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China's Competitive Threat to Latin America: An Analysis for 1990-2002

Sanjaya Lall* and John Weiss, with the assistance of Hiroshi Oikawa¹

This paper explores China's competitive threat to Latin America in trade in manufactures. The direct threat in exports to third country markets appears small: LAC's trade structure is largely complementary to that of China. In bilateral trade, several LAC countries are increasing primary and resource-based exports to China. However, the pattern of trade, with LAC specializing increasingly in resource-based products and China in manufactures, seems worrying. Given cumulative capability building, China's success in increasingly technology-based products with strong learning externalities can place it on a higher growth path than specialisation in 'simpler' goods, as in LAC. China may thus affect LAC's technological upgrading in exports and industrial production. The issue is not so much current competition as the 'spaces' open for LAC in the emerging technology-based world.

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* Queen Elizabeth House, University of Oxford

¹ Sanjaya Lall is Professor of Development Economics at the International Development Centre, Queen Elizabeth House, University of Oxford. John Weiss is Professor of Economics at the University of Bradford and Director of Research at the Asian Development Bank Institute in Tokyo. Hiroshi Oikawa is a doctoral student at Oxford University. The research was funded by the ADB Institute and the paper was presented to a joint Asian Development Bank-Inter-American Development Bank conference in Beijing on "The Emergence of China: Challenges and Opportunities for Latin America and Asia" in December, 2004. We are grateful to the World Bank for giving us access to the UN Comtrade database, to conference participants for discussion. The usual disclaimers apply.

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1. INTRODUCTION

This paper explores the competitive threat posed by China to Latin America and Caribbean (LAC), focusing on the impact of China on exports of manufactures, but also considering bilateral trade between LAC and China. We use trade data for 1990-2002 (2003 data are not available for all countries), analysing and comparing export performance and specialization patterns in the world as a whole and in the US, the main market for both regions. We do not undertake a detailed analysis of the competitiveness at the industrial or product level: this would require detailed investigation of the main export actors, benchmarking of productivity and capabilities and comparisons of national costs and policies, well beyond our scope.

Section 2 discusses the notion of a ‘competitive threat’ and sets out a schema for measuring China’s competitive impact on LAC. Section 3 analyses the ‘potential for competition’ between LAC and China by comparing the structure of their exports. Section 4 assesses the competitive impact of China on LAC in world markets in terms of relative market share changes in world and US markets over 1990-2002, distinguishing between technology categories. Section 5 deals with bilateral trade between LAC and China. Section 6 concludes.

2. THE CHINESE ‘COMPETITIVE THREAT’

The explosive growth of Chinese exports has led to much discussion of its ‘competitive threat’, in developed as well as developing countries. At the popular level, the threat appears clear. Between 1990 and 2002, China’s manufactured exports grew by 16.6% per annum, from \$48 billion to \$303.5 billion,² raising its world market share over three-fold from 1.9% to 6.4%. In 2002, China overtook the UK and in 2003 it overtook France, becoming the fourth largest exporter in the world after the US, Germany and Japan. In the developing world it was by far the largest exporter; its share of manufactured exports more than doubled (in a faster growing total), from 11.3% to 24.1%.

In response to falling trade costs and greater international capital mobility, China has emerged as a major exporter at both the labour-intensive low technology end and, increasingly, the knowledge-intensive high technology end of the product spectrum. For the former set, the large labour surplus in rural China has ensured a plentiful labour supply for the export sector at what has been a relatively constant real wage set by the low opportunity of rural labour. The consequence has been that in a wide range of activities China has been the marginal supplier of low technology goods to the world market and its productivity and wage level have set world prices for these goods. China’s productivity has improved fast enough to offset increases in rural wages to ensure its competitiveness at the labour-intensive end of the spectrum. At the high technology end, export growth has been based on a combination of growing domestic capabilities and the location by MNCs of segments of the production chain to China take advantage of low labour costs. However, the technology content high technology export activity is upgrading rapidly as it builds its supplier base and other capabilities.²

² All the trade data in this paper are in current US dollars and come from the UN Comtrade database.

² For a discussion of the role of capabilities (defined simply in terms of a combination of cost and quality) in trade and of the process capability development see Sutton (2000). By one simple measure of its development R and D expenditure per capita China has made great strides in recent years. In R&D, according the 2004 OECD *Science, Technology and Innovation Scoreboard*, China reached 1.1 per cent of GDP in 2002, up from 0.6 per cent in 1996; around 60 per cent of the R&D

The speed, magnitude and range of China's export growth has raised worries that competing countries were losing overseas markets and FDI inflows. Latin America, as a more industrialized region than China (its manufactured value added per capita in 2000 was nearly double that of China, at \$627 as compared with \$350, UNIDO, 2004), is a potential competitor, particularly in the US market. The most direct threat has so far been felt by Mexico. *The Economist* describes its problems succinctly:

"In the past two years it has become painfully clear that China is the favourite destination for the labour-intensive manufacturing that Mexico specialized in for the past three decades... The problem is simple. Labour costs in China, converted at the country's artificially low exchange rate, are about a quarter of the level in Mexico. The result: about 300 manufacturing plants have moved from Mexico to China in the past two years, reckons the Labour Ministry. Especially affected is electrical assembly. Those plants that stay have cut wages... Not only is Mexican labour being undercut, but so is its privileged access to the American market. China has joined the WTO, and the United States is negotiating a free-trade agreement with five Central American countries... Not surprisingly, Mexico is dropping steadily down the international league tables of competitiveness." ('Mexico's economy: the sucking sound from the East', London, July 24, 2003)

2.1. SOME REFINEMENTS

The popular notion of 'competitive threat' comes from business, where companies compete with one another and a gain in share by one is necessarily a loss by another. Transposing this to the national level treats trade also as a zero-sum game: the loss of markets to one competitor thus means a loss of jobs, incomes and growth in the other. In economic theory, this approach is misleading. The loss of markets in one industry does not imply that the country as a whole is 'less competitive'. Countries trade with each other in a range of products and it is unclear what higher or lower competitiveness means for an economy as a whole. The US, for instance, is becoming 'less competitive' in making apparel and 'more competitive' in making computers, but is it meaningful that the US is becoming 'less' or 'more competitive' overall?

Krugman (1994) argues that it is not. To him, "competitiveness is a meaningless word when applied to national economies. And the obsession with competitiveness is both wrong and dangerous" (p. 44). "International trade is not a zero-sum game" and treating it as such shows a lack of understanding of basic trade theory (p. 34). If all parties gain from specialising in trade, the entry of a new competitor can raise welfare for all partners – there is no 'competitive threat'.

Krugman uses the Heckscher-Ohlin (H-O) model to make his case. With efficient markets, perfect information, identical production functions across countries, no scale economies, no learning, full employment, fully mobile factors within economies, exogenous technical change, and all the other assumptions of static H-O models, all participants benefit from trade. The rise or fall of particular activities is irrelevant and the opening up of trade (or the entry of a new player) leads to a new equilibrium in which again all participants are better off. In this model, the *pattern* of specialization does not matter: since there are no

expenditure came from companies rather than the government. In terms of business enterprise R&D as a share of GDP, this takes China to fourth place in the developing world, after the Republic of Korea, Taipei China and Singapore, and well ahead of other large economies like India, Brazil, Mexico, Argentina or Indonesia.

externalities, innovation or differentiated products, all activities are equally beneficial and all factors yield equal returns on the margin. The *size* of the entrant and its *rate of export growth* also do not matter, since adjustment is instantaneous and costless.

In this model, China's entry induces other countries to move along their production possibility frontier and reach a higher social indifference curve, without friction, cost or delays and with full employment throughout. While the extent of adjustment required is particularly large because of China's size, as long as markets are efficient there *cannot be a 'competitive threat'* (that reduces welfare). On the contrary, China's size opens up greater possibilities for new specialization (in higher wage economies in more capital and skill-intensive activities) and so larger welfare gains (though there are distributional consequences as resources move across activities with different factor intensities). The policy implications are simple – governments should not delay or prevent the adjustment but should permit free trade.

Does this dispose completely of the 'competitive threat'? Unfortunately not, as the result depends crucially on the assumptions of the H-O model. If these assumptions are relaxed to allow for scale economies, differentiated products, adjustment lags, uncertainty, technological gaps, externalities and agglomeration effects, endogenous technical change, cumulative learning, information failures, unemployment, immobile factors domestically and mobile ones abroad, large firms with market power and so on, the outcome can be quite different. There remain benefits from specialization and trade remains a non-zero sum game, but the *realisation* of the benefits depends on the ability of each economy to create (or attract) competitive capabilities and to move into activities that offer the best opportunities for growth, technological development and beneficial spillovers. Here the structure of activities and the composition of trade matter.

Alternative perspectives on international trade help clarify the problem. For example, economic geography and strategic trade theories (also associated with Krugman) introduce increasing returns to scale, learning and agglomeration externalities to predict geographical concentration, first mover advantages, cumulative ness and path dependence as determinants of comparative advantage. The international relocation of activities with increasing returns requires either large cost increases in established production centres (due to rising wages or congestion) or major falls in trade costs. Part of recent globalization can be attributed to falling trade costs, including not just direct transport costs and import tariffs (or equivalents), but also the 'time costs' of goods in transit, search costs, control and management cost in organizing a supply chain, and unofficial trade barriers (including corruption). In the 1990s, China, with its large labour reserves and growing outward trade orientation and openness to FDI, was well placed to take advantage of these cost decreases.

These models predict that relocation of economic activity will be highly inequitable and only a few new production centres will emerge (Puga and Venables, 1996). Economies that lack the flexibility to move quickly into increasing return activities may find that once rival producers become established the process of catch-up may be lengthy and difficult. From this perspective, the rise of the first and second-tier newly industrializing economies (NIEs), in part the result of FDI flows from Japan, represents one stage of industrial dispersal. The rise of China represents a more recent stage, with FDI from the first-tier NIEs an important factor.

For LAC, this new wave of relocation can be analysed from conventional perspectives of trade diversion (i.e. whether or not LAC loses market share to China) and trade creation (China creates new demand globally or in bilateral trade with LAC). Even if the first effect is

negative, H-O analysis suggests that, assuming resource flexibility and efficient markets, the second effect should be strong enough to allow all trading partners to benefit.³ If, however, there are market rigidities and adjustment lags, the trade and production structures of the trading partners matter for growth and welfare because of the differential impact of increasing returns, externalities and so on. The net effect can then no longer be assumed to be positive.

Analyses of trade patterns that admit market imperfections and focus on the technology patterns of trade (e.g. Lall 2000) are perhaps more relevant to the present discussion. In line with economic geography models, they argue that adjustment is not automatic and costless. Thus, whether or not the impact of China on LAC trade is beneficial depends on whether the latter moves up or down the technology scale, with the explicit premise that a move up the scale is beneficial for the latter's long-term growth and dynamic comparative advantage.³ Trade specialization is seen as path-dependent, cumulative and gradual: countries can go on diverging over time with no inbuilt tendency to gravitate to some universal (mutually beneficial) norm. The entry of a large, efficient and low-wage competitor like China can, in other words *involve significant adjustment costs* for LAC. In the absence of full and rapid adjustment, it can lead to *welfare losses*, and the losses *may not be temporary*.

The outcome depends on two factors:

- The *similarity of export structures* in China and LAC, with greater similarity calling for greater adjustments on the part of the latter.
- The *speed, cost, nature and extent of adjustment* in each country competing with China. These will depend on the efficiency of existing markets and institutions in each country (and access to foreign capabilities through FDI), which in turn depend on the efficiency of policy in overcoming market and institutional failures in capability building and attraction.⁴

Lall and Albaladejo (2004) examine the impact of Chinese exports on East Asia (EA). LAC ostensibly faces a smaller Chinese threat for two reasons: greater distance and less similar export structures. At the same time, the opportunities for LAC 'keeping ahead' of China in terms of the product complexity are narrower. No LAC economy comes near the mature EA NIEs (Singapore, Korea and Taiwan) in terms of industrial capabilities,⁵ though there are pockets of advanced capabilities in some larger economies (for instance, in Brazil in automobiles, pharmaceuticals and aircraft). Distance and relatively weak capabilities mean that it will be much less feasible for LAC to relocate segments of export-oriented manufacturing in China to take advantage of its lower wages.

³ Macro models of developments following China's WTO accession assume away adjustment problems and predict strong trade creation, with all partners gaining from trade liberalization and Chinese growth (e.g. Roland-Holst, 2002, and Weiss, 2004).

³ A technology-intensive export structure is assumed to offer greater learning benefits, more scope for sustained productivity increase (more opportunities to introduce new products and processes), more beneficial spillovers to other activities and greater potential for export growth (technology-intensive activities grow faster in trade). See Lall, 2001.

⁴ Countries may also suffer because China raises world prices for energy and other imports by LAC. We ignore this and other price effects (for instance, China can lower the price of major exports in world markets) in this paper, as unit price data are only available for a small set of traded products. However, the risk is real on both the import and export fronts.

⁵ See Lall, Albaladejo and Moreira (2004).

Moreover, the East Asian pattern of intra-industry sharing of export activity within MNC-driven production networks (Lall, Albaladejo and Zhang, 2004) is much less feasible between LAC and China. Not only is distance a barrier, the two main industries in which such production sharing occurs, automobiles and electronics, have limited potential for intra-industry trade between LAC and China. China is not a major auto exporter and products are too ‘heavy’ (in terms of value-to-weight ratios) to make such long-distance interchange feasible. In electronics, China is a major player and some products are light enough to permit trans-continental production sharing, but most LAC countries are not significant exporters. The only major electronics player in LAC, Mexico, has been losing exports and jobs to China, though the data suggest (below) some intra-industry trade (but the amounts are very small and the long-term trends unclear).

LAC faces a more serious threat over the long term: the export specialization of most of LAC is heavily biased towards resource-based and primary products and is not geared to technology-intensive products. Chinese growth may thus constrain their ability to diversify into more dynamic and technologically advanced products, with potential harm to dynamic comparative advantage. While this cannot be examined directly with past trade data, it is possible to gauge the direction in which the region is heading, particularly in bilateral trade. We return to this below.

2.2 MEASURING THE COMPETITIVE THREAT

There is no accepted methodology for quantifying a ‘competitive threat’ with trade data. In the business literature, the common measure of competitive performance is relative market shares, and we start with this: in the simplest case, there is a competitive threat if China gains export market share and the other country loses. The intensity of the threat is given by the extent of the relative change. We look at competitiveness both in world markets and in the main market for LAC, the US.

However, such data do not show how LAC and China actually interact with each other at the product level. While it is not possible to infer direct *causal relationships* for the competitive impact of Chinese entry (only detailed fieldwork can show such relationships), it is possible make some progress by examining *combinations of market share changes* for China and neighbours. Using the technique in Lall and Albaladejo (2004), we distinguish five outcomes (Table 1) and quantify the exports that fall under each over time.

		Chinese export market shares	
		Rising	Falling
Other country's export market shares	Rising	<p>A. <i>No threat</i> Both China and other country have rising market shares and latter is gaining more than China</p> <p>B. <i>Partial threat</i> Both are gaining market share but China is gaining faster than other country</p>	<p>C. <i>Reverse threat</i> No competitive threat from China. The threat is the reverse, from the other country to China.</p>
	Falling	<p>D. <i>Direct threat</i> China gains market share and other country loses, this may indicate causal connection unless other country was losing market shares in the absence of Chinese entry.</p>	<p>E. <i>Mutual withdrawal: no threat</i> Both parties lose shares in export markets to other competitors.</p>

All the measures are only suggestive, since the data cannot, as they stand, prove that China *causes* the change in the export performance of the other country – they are simply compatible with such an effect. We should, moreover, note some other caveats with the trade analysis.

First, the data may suggest a ‘partial threat’ where China is raising market share faster than the other country (i.e. in China’s absence, its share may have risen faster). However, it is possible that China is helping the other country to compete better by complementing it within an integrated production network and so preventing its market share from doing even less well. This may be plausible for EA economies in some sectors but is much less so for LAC. In the ‘direct threat’ China gains and the other country loses market share. Within EA, this may be compatible with the losing country placing export facilities in China and so extending its competitive advantage (this is the case with textiles and clothing and some electronics). For the China-LAC interaction this pattern is highly unlikely, so that a ‘direct threat’ is unambiguously negative and the share of the direct threat category in an economy’s total exports is our preferred measure of threat.

Second, the level of aggregation may conceal or exaggerate competition at the product level. At the three-digit level at which our analysis is conducted, for instance, China may appear to be competing in meat products with Argentina, when in fact China exports pork and Argentina exports beef.⁴ However, such problems are inherent in the data and can be resolved only at the very detailed levels of disaggregation. This can, in turn, raise other problems in that different products (that appear not to compete directly) may substitute for each other. It would not be possible to resolve this except by detailed industry analysis based on field work, but this is outside the scope of this paper.

Third, market share changes do not take account of the absolute market share, and so may give misleading results. For instance, China gains market share in copper products from a very low base while Chile lose market share from a very high base (below). This is a ‘threat’ in some sense, but the relative size of the two players in copper is so unbalanced that it would be wrong to think of China posing a real challenge to Chile. There is no real answer to this problem but to examine each product in the threat category and do a ‘reality check’.

We examine the *potential for competition* between LAC and China by measuring the *similarity of their export structures over time*. This is done at several levels:

1. At the broad *technological level*, we examine the overlap between China and LAC in primary product and four technological categories of manufactured exports: RB (resource based), LT (low technology), MT (medium technology) and HT (high technology) (Table 2). These four categories are further disaggregated into nine sub-categories, capturing different technological or structural features. This technology classification offers several benefits. It allows us to gauge the basis of each country’s comparative advantage and its evolution over time. It shows how the country is ‘positioned’ to benefit from innovation and from changes in global trade patterns and it provides an indicator of whether the country will move up or down the technology ladder as a result of the competitive interaction with China.⁷

⁴ We are grateful to a referee for this example.

⁷ The technology classification is explained in detail in Lall (2000) and has been used in a number of recent studies on trade. One difficulty in applying this classification to trade is that the data do not distinguish between different processes in making a given product. A high technology product like semiconductors may in fact simply be based on low technology assembly and in the trade data its exports appear as high-tech. There is no way to overcome this problem; the only way to proceed is to apply the categories and then qualify the results with other evidence on the technological content of local production. A related problem is that at this level of aggregation it is not possible to distinguish between products in the same industry with very different technological and other features. Some low technology industries may have very complex and innovative products within them and some high technology ones may cover relatively simple and mature products.

2. We use another broad classification: *product ‘sophistication’*.⁸ We group all exports into categories according to the average income of the exporter in world markets, hypothesising that a ‘rich man’s export’ has certain characteristics of interest, such as greater differentiation and branding, better design and specifications, and more advanced technology. This allows us to compare goods within one of the given technology classifications.
3. At the more *detailed product level*, we examine the statistical correlation between the export structures of China and LAC (higher correlation indicates greater potential for competition and rising correlations over time suggest that the potential is growing).
4. We examine the most *direct interaction* between China and LAC in terms of bilateral trade. Apart from the values and net trade balances, we group trade by technological characteristics to assess the evolution of relative advantages.

To consider variations in performance within LAC, we analyse data for 1990-2002 for the *18 countries with substantial industrial sectors*. The countries are divided into the following groups:

- *LAC*: All the 18 countries below taken together
- *LAC-M*: LAC excluding Mexico because Mexico becomes an outlier after 1995 when it joins NAFTA
- *LAC Big 3*: The ‘big three’ are Argentina, Brazil and Mexico.
- *LAC Big 2*: Argentina and Brazil only, again to exclude the outlier Mexico.
- *LAC Medium 4*: The ‘medium four’ are Chile, Colombia, Peru and Venezuela
- *LAC Small 11*: The ‘small 11’ are Bolivia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Nicaragua, Panama, Paraguay and Uruguay.
- *LAC S 10*: The ‘small 10’, S11 excluding Costa Rica because its Intel plant in the late 1990s, and resulting high technology exports, make it an outlier in the group.

The technology classification used is shown in Table 2.

⁸ The sophistication index is explained in detail in Lall and Weiss (2004). A more detailed exposition of the index has been prepared and the resulting paper has been submitted for publication.

Table 2: Technological Classification of Exports	
Classification	Examples
Primary products	Fresh fruit, meat, rice, cocoa, tea, coffee, wood, coal, crude petroleum, gas
Manufactured products	
<u>Resource based manufactures (RB)</u>	
Agro based	Prepared meats/fruits, beverages, wood products, vegetable oils
Mineral based	Ore concentrates, petroleum/rubber products, cement, cut gems, glass
<u>Low technology manufactures (LT)</u>	
Fashion cluster	Textile fabrics, clothing, headgear, footwear, leather manufactures, travel goods
Other low technology	Pottery, simple metal parts/structures, furniture, jewellery, toys, plastic products
<u>Medium technology manufactures (MT)</u>	
Automotive	Passenger vehicles and parts, commercial vehicles, motorcycles and parts
Process industries	Synthetic fibres, chemicals and paints, fertilisers, plastics, iron, pipes/tubes
Engineering industries	Engines, motors, industrial machinery, pumps, switchgear, ships, watches
<u>High technology manufactures (HT)</u>	
Electronics and advanced electricals	Office/data processing/telecommunications equip, TVs, transistors, turbines, power generating equipment
Other high technology	Pharmaceuticals, aerospace, optical/measuring instruments, cameras
Other transactions	Electricity, cinema film, printed matter, 'special' transactions, gold, art, coins, pets

Source: Lall (2000)

2.3 CHANGES IN WORLD MARKET SHARES

Changes in world market share (WMS) for LAC and China 1990-2002 provide a first indication of trends in competitiveness. As Table 3 shows, China gains WMS in all products, marginally in primary products and massively in LT and HT products. LAC raises its world market share for all exports by two percentage points in the 1990s, after losses in the 1980s. However, its performance is very modest compared to China and EA more generally and in part represents a catch-up from the decline of the previous decade. Surprisingly for a relatively resource-rich region, LAC's WMS in primary products barely changes (from 12.4% in 1990 to 12.7% in 2002). In manufactures, its WMS rises from 2.3% to 4.9%, with the main WMS gains in complex MT and HT products (3.4 and 3.0 points, respectively).

However, the improvement in the technological structure of LAC exports is due almost entirely to Mexico. Mexico accounts for almost all of LAC's WMS gains in pure manufactures (LT, MT and HT); the rest of LAC (LAC-M) loses in LT and its gains in MT and HT are marginal (0.2% and 0.4%). In the resource-based categories, Mexico loses in primary products and gains slightly in RB, while LAC-M gains slightly in both. Mexico is a larger exporter of pure manufactures than the rest of LAC put together. In absolute terms, LAC-M remains a tiny global player (under 2% WMS) in all segments apart from primary and RB products, fashion products and process industries.

Table 3: World market shares of exports by CHINA, East Asia and LAC										
	EA 8		China		LAC 18		LAC-M		Mexico	
	1990	2002	1990	2002	1990	2002	1990	2002	1990	2002
All products	9.99%	11.09%	2.03%	5.96%	3.86%	5.89%	2.98%	2.95%	0.87%	2.95%
<u>Primary Products</u>	<u>8.15%</u>	<u>5.85%</u>	<u>2.72%</u>	<u>2.86%</u>	<u>12.38%</u>	<u>12.72%</u>	<u>9.62%</u>	<u>9.98%</u>	<u>2.76%</u>	<u>2.74%</u>
Manufactured	10.33%	11.87%	1.90%	6.42%	2.28%	4.87%	1.76%	1.90%	0.52%	2.98%
<u>Resource based</u>	<u>8.62%</u>	<u>8.32%</u>	<u>1.35%</u>	<u>3.23%</u>	<u>4.74%</u>	<u>5.85%</u>	<u>4.18%</u>	<u>4.80%</u>	<u>0.56%</u>	<u>1.05%</u>
Agro-based	9.22%	7.33%	1.43%	2.89%	5.74%	8.59%	5.23%	7.01%	0.51%	1.58%
Mineral-based	8.35%	8.72%	1.31%	3.36%	4.29%	4.73%	3.70%	3.90%	0.58%	0.84%
<u>Low technology</u>	<u>17.69%</u>	<u>11.57%</u>	<u>4.97%</u>	<u>14.85%</u>	<u>2.29%</u>	<u>4.75%</u>	<u>1.92%</u>	<u>1.78%</u>	<u>0.37%</u>	<u>2.98%</u>
Fashion cluster	24.46%	14.23%	8.07%	21.13%	2.71%	5.06%	2.47%	2.15%	0.25%	2.91%
Other LT	12.11%	9.61%	2.41%	10.21%	1.95%	4.52%	1.47%	1.50%	0.48%	3.02%

<u>Medium technology</u>	<u>6.44%</u>	<u>8.25%</u>	<u>1.27%</u>	<u>3.84%</u>	<u>1.78%</u>	<u>5.20%</u>	<u>1.09%</u>	<u>1.33%</u>	<u>0.69%</u>	<u>3.87%</u>
Automotive	1.82%	3.83%	1.12%	0.88%	2.16%	6.01%	0.84%	1.26%	1.32%	4.75%
Process	8.02%	10.86%	1.36%	3.72%	3.09%	4.18%	2.39%	2.77%	0.70%	1.41%
Engineering	8.74%	10.35%	1.33%	6.09%	0.90%	5.06%	0.64%	0.73%	0.27%	4.33%
<u>High technology</u>	<u>13.60%</u>	<u>21.11%</u>	<u>0.56%</u>	<u>6.98%</u>	<u>0.61%</u>	<u>3.66%</u>	<u>0.38%</u>	<u>0.76%</u>	<u>0.23%</u>	<u>2.90%</u>
Electronics	20.18%	31.45%	0.45%	9.78%	0.47%	4.18%	0.20%	0.49%	0.27%	3.69%
Other HT	3.11%	3.69%	0.74%	2.27%	0.84%	2.78%	0.67%	1.21%	0.17%	1.57%
	LAC big 2		LAC med 4		LAC small 11		LAC small 10			
	1990	2002	1990	2002	1990	2002	1990	2002		
All products	1.44%	1.55%	1.20%	1.06%	0.38%	0.39%	0.34%	0.30%		
<u>Primary Products</u>	<u>2.84%</u>	<u>3.90%</u>	<u>5.78%</u>	<u>5.23%</u>	<u>1.57%</u>	<u>1.39%</u>	<u>1.39%</u>	<u>1.21%</u>		
Manufactured	1.19%	1.20%	0.36%	0.44%	0.16%	0.24%	0.14%	0.17%		
<u>Resource based</u>	<u>2.56%</u>	<u>2.71%</u>	<u>0.98%</u>	<u>1.38%</u>	<u>0.48%</u>	<u>0.62%</u>	<u>0.45%</u>	<u>0.55%</u>		
Agro-based	3.69%	4.28%	0.87%	1.63%	0.60%	1.28%	0.55%	1.09%		
Mineral-based	2.05%	2.07%	1.03%	1.27%	0.43%	0.36%	0.41%	0.32%		
<u>Low technology</u>	<u>1.20%</u>	<u>1.03%</u>	<u>0.46%</u>	<u>0.42%</u>	<u>0.22%</u>	<u>0.32%</u>	<u>0.18%</u>	<u>0.22%</u>		
Fashion cluster	1.48%	1.31%	0.61%	0.48%	0.37%	0.39%	0.33%	0.26%		
Other LT	0.97%	0.83%	0.33%	0.38%	0.10%	0.26%	0.06%	0.19%		
<u>Medium technology</u>	<u>0.88%</u>	<u>0.97%</u>	<u>0.15%</u>	<u>0.25%</u>	<u>0.04%</u>	<u>0.10%</u>	<u>0.03%</u>	<u>0.06%</u>		
Automotive	0.80%	1.12%	0.03%	0.13%	0.01%	0.02%	0.01%	0.02%		
Process	1.73%	1.68%	0.48%	0.79%	0.13%	0.20%	0.11%	0.17%		
Engineering	0.53%	0.52%	0.07%	0.09%	0.02%	0.12%	0.01%	0.03%		
<u>High technology</u>	<u>0.32%</u>	<u>0.57%</u>	<u>0.02%</u>	<u>0.05%</u>	<u>0.03%</u>	<u>0.13%</u>	<u>0.02%</u>	<u>0.02%</u>		
Electronics	0.19%	0.32%	0.01%	0.02%	0.00%	0.15%	0.00%	0.00%		
Other HT	0.54%	1.00%	0.04%	0.11%	0.07%	0.11%	0.05%	0.06%		

Note: EA 8 are Singapore, Korea, Taiwan, China, Indonesia, Malaysia, Philippines, and Thailand.

Within LAC, Argentina and Brazil (LAC big 2) perform very poorly. Their manufactured WMS stagnates at just over 1% over 1990-2002. Industrial trends differ in these two economies: there are rises in WMS of 0.2 points or more in primary products, agro-based RB, automotives and other HT (aircraft and pharmaceuticals), but these are offset by declines in LT and process MT products. The Med 4 (Chile, Colombia, Peru and Venezuela) suffer a loss in primary products, with gains in RB, automotives, MT process and other HT. The 11 small LAC economies lose in primary products and gain in agro-based RB, other LT, process and engineering MT, and electronics. Within this group all the gain in electronics comes from Costa Rica. Several small LAC economies depend heavily on fashion cluster exports, but their WMS declines once Costa Rica is excluded.

In summary, LAC without Mexico does poorly, raising its world market share in all manufactured exports by less than 0.2 percentage points; the weakest performance is by the two large economies, Argentina and Brazil. The largest world market shares held by LAC-M are in primary and resource-based products and MT process industries, industries that offer relatively low technological and other spillover benefits and that tend to grow slowly in trade. Mexico, by contrast, behaves like an EA NIE, with significant gains across the spectrum (primary products excepted). Similarly, the share of the 50 most dynamic products in world

RB products and a sharp rise in that of HT products. However, Mexico has a much lower share than China for LT products, counter-balanced by a higher MT share. The big 2, medium 4 and small 11 LAC economies all have high shares of primary and RB exports, with the larger economies having proportionately more MT. At the more disaggregated technology level, the highest reliance on mineral-based RB exports is in the Medium 4 (the impact of oil in Venezuela). Fashion cluster exports are relatively important for the Small 11, due to US outsourcing of apparel in the Caribbean and Central America (which will come under severe threat from China after the end of the Multi-Fibre Arrangement after 2004). MT process industries are significant for the Big 2 and the Medium 4, while auto products are most significant for Mexico and the Big 2. MT engineering exports are very significant in Mexico but not in other LAC economies; electronics are also large in Mexico and (because of Costa Rica) in the Small 11. Other HT exports are significant only in the Big 2. Mexico apart, China has a very different technological trade pattern from LAC.

These technology comparisons suggest that *Chinese exports do not pose a direct threat to the bulk of LAC exports*, but there are *some exceptions*:

- Fashion products (of interest to the smaller economies and Mexico),
- ‘Other LT’ (this is a broad category but China may be posing a threat in specific products like toys, sports goods or travel goods that are exported by the smaller economies),
- Engineering products, where China is now a major exporter of machinery and consumer durables and may affect similar exports from Mexico and possibly Brazil. However their relative weight will raise transport costs and may reduce their competitiveness in markets to which LAC countries sell.
- Electronics, of export interest mainly to Mexico and Costa Rica.

However, these categories should be further disaggregated to yield meaningful conclusions at the product and country level.¹⁰

¹⁰ This leads many observers to argue that its long-term export prospects are weaker. For example, Weiss and Jalilian (2004: 287-8) say “In LA the higher growth manufacturing activities have been a combination of resource-processing (such as iron and steel, petrochemicals, non-ferrous metals, pulp and paper and various agro-processing activities), labour-intensive assembly in garments and simple electronics (in the export processing zones of Mexico and Central America) and, in the larger countries, automobiles. This production and export structure can have important implications for longer term growth in so far as LA economies are specialized in products with relatively low income-elasticities and therefore weak export demand prospects. Furthermore, the relative large endowment of Latin American economies in terms of natural resources has been seen as a potential constraint on the growth of manufactured exports, as commodity price booms can shift relative prices against tradable sectors like manufacturing... Whatever the price mechanism at work, Latin American economies appear to have been left behind in some of the most dynamic segments of world trade... Of the 20 fastest growing exports from LA, nine are primary commodities. ESEA [East and South East Asia], on the other hand, has succeeded in general in specializing in relatively dynamic products in terms of export growth, particularly in computers and their parts, and optical instruments.” Also see Lall, Albaladejo and Moreira (2004).

¹⁰ For a detailed analysis of RB exports see Chami (2003), who finds that ‘differentiated’ RB products are highly dynamic and that economies like Chile that specialised in them did much better in US markets than countries that exported undifferentiated RB products. He also conducts a more general comparison of LAC and East Asia and finds that, “Generally speaking, exporter countries with a low share of resource-based products in total exports tended to perform better in the last decade than those with high shares. Within Latin America, Mexico and Costa Rica with low shares of resource-based exports performed relatively well, while Brazil, Colombia and Venezuela, with high shares of resource-based exports, did not do very well.” (p. 20)

4.2 PRODUCT STRUCTURE

We now examine the similarity of export structures between LAC and China for 181 manufactured products (at the 3 digit level, excluding ‘special transactions’) without categorising them by technology. We start with the *stability of export structures* in each country, as shown by the correlation between export patterns in 1990 and 2002. A high coefficient shows that the export composition is stable, while a low coefficient indicates structural change.

China and Mexico have the most changeable structures (with correlation coefficients of 0.4 and 0.6 respectively). The least changeable structures are in the LAC Medium 4 and LAC without Mexico (correlation coefficients of over 0.9). It may be expected that rapid structural change – in so far as it allows exporters to respond to shifting patterns of world trade – will lead to faster growth. A regression of the stability coefficients on export growth rates for China and each LAC country over 1990-2002 supports this expectation. The adjusted R-square is 0.31 (F=11.2) and the coefficient is negative and significant – 0.022 (t=-3.35): in other words, the high stability of the export structure in LAC (with its specialisation in non-dynamic products) takes a toll on export growth.

We now compare the export structures of LAC countries with China (Appendix Table 1).

For all exports, China overlaps significantly only with Mexico and Costa Rica, and even here the correlation coefficient is relatively low (0.47 and 0.27 respectively). Other LAC countries show almost no correlation with China. By contrast, China’s export structure is highly correlated with the main exporters in EA, with a coefficient of 0.75 for 2002 (Lall and Albaladejo, 2004).

For manufactured products only, there is a sharp decline over time in the similarity of Chinese and LAC exports. Only Mexico and Costa Rica in 2002 have any significant similarity to China in 2002 (correlation coefficients of 0.5 and 0.35, respectively). Most other countries have negative or very low (below 0.1) coefficients. Even excluding RB (where China is least specialized) improves the correlation only slightly. Apart from Mexico and Costa Rica in 2002, only Jamaica and Colombia in 1990 have coefficients of above 0.20. All the other countries, including Mexico in 1990, have lower coefficients. In terms of the current overlap, therefore, *China seems to pose a very small threat to LAC exports*, including the large industrial producers Argentina and Brazil: even excluding RB products their coefficients for 2002 are -0.1 and 0.13 respectively.

3.3 ‘SOPHISTICATION’ STRUCTURE

Another way of analysing export structure and similarity is the ‘sophistication’ of manufactured exports based on *average income level of the exporter* of each product: the higher the level the more sophisticated the product. ‘Sophistication’ captures technological and other product characteristics based on the location of export production: a product exported by richer countries has features that allow relatively high wage economies to compete and are (in the relevant period) out of reach of lower wage economies. For a given product, greater sophistication presumably embodies higher levels of processing and greater value added; the inability to raise sophistication with rising wages leads to the loss of competitive advantage.

Table 5: Rank by export sophistication scores (ranked by 2000 score)		
Score	1990	2000
USA	84.44	74.83
Japan	85.14	74.62
Germany	83.87	74.57
UK	81.82	73.59
Finland	82.84	72.97
Singapore	74.59	68.11
Mexico	80.38	67.42
Taiwan	73.37	67.05
Korea	69.21	66.52
Argentina	66.90	64.64
Brazil	67.69	64.22
Philippines	60.53	64.08
Malaysia	68.08	63.43
Costa Rica	69.26	62.51
Thailand	65.12	61.88
Chile	65.16	57.16
China	65.04	56.55
Ireland	79.89	56.55
Indonesia	57.33	55.37
India	61.05	55.21
Hong Kong	67.62	53.74
Bangladesh	46.62	35.64

As a simple comparison we calculate an average sophistication score for each country based on the scores of each of its products.¹¹ Table 5 shows the score for 1990 and 2000 for China, some of the countries in LAC and EA, along with some developed and poorer countries for comparison.

The industrialized countries are, expectedly, at the top, with the US in the lead. Each has a decline in its sophistication score over the 1990s, reflecting the shift in exports to lower wage countries. In fact, most countries, including developing ones, see a decline in their scores for this reason. Note that Ireland, a relative newcomer to the industrial world with a strong specialisation in (MNC driven) electronics, comes much lower (after China) for this reason.

Mexico comes just after Singapore, with a higher score than the two larger NIEs (Taiwan and Korea) because of its concentration on autos, which has a higher sophistication score than electronics (the production of autos remains more a privilege of rich countries than electronics). The larger LAC economies, Brazil, Mexico and Argentina are in fact considerably closer to the EA NIEs than they are to China by this indicator.

The most helpful role for the sophistication index is likely to be in distinguishing different types of products within broad categories. The technology categories in Table 4 may contain a range of products of differing quality, subject to different marketing strategies and undergoing different degrees of processing and technology development. In such instances the index provides a simple way of differentiating within these broad technology categories. Table 5 gives the average sophistication score within some important product categories for China and the LAC groupings, with

Mexico shown separately.

Sophistication scores capture the impact of several factors and do not, as they stand, point to direct competitive effects within these broad categories. However, it is interesting to note that despite its lower score for its total exports and the important category of textiles and clothing, China has higher sophistication scores than LAC and Mexico for automobiles and metalworking machinery (where its score is very high), as well as for instruments and industrial chemicals. Its very high scores may be due to a division of the supply chain by MNCs, which concentrate relatively sophisticated activities (that those normally carried out in developed economies) in China. For the important category of electronics the

¹¹ The share of each manufactured product in a country's total manufactured exports is multiplied by the sophistication score of that product (in world trade); the figure is then totalled across all products.

sophistication scores for China, LAC and Mexico are similar. Hence for the two largest product categories in terms of export value, textiles and clothing and electronics, the sophistication scores for China are either below or broadly similar to the scores for its LAC trading partners.

Products	China	LAC	Mexico	Developed economies
Automobiles	89.9	72.9	72.9	76.3
Electronics	55.2	56.2	56.0	63.1
Industrial chemicals	54.1	47.8	50.4	66.5
Instruments	59.0	52.9	53.2	66.6
Metalworking machinery	86.0	51.5	66.1	74.6
Textiles and clothing	43.1	47.5	46.4	56.7

4. COMPETITIVE IMPACT ON LAC IN WORLD MARKETS

We now turn to the five-fold matrix of competitive effects of China on LAC, starting with exports to world markets and then considering the US market (see Table 1 for definitions of the ‘threat’). We work at the 3-digit SITC level and over the period 1990-2002 calculate changes in world market share (WMS) based on a comparison growth rates for LAC countries and China. For the two years 1990 and 2002 we show the proportions of trade that taken by the five ‘threat categories.’

Table 6: Competitive threat from China in world markets for LAC 18

	Values (\$ m.)		Distribution (%)	
	1990	2002	1990	2002
Partial Threat	17,164.8	91,288.9	14.6%	28.0%
No Threat	12,661.4	102,644.9	10.8%	31.5%
Direct Threat	35,809.9	37,142.1	30.5%	11.4%
China under Threat	14,229.0	47,648.8	12.1%	14.6%
Mutual Withdrawal	37,538.4	47,253.8	32.0%	14.5%
Total	117,403.4	325,978.5	100.0%	100.0%

As noted earlier, these calculations can only be suggestive – they cannot *prove* causation – but nonetheless they are plausible and interesting. Table 6 summarizes the position for Latin America as a whole (LAC-18) in the world market and Table 7 gives the same for the US. Figures 1 and 2 show the shares of exports for each LAC country under these five categories in 1990 and 2002, for the world and US markets, respectively. Appendix Tables 2 to 7 give the detailed data on the values of exports by the five categories for each country as well as the main five products that fall under each category.

There are large variations by country in the competitive threat from China and the nature of the threat changes significantly for several countries. For the world market for all the LAC 18 countries, the average weighted share of ‘threatened exports’ – under *direct plus partial threat* – is surprisingly stable at 45.1% in 1990 and 39.4% in 2002 (Table 6); there is also a shift in the composition of the threat, from direct to partial. The *intensify of the Chinese threat decreases significantly over time* (this is also true of EA, although there the degree of

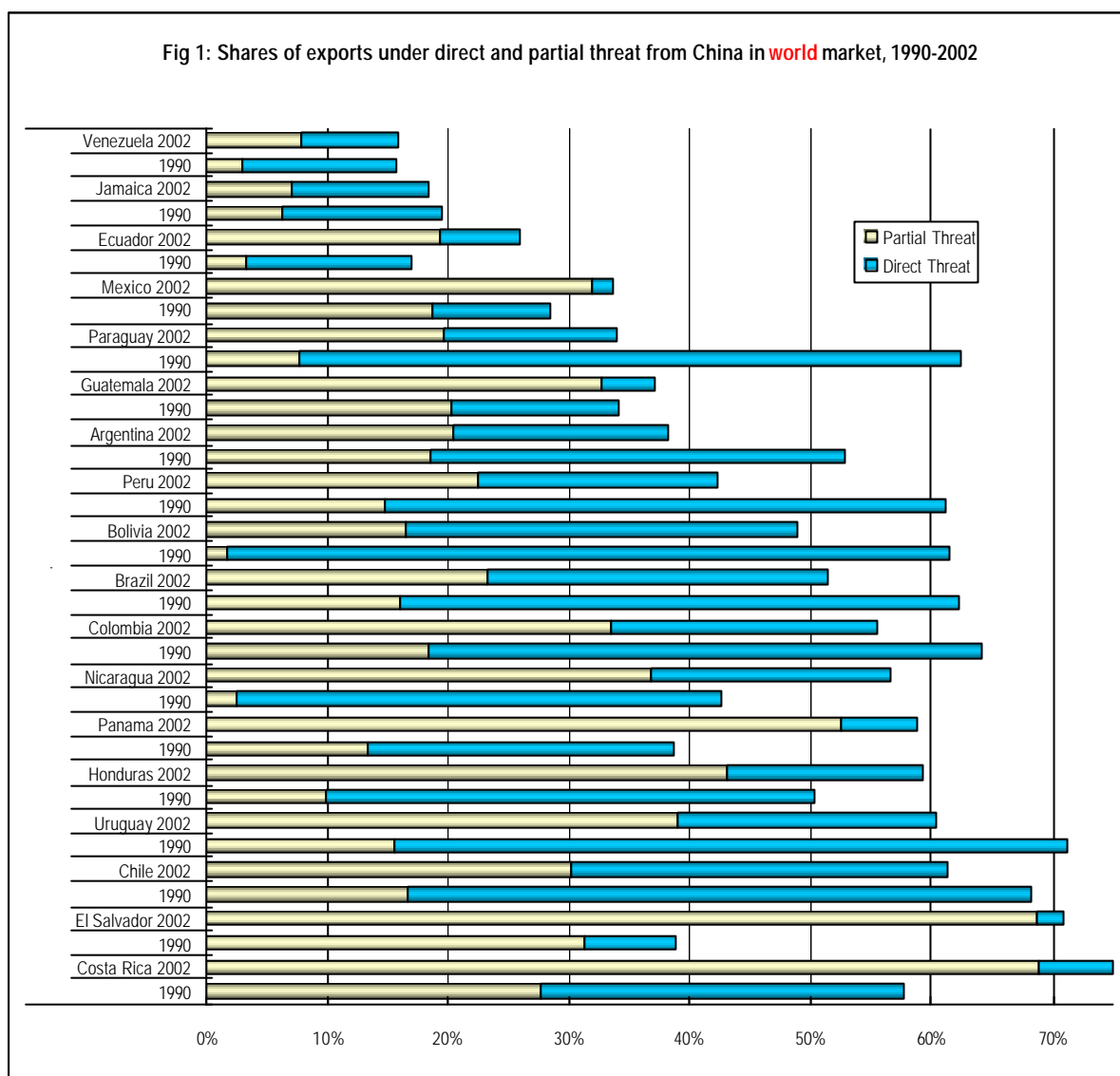
threat is much higher with on, an unweighted basis, 75% of exports under some form of threat; see Lall and Albaladejo, 2004).¹² By our direct threat measure in 2002 on 11% of LAC exports are in this category.

Table 7: Competitive threat from China in the US market for LAC 18

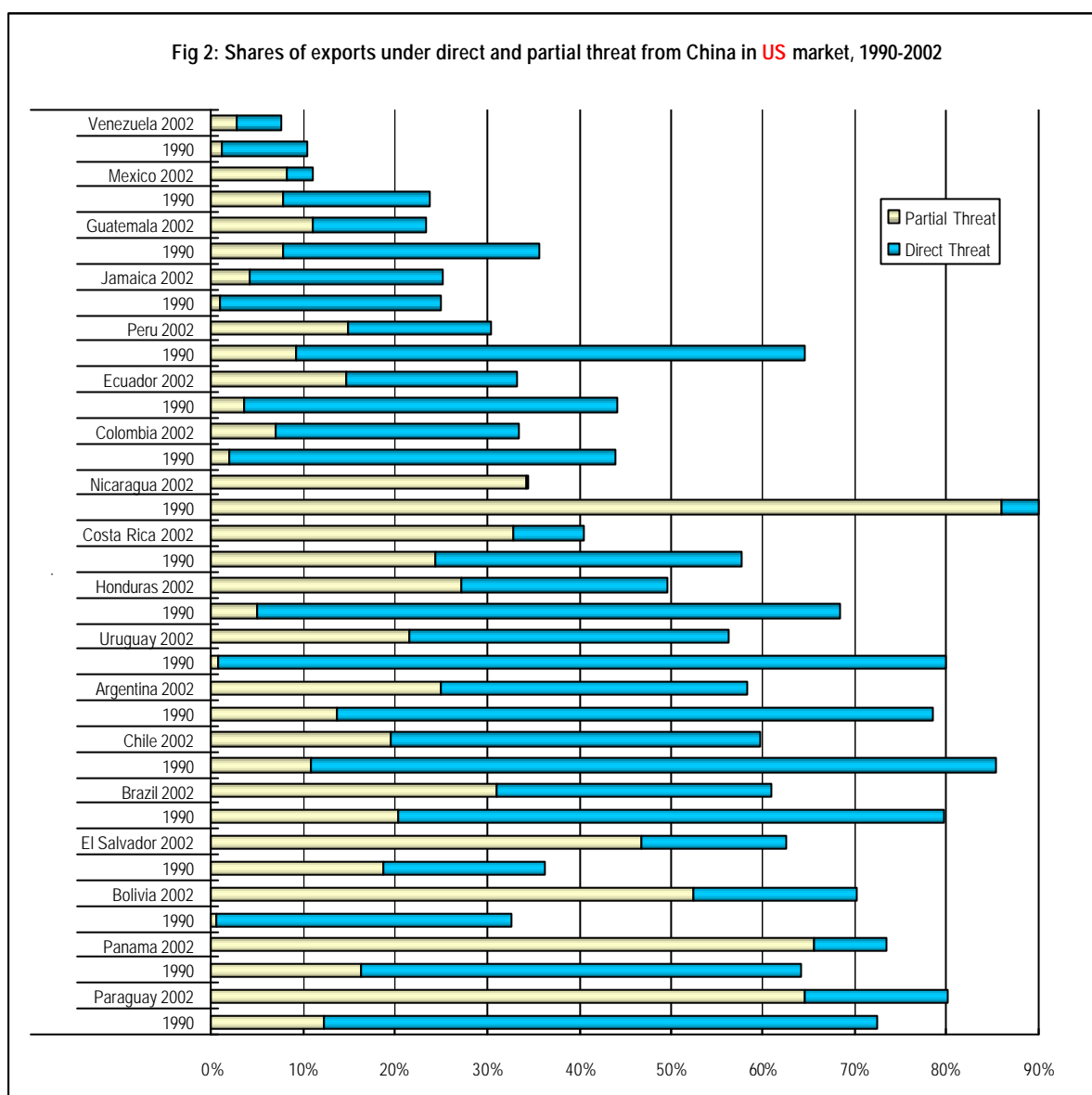
	Values (\$ m.)		Distribution (%)	
	1990	2002	1990	2002
Partial Threat	3,913.2	20,777.3	8.5%	10.8%
No Threat	7,508.3	101,371.3	16.3%	52.7%
Direct Threat	13,663.2	14,567.0	29.6%	7.6%
China under Threat	10,740.6	42,442.7	23.3%	22.1%
Mutual Withdrawal	10,267.9	13,238.9	22.3%	6.9%
Total	46,093.2	192,397.2	100.0%	100.0%

Figure 1 shows the share of ‘threatened exports’ both direct and partial in the two years, ranked by the total threat in 2002. The least threatened is Venezuela (less than 20% of exports), shielded by its heavy dependence on oil-based exports. The countries with the largest reduction in the competitive threat in these two categories are Paraguay, Peru and Argentina: all countries that have moved over time into primary or RB products where China does not have a strong competitive position or into products like automobiles where China is not yet a significant exporter. Countries like Guatemala and Colombia appear to place China under threat, because they gain market share in primary products where China is a small exporter and is losing market share.

¹² The unweighted average for threatened exports in EA of 75 % is much higher than LAC’s unweighted average of 47%. The highest figures for LAC are 75% for Costa Rica and 71% for El Salvador, while in EA they are 98% for Hong Kong and 85% for Malaysia. The lowest figure in LAC is 16% for Venezuela, while in EA it is 50% for Indonesia.



The most ‘threatened’ countries in LAC in total are Costa Rica, El Salvador and Chile (over 70% of total exports are under threat for the first two countries and around 60% in the case of Chile). While the presence of Chile as a highly threatened country may appear surprising, it reflects the large share of its exports in copper, where China gains WMS while Chile loses (noted earlier). Its large exports of fish appear partially threatened because China gains more WMS than it does. In Costa Rica the Chinese threat is overwhelmingly partial, with China gaining WMS in electronics, instruments, apparel and processed food exports. In El Salvador, it reflects a direct and partial threat in the textile and clothing industry. In terms of the more serious category of ‘direct threat’, all countries see a decline as a share of exports 1990-2002 and seven (Costa Rica, Ecuador, El Salvador, Guatemala, Mexico, Panama and Venezuela) have less than 10% of their exports in this category in 2002. The most directly threatened countries now are Chile, Bolivia, Brazil, Uruguay and Colombia), with more than 20% of their exports in this category (see Appendix Table 4 for details of the main products).



While earlier export structure comparisons show that Mexico faces the greatest potential threat from China, this calculation shows that it has not faced a significant WMS threat over 1990-2002 because of its very rapid gains in market share. The ‘directly threatened’ exports, in which Mexico loses WMS and China gains, only constitute 1.6% of its exports in 2002, down from nearly 10% in 1990. The ‘partially threatened’ exports are much larger, 32% in 2002, up from 19% in 1990, and comprise mainly electronic and electrical products and furniture. These may turn into direct threats if China continues to gain market share and actually takes markets away from Mexico. Brazil faces a larger competitive threat (28% direct and 23% partial threat in 2002) but the extent of the direct threat declines substantially, from 46% in 1990. The largest threatened exports for Brazil in the ‘partial threat’ category are telecoms and footwear. On the other hand, its largest single export, aircraft, faces no threat.

We test the type of product in which LAC is losing market share most rapidly by simple correlation analysis. At the 3 digit SITC level we correlate *relative change in market share* in 1990-2002 (the growth of Chinese exports minus the growth of Latin American exports) first with the growth of world exports for the product concerned and then with the degree of

specialization of LAC (as measured by the revealed comparative advantage ratio, RCA). We carry out this correlation analysis for LAC as a group and for individual countries.

The loss of LAC market share to China is greatest in the fastest growing categories. For LAC as a group the correlation coefficient, although relatively low (0.16), is significant at the 1% level. For Mexico the correlation is higher (0.32) and strongly significant. As far the degree of specialization is concerned LAC seems to hold its position better in more specialized (higher RCA) product lines. The correlation coefficient between RCA in 2002 and relative export growth is negative and significant at the 1% for LAC as a group (-0.19) and for Mexico (-0.24) but not for many other individual countries. It also does not hold if we take specialization at the beginning of the period i.e. the RCA for 1990.

These results suggest that while the *potential* for a competitive threat exists, LAC faces a significantly smaller threat overall than EA for two reasons. First, relative export structures differ far more, and second, structural similarities that exist have yet to translate into market share challenge. If one ranks LAC countries by the correlation coefficient of their total export structure with that of China in 2002 and compares this ranking with that by the degree of direct threat (the direct threat category as a share of total exports) there is a significant negative correlation. The Spearman rank correlation coefficient is -0.504 (significant at the 1% level). In other words, the countries with the more similar export structure show lower degrees of export threat. The clearest example, as discussed, is Mexico. However, it remains to be seen whether this will continue to be the case.

We conduct a similar exercise for the US market (Table 7).¹³ China accounted for 12% of US imports in 2002 compared with just 3% in 1990. Its gain in US market share over 1990-2002, 8 percentage points, was nearly double of that of LAC 18. LAC 18 had a share of 17% in 2002, but of this 11% is due to Mexico alone (LAC-M *lost* market share in the US in this period, almost entirely in RB products). China accounted for about double US imports of LT products as compared to LAC 18 and for almost as much of HT imports. By 2002, it overtook Mexico in HT products (it had lagged in 2000) and almost matched it in RB products. Appendix Tables 5 to 7 give the value of the threat by each category for each LAC country and the five main products in each.

There are similarities as well as differences with the world market analysis (Figure 2). In terms of direct plus partial threat, Venezuela continues to be the least threatened country in LAC. However, in 2002 Paraguay appears as the most threatened country in the US as compared to Costa Rica in the world as a whole, which now appears about half-way in the threat ranks. Mexico appears even less threatened than in world markets, while Brazil appears somewhat more threatened. Argentina also moves up the threat ranks.

The direct threat category has a smaller share of LAC trade in 2002 than in 1990. The most threatened countries are now Chile (around 40% of trade in this category), followed by Argentina and Uruguay with around 35% and Brazil with 30%. The main products involved are copper (Chile), fruits (Chile, Brazil), petroleum products (Argentina, Brazil), sugar and

¹³ The competitive impact calculations below are carried out on the basis of *export figures for each country to the US* (with market shares based on world exports to the US) rather than on import figures into the US. We used the export figures to make these results comparable with the previous world market exercise. A calculation with US import data may well yield slightly different results.

fish (Uruguay) and internal combustion engines (Brazil), none of which being products in which China is expected to have an obvious edge over LAC.

When we carry out a similar correlation analysis to that for the world market we find there is a tendency for the growth of China's exports relative to those of individual LAC to be higher in the faster growing categories of US imports; however, this result is not significant for LAC as a group nor for Mexico. For LAC-Mexico there is a weak correlation of 0.15 (at the 5% level).

5. BILATERAL TRADE BETWEEN LAC AND CHINA

Closer trade ties between LAC and China may lead to increased bilateral trade, which in principle may compensate for losses in export markets. LAC is running a large and growing trade deficit with China, with the latter accounting for just under 5% of total LAC imports in 2003. From a surplus of \$175 million in 1980, LAC as whole ran a deficit of \$5.5 billion in 2002. Not every country is in deficit, of course: in 2002, five ran a surplus with China, including Argentina and Brazil. The largest deficit was for Mexico, with a figure larger than for LAC 18.

The deficits are all in non-resource based products: in 2002, primary products and RB manufactures had a surplus of \$2.3 and \$1.0 billion, respectively. However, these were offset by large deficits in manufactures: LT products (\$3.0 billion), MT products (2.8 billion) and HT MT products (\$3.0 billion). This shows the structural shift in the pattern of LAC competitiveness towards RB products and away from low technology and more complex (medium and high technology) manufactures.

Table 8 shows the breakdowns of the two regions' exports to each other by technological sub-categories. LAC exports to China show a rise in the share of mineral-based RB, a sharp decline in that of MT process exports and a significant rise in the share of HT electronics. China's exports to LAC are predominantly LT products, but their share appears to have peaked, and recent growth is largely in electronics. The growth of electronics exports by both regions suggests the start of a similar intra-industry specialisation as observed in EA; but it is largely confined to Mexico and may reflect the emergence of an integrated network across the regions.

	LAC 18 Exports To China				China's exports to LAC 18			
	1990	1995	2000	2002	1990	1995	2000	2002
Primary Products	34.32%	24.69%	53.55%	42.52%	29.03%	1.66%	1.51%	3.17%
Manufactured	65.68%	75.31%	46.45%	57.48%	70.97%	98.34%	98.49%	96.83%
<u>Resource based</u>	<u>31.84%</u>	<u>53.66%</u>	<u>28.81%</u>	<u>33.63%</u>	<u>10.52%</u>	<u>8.26%</u>	<u>9.27%</u>	<u>10.50%</u>
Agro-based	22.97%	37.14%	8.50%	13.26%	0.48%	0.42%	0.45%	0.39%
Mineral-based	8.87%	16.52%	20.31%	20.37%	10.04%	7.84%	8.82%	10.11%
<u>Low technology</u>	<u>10.30%</u>	<u>10.15%</u>	<u>5.98%</u>	<u>8.27%</u>	<u>30.37%</u>	<u>53.26%</u>	<u>48.32%</u>	<u>45.49%</u>
Fashion cluster	1.71%	6.15%	5.18%	5.44%	19.49%	34.90%	32.09%	32.82%
Other LT	8.59%	3.99%	0.80%	2.83%	10.88%	18.36%	16.23%	12.67%
<u>Medium technology</u>	<u>23.31%</u>	<u>10.75%</u>	<u>5.09%</u>	<u>9.00%</u>	<u>27.24%</u>	<u>30.94%</u>	<u>28.42%</u>	<u>26.43%</u>
Automotive	0.91%	2.90%	0.51%	2.65%	3.17%	3.30%	2.44%	2.64%
Process	21.93%	5.10%	3.36%	4.25%	3.97%	6.25%	7.48%	7.28%
Engineering	0.48%	2.75%	1.22%	2.10%	20.10%	21.40%	18.50%	16.51%
<u>High technology</u>	<u>0.24%</u>	<u>0.75%</u>	<u>6.57%</u>	<u>6.58%</u>	<u>2.83%</u>	<u>5.88%</u>	<u>12.48%</u>	<u>14.41%</u>
Electronics	0.11%	0.17%	5.04%	5.69%	0.41%	3.20%	10.11%	11.75%

Other HT	0.13%	0.58%	1.53%	0.90%	2.42%	2.68%	2.37%	2.66%
Primary + RB 'Pure' manufactures	66.15%	78.36%	82.36%	76.15%	39.55%	9.92%	10.78%	13.67%
	33.85%	21.64%	17.64%	23.85%	60.45%	90.08%	89.22%	86.33%

Bilateral trade between the Big 3 (Argentina, Brazil, Mexico) and China shows different patterns (Appendix Table 8). Argentina is overwhelmingly an exporter of primary products, with its share of RB products declining significantly and with no noticeable exports of HT products. Its imports from China are predominantly LT, but with large and growing shares of MT and HT. Argentina ran a trade surplus with China (\$763 m. in 2002), most of it, in primary products, with a smaller surplus in agro-based RB and a deficit in mineral-based RB products.

Brazil also raises its exports of primary products but maintains a very large share for RB products. It has a small but growing share for HT but a sharply falling one for MT. China's exports to Brazil span the five categories, with all manufactured categories growing at the expense of primary products. The largest category by far is HT products. Brazil also ran a trade surplus with China, \$823 m., mostly in primary products and RB manufactures (both mineral and agro-based products). Its largest deficit was in HT, followed by MT engineering products. As a major exporter of other LT products (footwear), it is interesting to see a large and growing deficit in both LT categories (bearing out reports of a massive threat to its footwear exporters).

In contrast to the rest of LAC, Mexico exports hardly any primary or RB products to China, also making a massive shift from MT to HT products. Chinese exports to Mexico also have HT as the largest category, but along with very large shares of MT and LT products. However, the values of Mexican HT exports to China are far smaller than Chinese HT exports to Mexico. In 2002, for instance, the figures are \$320 million and \$2.1 billion, respectively. Overall, Mexico runs a huge \$5.7 billion trade deficit with China. It also runs a deficit with China in every single category of trade, possibly reflecting the import of components for assembly for the US market by MNCs from Japan and other countries.

In summary, the specialization pattern emerging in LAC-China trade has LAC becoming a net exporter of primary and resource-based products and a net importer of manufactures. Several LAC countries are benefiting from Chinese imports of primary and RB products. However, trade between China and LAC accounts for tiny shares of their total trade and we cannot assume that it will have significant effects on their overall trade patterns. LAC accounted for only 2.4% of Chinese exports and China for less than 2% of LAC's exports in 2002. The main competitive arena is the US (which took over 20% of China's exports in 2002 and nearly 60% of LAC's), with EU some distance behind. It is here that the real effects of the Chinese threat are likely to be felt, although as yet we have found little direct evidence of this threat being very substantial.

6. CONCLUSIONS

In an idealised world of efficient markets and instant adjustment the erosion of an economy's export market share by a competitor poses no problems. In practice, the outcome is less clear: there may be significant adjustment costs and the structure of exports may matter to future growth. Export success in dynamic products with strong learning externalities can place an economy on a higher growth path than specialisation in 'simpler' export goods, and the process may be cumulative. The rise of China may thus have important effects on competitors, given its size and rapid growth, because it is becoming increasingly

competitive in a range of both low and high technology products and shifting its export specialisation rapidly to the latter.

LAC is not showing similar dynamism. Some countries there are benefiting from growing imports of primary and RB products by China, although China is still a relatively small market for LAC (as an import supplier, however, China overtook Japan in 2003). The trade structure of most of LAC is generally more complementary than competitive with that of China, reducing the threat of damaging trade diversion.

In general the threatened (direct plus partial) category of LAC exports is less than 40% of total exports, well below the comparable figure for EA, and the direct threat category is only 10%. The two LAC economies with the most similar export structures, Mexico and Costa Rica, have very low shares in the direct threat categories (2% and 6%, respectively) although the shares of the partial threat groups are far higher (32% and 69%, respectively). In the US market, the direct threat groups remain small and the partial threat share is much lower (8% for Mexico and 33% for Costa Rica), reflecting rapid export growth from these economies to the US.

We should reiterate some caveats. The main is attributing causation to these relationships: the market share analysis only provides a broad indication of possibilities but not a proven impact. Moreover, the past may not be a good guide to the future, particularly as far as Mexico goes. With falling trade costs, MNCs may decide to shift more export bases from Mexico and Central America to China – this may prove the real challenge to policy makers in Mexico rather than the direct threat in export markets. The level of aggregation of the export data may conceal or exaggerate the competitive impact. Relative market share changes can be misleading unless the absolute size of exports is also taken into account. However, in the absence of better measures we believe that this exercise provides useful indicators.

The pattern of bilateral trade between LAC and China, with the former specializing increasingly in primary and resource based products and the latter in manufactures, is almost a classic illustration of colonial trade between developing and industrialized regions. While this does not take into account the possibility that many resource based exports from LAC use sophisticated technologies, it is surprising in view of the fact that LAC is the richer region, with a longer industrial history, larger human resources, more FDI per capita and more liberal trade and investment regimes. The technological downgrading of LAC's comparative advantage into products that grow relatively slowly in world trade and offer relatively few technological benefits is thus not expected and may be a cause for concern. The issue is less about current competition and exports than about the future 'spaces' open for the development of industrial exports by LAC, particularly in the technology-based world that is now emerging. As Lall, Albaladejo and Moreira (2004) note, LAC needs to greatly strengthen its industrial capabilities if it is to compete with East Asia, and, given its higher wages relative to China, to invest in more advanced skills and technologies. There is little sign that it is doing so. The real competitive threat from China is that its industrial advance will force LAC further down the technology scale.

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APPENDIX TABLES

Appendix Table 1: Correlation of Export Structure between LAC and each LAC (sorted by 2002 ranking)					
All Export Products			Manufactured Products only (incl. RB)		
LAC countries	China 2002	China 1990	LAC countries	China 2002	China 1990
Mexico 2002	0.470	0.356	Mexico 2002	0.512	0.196
Costa Rica 2002	0.274	0.023	Costa Rica 2002	0.345	0.026
El Salvador 2002	0.068	0.100	Costa Rica 1990	0.181	0.210
Brazil 2002	0.068	0.214	Colombia 1990	0.148	0.282
Colombia 2002	0.019	0.403	El Salvador 1990	0.141	0.272
Colombia 1990	0.018	0.334	Uruguay 1990	0.092	0.222
Mexico 1990	0.012	0.406	Brazil 2002	0.086	0.125
Brazil 1990	0.008	0.119	El Salvador 2002	0.069	0.148
Uruguay 1990	0.004	0.086	Colombia 2002	0.062	0.172
El Salvador 1990	0.002	0.025	Mexico 1990	0.033	0.035
Venezuela 1990	-0.002	0.413	Peru 2002	0.028	0.124
Venezuela 2002	-0.002	0.417	Panama 2002	0.017	0.083
Panama 2002	-0.004	0.051	Ecuador 1990	0.017	0.088
Costa Rica 1990	-0.007	0.021	Ecuador 2002	0.010	0.031
Ecuador 2002	-0.013	0.370	Brazil 1990	0.008	0.130
Ecuador 1990	-0.014	0.396	Honduras 1990	0.005	0.083
Peru 1990	-0.016	0.078	Guatemala 1990	0.003	0.075
Uruguay 2002	-0.018	0.066	Peru 1990	0.003	0.110
Jamaica 1990	-0.019	0.013	Panama 1990	-0.001	0.059
Peru 2002	-0.023	0.082	Uruguay 2002	-0.006	0.085
Panama 1990	-0.024	0.056	Guatemala 2002	-0.019	0.018
Guatemala 2002	-0.033	0.123	Argentina 1990	-0.024	0.068
Jamaica 2002	-0.034	-0.005	Paraguay 1990	-0.024	0.017
Guatemala 1990	-0.035	0.033	Jamaica 1990	-0.027	0.013
Chile 1990	-0.035	-0.013	Nicaragua 2002	-0.035	-0.025
Honduras 1990	-0.040	-0.001	Venezuela 1990	-0.041	0.055
Argentina 1990	-0.041	0.116	Jamaica 2002	-0.042	-0.007
Paraguay 2002	-0.041	0.063	Paraguay 2002	-0.042	-0.020
Paraguay 1990	-0.044	0.044	Bolivia 2002	-0.044	-0.004
Chile 2002	-0.046	-0.021	Nicaragua 1990	-0.045	0.016
Argentina 2002	-0.053	0.272	Bolivia 1990	-0.056	-0.020
Nicaragua 2002	-0.056	0.027	Venezuela 2002	-0.059	0.115
Bolivia 2002	-0.057	0.064	Argentina 2002	-0.059	0.065
Nicaragua 1990	-0.064	0.012	Chile 1990	-0.065	-0.019
Honduras 2002	-0.068	-0.025	Chile 2002	-0.075	-0.039
Bolivia 1990	-0.068	-0.037	Honduras 2002	-0.088	-0.051

Appendix Table 2: China's potential threat to LAC in World Market by type of threat 1990 and 2002 (US\$ thousand)						
	Argentina		Bolivia		Brazil	
	1990	2002	1990	2002	1990	2002
Partial Threat	2,289,137	5,185,574	17,051	225,490	4,957,834	13,797,133
No Threat	568,439	3,529,848	25	99,116	3,038,885	11,591,197
Direct Threat	4,231,615	4,542,278	549,894	445,081	14,368,972	16,678,024
China under Threat	3,825,753	10,491,826	55,537	448,568	2,740,785	9,880,188
Mutual Withdrawal	1,426,440	1,703,906	299,461	150,089	5,926,048	7,371,005
Total	12,341,383	25,453,433	921,968	1,368,343	31,032,523	59,317,547
	Chile		Colombia		Costa Rica	
	1990	2002	1990	2002	1990	2002
Partial Threat	1,365,399	5,039,703	1,231,031	3,979,115	373,278	3,401,972
No Threat	395,272	1,780,113	19,008	719,726	2,172	21,658
Direct Threat	4,219,832	5,176,857	3,077,901	2,634,036	403,401	305,847
China under Threat	1,554,214	4,142,127	1,947,471	4,006,632	516,018	1,193,312
Mutual Withdrawal	643,639	530,384	444,980	549,713	50,431	25,117
Total	8,178,357	16,669,185	6,720,390	11,889,222	1,345,300	4,947,907
	Ecuador		El Salvador		Guatemala	
	1990	2002	1990	2002	1990	2002
Partial Threat	90,349	970,921	127,928	845,925	236,169	728,362
No Threat	1,089	68,862	180,176	123,393	336,925	315,266
Direct Threat	368,446	334,636	31,025	28,286	159,903	98,626
China under Threat	517,054	1,434,128	48,927	220,497	324,811	981,568
Mutual Withdrawal	1,735,810	2,232,343	21,013	15,083	105,162	103,556
Total	2,712,748	5,040,890	409,070	1,233,184	1,162,970	2,227,377
	Honduras		Jamaica		Mexico	
	1990	2002	1990	2002	1990	2002
Partial Threat	55,173	576,059	70,451	75,912	4,920,465	51,435,190
No Threat	357	6,732	11,467	37,503	7,594,492	81,385,144
Direct Threat	223,402	219,170	145,476	123,222	2,525,043	2,519,583
China under Threat	18,145	334,610	76,454	94,423	1,716,008	11,787,713
Mutual Withdrawal	256,445	203,415	804,614	753,154	9,491,396	13,361,572
Total	553,522	1,339,987	1,108,461	1,084,214	26,247,404	160,489,203
	Nicaragua		Panama		Paraguay	
	1990	2002	1990	2002	1990	2002
Partial Threat	8,356	220,607	44,993	395,399	74,258	186,917
No Threat	80,719	101,234	1,359	15,078	0	13,893
Direct Threat	130,319	118,436	85,372	47,154	525,044	134,843
China under Threat	21,783	100,261	104,163	187,574	32,798	234,071
Mutual Withdrawal	84,416	58,232	100,826	107,494	326,581	379,593
Total	325,593	598,770	336,712	752,698	958,681	949,317
	Peru		Uruguay		Venezuela	
	1990	2002	1990	2002	1990	2002
Partial Threat	489,083	1,685,744	264,609	717,967	549,276	1,820,890
No Threat	108,157	1,920,361	311,326	470,616	11,512	445,163
Direct Threat	1,532,536	1,481,256	939,928	391,952	2,291,745	1,862,777
China under Threat	495,802	1,389,879	55,462	150,314	177,803	571,099
Mutual Withdrawal	687,172	1,013,173	120,027	108,887	15,013,918	18,587,110
Total	3,312,750	7,490,413	1,691,351	1,839,736	18,044,254	23,287,039

Note: For some countries these totals are less than total exports because some exports could not be classified (e.g. special transactions)

Appendix Table 3: China's potential threat to LAC's in World Market by threat type 1990 and 2002 (% to total exports)						
	Argentina		Bolivia		Brazil	
	1990	2002	1990	2002	1990	2002
Partial Threat	18.55%	20.37%	1.85%	16.48%	15.98%	23.26%
No Threat	4.61%	13.87%	0.00%	7.24%	9.79%	19.54%
Direct Threat	34.29%	17.85%	59.64%	32.53%	46.30%	28.12%
China under Threat	31.00%	41.22%	6.02%	32.78%	8.83%	16.66%
Mutual Withdrawal	11.56%	6.69%	32.48%	10.97%	19.10%	12.43%
	Chile		Colombia		Costa Rica	
	1990	2002	1990	2002	1990	2002
Partial Threat	16.70%	30.23%	18.32%	33.47%	27.75%	68.76%
No Threat	4.83%	10.68%	0.28%	6.05%	0.16%	0.44%
Direct Threat	51.60%	31.06%	45.80%	22.15%	29.99%	6.18%
China under Threat	19.00%	24.85%	28.98%	33.70%	38.36%	24.12%
Mutual Withdrawal	7.87%	3.18%	6.62%	4.62%	3.75%	0.51%
	Ecuador		El Salvador		Guatemala	
	1990	2002	1990	2002	1990	2002
Partial Threat	3.33%	19.26%	31.27%	68.60%	20.31%	32.70%
No Threat	0.04%	1.37%	44.05%	10.01%	28.97%	14.15%
Direct Threat	13.58%	6.64%	7.58%	2.29%	13.75%	4.43%
China under Threat	19.06%	28.45%	11.96%	17.88%	27.93%	44.07%
Mutual Withdrawal	63.99%	44.28%	5.14%	1.22%	9.04%	4.65%
	Honduras		Jamaica		Mexico	
	1990	2002	1990	2002	1990	2002
Partial Threat	9.97%	42.99%	6.36%	7.00%	18.75%	32.05%
No Threat	0.06%	0.50%	1.03%	3.46%	28.93%	50.71%
Direct Threat	40.36%	16.36%	13.12%	11.37%	9.62%	1.57%
China under Threat	3.28%	24.97%	6.90%	8.71%	6.54%	7.34%
Mutual Withdrawal	46.33%	15.18%	72.59%	69.47%	36.16%	8.33%
	Nicaragua		Panama		Paraguay	
	1990	2002	1990	2002	1990	2002
Partial Threat	2.57%	36.84%	13.36%	52.53%	7.75%	19.69%
No Threat	24.79%	16.91%	0.40%	2.00%	0.00%	1.46%
Direct Threat	40.03%	19.78%	25.35%	6.26%	54.77%	14.20%
China under Threat	6.69%	16.74%	30.94%	24.92%	3.42%	24.66%
Mutual Withdrawal	25.93%	9.73%	29.94%	14.28%	34.07%	39.99%
	Peru		Uruguay		Venezuela	
	1990	2002	1990	2002	1990	2002
Partial Threat	14.76%	22.51%	15.64%	39.03%	3.04%	7.82%
No Threat	3.26%	25.64%	18.41%	25.58%	0.06%	1.91%
Direct Threat	46.26%	19.78%	55.57%	21.30%	12.70%	8.00%
China under Threat	14.97%	18.56%	3.28%	8.17%	0.99%	2.45%
Mutual Withdrawal	20.74%	13.53%	7.10%	5.92%	83.21%	79.82%

Appendix table 4: Top five threatened items in LAC in world markets by type of threat from CHINA										
	Mexico					Argentina				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	752	Automatic data processing machines	9,262	5.7%	3.8%	611	Leather	677	2.3%	0.4%
	821	Furniture and parts thereof	3,429	6.3%	5.2%	678	Tubes, pipes and fittings, of iron or	528	2.4%	0.2%
	759	Parts of and accessories suitable f	2,709	3.8%	1.9%	583	Polymerization and copolymerization	397	0.2%	0.0%
	749	Non-electric parts and accessories	2,155	2.4%	2.3%	054	Vegetab.,fresh,chilled,frozen/pres.	227	1.7%	0.1%
	771	Electric power machinery and parts	2,099	10.0%	8.0%	821	Furniture and parts thereof	215	6.3%	0.3%
No Threat	781	Passenger motor cars, for transport	13,948	0.0%	3.9%	044	Maize (corn), unmilled	925	7.7%	8.1%
	764	Telecommunications equipment and pa	9,284	5.1%	5.4%	341	Gas, natural and manufactured	625	0.3%	0.5%
	761	Television receivers	6,694	1.3%	20.8%	781	Passenger motor cars, for transport	604	0.0%	0.2%
	782	Motor vehicles for transport of goods	6,356	0.1%	8.4%	782	Motor vehicles for transport of goods	481	0.1%	1.0%
	773	Equipment for distributing electric	5,887	3.8%	16.9%	022	Milk and cream	237	0.2%	1.2%
Direct Threat	334	Petroleum products, refined	1,122	0.1%	-0.2%	334	Petroleum products, refined	1,398	0.1%	0.3%
	681	Silver, platinum & oth. metals of the	533	0.4%	-2.2%	011	Meat, edible meat offal, fresh, chi	441	0.2%	0.3%
	522	Inorganic chemical elements, oxides	203	5.1%	-0.7%	684	Aluminium	347	0.8%	0.1%
	686	Zinc	149	12.0%	-1.2%	034	Fish, fresh (live or dead),chilled o	336	4.2%	0.0%
	278	Other crude minerals	128	4.7%	-0.5%	674	Universals, plates and sheets, of iron	300	0.6%	0.2%
China under Threat	784	Parts & accessories of 722--,781--,	6,608	-3.4%	3.6%	081	Feedstuff for animals(not incl. unmilled	2,783	-3.5%	4.1%
	541	Medicinal and pharmaceutical products	1,172	-0.1%	0.6%	333	Petrol. oils, crude,& c.o.obtain.from	2,224	-1.7%	0.8%
	057	Fruit & nuts(not including oil nuts),	731	-0.2%	1.4%	423	Fixed vegetable oils,soft,crude,ref	1,949	-0.7%	3.4%
	553	Perfumery, cosmetics and toilet prep	534	-0.3%	1.3%	041	Wheat (including spelt) and meslin,	1,097	0.0%	2.8%
	554	Soap, cleansing and polishing preparations	454	-0.1%	2.8%	287	Ores and concentrates of base metal	562	-0.9%	1.8%
Mutual Withdrawal	333	Petrol.oils,crude,& c.o.obtain.from	13,110	-1.7%	-1.7%	222	Oil seeds and oleaginous fruit, whole	1,280	-3.2%	1.2%
	287	Ores and concentrates of base metal	158	-0.9%	-0.6%	061	Sugar and honey	196	-1.5%	0.3%
	512	Alcohols,phenols,phenol-alcohols,&	54	-0.2%	-0.5%	673	Iron and steel bars, rods, angles, shapes	82	-0.4%	0.3%
	222	Oil seeds and oleaginous fruit, whole	14	-3.2%	-0.2%	512	Alcohols,phenols,phenol-alcohols,&	53	-0.2%	0.2%
	274	Sulphur and unroasted iron pyrites	12	-0.3%	-7.3%	045	Cereals, unmilled (no wheat,rice,barley)	41	-1.5%	4.0%

	Brazil					Bolivia				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	764	Telecommunications equipment and pa	1,470	5.1%	0.4%	897	Jewellery, goldsmiths and other art.	59	6.9%	0.2%
	851	Footwear	1,449	19.8%	0.3%	723	Civil engineering & contractors pla	17	0.5%	0.1%
	611	Leather	956	2.3%	2.1%	635	Wood manufactures,n.e.s.	14	5.1%	0.1%
	821	Furniture and parts thereof	560	6.3%	0.7%	846	Under garments,knitted or crocheted	13	7.3%	0.0%
	625	Rubber tyres,tyre cases,etc.for whe	496	3.7%	0.6%	821	Furniture and parts thereof	13	6.3%	0.0%
No Threat	792	Aircraft & associated equipment and	2,799	0.5%	2.4%	971	Gold,non-monetary	90	0.0%	0.4%
	011	Meat,edible meat offals, fresh, chi	2,741	0.2%	2.7%	091	Margarine and shortening	9	0.9%	1.6%
	781	Passenger motor cars,for transport	2,006	0.0%	0.3%		(only two items)	0		
	251	Pulp and waste paper	1,161	0.0%	3.6%			0		
	121	Tobacco,unmanufactured; tobacco ref	978	1.5%	2.7%			0		
Direct Threat	672	Ingots and other primary forms,of i	1,615	4.4%	-2.1%	341	Gas,natural and manufactured	268	0.3%	-0.8%
	071	Coffee and coffee substitutes	1,385	0.1%	-1.2%	289	Ores & concentrates of precious met	64	0.0%	3.1%
	713	Internal combustion piston engines	1,359	0.5%	-0.8%	687	Tin	49	21.9%	2.0%
	684	Aluminium	1,218	0.8%	-0.8%	248	Wood, simply worked, and railway slee	23	0.9%	0.1%
	334	Petroleum products, refined	1,188	0.1%	-0.5%	611	Leather	21	2.3%	0.0%
China under Threat	001	Live animals chiefly for food	5	-1.1%	0.0%	081	Feed.stuff for animals(not incl.unm	212	-3.5%	0.6%
	012	Meat & edible offals,salted,in brin	6	-0.8%	0.1%	423	Fixed vegetable oils,soft,crude,ref	107	-0.7%	0.9%
	025	Eggs and yolks,fresh,dried or other	10	-1.0%	0.6%	333	Petrol.oils,crude,& c.o.obtain.from	62	-1.7%	0.0%
	041	Wheat (including spelt) and meslin,	0	0.0%	0.0%	057	Fruit & nuts(not includ. oil nuts),	31	-0.2%	0.0%
	057	Fruit & nuts(not includ. oil nuts),	363	-0.2%	0.3%	223	Oils seeds and oleaginous fruit, wh	16	-5.3%	5.2%
Mutual Withdrawal	281	Iron ore and concentrates	3,049	0.0%	-2.2%	287	Ores and concentrates of base metal	130	-0.9%	0.4%
	081	Feed.stuff for animals(not incl.unm	2,300	-3.5%	-3.2%	061	Sugar and honey	16	-1.5%	0.3%
	423	Fixed vegetable oils,soft,crude,ref	808	-0.7%	-1.6%	211	Hides and skins (except furskins),	2	-2.3%	0.1%
	673	Iron and steel bars,rods,angles,sha	293	-0.4%	-1.9%	072	Cocoa	1	-0.4%	0.1%
	512	Alcohols,phenols,phenol-alcohols,&	261	-0.2%	-0.2%	001	Live animals chiefly for food	1	-1.1%	0.6%

	Chile					Colombia				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	034	Fish,fresh (live or dead),chilled o	1,196	4.2%	3.5%	322	Coal,lignite and peat	972	4.0%	1.4%
	248	Wood, simply worked, and railway sleet	588	0.9%	0.8%	583	Polymerization and copolymerization	305	0.2%	0.2%
	641	Paper and paperboard	338	0.4%	0.2%	591	Disinfectants, insecticides, fungicid	190	3.4%	1.1%
	058	Fruit, preserved, and fruit preparati	204	3.7%	0.9%	846	Under garments, knitted or crocheted	155	7.3%	0.1%
	523	Other inorganic chemicals	194	5.0%	0.5%	642	Paper and paperboard, cut to size or	151	2.3%	0.3%
No Threat	251	Pulp and waste paper	823	0.0%	3.0%	533	Pigments, paints, varnishes & related	231	0.4%	1.4%
	112	Alcoholic beverages	614	0.1%	1.8%	781	Passenger motor cars, for transport	163	0.0%	0.0%
	288	Non-ferrous base metal waste and sc	103	0.3%	1.1%	062	Sugar confectionery and other sugar	115	1.4%	2.1%
	782	Motor vehicles for transport of goo	84	0.1%	0.2%	971	Gold, non-monetary	113	0.0%	0.0%
	781	Passenger motor cars, for transport	55	0.0%	0.0%	122	Tobacco manufactured	40	0.0%	0.1%
Direct Threat	682	Copper	4,649	1.7%	-1.2%	071	Coffee and coffee substitutes	865	0.1%	-9.1%
	246	Pulpwood (including chips and wood	123	4.5%	-0.9%	334	Petroleum products, refined	684	0.1%	-0.1%
	054	Vegetab., fresh, chilled, frozen/pres.	120	1.7%	-0.3%	671	Pig iron, spiegeleisen, sponge iron, i	273	6.3%	-0.8%
	681	Silver, platinum & oth. metals of the	91	0.4%	-1.0%	842	Outer garments, men's, of textile fab	148	15.1%	-0.1%
	289	Ores & concentrates of precious met	27	0.0%	-5.1%	843	Outer garments, women's, of textile f	133	11.4%	-0.6%
China under Threat	287	Ores and concentrates of base metal	1,976	-0.9%	8.4%	333	Petrol. oils, crude, & c.o. obtain. from	2,578	-1.7%	0.2%
	057	Fruit & nuts (not includ. oil nuts),	1,325	-0.2%	0.5%	292	Crude vegetable materials, n.e.s.	675	-0.4%	2.0%
	512	Alcohols, phenols, phenol-alcohols, &	314	-0.2%	1.3%	541	Medicinal and pharmaceutical produc	242	-0.1%	0.2%
	292	Crude vegetable materials, n.e.s.	173	-0.4%	0.7%	061	Sugar and honey	226	-1.5%	0.6%
	036	Crustaceans and molluscs, fresh, chil	112	-4.3%	0.4%	553	Perfumery, cosmetics and toilet prep	73	-0.3%	0.2%
Mutual Withdrawal	081	Feed. stuff for animals (not incl. unnm	343	-3.5%	-1.4%	057	Fruit & nuts (not includ. oil nuts),	455	-0.2%	0.0%
	281	Iron ore and concentrates	140	0.0%	-0.5%	036	Crustaceans and molluscs, fresh, chil	84	-4.3%	-0.2%
	247	Other wood in the rough or roughly	37	-0.5%	-0.7%	072	Cocoa	8	-0.4%	-0.9%
	211	Hides and skins (except furskins),	4	-2.3%	-0.1%	512	Alcohols, phenols, phenol-alcohols, &	1	-0.2%	0.0%
	282	Waste and scrap metal of iron or st	4	-0.1%	0.0%	941	Animals, live, n.e.s., incl. zoo-anima	1	-1.3%	-0.2%

	Costa Rica					Ecuador				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	759	Parts of and accessories suitable f	898	3.8%	1.1%	037	Fish,crustaceans and molluscs,prepa	343	14.1%	1.8%
	872	Medical instruments and appliances	357	1.6%	0.8%	058	Fruit,preserved,and fruit preparati	75	3.7%	0.5%
	846	Under garments,knitted or crocheted	187	7.3%	0.5%	335	Residual petroleum products,nes.& r	51	1.0%	0.8%
	098	Edible products and preparations n.	134	1.0%	0.4%	054	Vegetab.,fresh,chilled,frozen/pres.	39	1.7%	0.1%
	058	Fruit,preserved,and fruit preparati	127	3.7%	0.9%	062	Sugar confectionery and other sugar	29	1.4%	0.5%
No Threat	971	Gold,non-monetary	8	0.0%	0.0%	781	Passenger motor cars,for transport	46	0.0%	0.0%
	035	Fish,dried,salted or in brine ; smo	6	0.1%	0.3%	971	Gold,non-monetary	13	0.0%	0.0%
	047	Other cereal meals and flours	4	0.4%	1.0%	431	Animal & vegetable oils and fats,pr	9	0.1%	0.3%
	073	Chocolate & other food preptns. con	4	0.0%	0.1%	047	Other cereal meals and flours	1	0.4%	0.4%
		(only four items)					(only four items)			
Direct Threat	071	Coffee and coffee substitutes	170	0.1%	-0.7%	334	Petroleum products,refined	171	0.1%	-
	843	Outer garments,women's,of textile f	35	11.4%	0.0%	034	Fish,fresh (live or dead),chilled o	91	4.2%	0.0%
	899	Other miscellaneous manufactured ar	25	8.6%	-0.1%	071	Coffee and coffee substitutes	42	0.1%	-
	011	Meat,edible meat offals, fresh, chi	24	0.2%	-0.1%	098	Edible products and preparations n.	7	1.0%	0.0%
	874	Measuring,checking,analysing instru	16	0.9%	0.0%	073	Chocolate & other food preptns. con	6	0.0%	0.0%
China under Threat	057	Fruit & nuts(not includ. oil nuts),	708	-0.2%	0.7%	057	Fruit & nuts(not includ. oil nuts),	999	-0.2%	0.4%
	541	Medicinal and pharmaceutical produc	174	-0.1%	0.1%	292	Crude vegetable materials, n.e.s.	294	-0.4%	1.0%
	292	Crude vegetable materials, n.e.s.	160	-0.4%	0.5%	541	Medicinal and pharmaceutical produc	37	-0.1%	0.0%
	424	Other fixed vegetable oils,fluid or	38	-1.3%	0.4%	222	Oil seeds and oleaginous fruit,whol	19	-3.2%	0.1%
	061	Sugar and honey	30	-1.5%	0.0%	081	Feed.stuff for animals(not incl.unm	18	-3.5%	0.0%
Mutual Withdrawal	512	Alcohols,phenols,phenol-alcohols,&	9	-0.2%	-0.1%	333	Petrol.oils,crude,& c.o.obtain.from	1,838	-1.7%	-
	001	Live animals chiefly for food	4	-1.1%	0.0%	036	Crustaceans and molluscs,fresh,chil	256	-4.3%	-
	075	Spices	4	-1.3%	-0.1%	072	Cocoa	122	-0.4%	-
	072	Cocoa	3	-0.4%	-0.2%	265	Vegetable textile fibres and waste	8	-4.5%	-
	551	Essential oils,perfume and flavour	2	-1.7%	0.0%	784	Parts & accessories of 722--,781--,	4	-3.4%	0.0%

	El Salvador					Guatemala				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	642	Paper and paperboard,cut to size or	96	2.3%	0.2%	048	Cereal prepar. & preps. of flour of	67	1.3%	0.2%
	334	Petroleum products,refined	61	0.1%	0.0%	893	Articles of materials described in	52	7.1%	0.0%
	048	Cereal prepar. & preps. of flour of	47	1.3%	0.1%	054	Vegetab.,fresh,chilled,frozen/pres.	44	1.7%	0.2%
	674	Universals,plates and sheets,of iro	45	0.6%	0.1%	642	Paper and paperboard,cut to size or	37	2.3%	0.1%
	846	Under garments,knitted or crocheted	43	7.3%	0.1%	591	Disinfectants,insecticides,fungicid	36	3.4%	0.3%
No Threat	071	Coffee and coffee substitutes	109	0.1%	0.3%	071	Coffee and coffee substitutes	262	0.1%	0.8%
	047	Other cereal meals and flours	7	0.4%	2.2%	232	Natural rubber latex; nat.rubber &	29	0.0%	0.4%
	073	Chocolate & other food preptns. con	4	0.0%	0.0%	122	Tobacco manufactured	10	0.0%	0.0%
	431	Animal & vegetable oils and fats,pr	4	0.1%	0.1%	431	Animal & vegetable oils and fats,pr	8	0.1%	0.2%
	971	Gold,non-monetary	0	0.0%	0.0%	047	Other cereal meals and flours	6	0.4%	0.9%
Direct Threat	651	Textile yarn	15	4.2%	0.0%	778	Electrical machinery and apparatus,	18	5.2%	0.0%
	693	Wire products and fencing grills	3	3.8%	0.0%	625	Rubber tyres,tyre cases,etc.for whe	12	3.7%	0.0%
	842	Outer garments,men's,of textile fab	1	15.1%	0.0%	658	Made-up articles,wholly/chiefly of	9	3.8%	0.0%
	657	Special textile fabrics and related	1	2.4%	0.0%	248	Wood, simply worked, and railway slee	8	0.9%	0.0%
	898	Musical instruments,parts and acces	1	1.1%	0.0%	062	Sugar confectionery and other sugar	7	1.4%	-0.3%
China under Threat	061	Sugar and honey	57	-1.5%	0.3%	057	Fruit & nuts(not includ. oil nuts),	253	-0.2%	0.4%
	554	Soap,cleansing and polishing prepar	55	-0.1%	0.2%	061	Sugar and honey	245	-1.5%	0.6%
	541	Medicinal and pharmaceutical produc	52	-0.1%	0.0%	333	Petrol.oils,crude,& c.o.obtain.from	149	-1.7%	0.0%
	673	Iron and steel bars,rods,angles,sha	10	-0.4%	0.0%	075	Spices	94	-1.3%	0.4%
	553	Perfumery,cosmetics and toilet prep	6	-0.3%	0.0%	554	Soap,cleansing and polishing prepar	65	-0.1%	0.3%
Mutual Withdrawal	036	Crustaceans and molluscs,fresh,chil	13	-4.3%	0.0%	541	Medicinal and pharmaceutical produc	73	-0.1%	-0.1%
	222	Oil seeds and oleaginous fruit,whol	2	-3.2%	-0.1%	222	Oil seeds and oleaginous fruit,whol	21	-3.2%	-0.2%
	057	Fruit & nuts(not includ. oil nuts),	1	-0.2%	0.0%	036	Crustaceans and molluscs,fresh,chil	5	-4.3%	0.0%
	585	Other artificial resins and plastic	0	-4.1%	0.0%	551	Essential oils,perfume and flavour	3	-1.7%	0.0%
	281	Iron ore and concentrates	0	0.0%	0.0%	045	Cereals,unmilled (no wheat,rice,ba	1	-1.5%	0.0%

	Honduras					Jamaica				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	248	Wood, simply worked, and railway sleepers	181	0.9%	0.1%	054	Vegetables, fresh, chilled, frozen/preserved.	18	1.7%	0.0%
	054	Vegetables, fresh, chilled, frozen/preserved.	107	1.7%	0.2%	098	Edible products and preparations n.e.s.	15	1.0%	0.0%
	635	Wood manufactures, n.e.s.	32	5.1%	0.1%	048	Cereal preparations & preparations of flour of wheat	13	1.3%	0.0%
	058	Fruit, preserved, and fruit preparations	29	3.7%	0.0%	846	Undergarments, knitted or crocheted	7	7.3%	0.2%
	288	Non-ferrous base metal waste and scrap	29	0.3%	0.1%	111	Non-alcoholic beverages, n.e.s.	4	1.0%	0.0%
No Threat	047	Other cereal meals and flours	4	7.7%	8.1%	071	Coffee and coffee substitutes	33	0.1%	0.2%
	023	Butter	2	0.3%	0.5%	024	Cheese and curd	5	0.0%	0.0%
	073	Chocolate & other food preparations, confectionery, etc. (only three items)	0	0.0%	0.2%		(only two items)			
Direct Threat	071	Coffee and coffee substitutes	163	0.1%	-0.4%	112	Alcoholic beverages	52	0.1%	0.0%
	642	Paper and paperboard, cut to size or shape	13	2.3%	0.0%	334	Petroleum products, refined	29	0.1%	0.0%
	893	Articles of materials described in heading 847	8	7.1%	0.0%	058	Fruit, preserved, and fruit preparations	12	3.7%	0.0%
	641	Paper and paperboard	4	0.4%	0.0%	844	Undergarments of textile fabrics	4	10.0%	0.0%
	034	Fish, fresh (live or dead), chilled or frozen	4	4.2%	0.0%	893	Articles of materials described in heading 847	4	7.1%	0.0%
China under Threat	061	Sugar and honey	162	-1.5%	0.7%	061	Sugar and honey	54	-1.5%	0.1%
	424	Other fixed vegetable oils, fluid or solid	58	-1.3%	0.5%	512	Alcohols, phenols, phenol-alcohols, and aldehydes	35	-0.2%	0.3%
	554	Soap, cleansing and polishing preparations	40	-0.1%	0.2%	036	Crustaceans and molluscs, fresh, chilled or frozen	4	-4.3%	0.0%
	282	Waste and scrap metal of iron or steel	38	-0.1%	0.1%	074	Tea and mate	1	-0.2%	0.0%
	673	Iron and steel bars, rods, angles, shapes, and profiles	27	-0.4%	0.0%	211	Hides and skins (except furskins), of animals	0	-2.3%	0.0%
Mutual Withdrawal	057	Fruit & nuts (not including oil nuts), fresh, chilled or frozen	187	-0.2%	-0.1%	287	Ores and concentrates of base metal	709	-0.9%	-1.1%
	036	Crustaceans and molluscs, fresh, chilled or frozen	5	-4.3%	-0.3%	057	Fruit & nuts (not including oil nuts), fresh, chilled or frozen	26	-0.2%	0.1%
	247	Other wood in the rough or roughly squared	3	-0.5%	-0.2%	075	Spices	5	-1.3%	0.3%
	292	Crude vegetable materials, n.e.s.	2	-0.4%	0.0%	553	Perfumery, cosmetics and toilet preparations	3	-0.3%	0.0%
	211	Hides and skins (except furskins), of animals	2	-2.3%	0.0%	551	Essential oils, perfume and flavouring preparations	3	-1.7%	0.1%

	Nicaragua					Panama				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	054	Vegetab.,fresh,chilled,frozen/pres.	23	1.7%	0.0%	034	Fish,fresh (live or dead),chilled o	210	4.2%	0.6%
	022	Milk and cream	21	0.2%	0.0%	334	Petroleum products,refined	46	0.1%	0.0%
	121	Tobacco,unmanufactured; tobacco ref	17	1.5%	0.1%	037	Fish,crustaceans and molluscs,prepa	22	14.1%	0.0%
	034	Fish,fresh (live or dead),chilled o	15	4.2%	0.0%	011	Meat,edible meat offals, fresh, chi	20	0.2%	0.0%
	248	Wood,Simply worked,and railway slee	15	0.9%	0.0%	054	Vegetab.,fresh,chilled,frozen/pres.	14	1.7%	0.0%
No Threat	071	Coffee and coffee substitutes	77	0.1%	0.5%	035	Fish,dried,salted or in brine ; smo	15	0.1%	1.0%
	024	Cheese and curd	19	0.0%	0.2%	122	Tobacco manufactured	0	0.0%	0.2%
	122	Tobacco manufactured	6	0.0%	0.1%		(only two items)	0		
		(only three items)	0					0		
Direct Threat	011	Meat,edible meat offals, fresh, chi	91	0.2%	-0.1%	098	Edible products and preparations n.	13	1.0%	0.0%
	694	Nails,screws,nuts,bolts etc.of iron	5	2.1%	0.0%	071	Coffee and coffee substitutes	9	0.1%	0.0%
	699	Manufactures of base metal,n.e.s.	3	3.2%	0.0%	642	Paper and paperboard,cut to size or	8	2.3%	0.0%
	778	Electrical machinery and apparatus,	3	5.2%	0.0%	611	Leather	7	2.3%	0.0%
	112	Alcoholic beverages	2	0.1%	0.0%	847	Clothing accessories of textile fab	2	4.3%	0.0%
China under Threat	036	Crustaceans and molluscs,fresh,chil	36	-4.3%	0.6%	057	Fruit & nuts(not includ. oil nuts),	152	-0.2%	0.1%
	222	Oil seeds and oleaginous fruit,whol	27	-3.2%	0.1%	001	Live animals chiefly for food	13	-1.1%	0.2%
	001	Live animals chiefly for food	21	-1.1%	0.3%	081	Feed.stuff for animals(not incl.unm	6	-3.5%	0.0%
	512	Alcohols,phenols,phenol-alcohols,&	4	-0.2%	0.0%	025	Eggs and yolks,fresh,dried or other	4	-1.0%	0.1%
	423	Fixed vegetable oils,soft,crude,ref	3	-0.7%	0.0%	512	Alcohols,phenols,phenol-alcohols,&	3	-0.2%	0.0%
Mutual Withdrawal	061	Sugar and honey	29	-1.5%	-0.1%	036	Crustaceans and mollusks, fresh, chil	77	-4.3%	0.0%
	057	Fruit & nuts(not includ. oil nuts),	16	-0.2%	-0.1%	061	Sugar and honey	15	-1.5%	-0.2%
	673	Iron and steel bars,rods,angles,sha	6	-0.4%	0.0%	541	Medicinal and pharmaceutical produc	14	-0.1%	0.0%
	081	Feed.stuff for animals(not incl.unm	4	-3.5%	0.0%	072	Cocoa	0	-0.4%	0.0%
	554	Soap,cleansing and polishing prepar	1	-0.1%	0.0%	784	Parts & accessories of 722--,781--,	0	-3.4%	0.0%
	Paraguay					Peru				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	611	Leather	53	2.3%	0.1%	846	Under garments,knitted or crocheted	319	7.3%	0.7%
	248	Wood,Simply worked,and railway slee	39	0.9%	0.0%	845	Outer garments and other articles,k	166	8.2%	0.1%

	893	Articles of materials described in	32	7.1%	0.0%	522	Inorganic chemical elements,oxides	86	5.1%	0.2%
No Threat	011	Meat,edible meat offals, fresh, chi	284	0.2%	0.2%	334	Petroleum products,refined	331	0.1%	5.1%
	022	Milk and cream	78	0.2%	0.4%	781	Passenger motor cars,for transport	59	0.0%	0.0%
	122	Tobacco manufactured	40	0.0%	0.4%	971	Gold,non-monetary	46	0.0%	0.1%
	781	Passenger motor cars,for t ransport	36	0.0%	0.0%	047	Other cereal meals and flours	5	0.4%	1.8%
	024	Cheese and curd	33	0.0%	0.2%	073	Chocolate & other food preptns. con	4	0.0%	0.1%
Direct Threat	042	Rice	140	6.5%	-0.2%	684	Aluminium	719	0.8%	-
	034	Fish,fresh (live or dead),chilled o	81	4.2%	-0.1%	674	Universals,plates and sheets,of iro	223	0.6%	-
	848	Art.of apparel & clothing accessori	26	22.2%	-0.5%	672	Ingots and other primary forms,of i	223	4.4%	-
	268	Wool and other anim al hair (excludi	25	5.3%	-5.7%	562	Fertilizers,manufactured	51	1.9%	-
	014	Meat & edib.offals,prep./pres.,fish	19	2.4%	-0.4%	641	Paper and paperboard	50	0.4%	0.0%
China under Threat	247	Other wood in the rough or roughly	42	-0.5%	0.6%	784	Parts & accessories of 722--,781--,	163	-3.4%	0.0%
	057	Fruit & nuts(not includ. oil nuts),	35	-0.2%	0.0%	512	Alcohols,phenols,phenol-alcohols,&	107	-0.2%	0.8%
	541	Medicinal and pharmaceutical produc	27	-0.1%	0.0%	036	Crustaceans and molluscs,fresh,chil	87	-4.3%	0.4%
	784	Parts & accessories of 722--,781--,	19	-3.4%	0.0%	541	Medicinal and pharmaceutical produc	62	-0.1%	0.0%
	036	Crustaceans and molluscs,fresh,chil	16	-4.3%	0.1%	287	Ores and concentrates of base metal	57	-0.9%	0.2%
Mutual Withdrawal	222	Oil seeds and oleaginous fruit,whol	41	-3.2%	-0.1%	333	Petrol.oils,crude,& c.o.obtain.from	18,323	-1.7%	-
	654	Textil.fabrics,woven,oth.than cotto	34	-1.0%	-0.1%	673	Iron and steel bars,rods,angles,sha	97	-0.4%	-
	061	Sugar and honey	18	-1.5%	-0.1%	281	Iron ore and concentrates	93	0.0%	-
	211	Hides and skins (except furskins),	5	-2.3%	-0.2%	057	Fruit & nuts(not includ. oil nuts),	17	-0.2%	-
	554	Soap,cleansing and polishing prepar	4	-0.1%	-0.1%	553	Perfumery,cosmetics and toilet prep	12	-0.3%	-

Note: GC is growth of CHINA exports; GL is growth of LAC country exports

Appendix Table 5: CHINA's potential threat to LAC in US markets by type of threat, 1990 and 2002 (US\$ thousand)						
	Argentina		Bolivia		Brazil	
	1990	2002	1990	2002	1990	2002
Partial Threat	228,353	732,507	1,102	100,893	1,571,573	4,820,115
No Threat	93,318	335,110	104	11,860	1,108,727	4,602,035
Direct Threat	1,089,450	977,547	59,082	34,322	4,601,856	4,607,537
China under Threat	243,831	867,425	45	11,882	137,357	995,120
Mutual Withdrawal	21,995	20,943	124,029	33,693	312,234	480,610
Total	1,676,948	2,933,531	184,362	192,650	7,731,747	15,505,417
	Chile		Colombia		Costa Rica	
	1990	2002	1990	2002	1990	2002
Partial Threat	145,208	666,191	59,052	380,747	139,472	822,210
No Threat	142,147	1,122,507	236,610	983,706	217,706	1,261,987
Direct Threat	998,772	1,361,403	1,258,372	1,403,881	190,934	197,873
China under Threat	18,412	146,702	1,349,530	2,483,693	20,423	223,419
Mutual Withdrawal	35,592	102,909	92,973	75,480	4,446	4,220
Total	1,340,131	3,399,712	2,996,537	5,327,508	572,981	2,509,708
	Ecuador		El Salvador		Guatemala	
	1990	2002	1990	2002	1990	2002
Partial Threat	50,234	301,804	25,946	116,708	35,920	74,381
No Threat	12,029	258,509	69,620	44,915	254,283	359,458
Direct Threat	583,463	379,434	24,685	39,037	129,484	83,045
China under Threat	532,593	956,574	310	25,121	20,885	151,458
Mutual Withdrawal	259,067	160,907	18,778	23,880	22,582	6,460
Total	1,437,386	2,057,229	139,339	249,661	463,153	674,802
	Honduras		Jamaica		Mexico	
	1990	2002	1990	2002	1990	2002
Partial Threat	13,987	111,270	3,011	12,489	1,425,071	11,655,037
No Threat	49,988	196,261	49	37,309	5,206,800	90,348,215
Direct Threat	180,437	91,483	78,376	64,011	2,942,150	4,289,304
China under Threat	76	2,562	221,105	166,117	8,125,726	35,945,896
Mutual Withdrawal	40,162	7,520	24,993	24,521	794,308	843,171
Total	284,649	409,095	327,533	304,448	18,494,056	143,081,622
	Nicaragua		Panama		Paraguay	
	1990	2002	1990	2002	1990	2002
Partial Threat	19,267	62,856	24,731	236,702	4,982	23,523
No Threat	186	88,355	2,105	27,025	0	0
Direct Threat	878	321	73,204	28,074	24,694	5,652
China under Threat	2,069	32,209	17	2,872	1,754	4,904
Mutual Withdrawal	0	0	52,864	65,617	9,563	2,354
Total	22,399	183,741	152,922	360,290	40,992	36,433
	Peru		Uruguay		Venezuela	
	1990	2002	1990	2002	1990	2002
Partial Threat	69,967	284,908	1,029	30,147	94,325	344,814
No Threat	63,837	904,306	1,540	7,800	49,217	781,920
Direct Threat	424,176	295,636	125,980	48,364	877,181	660,086
China under Threat	21,907	295,947	17,500	50,639	27,040	80,120
Mutual Withdrawal	184,226	136,227	13,000	2,588	8,257,119	11,247,814
Total	764,113	1,917,024	159,049	139,539	9,304,881	13,114,755

Note: For some countries these totals are less than total exports because some exports could not be classified (e.g. special transactions)

Appendix Table 6: CHINA's potential threat to LAC's in US market by threat type 1990 and 2002 (% to total exports)						
	Argentina		Bolivia		Brazil	
	1990	2002	1990	2002	1990	2002
Partial Threat	13.62%	24.97%	0.60%	52.37%	20.33%	31.09%
No Threat	5.56%	11.42%	0.06%	6.16%	14.34%	29.68%
Direct Threat	64.97%	33.32%	32.05%	17.82%	59.52%	29.72%
China under Threat	14.54%	29.57%	0.02%	6.17%	1.78%	6.42%
Mutual Withdrawal	1.31%	0.71%	67.27%	17.49%	4.04%	3.10%
	Chile		Colombia		Costa Rica	
	1990	2002	1990	2002	1990	2002
Partial Threat	10.84%	19.60%	1.97%	7.15%	24.34%	32.76%
No Threat	10.61%	33.02%	7.90%	18.46%	38.00%	50.28%
Direct Threat	74.53%	40.04%	41.99%	26.35%	33.32%	7.88%
China under Threat	1.37%	4.32%	45.04%	46.62%	3.56%	8.90%
Mutual Withdrawal	2.66%	3.03%	3.10%	1.42%	0.78%	0.17%
	Ecuador		El Salvador		Guatemala	
	1990	2002	1990	2002	1990	2002
Partial Threat	3.49%	14.67%	18.62%	46.75%	7.76%	11.02%
No Threat	0.84%	12.57%	49.96%	17.99%	54.90%	53.27%
Direct Threat	40.59%	18.44%	17.72%	15.64%	27.96%	12.31%
China under Threat	37.05%	46.50%	0.22%	10.06%	4.51%	22.44%
Mutual Withdrawal	18.02%	7.82%	13.48%	9.56%	4.88%	0.96%
	Honduras		Jamaica		Mexico	
	1990	2002	1990	2002	1990	2002
Partial Threat	4.91%	27.20%	0.92%	4.10%	7.71%	8.15%
No Threat	17.56%	47.97%	0.02%	12.25%	28.15%	63.14%
Direct Threat	63.39%	22.36%	23.93%	21.03%	15.91%	3.00%
China under Threat	0.03%	0.63%	67.51%	54.56%	43.94%	25.12%
Mutual Withdrawal	14.11%	1.84%	7.63%	8.05%	4.29%	0.59%
	Nicaragua		Panama		Paraguay	
	1990	2002	1990	2002	1990	2002
Partial Threat	86.02%	34.21%	16.17%	65.70%	12.15%	64.57%
No Threat	0.83%	48.09%	1.38%	7.50%	0.00%	0.00%
Direct Threat	3.92%	0.17%	47.87%	7.79%	60.24%	15.51%
China under Threat	9.23%	17.53%	0.01%	0.80%	4.28%	13.46%
Mutual Withdrawal	0.00%	0.00%	34.57%	18.21%	23.33%	6.46%
	Peru		Uruguay		Venezuela	
	1990	2002	1990	2002	1990	2002
Partial Threat	9.16%	14.86%	0.65%	21.60%	1.01%	2.63%
No Threat	8.35%	47.17%	0.97%	5.59%	0.53%	5.96%
Direct Threat	55.51%	15.42%	79.21%	34.66%	9.43%	5.03%
China under Threat	2.87%	15.44%	11.00%	36.29%	0.29%	0.61%
Mutual Withdrawal	24.11%	7.11%	8.17%	1.85%	88.74%	85.76%

Appendix Table 7: Top five threatened items in US export market by type of threat and by country										
	Mexico					Argentina				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	775	Household elect.& non-electric	1,904	24.9%	21.5%	821	Furniture and parts thereof	173	11.4%	0.9%
	893	Articles of materials described in	1,658	17.8%	16.3%	058	Fruit, preserved, and fruit preparations	87	5.9%	2.3%
	812	Sanitary, plumbing, heating, lighting	1,108	28.7%	26.0%	784	Parts & accessories of 722–,781–,	59	0.9%	0.0%
	894	Baby carriages, toys, games and sport	1,034	41.4%	4.8%	673	Iron and steel bars, rods, angles, shapes	53	2.2%	0.1%
	672	Ingots and other primary forms	485	3.9%	2.6%	034	Fish, fresh (live or dead),chilled o	47	7.4%	0.3%
No Threat	764	Telecommunications equipment and pa	8,989	4.8%	24.3%	684	Aluminium	116	0.2%	1.4%
	752	Automatic data processing machines	8,383	8.5%	14.9%	792	Aircraft & associated equipment and	70	0.4%	0.4%
	784	Parts & accessories of 722–,781–,	6,343	0.9%	16.0%	121	Tobacco, unmanufactured; tobacco ref	36	1.7%	2.7%
	782	Motor vehicles for transport of goo	6,181	0.0%	30.0%	057	Fruit & nuts(not includ. oil nuts),	35	0.3%	1.1%
	773	Equipment for distributing electric	5,789	3.4%	58.7%	061	Sugar and honey	34	1.4%	2.6%
Direct Threat	054	Vegetables, fresh, chilled, frozen/pres.	2,141	0.0%	-7.6%	334	Petroleum products, refined	571	0.3%	-3.9%
	334	Petroleum products, refined	816	0.3%	-0.2%	014	Meat & edib. offals, prep./pres. fish	56	0.7%	-
	641	Paper and paperboard	151	0.1%	0.0%	678	Tubes, pipes and fittings, of iron	38	3.4%	-1.5%
	522	Inorganic chemical elements, oxides	147	3.3%	-6.8%	612	Manufactures of leather/of composites	24	18.3%	-1.0%
	673	Iron and steel bars, rods, angles, shapes	139	2.2%	-1.4%	335	Residual petroleum products, nes.& r	22	7.3%	-3.5%
China under Threat	781	Passenger motor cars, for transport	12,097	0.0%	8.1%	333	Petrol. oils, crude,& c.o.	553	-1.0%	0.6%
	333	Petrol. oils, crude,& c.o.	10,247	-1.0%	4.1%	611	Leather	178	-0.2%	3.4%
	761	Television receivers	6,514	-1.5%	62.8%	112	Alcoholic beverages	36	0.0%	0.5%
	842	Outer garments, men's, of textile fabric	1,906	-0.1%	28.1%	551	Essential oils, perfume and flavour	35	-0.2%	3.2%
	846	Under garments, knitted or crocheted	1,481	-0.1%	23.9%	074	Tea and mate	29	-7.7%	12.2%
Mutual Withdrawal	681	Silver, platinum & oth. metals	495	-0.1%	12.6%	541	Medicinal and pharmaceutical produc	8	-0.4%	0.0%
	001	Live animals chiefly for food	308	0.0%	-7.2%	652	Cotton fabrics, woven	5	-3.2%	-0.3%
	287	Ores and concentrates of base metal	24	-3.3%	-8.3%	081	Feed. stuff for animals	5	-0.5%	-1.4%
	689	Miscell. non-ferrous base metals emp	12	-2.4%	-1.5%	658	Made-up articles, wholly/chiefly of	1	-3.1%	-0.1%
	896	Works of art, collectors pieces & an	4	-1.1%	0.0%	846	Under garments, knitted or crocheted	1	-0.1%	-0.2%
	Brazil					Bolivia				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	764	Telecommunications equipment and pa	1,034	4.8%	0.9%	897	Jewellery, goldsmiths and other art.	12	5.8%	0.8%
	851	Footwear	519	40.9%	0.4%	635	Wood manufactures ,n.e.s.	7	7.1%	0.5%

	672	Ingot and other primary forms	302	3.9%	3.7%	821	Furniture and parts thereof	5	11.4%	0.1%
	743	Pumps & compressors, fans & blowers,	293	1.4%	0.4%	334	Petroleum products,refined	2	0.3%	0.0%
	635	Wood manufactures ,n.e.s.	2,282	7.1%	2.0%	522	Inorganic chemical elements,oxides	8	3.3%	0.1%
No Threat	792	Aircraft & associated equipment and	447	0.4%	4.5%	723	Civil engineering & contractors pla	2	0.1%	0.2%
	671	Pig iron, spiegeleisen, sponge iron	300	1.6%	8.6%	971	Gold, non-monetary	1	0.0%	0.1%
	251	Pulp and waste paper	283	0.0%	5.5%	045	Cereals, unmilled (no wheat, rice, barley)	0	0.0%	0.3%
	248	Wood, simply worked, and railway sleepers	259	0.2%	2.1%	054	Vegetab.,fresh, chilled, frozen/pres.	0	0.0%	0.0%
	971	Gold, non-monetary	671	0.0%	14.5%	792	Aircraft & associated equipment and	12	0.4%	0.7%
Direct Threat	334	Petroleum products, refined	503	0.3%	-3.4%	248	Wood, simply worked, and railway sleepers	10	0.2%	-0.6%
	713	Internal combustion piston engines	413	0.2%	-4.2%	057	Fruit & nuts(not includ. oil nuts),	6	0.3%	-0.2%
	784	Parts & accessories of 722--,781--,	234	0.9%	-0.1%	845	Outer garments and other articles	3	4.8%	0.0%
	071	Coffee and coffee substitutes	190	0.0%	-9.4%	061	Sugar and honey	2	1.4%	-0.7%
	058	Fruit, preserved, and fruit preparations	634	5.9%	29.0%	071	Coffee and coffee substitutes	11	0.0%	0.0%
China under Threat	781	Passenger motor cars,for transport	186	0.0%	0.1%	846	Under garments,knitted or crocheted	0	-0.1%	0.2%
	333	Petrol.oils,crude,& c.o.obtain.from	105	-1.0%	0.1%	781	Passenger motor cars,for transport	0	0.0%	0.0%
	611	Leather	25	-0.2%	2.1%	658	Made-up articles,wholly/chiefly of	0	-3.1%	0.0%
	681	Silver,platinum & oth.metals of the	17	-0.1%	0.1%	611	Leather	0	-0.2%	0.0%
	687	Tin	184	-2.7%	4.8%	652	Cotton fabrics,woven	31	-3.2%	0.0%
Mutual Withdrawal	658	Made-up articles,wholly/chiefly of	152	-3.1%	-2.8%	687	Tin	2	-2.7%	13.4%
	036	Crustaceans and molluscs,fresh,chil	32	-9.4%	-1.1%	287	Ores and concentrates of base metal	1	-3.3%	-1.2%
	846	Under garments,knitted or crocheted	31	-0.1%	-1.1%	842	Outer garments,men's,of textile fab	0	-0.1%	0.0%
	551	Essential oils,perfume and flavour	25	-0.2%	-1.3%	112	Alcoholic beverages	0	0.0%	0.0%
	287	Ores and concentrates of base metal	0	-3.3%	-2.5%	689	Miscell.non-ferrous base metals emp	0	-2.4%	-0.4%
	Chile					Colombia				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	635	Wood manufactures,n.e.s.	99	7.1%	1.2%	667	Pearls,precious& semi-prec.stones,u	54	0.1%	0.1%
	334	Petroleum products,refined	66	0.3%	0.2%	583	Polymerization and copolymerization	46	0.5%	0.2%
	058	Fruit,preserved,and fruit preparati	66	5.9%	2.7%	122	Tobacco manufactured	32	0.9%	0.3%
	522	Inorganic chemical elements,oxides	60	3.3%	0.9%	665	Glassware	21	6.3%	0.4%
	523	Other inorganic chemicals	59	7.0%	0.0%	678	Tubes,pipes and fittings,of iron or	19	3.4%	0.6%
No Threat	034	Fish,fresh (live or dead),chilled o	465	7.4%	9.8%	292	Crude vegetable materials, n.e.s.	551	0.5%	3.6%

	248	Wood, simply worked, and railway sleepers	344	0.2%	2.4%	322	Coal, lignite and peat	253	0.1%	10.8%
	512	Alcohols, phenols, phenol-alcohols, & aldehydes	149	0.0%	3.1%	971	Gold, non-monetary	106	0.0%	0.4%
	641	Paper and paperboard	72	0.1%	0.4%	533	Pigments, paints, varnishes & related	56	0.2%	15.2%
	044	Maize (corn), unmilled	51	0.0%	12.1%	847	Clothing accessories of textile fabrics	9	0.0%	0.2%
Direct Threat	682	Copper	658	0.9%	-8.2%	334	Petroleum products, refined	549	0.3%	-1.1%
	057	Fruit & nuts (not incl. oil nuts),	587	0.3%	-4.8%	071	Coffee and coffee substitutes	288	0.0%	-0.1%
	037	Fish, crustaceans and molluscs, prepared	21	9.3%	-0.4%	057	Fruit & nuts (not incl. oil nuts),	175	0.3%	-1.8%
	054	Vegetables, fresh, chilled, frozen/preserved	17	0.0%	-2.2%	843	Outer garments, women's, of textile fabrics	94	4.9%	-0.6%
	812	Sanitary, plumbing, heating, lighting	13	28.7%	-0.4%	661	Lime, cement, and fabricated construction materials	61	6.0%	-0.3%
China under Threat	112	Alcoholic beverages	131	0.0%	1.5%	333	Petroleum oils, crude, & c.o. obtained from	2,313	-1.0%	2.1%
	036	Crustaceans and molluscs, fresh, chilled	6	-9.4%	0.2%	842	Outer garments, men's, of textile fabrics	117	-0.1%	1.0%
	001	Live animals chiefly for food	4	0.0%	0.2%	846	Under garments, knitted or crocheted	38	-0.1%	0.1%
	551	Essential oils, perfume and flavour	2	-0.2%	0.1%	656	Tulle, lace, embroidery, ribbons, & other	11	-0.3%	0.7%
	541	Medicinal and pharmaceutical products	1	-0.4%	0.0%	289	Ores & concentrates of precious metals	2	0.0%	0.1%
Mutual Withdrawal	287	Ores and concentrates of base metal	84	-3.3%	-0.7%	036	Crustaceans and molluscs, fresh, chilled	34	-9.4%	-1.3%
	681	Silver, platinum & other metals of the	13	-0.1%	-0.2%	658	Made-up articles, wholly/chiefly of	18	-3.1%	-0.1%
	842	Outer garments, men's, of textile fabrics	5	-0.1%	-0.1%	611	Leather	8	-0.2%	-2.1%
	081	Feed stuff for animals (not incl. unman)	1	-0.5%	-1.8%	541	Medicinal and pharmaceutical products	7	-0.4%	0.0%
	846	Under garments, knitted or crocheted	0	-0.1%	0.0%	681	Silver, platinum & other metals of the	6	-0.1%	-0.3%
	Costa Rica					Ecuador				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	034	Fish, fresh (live or dead), chilled or frozen	75	7.4%	0.3%	037	Fish, crustaceans and molluscs, prepared	146	9.3%	2.1%
	844	Under garments of textile fabrics	69	2.1%	1.1%	034	Fish, fresh (live or dead), chilled or frozen	72	7.4%	0.1%
	778	Electrical machinery and apparatus, electric	65	5.5%	0.3%	058	Fruit, preserved, and fruit preparations	17	5.9%	0.6%
	292	Crude vegetable materials, n.e.s.	63	0.5%	0.3%	897	Jewellery, goldsmiths and other art.	8	5.8%	0.0%
	058	Fruit, preserved, and fruit preparations	61	5.9%	3.1%	056	Vegetables, roots & tubers, prepared/preserved	8	1.3%	0.5%
No Threat	759	Parts of and accessories suitable for transport	421	2.4%	2.6%	292	Crude vegetable materials, n.e.s.	203	0.5%	4.2%
	057	Fruit & nuts (not incl. oil nuts),	379	0.3%	3.1%	335	Residual petroleum products, n.e.s. & r	43	7.3%	7.9%
	872	Medical instruments and appliances	335	3.2%	4.0%	054	Vegetables, fresh, chilled, frozen/preserved	10	0.0%	0.1%
	071	Coffee and coffee substitutes	86	0.0%	1.3%	847	Clothing accessories of textile fabrics	3	0.0%	0.1%
	847	Clothing accessories of textile fabrics	29	0.0%	2.6%	247	Other wood in the rough or roughly	0	0.0%	0.0%
Direct Threat	054	Vegetables, fresh, chilled, frozen/preserved	51	0.0%	0.0%	057	Fruit & nuts (not incl. oil nuts),	274	0.3%	-
	628	Articles of rubber, n.e.s.	37	2.6%	-0.8%	072	Cocoa	34	0.7%	-

	893	Articles of materials described in	24	17.8%	-0.1%	248	Wood, simply worked, and railway sleepers	17	0.2%	0.0%
	011	Meat, edible meat offals, fresh, ch	21	0.0%	-1.3%	334	Petroleum products, refined	16	0.3%	-1.3%
	874	Measuring, checking, analysing instru	11	1.7%	-0.1%	812	Sanitary, plumbing, heating, lighting	16	28.7%	-0.1%
China under Threat	846	Under garments, knitted or crocheted	186	-0.1%	2.1%	333	Petrol. oils, crude, & c.o. obtain. from	949	-1.0%	0.2%
	842	Outer garments, men's, of textile fab	23	-0.1%	0.7%	842	Outer garments, men's, of textile fab	2	-0.1%	0.0%
	036	Crustaceans and molluscs, fresh, chil	10	-9.4%	0.1%	658	Made-up articles, wholly/chiefly of	1	-3.1%	0.0%
	656	Tulle, lace, embroidery, ribbons, & oth	2	-0.3%	1.0%	846	Under garments, knitted or crocheted	1	-0.1%	0.0%
	289	Ores & concentrates of precious met	1	0.0%	0.7%	781	Passenger motor cars, for transport	1	0.0%	0.0%
Mutual Withdrawal	551	Essential oils, perfume and flavour	2	-0.2%	-0.2%	036	Crustaceans and molluscs, fresh, chil	160	-9.4%	-9.9%
	541	Medicinal and pharmaceutical produc	2	-0.4%	0.0%	081	Feed stuff for animals (not incl. un	0	-0.5%	-0.1%
	611	Leather	1	-0.2%	0.0%	265	Vegetable textile fibres and waste (only three items)	0	-1.1%	-1.4%
	652	Cotton fabrics, woven	0	-3.2%	0.0%					
	896	Works of art, collectors pieces & an	0	-1.1%	0.0%					
	El Salvador					Guatemala				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	061	Sugar and honey	29	1.4%	0.5%	292	Crude vegetable materials, n.e.s.	23	0.5%	0.5%
	674	Universals, plates and sheets, of iro	12	1.6%	0.0%	714	Engines & motors, non-electric	5	0.4%	0.0%
	899	Other miscellaneous manufactured ar	9	24.9%	0.2%	075	Spices	4	0.6%	0.2%
	845	Outer garments and other articles, k	7	4.8%	0.0%	684	Aluminium	4	0.2%	0.1%
	697	Household equipment of base metal, n	6	19.9%	0.1%	893	Articles of materials described in	3	17.8%	0.0%
No Threat	071	Coffee and coffee substitutes	34	0.0%	1.7%	057	Fruit & nuts (not incl. oil nuts),	236	0.3%	1.9%
	054	Vegetab., fresh, chilled, frozen/pres.	7	0.0%	0.0%	071	Coffee and coffee substitutes	120	0.0%	0.5%
	512	Alcohols, phenols, phenol-alcohols, &	4	0.0%	0.4%	512	Alcohols, phenols, phenol-alcohols, &	2	0.0%	0.1%
	073	Chocolate & other food preptns. con	0	0.0%	0.0%	044	Maize (corn), unmilled	1	0.0%	0.0%
	047	Other cereal meals and flours	0	0.3%	0.4%	554	Soap, cleansing and polishing prepar	0	0.4%	1.9%
Direct Threat	642	Paper and paperboard, cut to size or	25	6.4%	-0.2%	061	Sugar and honey	46	1.4%	-0.4%
	651	Textile yarn	7	0.4%	-0.6%	054	Vegetab., fresh, chilled, frozen/pres.	16	0.0%	-0.5%
	292	Crude vegetable materials, n.e.s.	1	0.5%	-0.1%	222	Oil seeds and oleaginous fruit, whol	9	0.6%	-6.6%
	699	Manufactures of base metal, n.e.s.	1	6.7%	0.0%	248	Wood, simply worked, and railway slee	3	0.2%	-0.1%
	222	Oil seeds and oleaginous fruit, whol	1	0.6%	-3.3%	641	Paper and paperboard	2	0.1%	0.0%
China under Threat	846	Under garments, knitted or crocheted	19	-0.1%	0.2%	333	Petrol. oils, crude, & c.o. obtain. from	149	-1.0%	0.2%
	112	Alcoholic beverages	4	0.0%	0.0%	112	Alcoholic beverages	1	0.0%	0.0%
	655	Knitted or crocheted fabrics	1	-0.3%	0.1%	656	Tulle, lace, embroidery, ribbons, & oth	1	-0.3%	0.0%
	111	Non alcoholic beverages, n.e.s.	1	-0.4%	0.0%	781	Passenger motor cars, for transport	1	0.0%	0.0%

	541	Medicinal and pharmaceutical produc	0	-0.4%	0.0%	655	Knitted or crocheted fabrics	0	-0.3%	0.0%
Mutual Withdrawal	658	Made-up articles,wholly/chiefly of	13	-3.1%	-0.3%	036	Crustaceans and molluscs,fresh,chil	3	-9.4%	-0.3%
	036	Crustaceans and molluscs,fresh,chil	9	-9.4%	-0.1%	541	Medicinal and pharmaceutical produc	2	-0.4%	0.0%
	842	Outer garments,men's,of textile fab	1	-0.1%	0.0%	551	Essential oils,perfume and flavour	0	-0.2%	-0.1%
	652	Cotton fabrics,woven	0	-3.2%	0.0%	658	Made-up articles,wholly/chiefly of	0	-3.1%	-0.1%
	781	Passenger motor cars,for transport	0	0.0%	0.0%	846	Under garments,knitted or crocheted	0	-0.1%	0.0%
	Honduras					Jamaica				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	248	Wood, simply worked, and railway slee	55	0.2%	0.1%	057	Fruit & nuts(not includ. oil nuts),	5	0.3%	0.1%
	635	Wood manufactures,n.e.s.	20	7.1%	0.0%	075	Spices	1	0.6%	0.2%
	634	Veneers,plywood,improved or reconst	15	1.3%	0.5%	893	Articles of materials described in	1	17.8%	0.0%
	058	Fruit,preserved,and fruit preparati	8	5.9%	0.0%	522	Inorganic chemical elements,oxides	1	3.3%	0.4%
	424	Other fixed vegetable oils,fluid or	3	0.8%	0.6%	635	Wood manufactures,n.e.s.	1	7.1%	0.0%
No Threat	061	Sugar and honey	82	1.4%	7.9%	512	Alcohols,phenols,phenol-alcohols,&	35	0.0%	2.7%
	054	Vegetab.,fresh,chilled,frozen/pres.	54	0.0%	0.9%	024	Cheese and curd	2	0.0%	0.2%
	288	Non-ferrous base metal waste and sc	27	0.4%	0.5%		(only two items)	0		
	071	Coffee and coffee substitutes	26	0.0%	1.5%			0		
	246	Pulpwood (including chips and wood	4	0.4%	3.8%			0		
Direct Threat	057	Fruit & nuts(not includ. oil nuts),	72	0.3%	-2.1%	334	Petroleum products,refined	21	0.3%	0.0%
	034	Fish,fresh (live or dead),chilled o	4	7.4%	-0.1%	054	Vegetab.,fresh,chilled,frozen/pres.	11	0.0%	-0.1%
	694	Nails,screws,nuts,bolts etc.of iron	2	3.5%	0.0%	098	Edible products and preparations n.	7	2.0%	-0.1%
	661	Lime,cement,and fabricated construc	2	6.0%	-0.1%	058	Fruit,preserved,and fruit preparati	6	5.9%	-0.1%
	121	Tobacco,unmanufactured; tobacco ref	2	1.7%	-0.9%	048	Cereal prepar. & preps. of flour of	5	1.0%	-0.1%
China under Threat	112	Alcoholic beverages	2	0.0%	0.0%	287	Ores and concentrates of base metal	153	-3.3%	3.7%
	111	Non alcoholic beverages,n.e.s.	1	-0.4%	0.1%	846	Under garments,knitted or crocheted	7	-0.1%	0.2%
	656	Tulle,lace,embroidery,ribbons,& oth	0	-0.3%	0.0%	036	Crustaceans and molluscs,fresh,chil	4	-9.4%	0.0%
	781	Passenger motor cars,for transport	0	0.0%	0.0%	111	Non alcoholic beverages,n.e.s.	2	-0.4%	0.1%
	081	Feed.stuff for animals(not incl.unm	0	-0.5%	0.0%	211	Hides and skins (except furskins),	0	-0.3%	0.1%
Mutual Withdrawal	036	Crustaceans and molluscs,fresh,chil	5	-9.4%	-1.4%	112	Alcoholic beverages	19	0.0%	-0.1%
	846	Under garments,knitted or crocheted	2	-0.1%	-0.1%	842	Outer garments,men's,of textile fab	4	-0.1%	-0.4%
	658	Made-up articles,wholly/chiefly of	0	-3.1%	0.0%	551	Essential oils,perfume and flavour	2	-0.2%	-0.2%
	842	Outer garments,men's,of textile fab	0	-0.1%	-0.1%	541	Medicinal and pharmaceutical produc	0	-0.4%	0.0%
	541	Medicinal and pharmaceutical produc	0	-0.4%	0.0%	081	Feed.stuff for animals(not incl.unm	0	-0.5%	-0.1%
	Nicaragua					Panama				

	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	057	Fruit & nuts(not includ. oil nuts),	14	0.3%	0.1%	034	Fish,fresh (live or dead),chilled o	177	7.4%	3.3%
	034	Fish,fresh (live or dead),chilled o	13	7.4%	0.3%	037	Fish,crustaceans and molluscs,prepa	21	9.3%	0.1%
	061	Sugar and honey	9	1.4%	0.1%	057	Fruit & nuts(not includ. oil nuts),	14	0.3%	0.0%
	812	Sanitary,plumbing,heating,lighting	6	28.7%	0.0%	899	Other miscellaneous manufactured ar	8	24.9%	0.2%
	423	Fixed vegetable oils,soft,crude,ref	2	0.1%	0.0%	334	Petroleum products,refined	6	0.3%	0.1%
No Threat	011	Meat,edible meat offals, fresh, chi	39	0.0%	0.6%	054	Vegetab.,fresh,chilled,frozen/pres.	14	0.0%	0.2%
	071	Coffee and coffee substitutes	26	0.0%	2.5%	035	Fish,dried,salted or in brine ; smo	9	1.8%	6.9%
	971	Gold,non-monetary	14	0.0%	0.3%	288	Non-ferrous base metal waste and sc	4	0.4%	0.5%
	122	Tobacco manufactured	5	0.9%	2.2%	122	Tobacco manufactured	0	0.9%	11.5%
	054	Vegetab.,fresh,chilled,frozen/pres.	3	0.0%	0.1%	247	Other wood in the rough or roughly	0	0.0%	0.0%
Direct Threat	792	Aircraft & associated equipment and	0	0.4%	0.0%	061	Sugar and honey	15	1.4%	-1.7%
	684	Aluminium	0	0.2%	0.0%	071	Coffee and coffee substitutes	7	0.0%	0.0%
	035	Fish,dried,salted or in brine ; smo	0	1.8%	0.0%	893	Articles of materials described in	2	17.8%	0.0%
	334	Petroleum products,refined	0	0.3%	0.0%	642	Paper and paperboard,cut to size or	2	6.4%	-0.1%
	686	Zinc	0	4.7%	0.0%	843	Outer garments,women's,of textile f	1	4.9%	0.0%
China under Threat	036	Crustaceans and molluscs,fresh,chil	25	-9.4%	2.5%	846	Under garments,knitted or crocheted	2	-0.1%	0.0%
	681	Silver,platinum & oth.metals of the	5	-0.1%	0.0%	022	Milk and cream	0	0.0%	0.6%
	022	Milk and cream	1	0.0%	0.2%	681	Silver,platinum & oth.metals of the	0	-0.1%	0.0%
	541	Medicinal and pharmaceutical produc	1	-0.4%	0.0%	001	Live animals chiefly for food	0	0.0%	0.0%
	112	Alcoholic beverages	0	0.0%	0.0%	658	Made-up articles,wholly/chiefly of	0	-3.1%	0.0%
Mutual Withdrawal	(no items)					036	Crustaceans and molluscs,fresh,chil	62	-9.4%	-0.6%
						541	Medicinal and pharmaceutical produc	1	-0.4%	-0.1%
						081	Feed.stuff for animals(not incl.unm	1	-0.5%	-0.8%
						842	Outer garments,men's,of textile fab	1	-0.1%	-0.1%
						112	Alcoholic beverages	0	0.0%	0.0%
	Paraguay					Peru				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	061	Sugar and honey	6	1.4%	0.3%	845	Outer garments and other articles,k	122	4.8%	0.4%
	635	Wood manufactures,n.e.s.	4	7.1%	0.1%	686	Zinc	41	4.7%	3.1%
	122	Tobacco manufactured	4	0.9%	0.0%	661	Lime,cement,and fabricated construc	19	6.0%	0.2%
	248	Wood,simply worked,and railway slee	3	0.2%	0.0%	056	Vegetab.,roots & tubers,prepared/pr	16	1.3%	0.4%
	634	Veneers,plywood,improved or reconst	3	1.3%	0.2%	821	Furniture and parts thereof	10	11.4%	0.0%

No Threat	(no item)	0			682	Copper	457	0.9%	13.4%	
		0			971	Gold,non-monetary	203	0.0%	6.1%	
		0			054	Vegetab.,fresh,chilled,frozen/pres.	96	0.0%	1.4%	
		0			248	Wood, simply worked, and railway slee	56	0.2%	0.5%	
		0			071	Coffee and coffee substitutes	56	0.0%	0.9%	
Direct Threat	424	Other fixed vegetable oils, fluid or	2	0.8%	-0.3%	334	Petroleum products, refined	159	0.3%	-1.8%
	831	Travel goods, handbags, brief-cases, p	1	24.5%	0.0%	897	Jewellery, goldsmiths and other art.	50	5.8%	-1.5%
	843	Outer garments, women's, of textile f	1	4.9%	0.0%	061	Sugar and honey	17	1.4%	-2.3%
	845	Outer garments and other articles, k	1	4.8%	0.0%	292	Crude vegetable materials, n.e.s.	10	0.5%	-0.3%
	512	Alcohols, phenols, phenol-alcohols, &	0	0.0%	-1.1%	843	Outer garments, women's, of textile f	9	4.9%	0.0%
China under Threat	081	Feed. stuff for animals (not incl. unnm	5	-0.5%	0.1%	846	Under garments, knitted or crocheted	254	-0.1%	3.0%
	074	Tea and mate	0	-7.7%	0.0%	681	Silver, platinum & oth. metals of the	34	-0.1%	0.6%
		(only two items)	0			687	Tin	3	-2.7%	40.2%
			0			112	Alcoholic beverages	1	0.0%	0.0%
			0			896	Works of art, collectors pieces & an	1	-1.1%	0.0%
Mutual Withdrawal	551	Essential oils, perfume and flavour	1	-0.2%	-0.1%	333	Petrol. oils, crude, & c.o. obtain. from	81	-1.0%	0.0%
	611	Leather	1	-0.2%	-0.6%	287	Ores and concentrates of base metal	21	-3.3%	-6.9%
	846	Under garments, knitted or crocheted	0	-0.1%	0.0%	036	Crustaceans and molluscs, fresh, chil	15	-9.4%	-0.6%
	842	Outer garments, men's, of textile fab	0	-0.1%	-0.1%	842	Outer garments, men's, of textile fab	6	-0.1%	-0.2%
	652	Cotton fabrics, woven	0	-3.2%	0.0%	081	Feed. stuff for animals (not incl. unnm	5	-0.5%	-5.1%
	Uruguay					Venezuela				
	SITC	Name of Items	Export (\$mil)	GC	GL	SITC	Name of Items	Export (\$mil)	GC	GL
Partial Threat	663	Mineral manufactures, n.e.s	6	1.6%	0.1%	784	Parts & accessories of 722–, 781–,	147	0.9%	0.2%
	821	Furniture and parts thereof	6	11.4%	0.0%	672	Ingots and other primary forms, of i	83	3.9%	0.7%
	248	Wood, simply worked, and railway slee	4	0.2%	0.0%	522	Inorganic chemical elements, oxides	28	3.3%	0.4%
	585	Other artificial resins and plastic	3	1.4%	1.0%	793	Ships, boats and floating structures	20	1.2%	0.0%
	792	Aircraft & associated equipment and	2	0.4%	0.0%	335	Residual petroleum products, nes. & r	12	7.3%	1.6%
No Threat	024	Cheese and curd	8	0.0%	0.5%	334	Petroleum products, refined	275	0.3%	22.3%
	011	Meat, edible meat offals, fresh, chi	0	0.0%	1.3%	671	Pig iron, spiegeleisen, sponge iron, i	178	1.6%	4.7%
	247	Other wood in the rough or roughly	0	0.0%	0.0%	516	Other organic chemicals	145	3.1%	5.7%
	411	Animal oils and fats	0	0.1%	0.2%	322	Coal, lignite and peat	112	0.1%	1.4%
Direct Threat	061	Sugar and honey	12	1.4%	-0.2%	512	Alcohols, phenols, phenol-alcohols, &		0.0%	3.9%
	034	Fish, fresh (live or dead), chilled o	10	7.4%	-0.1%	684	Aluminium	305	0.2%	-3.2%
						674	Universals, plates and sheets, of iro	41	1.6%	-0.3%

	014	Meat & edib.offals,prep./pres.,fish	9	0.7%	-1.9%	778	Electrical machinery and apparatus,	34	5.5%	0.0%
	845	Outer garments and other articles,k	5	4.8%	-0.2%	661	Lime,cement,and fabricated construc	30	6.0%	-1.0%
	848	Art.of apparel & clothing accessory	3	34.0%	-0.9%	673	Iron and steel bars,rods,angles,sha	24	2.2%	-0.2%
China under Threat	611	Leather	48	-0.2%	2.8%	036	Crustaceans and molluscs,fresh,chil	76	-9.4%	1.8%
	541	Medicinal and pharmaceutical produc	1	-0.4%	0.0%	111	Non alcoholic beverages,n.e.s.	3	-0.4%	0.3%
	036	Crustaceans and molluscs,fresh,Chile	1	-9.4%	0.0%	287	Ores and concentrates of base metal	1	-3.3%	1.1%
	112	Alcoholic beverages	0	0.0%	0.0%	761	Television receivers	0	-1.5%	0.0%
	551	Essential oils,perfume and flavour	0	-0.2%	0.0%	022	Milk and cream	0	0.0%	0.1%
Mutual Withdrawal	842	Outer garments, men's, of textile fabric	2	-0.1%	-0.3%	333	Petrol.oils, crude,& c.o.	11,245	-1.0%	-2.0%
	656	Tulle, lace, embroidery, ribbons & others	0	-0.3%	0.0%	658	Made-up articles, wholly	1	-3.1%	-0.1%
	781	Passenger motor cars, for transport	0	0.0%	0.0%	781	Passenger motor cars, for transport	0	0.0%	0.0%
	658	Made-up articles, wholly/chiefly of	0	-3.1%	-0.2%	656	Tulle, lace, embroidery, ribbons	0	-0.3%	-0.1%
	211	Hides and skins (except furskins),	0	-0.3%	-0.1%	541	Medicinal and pharmaceutical products	0	-0.4%	-0.1%

Note: GC is growth of CHINA exports; GL is growth of LAC country exports.

Appendix Table 8 : Technology structure of bilateral trade of LAC Big 3 with CHINA (\$ thousand)												
	Argentina				Brazil				Mexico			
	Export to CHINA		Import from CHINA		Export to CHINA		Import from CHINA		Export to CHINA		Import from CHINA	
	1990	2002	1990	2002	1990	2002	1990	2002	1990	2002	1990	2002
Primary	134,427	543,663	859	4,985	23,033	939,851	118,743	153,680	1,055	2,907	2,126	157,436
RB	53,849	270,014	9,609	111,567	181,249	1,001,915	36,471	346,204	8,642	25,688	15,839	328,437
LT	16,021	198,258	11,983	62,718	66,126	195,639	13,068	286,187	5,101	16,878	82,510	1,376,338
MT	36,340	79,161	5,772	102,147	110,316	308,296	22,710	341,622	49,920	87,738	85,075	1,937,464
HT	299	1,258	3,363	47,711	1,080	74,071	12,093	568,920	693	322,510	32,579	2,359,191
Total	240,935	1,092,353	31,586	329,128	381,804	2,519,771	203,085	1,696,612	65,410	455,722	218,129	6,158,865
(% of total)												
	Argentina				Brazil				Mexico			
	Export to CHINA		Import from CHINA		Export to CHINA		Import from CHINA		Export to CHINA		Import from CHINA	
	1990	2002	1990	2002	1990	2002	1990	2002	1990	2002	1990	2002
Primary	55.8%	49.8%	2.7%	1.5%	6.0%	37.3%	58.5%	9.1%	1.6%	0.6%	1.0%	2.6%
RB	22.3%	24.7%	30.4%	33.9%	47.5%	39.8%	18.0%	20.4%	13.2%	5.6%	7.3%	5.3%
LT	6.6%	18.1%	37.9%	19.1%	17.3%	7.8%	6.4%	16.9%	7.8%	3.7%	37.8%	22.3%
MT	15.1%	7.2%	18.3%	31.0%	28.9%	12.2%	11.2%	20.1%	76.3%	19.3%	39.0%	31.5%

