 2.4 million per year of which roughly 45% are in science and engineering.<sup>13</sup> Moreover, the country is generating 150 thousand master's and doctorate graduates a year, of which 50% are in science and engineering<sup>14</sup> (CSY, 2005). The limited information on test scores in science and math (for 14-year olds) suggests that the Chinese students are internationally competitive. The significant pool of low wage, competent technical labor has been increasingly inducing the establishment in China of R&D centers by multinational corporations (Devlin, Estevadeordal and Rodriguez-Clare, 2006).

## **2. Innovation**

China's culture of ambition and desire to move upscale is reflected in the fact that a recent survey showed that innovation was the second highest priority of Chinese firms after high quality (Preeg, 2005). It also is reflected in the fact that China currently is spending at least 1.2% of GDP on R&D. That figure exceeds every Latin American country, and by far (except Brazil which is 1%) and even Spain (Table 8 ).<sup>15</sup> Moreover, the authorities have formally programmed a the goal of 2.5% for 2020. The objective is to have 60% of the country's growth driven by S&T by that year (The Economist, 2006).

The number of Chinese researchers per inhabitant exceeds Latin American countries and in indicators such a number of researchers in R&D and patent applications in the US. The number of full time researchers already exceeds Japan and is on heels of the EU. Indeed, a recent study projects that China will by 2015 exceed number three-ranked Japan in standard indicators of science and technology (Preeg, 2005).

## **3. Investment**

China's investment in fixed assets is near 40% of GDP (the Latin American average is half that, ECLAC, 2006). Moreover, the Chinese have given high priority to

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<sup>13</sup> This includes 2 year community college like programs.

<sup>14</sup> In 2003 graduates with a doctorate in Mexico, Brazil and Spain respectively numbered 1,440, 7,730 and 6,450. In 2001 China matched the highest figure in science and engineering doctorates alone (Preeg, 2005).

<sup>15</sup> In absolute terms expenditure in 2004 exceeded that of S. Korea, a strong technological player in world markets.

infrastructure development, known to be vital to productivity. This is an area where Latin America has severely lagged. Indeed, China outdistances Latin America (and middle income countries more generally) in indicators such as access to electricity, paved roads (with more than 30,000 kilometers of autoroutes) and telephone mainlines (The Economist, 2006B).

#### **4. Credit**

China, thanks to a high saving ratio, has abundant cheap bank credit. ( However, the system has been biased to state financing.) Latin American firms often face severe credit constraints.

Of course, in looking at impressive indicators such as those for investment, higher education, R&D, etc., there can be fears of inefficiencies. Undoubtedly there are inefficiencies. But size matters. Even if 30% of the investment were wasteful, the countries effective investment coefficient would still be relatively high at 30%. If 30% of the scientists and engineers leaving graduate school were “inept”, the country would still be generating 100, 000 competent ones per year. If 30% of R&D expenditures were wasteful, the more effective expenditures would still be 0.8% of GDP—higher than practically all of Latin America.

#### **V. Not All is Rosy...but**

China’s performance and competitive advantages are impressive. But an economy expanding so fast clearly has a high risk of accidents along the way, even fatal ones. China does indeed face many areas of risk that create serious vulnerabilities.<sup>16</sup> But given the “cushions” mentioned earlier, and the fact that Chinese authorities have repeatedly shown themselves to be forward looking, alert and proactive in dealing with problems (in their own way), it might be wise to give them the benefit of the doubt. In any event, with the caveat that in economic punditry bubbles do occur, most professional estimates have been reasonably sanguine about China’s ability to grow at high rates for years to come.<sup>17</sup>

Latin America also should remember that if China continues to grow fast in a sustained way its culture of ambition will mean that China of today will not look like the China of tomorrow. Among other things, the Chinese economy will be less commodity intensive; higher tech; display more consumption and services and the country will have increasingly more geopolitical power.

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<sup>16</sup> Some of the critical areas are: social tensions over increasing inequality (especially urban-rural); hidden large contingent liabilities (non-performing loans, pensions, environmental cleanup); wide spread inefficiencies in state enterprises; turbid governance of firms and corruption; a possibly overheated economy; compliance with the WTO obligations; a rise of protectionism in trading partners; permitting more flexibility and appreciation of the exchange rate; global imbalances and a sharp slow down in the world economy; rebalancing domestic demand with more consumption, and management of political demands as more markets bring more space for individuals.

<sup>17</sup> Some point to China overtaking the German and Japanese economies before the end of the next decade (Goldman Sachs, 2003). Hawksworth (2006), along with Goldman Sachs, projects that China will be by far the world’s largest economy by 2050.

## VI. What does China Mean for Latin America?

Trade is currently the main link between China and Latin America and serves as the potential platform for other possibilities in investment and cooperation. This was viewed earlier in narrow terms. China means important competition for sectors of countries (e.g., textiles and apparel, footwear, electronics) that are in head to head competition now in third markets, or are likely to be in the future as China further diversifies. China also means a new major booming export market for Latin America. Commodity producing countries primarily see this side of China. But should the commodity boom falter, and should commodity producers suffer symptoms of Dutch Disease, the competitive side of the Chinese phenomenon will gain more weight in their perspective too.

In any event, China's formidable economy should not primarily raise fear (and protectionism) or optimism (and complacency). Rather China should be interpreted in broader terms as a "wake up service" for Latin America, alerting our region to the need to better organize itself to compete globally. More to the point, China's success is a reminder for Latin America that it must better diversify and upgrade exports: a very important strategic objective in the region's development agenda since there is emerging evidence that this is an important ingredient for growth, which distinguishes Latin America from developing East Asia<sup>18 19</sup>.

The World Bank's (2006) most recent quarterly report on China pointed out that China's trade basket continues to rapidly diversify and move up market. New product varieties are emerging every year. An expanding private sector is leading the drive. Moreover, import substitution is deepening domestic supply chains, with export processing steadily falling as a percent of total exports, now according to the Bank at 50%. Moreover, Preeg (2006) reports that hi-tech information and telecommunication equipment is a leading driver of exports and "Chinese valued-added for information technology exports will soon reach 70%, if it has not already done so".

Latin America's exports have expanded significantly during the reform period, and growth has been especially healthy in recent years (Figure 7). There has been diversification as well. Nevertheless, the region's share of world exports has declined sharply since 1950 (CAF, 2005) and after 20 years of reforms the share is not much

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<sup>18</sup> See for instance Agosin (2005) and Hausmann, Hwang, and Rodrik (2005). Export diversification can reduce vulnerability to international economic cycles and thereby help sustain growth. It moreover can lead to so-called dynamic effects for growth associated with the learning, innovation and knowledge spillovers that are stimulated by better articulation with consumers in world markets. Meanwhile, the regions with the greatest poverty in Latin America coincide with those that are export enclaves—e.g. in minerals and forestry. Diversifying and upgrading exports in these countries can lead to development of local and regional value chains, create new industries that incorporate small and medium sized enterprises, raise opportunities for employment and good jobs, etc. While not automatic, the same process can set a better stage for reduction of inequality as well. Meanwhile, what types of products that are diversified into also appears to matter, with export products associated with higher productivity being most associated with economic growth.

<sup>19</sup> Economic growth was anemic in the region during the reform until the commodity boom started to make a mark on performance. But at a rate of 4.5% in 2005 and a projected rate of 5% for 2006 (ECLAC, 2006) the region's growth is still relatively modest.

different than in 1980 (Figure 8)<sup>20</sup>. The participation of manufactured exports has risen, but as Mesquita Moreira (forthcoming) points out, “output and exports of manufactures are still dominated by ‘mundane’ resource and labor intensive goods or are concentrated in the labor intensive links of the value chain; and the region has been having difficulties to increase its limited share of the of the world market, being thoroughly outperformed by East Asia”.

Indeed, as an IDB study (Devlin, Estevadeordal and Rodriguez-Clare, 2006) mentions, China is just one more chapter in an unfolding story of reversed fortunes. In the early 1950s developing East Asia was economically very backward and war torn. Latin America, in contrast, was the premier growth pole in the developing world, inspiring important development theories as well as inspiring copy cats in Asia and Africa. But as mentioned earlier, in the 1960s East Asia moved towards export led-growth while Latin America stayed in its classic inward-looking import substitution mode which was becoming “long in the tooth” as the world economy retook the path of globalization. Growth in region slowed and then, with few exceptions, became anemic in the crisis and reform periods of the 1980s and 1990s. The first East Asian wave to overtake Latin America in growth was Korea, Singapore, Taiwan and Hong Kong beginning in the late 1960s. The next wave was in the late 70s and 80s with Malaysia, Thailand and Indonesia. Then in the 1990s China’s advance became noticed. And on China’s heels are India and Vietnam.

Economic growth in Latin America is doing better recently (footnote 19), but is far from “miracle” status. As the same IDB study mentioned above stated: “if it were just a matter of which region comes first in the growth rankings, this story would be irrelevant for the policy debate in Latin America. But it is not just about rankings. It is about a region that has managed to lift most people out of poverty after 3 consecutive decades of fast growth (and it is happening again in China) and another region that, despite its efforts to reform, has consistently failed to.....reduce poverty”

## **VII. What Should Latin America Do?**

Latin America has made major advances in structural reforms. The economies of the region today are generally more stable, agile and competitive than they were at the outset of the 1980 crisis. But as mentioned earlier, the region’s export development has seriously lagged East Asia’s and this has probably contributed to a history of unremarkable growth in the former and a strong growth performance in the latter.

There are no formulas for national export diversification and upgrading. Moreover, the potential scope and complexity of the topics for achieving this goal are enormous and selectivity is inevitable. Hence, here one will only summarily sketch three areas for Latin America to reflect on and that likely need more attention in policy making, firm strategies and research.

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<sup>20</sup> Protectionism in world markets in areas where Latin America has a comparative advantage (e.g., agriculture) is partly to blame. (See IDB, 2000)

## **A. Some of the Key Stylized Elements Behind East Asian Diversification and Upgrading**

East Asia (and even less China ) cannot be a model for Latin America; the two region's are world's apart in most ways. Nevertheless, looking at East Asia's success, there are insights worth reflecting on that perhaps with local adaptation could serve Latin America in today's increasingly competitive world economy.

### **1. Development of Long-term Strategies and Goal Setting**

Achieving long term forward-looking strategies at the national, sectoral and firm levels is a characteristic not only of China but can be stylized for East Asia success stories. Persistence and consistency over time, coupled with pragmatism and the test of market outcomes, is necessary to keep strategies firm, yet flexible enough to adapt to changing circumstances. Latin America's difficulty in developing a long term strategic vision at the national, sectoral or cluster-based levels puts it at a disadvantage when competing in a fast changing and increasingly knowledge-based world economy.

### **2. Priority on Development of Local Capacity**

With, or without, association with direct foreign investors there is a premium on developing local capacities to adapt and innovate for diversification and upgrading of exports. As an example, China started out with simple export processing zones that were not unisimilar to those in Latin America. However, policies, including encouragement of joint ventures with FDI, have seen the country aggressively drive to add domestic value through more sophisticated strategies for development of local capacities; extensive development of industrial and technological parks is just one manifestation. Latin America generally has been slower off the mark (Mortimore, 2004).

### **3. A Proactive State**

The state apparatus has developed a capacity to assist economies and the private sector in developing and realizing long term strategies. Ensuring fundamental macro balance of course is central, but is not enough. Private sector export development faces obstacles from market failures. Government action—in the form of horizontal and vertical interventions-- can assist in ameliorating market failures that are binding constraints on export diversification and upgrading. East Asian countries have traditionally valued this role of government. In contrast, in the reform period of Latin America emphasis was on government failure and a “rollback” of the public promotion. While the rollback has far from eliminated market interventions, it certainly has affected capacity and coherence (Peres, 2005).

### **4. Some fundamentals**

Priority is given to maintenance of competitive exchange rates, high saving and investment rates, emphasis on education, investment in science and technology networks, including R&D expenditures, and infrastructure. All these areas provide in

different degrees critical support for export diversification and upgrading in East Asia. All are “soft” spots in the Latin American economy.

## **B. The Need to Better Exploit Some of Latin America’s Inherent Advantages**

### **1. Closeness to major markets**

Latin America is geographically closer to big rich country markets than developing Asia. However, a recent IDB study (Devlin, Estevadeordal and Rodriguez-Clare, 2006) has shown that transport costs are not a particular advantage for the region because the unit values of goods shipped by China (and surely East Asia) tend to be higher than Latin America’s and hence mostly compensate for the differential in shipping costs. We also have seen that labor costs are not competitive either. Where Latin America does have an advantage is “speed to market” for ocean transport. But to exploit this advantage the region must focus more on goods that are time sensitive, improve transport infrastructure, develop consolidate containerized regional shipping hubs<sup>21</sup> and improve business<sup>22</sup> and export facilitation.

### **2. Natural Resources**

We now have increasing evidence that natural resources are not a “curse” for growth.<sup>23</sup> But growth-successful natural resource exporters have nevertheless diversified and upgraded beyond commodities as such, whether that be by adding knowledge-based backward and forward linkages to the base sector activity (Australia) and/or adding new higher value non-resource exports to the portfolio (Sweden and Finland). This requires, among other things, coherent national innovation systems (broadly defined to include adaptation and to encompass the entire production chain) that are effective in supporting better and new private sector activities for export. Latin America’s innovation systems suffer from, among other things, incompleteness, fragmentation and under-financing (Moguillansky, 2006).

### **3. Tourism**

The region is abundant in tourist attractions but with a few exceptions this natural advantage is not fully exploited due to problems of security, infrastructure, coordination failures, language barriers, marketing, etc. Moreover, special adjustments will have to be made to capture an expected huge wave of Chinese tourists in the world economy over the next 15 years (World Tourism Organization, 2003). Maybe up to 150 million Chinese already have incomes sufficient for foreign tourism (The Economist, 2006C ).

### **4. The Latin American Diaspora**

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<sup>21</sup> Because of low volume, ships in the region often must make multiple stops instead of point to point transit.

<sup>22</sup> Shortcomings and practical solutions can be found in World Bank, 2005.

<sup>23</sup> Stijns (2005) reviews the literature and does some new empirical work that supports this point.

The Overseas Latin Community is now enormous. Not only might worker remittances (2.3% of GDP in 2005, ECLAC, 2006) be better put to work for export-oriented development, but overlapping culture, language and tastes creates potential new export markets abroad.

## **5. Regional integration**

Asia is only now discovering regional integration, while Latin America has a long tradition and much experience in this area. The IDB (2002) has shown that regional integration can be a vehicle to enhance competitiveness and develop exports. This comes about through, *inter alia*, (i) offering a platform for economies of scale and new export experience (ii) combining factors of production and inter-industry trade (iii) attracting foreign investment and (iv) cooperation in areas such as infrastructure, education, innovation, international negotiations, etc. and (v) institutional modernization.

Unfortunately deep subregional integration in Latin America, after much advance in the 1990s, is now languishing in comparison. North-South FTAs in the region are doing better, but the benefit of rich country preferences have been found not to be free of risks. Figure 9 shows that in the case of Mexico, US NAFTA preferences are highest in low wage industries. This provides an incentive to diversify exports by allocating resources to these sectors. However, while Mexico may have a comparative advantage in those sectors vis-à-vis the US, it very well may not have an advantage vis-à-vis China and East Asia. Moreover, the protection of preferences is falling. On the one hand, U.S. preferences are steadily eroding as it expands its FTA network, including to Asia. On the other, East Asian countries are increasing their productivity faster than Mexico. Hence, preferences are a benefit only if they buy time for national programs that help upgrade exports, a lesson that Mexico is learning today in the face of Chinese competition.

Finally, in terms of South-South trade, Chile's example of pursuing FTA's in East Asia, including China, could be a way to open markets and also be a way to gain entry to East Asian productive chains.

### **C. Private-Public Sector Strategic Alliances for Export Development: A Missing Page in Latin America's Competitiveness Agenda:**

As mentioned earlier, strengthening and improving the quality of countries' international integration and growth involves export development that achieves access to new markets, product diversification, added value and new knowledge-based activities, all requirements that are effectively demanded in international markets. This, in turn, involves a myriad of requirements and conditions for firms such as access to information about markets and trends, incentives to invest in new activities, ability to adapt technologies and/or innovate for commercial application, access to credit and skilled labor, availability of essential public goods, a facilitating business environment, sectoral coordination and articulation, techniques of marketing and product differentiation, etc. Due to imperfections, markets do not necessarily spontaneously generate effective responses to all these requirements, especially in

developing countries where factor markets are seriously incomplete. In Latin America all these issues are to one degree or another binding constraints.

Experience in Latin America, but especially Mexico and Central America, also shows that high participation in the labor-intensive segments of international production chains neither automatically brings about technological upgrading and productivity growth nor the technological spillovers needed to move up in the production chain. Going up the technology ladder is especially difficult when the local suppliers' base is not well developed, or when the foreign-owned manufacturers, rather than national firms, are the major suppliers of the most sophisticated key components and services. In comparison with the thriving internationally integrated production systems (IIPS) in East Asia, the Latin American experience in this area is still characterized by a high propensity of importation of goods and services (often just protracted *maquila*) and resulting low value-added, little integration of enterprises and productive sectors to global production networks, and few design and engineering services and R&D activities as well as marketing logistics, all of which tend to be more concentrated in the parent companies of multinational corporations. The degree of articulation with the local productive apparatus has been unsatisfactory at the detriment of the development of national suppliers and endogenous technology capabilities. Even in countries like Brazil, which has more integrated production, moving upscale and into IIPS has been a slow, limited and uncertain process (Kuwayama, 2005).

A lack of effective strategic coordination in Latin America has handicapped innovation (in the broad sense mentioned earlier) and investment in new export-related activities from playing its central role in industrial restructuring and export growth (Mogullansky, 2006). To wit, innovation in Latin America is not always constrained on the supply side, rather it can be the demand side that matters: i.e., it is not always the lack of trained scientists and engineers, absence of R&D labs, inadequate protection of intellectual property or obstacles to doing business that is the binding constraint, but rather the lack of demand from its potential users in the real economy—entrepreneurs. Because of three key externalities, or market failures (i.e., information externalities, coordination externalities and technological spillovers), innovation and export development for higher value products and services are unlikely to take place without the stimulation of support policies/programs emerging from interaction between the public and private sectors *cum academia*. These policies/programs can be facilitated by subsidies to investments or other measures in new, non-traditional activities (a new or adapted technology, a particular kind of training, infrastructure, etc.) or can be sectoral or cluster - based, but always with an effective carrot and stick strategy (Rodrick, 2004). In Latin America the public-private nexus is very weak (Moguillansky, 2006). Private sectors are in an environment that provides little or no strategically-based carrot (i.e., left to own devices with of risk of suboptimal capturing of externalities), or too much of the carrot and too little of the stick (state capture). In contrast, East Asia has had proactive industrial policies with a long-term strategic focus and greater balance of carrots and sticks.

There are now signals in the region of recognition that a well-designed public policy can assist the private sector in overcoming the restraints of market failures on new export activities. In principle, the gradual shift in ideology towards acceptance of a more proactive state can be a useful step in the direction of more pragmatism in public

policy. Indeed, it would seem to be a reasonable area to explore because the “visible hand” of public policy can be seen in many successful export stories in Asia, Oceania, Europe and even North America. So there is precedent for a more active public policy in Latin America aimed at developing a dynamic export sector with more and better diversification. But there is the question of what type of government interventions and how?

Latin America had a long tradition of government intervention in the economy, but it involved a top-down government-led approach in the era of inward-looking import substitution industrialization when efficiency and international integration were not primary objectives like they are today. Hence that traditional approach must not be resurrected in this new era of emerging interest in a more proactive state. Nor are the current prevalence of more or less *ad hoc* measures (because a comprehensive government strategic role fell out of fashion) optimal because they emerge without a more integrated forward-looking strategic vision and can, among other things, accumulate contradictions over time as well as lack credibility in the private sector.

The most successful public interventions appear to emerge out of a close strategic alliance between the public and private sectors. This is because in the fast-changing and increasingly competitive world of globalization each party has (or potentially could generate) some of the vision necessary to identify binding constraints and formulate effective long-term support strategies in the face of market failures, but each has less than could be generated by joining forces and undertaking a coordinated effort. The private sector is clearly “on the ground”, has knowledge of how the market works, its problems, and the effectiveness of public interventions in support of innovation and export. But the private sector’s perspective on any market opportunity is partial and fragmented between competing firms at home due to market failures that it may or may not recognize. Meanwhile, although the public sector has less potential capacity to assess a specific market situation, it can in principle: (i) help overcome information barriers; (ii) anticipate better what is needed for the maximization of the social benefits of private sector actions; (iii) help coordinate perspectives within and between sectors; (iv) mediate dysfunctional conflicts; and (v) provide private incentives for a long-term view to counteract a natural market tendency to short-term profit taking activities.

Strategic public-private sector alliances for innovation and export development underlined many the economic success stories in East Asia. However, in more recent years, even more advanced countries (e.g., Australia, New Zealand, Ireland, Sweden) have moved in this direction to maintain competitiveness and upgrade exports in the face of a fast changing globalized economy.<sup>24</sup> Sub-national entities also frequently use alliances for economic transformation. In Latin America, effective and sustained private-public strategic alliances seem to be a missing page in the region’s competitiveness agenda.<sup>25</sup>

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<sup>24</sup> Moguillansky (2006B) analyses the Australian and New Zealand cases. For Ireland see O’Donnell (1998) and for a sub national alliance see Vázquez-Barquero (1999).

<sup>25</sup> When they exist at all they tend to be precarious (Peres, 2006). They suffer from being one-sided (too much government, too little private sector or vice-versa), not sustained, incomplete, underfinanced or only on paper.

Latin America needs structured and sustained alliances--- a tight nexus of government-firms-labor-academia and research centers-- to develop consensual-based forward looking export development strategies and to validate effective public support interventions. The alliance at the national, sectoral or cluster-based levels can undertake systematic self- diagnosis of strengths, weaknesses and binding constraints for export and diversification. This is essential to consensually set priorities in the face of public resource constraints and to guide deployment of horizontal and vertical public interventions and incentives for new activities. A structured alliance also can facilitate checks and balances, public accountability and timely adjustments.

The region's private sector pieces of an alliance are mostly ready to be put together. What is missing is government and public agencies that can fully engage the private sector without capture; have sufficient technical capacity to instill confidence in the private sector and motivate systematic coordination, including building consensus on interventions, with coherence over time, in support of export development. Of course, this also requires availability of public finance with transparency and accountability for results-based public policy.

These are all major challenges for most Latin American public sectors. But this is a new direction which the countries cannot avoid if they want more and better exports for productive transformation and growth. Perhaps the countries can get off the ground in building a credible public-private alliance by copying one piece from the Chinese playbook of strategic implementation: (i) examine insights from other successful experiences; (ii) adapt according to local circumstances (iii) start gradually by developing pilot alliance program(s) for supporting innovation, new export-related activities and upgrading, and (iv) adjusting and expanding according to empirical evaluation of results.

## **VIII. Conclusions**

China is an economic phenomenon. In Latin America, China's expansion in the world economy has raised pains in some countries facing head- to-head competition in third markets. Meanwhile, for raw material intensive exporters the expanding competitive edge of China is being temporarily masked by the bonanza being realized from China's strong demand for their products. All are waiting Chinese FDI and many expect strategic cooperation.

In the context of competition and complementarities, China's emergence is often interpreted in narrow terms as market opportunity and challenge. And so it is. However, this paper argues that notwithstanding the market dimension, there is a more broadly interpreted meaning of China's emergence that is of greater significance for the region's development: its increasing competitive prowess is a "wake up service" for the region. In effect, China is just the latest wave—and one too big to go unnoticed--- of East Asian countries that have been over the decades leapfrogging Latin America in export growth, diversification and upgrading, which are increasingly recognized as key ingredients for sustained growth.

The paper reviews the intangible, natural and dynamic advantages behind China's increasing ability to compete. This is seen not as a model, but rather as a back drop to

motivate Latin America to develop, in its own way, a more strategic long term strategy for innovation and export development. The paper highlights 3 areas for reflection concerning this latter issue, of which the primary one is construction of a credible public-private sector alliance which allows structured coordination of government, business, labor, academia and research centers. These public-private alliances are frequently used by successful exporting countries, including increasingly in the OECD area, to develop national, sectoral and cluster-based strategies/policies/public interventions/monitoring and evaluation in support of innovation (and adaptation) for diversifying and upgrading exports. The creation of credible and sustainable alliance is a critical missing page in the Latin American competitiveness agenda that needs to be seriously addressed ASAP.

Table 1  
**LATIN AMERICAN TRADE WITH CHINA**  
(Percentages of total trade)

	1990		2004	
	Export	Import	Export	Import
<b>Latin America</b>	<b>0.7</b>	<b>0.8</b>	<b>3.2</b>	<b>4.5</b>
Argentina	2.0	0.3	7.7	3.7
Bolivia	...	0.9	1.1	1.3
Brazil	1.2	0.5	5.7	5.6
Chile	0.4	1.0	10.5	7.6
Colombia	0.0	0.0	0.9	3.7
Cuba	...	...	...	...
Dominican Republic	...	...	...	...
Costa Rica	...	0.2	2.7	1.9
Ecuador	0.0	0.5	0.7	4.4
El Salvador	0.0	0.4	0.2	4.0
Guatemala	...	0.3	0.7	5.0
Haiti	...	...	...	...
Honduras	...	0.6	...	...
Mexico	0.3	0.4	0.3	2.5
Nicaragua	3.5	0.1	0.4	4.6
Panama	...	6.4	1.2	...
Paraguay	0.0	0.7	2.7	7.6
Peru	1.7	0.9	12.3	4.1
Uruguay	3.9	0.4	3.9	6.7
Venezuela	0.0	0.2	0.6	4.1

**Source:** UN Comtrade

Table 2  
**CHINA TRADE WITH LATIN AMERICA**  
 (Percentages of total trade)

	1990		2004	
	Export	Import	Export	Import
<b>Latin America</b>	<b>1.4</b>	<b>1.4</b>	<b>2.3</b>	<b>3.1</b>
Argentina	0.0	0.5	0.1	0.5
Bolivia	0.0	...	0.0	0.0
Brazil	0.2	0.7	0.6	1.0
Chile	0.1	0.1	0.3	0.6
Colombia	0.0	0.0	0.1	0.0
Cuba	0.4	...	0.1	...
Dominican Republic	0.0	...	0.0	...
Costa Rica	0.0	...	0.0	0.0
Ecuador	0.0	0.0	0.1	0.0
El Salvador	0.0	0.0	0.0	0.0
Guatemala	0.0	...	0.1	0.0
Haiti	0.0	...	0.0	...
Honduras	0.0	...	0.0	...
Mexico	0.2	0.1	0.8	0.1
Nicaragua	0.0	0.0	0.0	0.0
Panama	0.2	...	0.4	0.0
Paraguay	0.0	0.0	0.0	0.0
Peru	0.0	0.1	0.1	0.2
Uruguay	0.0	0.1	0.0	0.0
Venezuela	0.0	0.0	0.1	0.0

Source: UN Comtrade

Table 3  
TOP PRODUCTS IN LAC-CHINA TRADE, 2004 <sup>a</sup>

Top 3 LAC exports to China	% <sup>b</sup>	Top 3 Chinese exports to LAC	% <sup>c</sup>
<b>From Argentina</b>		<b>To Argentina</b>	
221 oil seeds,nuts,kernels	43.9	512 organic chemicals	15.4
421 fixed vegetable oils, soft	32.6	719 machines nesnon-electric	8.2
331 crude petroleum, etc	6.0	724 telecommunications equipment	7.2
<b>From Bolivia</b>		<b>To Bolivia</b>	
283 nonferrous base metal ore, conc.	74.0	599 chemicals nes	26.1
243 wood shaped	6.7	732 road motor vehicles	9.6
285 silver and platinum ores	6.1	931 special transactions	8.5
<b>From Brazil</b>		<b>To Brazil</b>	
221 oil seeds, nuts, kernels	29.8	321 coal,coke & briquettes	14.4
281 iron ore, concentrates	20.5	724 telecommunications apparatus	13.2
421 fixed vegetable oils, soft	9.1	729 other electrical machinery and apparatus	6.7
<b>From Chile</b>		<b>To Chile</b>	
682 copper	53.1	841 clothing not of fur	29.7
283 nonfer base mtl ore,conc	25.8	851 footwear	8.7
251 pulp and waste paper	10.0	653 woven textiles noncotton	6.6
<b>From Colombia</b>		<b>To Colombia</b>	
671 pig iron etc	58.0	652 cotton fabrics woven	7.8
284 non-ferrous metal scrap	23.9	719 machines nes nonelectric	6.8
611 leather	4.7	724 telecommunications equip	6.6
<b>From Cuba</b>		<b>To Cuba</b>	
...	...	724 telecommunications equip	11.7
...	...	054 veg etc frsh,smply prsvd	7.3
...	...	861 instruments,apparatus	5.5
<b>From Dominican Republic</b>		<b>To Dominican Republic</b>	
...	...	653 woven textiles noncotton	12.9
...	...	719 machines nes nonelectric	7.7
...	...	652 cotton fabrics,woven	6.7
<b>From Costa Rica</b>		<b>To Costa Rica</b>	
729 electrical machinery nes	54.6	652 cotton fabrics,woven	8.8
714 office machines	28.8	729 electrical machinery nes	6.8
724 telecommunications equip	11.0	851 footwear	6.4
<b>From Ecuador</b>		<b>To Ecuador</b>	
331 crude petroleum,etc	75.9	724 telecommunications equip	8.4
332 petroleum products	11.9	732 road motor vehicles	6.2
051 fruit frsh nuts frsh dry	5.1	718 machs for spcl industrys	5.5
<b>From El Salvador</b>		<b>To El Salvador</b>	
284 non-ferrous metal scrap	70.3	653 woven textile, non-cotton	26.0

031 fish fresh, simply preserved	15.4	652 cotton fabrics, woven	16.7
276 other crude minerals	6.1	841 clothing not of fur	12.7
<b>From Guatemala</b>		<b>To Guatemala</b>	
061 sugar and honey	93.8	653 woven textiles noncotton	30.7
652 cotton fabrics, woven	1.4	652 cotton fabrics, woven	11.4
724 plastic materials etc	1.4	841 clothing not of fur	10.6
<b>From Haiti</b>		<b>To Haiti</b>	
...	...	629 rubber articles nes	10.3
...	...	652 cotton fabrics, woven	6.2
...	...	698 metal manufactures nes	6.0
<b>From Honduras</b>		<b>To Honduras</b>	
...	...	653 woven textiles noncotton	23.5
...	...	841 clothing not of fur	10.6
...	...	652 cotton fabrics, woven	9.1
<b>From Mexico</b>		<b>To Mexico</b>	
714 office machines	44.4	841 clothing not of fur	12.5
283 nonfer base mtl ore, conc	11.9	714 office machines	11.2
711 power machinery non-elec	7.1	724 telecommunications equip	9.7
<b>From Nicaragua</b>		<b>To Nicaragua</b>	
061 sugar and honey	56.5	652 cotton fabrics, woven	42.5
611 leather	32.5	653 woven textiles noncotton	23.7
071 coffee	2.5	841 clothing not of fur	6.3
<b>From Panama</b>		<b>To Panama</b>	
081 animal feeding stuff	35.8	841 clothing not of fur	30.4
284 non-ferrous metal scrap	33.9	851 footwear	11.5
282 iron and steel scrap	26.0	332 petroleum products	11.5
<b>From Paraguay</b>		<b>To Paraguay</b>	
263 cotton	76.7	714 office machines	19.2
611 leather	14.9	599 chemicals nes	17.2
243 wood shaped	4.2	724 telecommunications equip	7.4
<b>From Peru</b>		<b>To Peru</b>	
283 non-ferrous base metal ore, conc	45.1	724 telecommunications equip	8.1
081 animal feeding stuff	34.5	891 sound recorders, products	7.2
682 copper	7.6	653 woven textiles noncotton	6.3
<b>From Uruguay</b>		<b>To Uruguay</b>	
262 wool and animal hair	44.6	599 chemicals nes	10.9
611 leather	27.2	512 organic chemicals	8.2
031 fish fresh, simply preserved	17.4	724 telecommunications equip	8.2
<b>From Venezuela</b>		<b>To Venezuela</b>	
671 pig iron etc	43.7	718 machs for splc industrys	9.4
284 non-ferrous metal scrap	26.8	719 machines nes nonelectric	9.3
513 inorganic elements, oxides, etc	14.4	653 woven textiles noncotton	8.4

Source: UN Comtrade

a. Based on SITC Rev.1.

- b. Percentage of total Latin American country exports to China.
- c. Percentage of total Chinese exports to LAC countries.

Table 4  
**TOP PRODUCTS IN LAC-CHINA TRADE, 1990 <sup>a</sup>**  
 (percentage shares of exports and imports)

Top 3 LAC exports to China	% <sup>b</sup>	Top 3 Chinese exports to LAC	% <sup>c</sup>
<b>From Argentina</b>		<b>To Argentina</b>	
041 wheat etc unmilled	46.0	512 organic chemicals	21.0
421 fixed veg oils,soft	21.1	599 chemicals nes	11.6
678 iron, stl tubes, pipes, etc	13.1	733 road vehicles non-motor	6.5
<b>From Bolivia</b>		<b>To Bolivia</b>	
...	...	551 essential oil, perfume, etc	26.9
...	...	732 road motor vehicles	25.1
...	...	864 watches and clocks	6.3
<b>From Brazil</b>		<b>To Brazil</b>	
421 fixed veg oils, soft	32.6	331 petroleum, crude and partly refined	60.8
671 pig iron etc	14.8	321 coal, coke & briquettes	14.4
281 iron ore, concentrates	13.5	221 oil seeds, oil nuts and oil kernels	4.8
<b>From Chile</b>		<b>To Chile</b>	
251 pulp and waste paper	57.0	735 ships and boats	23.1
283 non-ferrous base metal ore, conc	26.1	841 clothing not of fur	17.2
271 fertilizers, crude	5.1	695 tools	5.6
<b>From Colombia</b>		<b>To Colombia</b>	
051 fruits fresh, nuts fresh or dry	60.2	715 metalworking machinery	39.5
717 textile, leather machnry	25.3	722 elec pwr mach, switchgear	26.1
071 coffee	10.9	512 organic chemicals	8.7
<b>From Cuba</b>		<b>To Cuba</b>	
...	...	013 meat tinned nes or prepd	10.2
...	...	054 vegetables etc fresh, simply preserved	8.1
...	...	081 animal feeding stuffF	7.9
<b>From Dominican Republic</b>		<b>To Dominican Republic</b>	
...	...	653 woven textiles noncotton	31.8
...	...	698 metal manufactures nes	14.7
...	...	652 cotton fabrics, woven	7.1
<b>From Costa Rica</b>		<b>To Costa Rica</b>	
...	...	054 veg etc frsh, smply prsvd	48.9
...	...	698 metal manufactures nes	10.8
...	...	653 woven textiles noncotton	7.2
<b>From Ecuador</b>		<b>To Ecuador</b>	
292 crude veg materials nes	100.0	695 tools	16.7
...	...	678 iron, stl tubes, pipes, etc	9.4
...	...	698 metal manufactures nes	8.3
<b>From El Salvador</b>		<b>To El Salvador</b>	
031 fish fresh, simply presvd	100.0	221 oil seeds, nuts, kernels	36.3

...	...	698 metal manufactures nes	24.1
...	...	695 tools	6.2
<b>From Guatemala</b>		<b>To Guatemala</b>	
...	...	599 chemicals nes	11.4
...	...	652 cotton fabrics,woven	9.8
...	...	698 metal manufactures nes	9.8
<b>From Haiti</b>		<b>To Haiti</b>	
...	...	652 cotton fabrics,woven	41.8
...	...	653 woven textiles noncotton	15.3
...	...	541 medicinal etc products	14.0
<b>From Honduras</b>		<b>To Honduras</b>	
...	...	656 textile etc products nes	37.1
...	...	733 road vehicles non-motor	9.4
...	...	698 metal manufactures nes	8.3
<b>From Mexico</b>		<b>To Mexico</b>	
512`organic chemicals	39.0	054 veg etc frsh,smply prsvd	48.1
581 plastic materials etc	16.1	841 clothing not of fur	13.9
561 fertilizers manufactured	9.9	332 petroleum products	5.1
<b>From Nicaragua</b>		<b>To Nicaragua</b>	
263 cotton	100.0	054 veg etc frsh,smply prsvd	53.5
...	...	599 chemicals nes	17.5
...	...	678 iron,stl tubes,pipes,etc	13.1
<b>From Panama</b>		<b>To Panama</b>	
...	...	735 ships and boats	36.7
...	...	841 clothing not of fur	26.5
...	...	656 textile etc products nes	6.3
<b>From Paraguay</b>		<b>To Paraguay</b>	
263 cotton	100.0	851 footwear	23.3
...	...	841 clothing not of fur	15.1
...	...	724 telecommunications equip	6.6
<b>From Peru</b>		<b>To Peru</b>	
081 ANIMAL FEEDING STUFF	96.8	321 coal,coke,briquettes	40.6
682 copper	2.6	735 ships and boats	26.6
292 crude veg materials nes	0.4	541 medicinal etc products	5.0
<b>From Uruguay</b>		<b>To Uruguay</b>	
262 wool and animal hair	89.4	841 clothing not of fur	31.1
041 wheat etc unmilled	5.7	732 road motor vehicles	9.9
031 fish fresh,simply presvd	4.3	894 toys, sporting goods, etc	5.5
<b>From Venezuela</b>		<b>To Venezuela</b>	
561 fertilizers manufactured	69.4	841 clothing not of fur	20.5
281 iron ore,concentrates	30.5	541 medicinal etc products	9.1
861 instruments, apparatus	0.1	276 other crude minerals	7.9

Source: UN Comtrade

- a. Based on SITC Rev.1.
- b. Percentage of total Latin American country exports to China.
- c. Percentage of total Chinese exports to LAC countries.

Table 5  
**EXPORT SIMILARITY INDEX LAC-CHINA, 2004<sup>a</sup>**

	Index value
Argentina	7.0
Bolivia	5.9
Brazil	17.4
Chile	5.1
Colombia	7.4
Costa Rica	13.3
Cuba	0.3
Dominican Republic	11.9
Ecuador	3.3
El Salvador	5.0
Haiti	3.8
Honduras	5.1
Mexico	25.1
Nicaragua	3.2
Panama	6.4
Paraguay	4.1
Peru	4.9
Uruguay	3.8
Venezuela	2.1

**Source:** UN Comtrade

a. Index constructed at the 3 digit level of SITC Rev. 1. The ESI is defined as:  $ESI_{ij} = 100 * \sum_c \min(X_{ci}, X_{cj})$ , where  $X_{ci}$  ( $X_{cj}$ ) represents the share of gross exports  $X$  of commodity  $c$  in total exports of country ( $j$ ).

Table 6  
**CHINESE FDI <sup>a</sup>**  
(Millions of US Dollars)

Country (Region)	Flows			Stock		
	2002	2003	2004	2002	2003	2004
<b>Total</b>	<b>983</b>	<b>2087</b>	<b>3712</b>	<b>9340</b>	<b>11427</b>	<b>15139</b>
Asia	606	772	1963	5482	6254	8217
Hong Kong	356	266	957	4074	4341	5298
North America	153	121	165	1271	1391	1557
USA	152	113	142	835	948	1089
Europe	75	889	316	561	1450	1766
Russia	35	339	111	207	546	657
Oceania	50	35	236	550	584	820
Australia	49	34	231	431	464	695
Africa	63	107	432	818	926	1358
South Africa	2	7	107	119	127	233
<b>Latin America <sup>b</sup></b>	<b>19</b>	<b>25</b>	<b>54</b>	<b>630</b>	<b>655</b>	<b>709</b>
Antigua & Barbuda	...	...	...	2	2	2
Argentina	...	...	10	11	11	21
Bahamas	...	...	...	1	1	1
Barbados <sup>c</sup>	...	...	...	<1	<1	<1
Belize	...	...	...	1	1	1
Bolivia	5	<1	...	10	11	11
Brazil	9	9	6	120	129	135
Chile	...	...	...	25	25	25
Colombia	...	...	...	10	10	10
Costa Rica <sup>c</sup>	...	...	...	<1	<1	<1
Cuba	3	...	31	17	17	48
Dominica <sup>c</sup>	...	...	...	<1	<1	<1
Dominican Republic <sup>c</sup>	...	...	...	<1	<1	<1
Ecuador <sup>c</sup>	...	...	<1	4	4	5
El Salvador	...	...	...	...	...	...
Grenada	...	...	...	...	...	...
Guatemala	...	...	...	...	...	...
Guyana <sup>c</sup>	...	...	<1	18	18	18
Honduras	...	...	...	16	16	16
Jamaica	...	...	...	1	1	1
Mexico <sup>c</sup>	2.0	<1	<1	167	167	167
Nicaragua	...	...	...	...	...	...
Panama <sup>c</sup>	...	<1	6	3	4	10
Paraguay	...	...	...	...	...	...
Peru <sup>c</sup>	...	<1	...	201	202	202
Saint Lucia	...	...	...	...	...	...

Saint Vincent & Grenadines	...	...	...	...	...	...
Suriname	...	...	...	...	...	...
Trinidad & Tobago	...	...	...	90	90	90
Uruguay	53	...	...	81	81	81
Venezuela	...	1342	90	362	1704	1794

**Source:** Ministry of Commerce of China

a. Approved overseas investment only.

b. Latin America statistics exclude Bermuda, Cayman Islands, Guyana (France), Micronesia, Virgin Islands.

c. "<1" indicates less than one million dollars.

Table 7  
**CHINA : SOME BASIC ECONOMIC INDICATORS**

	1980 -1989	1990 -1999	2000 -2005	2006 first half
<b>Growth rates</b>				
GDP	9.9	10.3	9.5	10.9
Exports of goods	12.9	14.4	25.9	25.2
Imports of goods	14.2	11.5	26.4	21.3
Consumer prices	7.7	7.8	1.2	1.3
<b>Percentage share of GDP</b>				
Fixed investment	26.0	31.9	38.5	39.8
Gross domestic saving	34.8	40.6	42.5	...
Central government fiscal balance	-0.6	-1.0	-2.0	...
<b>Billions of dollars</b>				
Foreign direct investment <sup>a</sup>	2.2	29.0	54.5	23.0
Trade balance in goods (Customs CN) <sup>b</sup>	-4.4	15.6	39.4	61.4
Trade balance in goods (IMF) <sup>b</sup>	-3.6	18.6	58.4	...
International reserves	4.2	74.3	416.0	941.1
<b>Months</b>				
International reserves (months cover for import of goods)	1.8	6.8	11.8	15.4
<b>Percentage share of export</b>				
Total foreign debt	...	...	44 <sup>c</sup>	...

**Sources:** Infobank China Content Provider; National Bureau of Statistics of China; State Administration of Foreign Exchange; China Statistical Yearbook 2005, 2001, 1996; International Financial Statistics; The People's Bank of China; and World Development Indicators, 2005.

a. The first announced estimate was 60.3 billion dollars of FDI inflows in 2005. This figure did not include the FDI flowing into the financial sectors. The new estimate for 2005 is 72 billion dollars.

b. Exports and imports are f.o.b in IMF figures. Exports are f.o.b and imports c.i.f in China's Customs data.

c. 2003 only.

Table 8  
**CHINA: MAJOR STRUCTURAL REFORMS**

Year	Policy Change
1978	"Open Door" Policy Initiated, allowing foreign trade and investment to begin
1979	Collective farms assign plots to individual families
1979	Township and village enterprise (TVEs) encouraged
1980	Special economic zones created for export
1984	Self-proprietorship (getihu) encouraged, of less than 8 persons
1990	Stock exchange started in Shenzhen
1993	Decision to establish a "socialist market economic system"
1994	Company law first introduced
1994	Multiple exchange rates ended and tax reform introduced
1995	Shift to contractual terms for state owned enterprise staff
1996	Full convertibility for current account transactions
1997	Plan to restructure many state-owned enterprises begins
1998	Program for recapitalization of commercial banks
1999	Constitutional amendment passed that explicitly recognizes private ownership
2001	China accedes to the World Trade Organization
2002	Communist Party endorses role of private sector, inviting entrepreneurs to join
2003	Decision to "perfect"the socialist market economic system
2004	Consitution amended to guarantee private property rights
2005	Reform of the exchange regime

**Source:** OECD, 2005 and author.

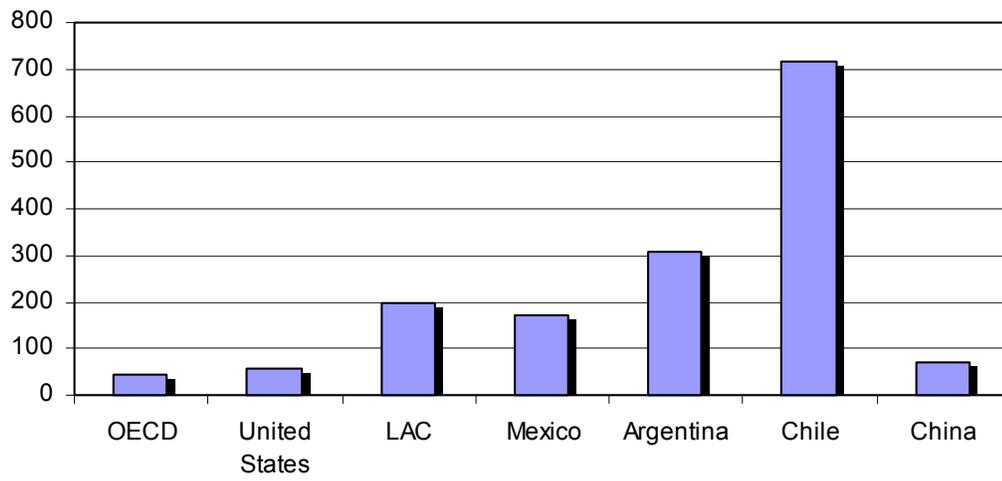
Table 9  
**R&D EXPENDITURES**<sup>a</sup>  
(as percentage of GDP)

	R&D expenditure
China	1.2
<b>Latin America</b>	
Argentina	0.4
Bolivia	0.3
Brazil	1.0
Chile	0.5
Colombia	0.6
Cuba	0.5
El Salvador	0.2
Honduras	0.1
Mexico	0.4
Panama	0.4
Paraguay	0.1
Peru	0.1
Trinidad & Tobago	0.1
Uruguay	0.2
Venezuela	0.4
<b>Others</b>	
Spain	1.0
South Korea	2.5
Malaysia	0.7
United States	2.7
Japan	3.2

**Source:** World Bank, 2005. World Development Indicators 2005.

a. Most recent year available

Figure 1  
**EXPORT CONCENTRATION INDEX**



Source: Devlin Esteveordal and Rodriguez-Clare (2006)

Figure 2  
**VARIATION IN TERMS OF TRADE BETWEEN THE 1990S  
AND 2005**

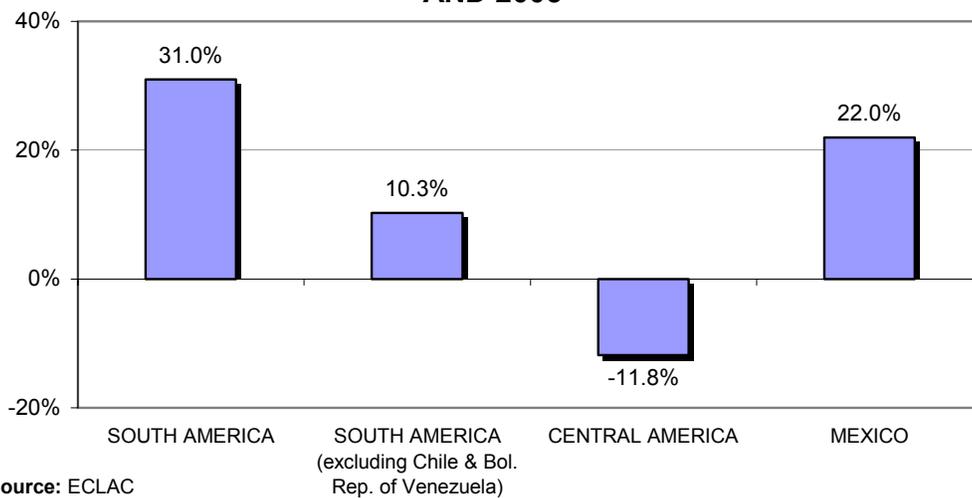
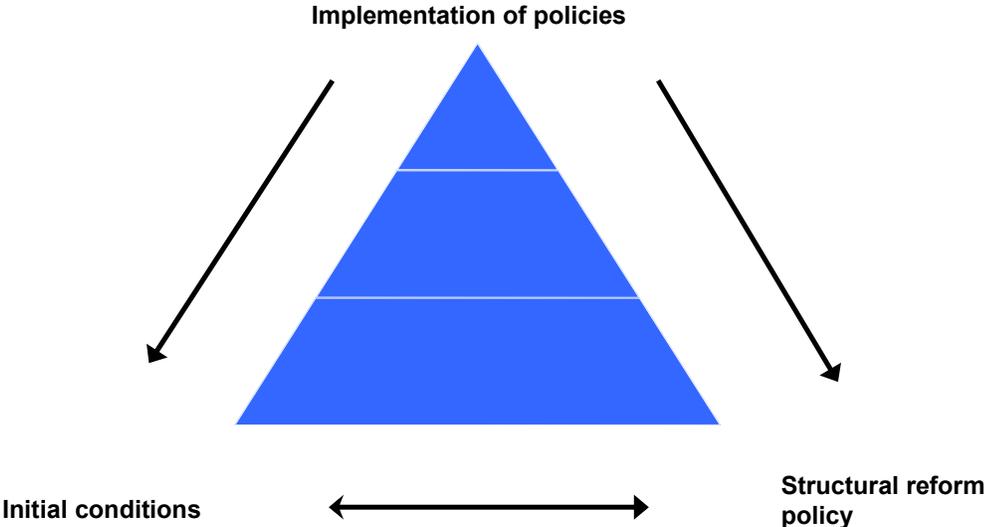


Figure 3  
**CHINA: THE DELTA OF ECONOMIC SUCCESS**



Source: Author

Figure 4  
**LABOR PRODUCTIVITY IN CHINA AND SELECTED COUNTRIES,  
 2001**

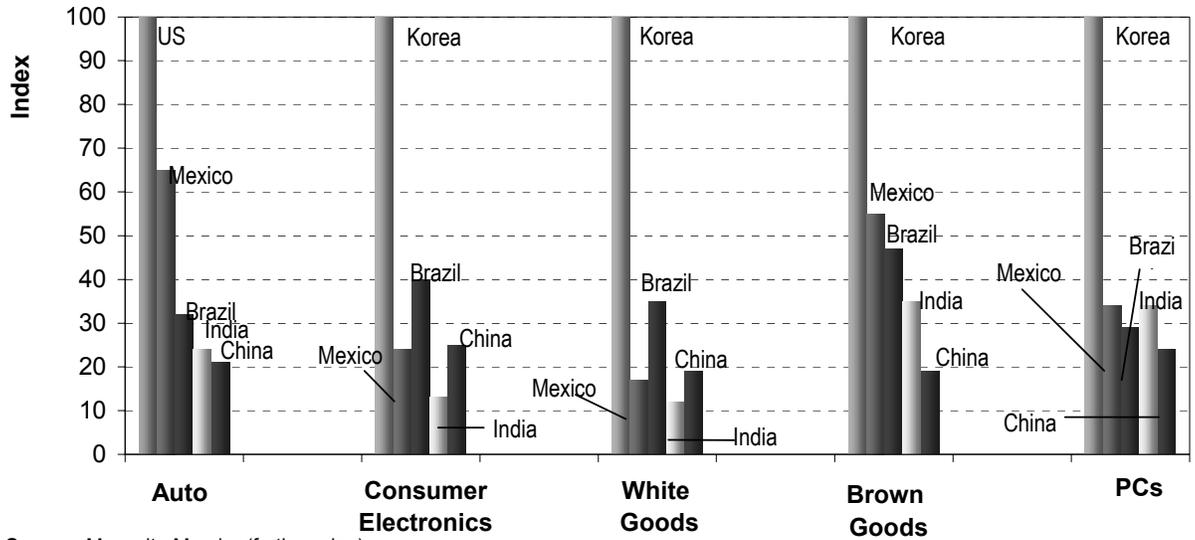
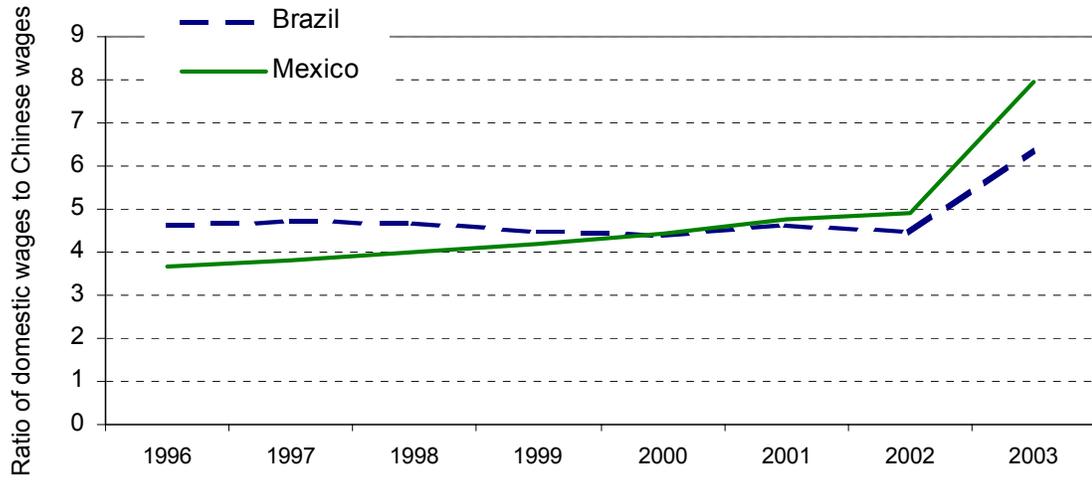


Figure 5  
**MANUFACTURING WAGE GAP: BRAZIL, MEXICO VERSUS CHINA**  
(PPP Current International \$ )



Source: Mesquita Moreira (forthcoming)

Figure 6  
**CHINA AND LATIN AMERICA: TECHNOLOGICAL CONTENT  
 OF EXPORTS**

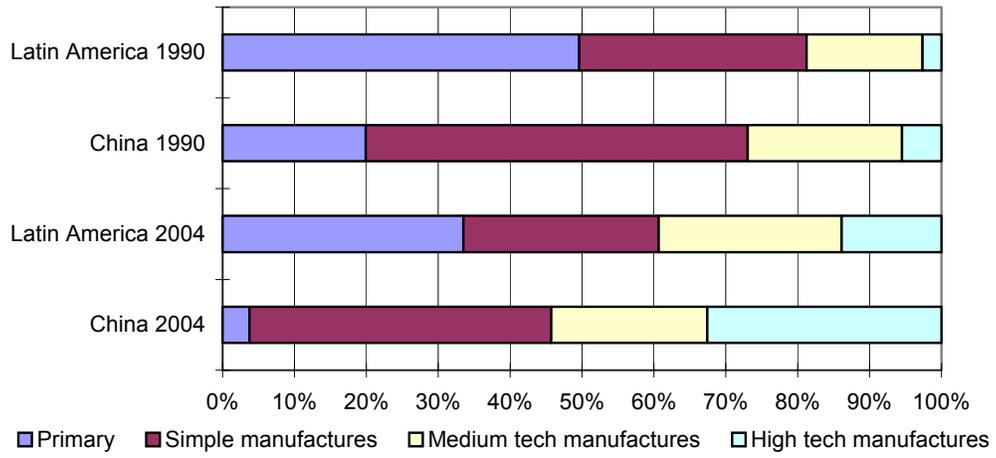
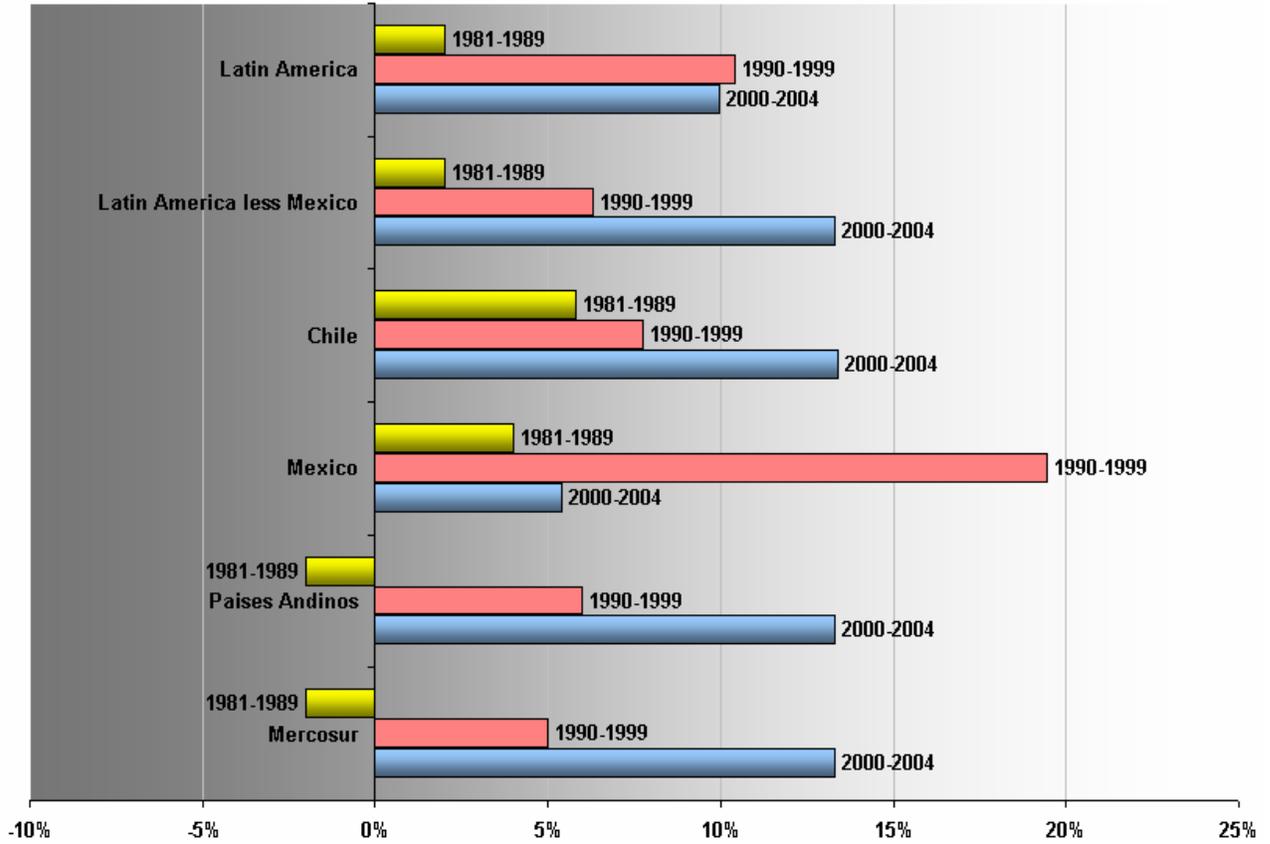
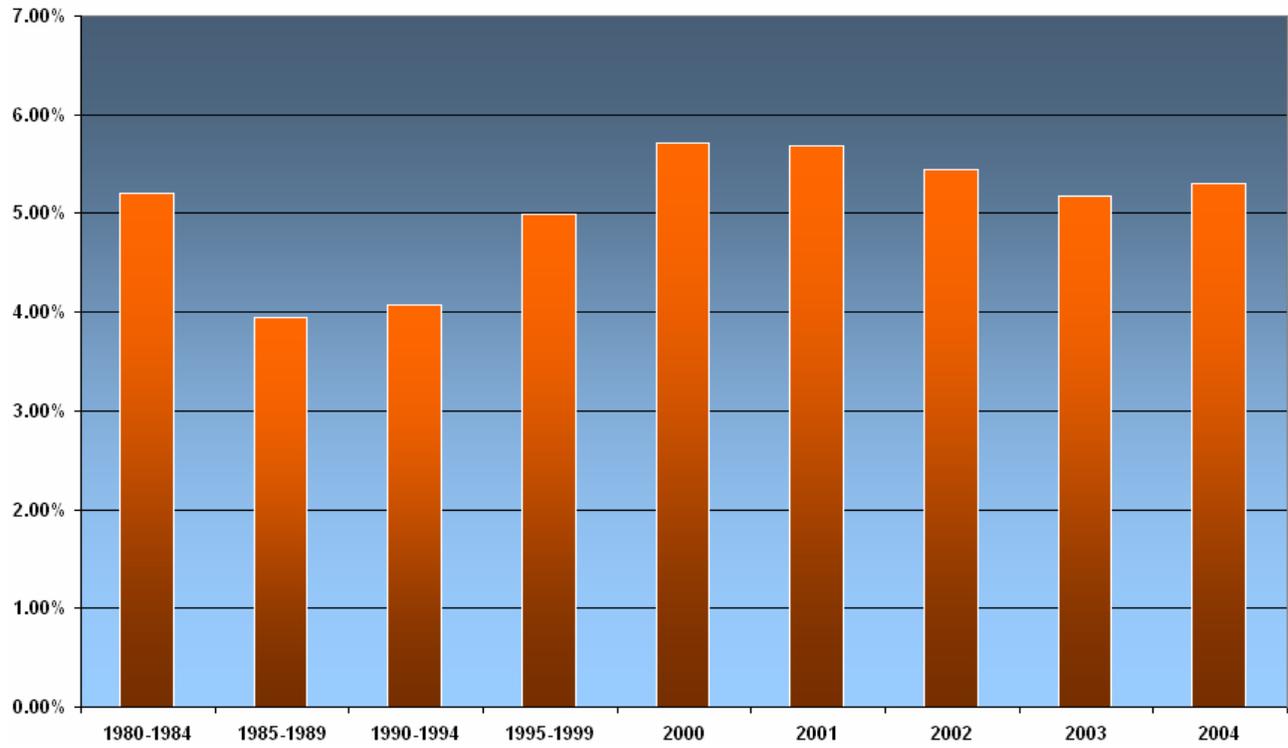


Figure 7  
**GROWTH ON EXPORTS OF GOOD AND SERVICES BY COUNTRY / GROUP**  
 (percentage average annual growth rate)



Source: Comtrade

Figure 8  
**LATIN AMERICA EXPORTS OF GOOD AND SERVICES**  
(as percentage of world exports)



Source: Comtrade

Figure 9  
**MEXICO'S PREFERENTIAL TARIFF MARGIN VIS-À-VIS CHINA**  
 (percentage difference in applied US tariffs)



Source: E. Lopez-Cordoba, "Economic Integration and Manufacturing Performance in Mexico: Is Chinese Competition to Blame?", 2004

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