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informes y estudios especiales

Trade, direct investment and production policies

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CEPAL

Santiago, Chile, May 2006

This document was produced by José Luis Machinea, Executive Secretary of the Economic Commission for Latin America and the Caribbean (ECLAC) and Cecilia Vera, Economic Affairs Officer of the Office of the Executive Secretary of ECLAC, and was presented at the Seminar on a New Economic Development Agenda for Latin America (Salamanca, Spain, 7 and 8 October 2005).

The document includes input from lengthy discussions with Osvaldo Kacef. The authors would also like to thank Ricardo Ffrench-Davis for his valuable comments on an earlier version, and Omar Bello for his help in estimating the import function. They are also grateful to Daniel Lederman and other participants in the Seminar for their comments.

The views expressed in this document are those of the authors and do not necessarily reflect the views of the Organization.

United Nations Publication
ISSN printed version 1682-0010
ISSN online version 1682-0029

ISBN: 92-1-121588-9
LC/L.2469-P
Sales No. E.05.II.G.216
ORIGINAL: SPANISH

Printed in United Nations, Santiago, Chile

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Abstract

During the 1990s, the economies of Latin America and the Caribbean implemented a series of far-reaching structural reforms and took a new direction in terms of economic policy. At first, these liberalization measures were primarily focused on national financial markets and the initial opening-up of trade, but they were soon extended to include the swift liberalization of external capital flows, and some countries embarked upon intensive privatization programmes.

This set of reforms generated increases in foreign trade (particularly exports) and higher foreign direct investment. However, the growth path of the region's countries is a far cry from one of intensive, steady expansion –and this document analyses possible reasons for this. This paper posits that there is no unequivocally positive link between trade openness and economic growth, given the importance of the context and how the process of liberalization is carried out. The way in which changes are processed within economies is crucial if the productive fabric is to be strengthened rather than destroyed. The link between increased exports and growth is not necessarily positive either, as it depends on the types of exports and their potential to generate linkages that boost the rest of the productive structure. Similarly, in the case of foreign direct investment, there is no unequivocally positive relationship between FDI and growth, as the link between the two depends on the type of FDI, its objectives and target sectors.

This therefore leaves considerable scope for productive policies to promote these linkages and ensure that the region's export position and the foreign investment it receives contribute to the buoyancy of national economies. The present document closes with an analysis of precisely those characteristics that productive policies need to include if they are to achieve that objective.

Introduction

During the 1990s, the economies of Latin America and the Caribbean implemented a series of far-reaching structural reforms and took a new direction in terms of economic policy. At first, these liberalization measures were primarily focused on national financial markets and the initial opening-up of trade, but they were soon extended to include the swift liberalization of external capital flows, and some countries embarked upon intensive privatization programmes.

Perhaps the most prominent component of the reform agenda has been the liberalization of the region's economies. At the beginning of the 1980s, the region's average most-favoured nation tariff was over 100%, but in the 1990s it was down to 29% and had dropped to less than 10% by 2004. In addition to this sharp reduction in the nominal tariff, quantitative restrictions practically disappeared and trade agreements proliferated, thereby further reducing barriers to the entry of foreign merchandise. In the case of Mexico, for instance, although the current most-favoured nation tariff is around 16%, around 90% of its imports enter under trade agreements that provide for a zero tariff rate, which means that the average effective tariff is less than 2%. This is the case for most Latin American and Caribbean economies, as is reflected by the fact that the region's average effective tariff is just 5%.

The trade openness ratio is almost three times higher than it was, rising from 7.8% in 1980-1983 to 23% in 2003-2005.[1] Both the imports and exports of the Latin American and Caribbean region have been extremely buoyant. Between 1990 and 2004, the physical volume of the region's exports grew at an annual rate of 8.5%, which was the highest rate to be recorded in the last 60 years or more. In fact, this rate, which was also far above the world average, was surpassed only by Asia. The region's imports expanded even faster, partly as a result of the sharp decline in tariffs in a context of widespread appreciation of the country's currencies. Rapid and indiscriminate liberalization in the absence of mechanisms to assist the productive reengineering process therefore resulted in large current account deficits and a growing dependency on external capital.

The liberalization of domestic financial markets and the increased openness of the capital account heightened the region's sensitivity to the ups and downs of international financial markets. During the third phase of globalization, the macroeconomic situation of Latin American and Caribbean countries has therefore been closely linked to capital inflows to the region.[2]

In the second half of the 1970s and early 1980s, the region's countries received a massive amount of external credit. These resources facilitated rapid growth, but also resulted in hefty balance-of-payments current account deficits and unsustainable expenditure patterns and relative price structures that culminated in the 1982 debt crisis. Between then and 1991, there was a large-scale transfer of net resources abroad, causing the region to lose an entire decade in terms of economic growth.

Since 1991, renewed but volatile access to international capital flows has been generating short-lived growth cycles interrupted by slowdowns and outright recessions. Following a new wave of capital inflows between 1991 and 1994, the economies of some countries contracted dramatically between late 1994 and mid-1995. This was followed by another period of abundant external financing between 1996 and early 1998. During the next five years, many parts of the world suffered crises that turned capital markets into a source of great instability for the region. The exception to this general picture was the significant inflow of foreign investment, which grew steadily up until the year 2000 and has been gradually decreasing ever since.

The incentives associated with the reforms (especially stabilization, external openness, foreign direct investment (FDI) and privatization) have helped to boost exports and FDI, to improve infrastructure and to raise productivity in some sectors of the economy. However, the growth path of the region's countries is a far cry from one of intensive, steady expansion; nor has the region successfully tackled the increased structural heterogeneity generated by the reforms (ECLAC, 2004a). Analysing why the region's economies have been unable to create the conditions for sustained growth within open economies is a complex issue that would involve examining the reforms themselves, aspects of macroeconomic management, the mobilization and use of resources, education and the organization of labour markets, and the development of active public policies and institutions, in addition to the inevitable interactions with the international environment. This paper will concentrate on a restricted set of factors by limiting the analysis to the impact on growth of international trade and direct investment, followed by a discussion of the importance of production policies in the growth process.

[1] The openness ratio is defined as the ratio of half the sum of exports and imports of goods and services to GDP, all expressed in 1995 prices.

[2] See Ffrench-Davis (2005b); Ocampo (2004); and ECLAC (2004a).

Section I of this paper includes an analysis of the various links between trade and growth. Section II presents a discussion of the export dynamics of Latin America, the way in which the region has positioned itself within the international economy and the extent to which the region's capacity for growth is limited by that position. Section III analyses the role of FDI in growth and, more specifically, its role in Latin America during the last decade. The absence of clear links between trade and foreign investment and growth leads us to consider the importance of complementing those types of policies with productive development policies to boost growth by stimulating more dynamic activities in terms of innovation and the development of complementarities (section IV). Section V includes a series of economic policy recommendations, particularly in relation to production policies.

I. Trade and growth

Many studies have attempted to define the link between trade openness and economic growth. Until fairly recently, there were some signs of consensus about a positive correlation between the two. This turned the spotlight on "outward-looking" growth strategies, which formed the basis for many of the recommendations that emerged out of the Washington consensus.[3]

The current specialized literature tends to express more doubts than certainties about the nature of the link between openness and economic growth. Critics of the earlier findings include Rodrik and Rodríguez (2000),[4] who claim that the positive correlation is influenced by methodological problems and that the studies' findings are therefore not reliable.[5] This is backed up by Winters (2004), whose review of the literature concludes that, despite the evidence in favour of such a positive link, the methodological problems make it impossible to be completely certain.

The absence of an unequivocal link should not overly concern us, since the impact of trade liberalization on growth will mainly depend on the context and how the liberalization process is carried out. Over the years, many liberalization processes have been carried out

[3] Krueger (1995) summarizes the arguments for an open trade strategy from the 1970s and 1980s. Many subsequent studies emphasized the importance of openness for economic growth: Sachs and Warner (1995); Frankel and Romer (1999); Alesina et al. (2000); and reports of the World Bank (1996); OECD (1998); and IMF (1997).

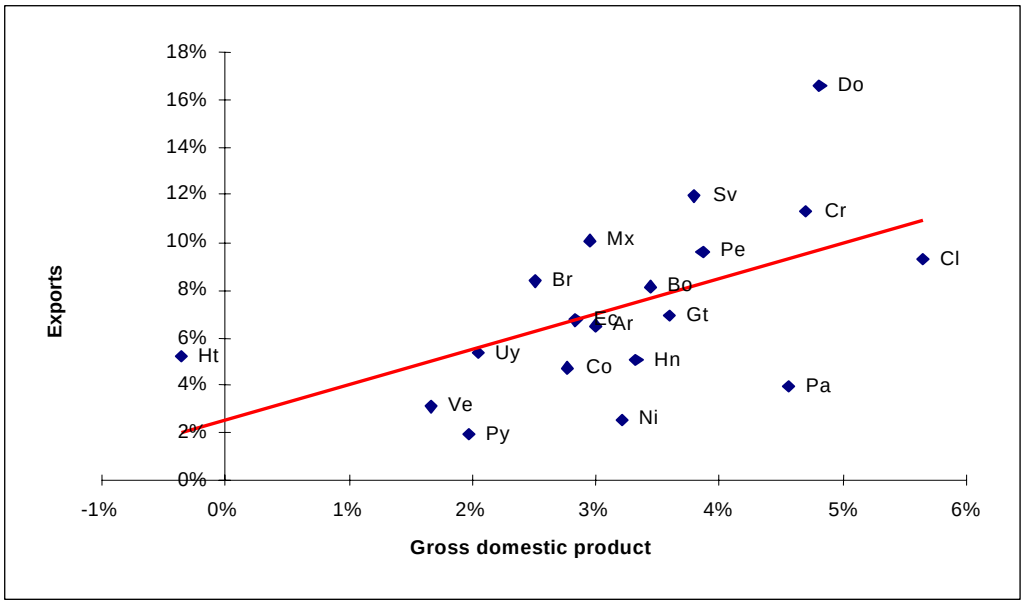
[4] Other studies that raise doubts about the positive relationship between openness and growth include Rodrik (1999), Harrison and Hanson (1999) and Vamvakidis (1998).

[5] According to Rodrik and Rodríguez, there is a problem related to the correct measurement of trade liberalization, and the studies have not taken into account the likelihood of a correlation between a country's liberalization policies and the rest of its policies. Such a correlation could be resulting in negative effects on growth being attributed to a country's protectionist policies, whereas those effects may actually be the consequence of a combination of unwise macroeconomic policies.

in different ways in various countries and contexts. This means that factors such as the rate of liberalization, the order in which trade and financial markets are liberalized, the macroeconomic situation, the role of public policy and the management of exchange-rate policy may all be determining factors in the impact of openness on growth.

Although the link between trade liberalization and growth is far from unequivocal, an analysis of the export performance of Latin America between 1990 and the present shows a positive correlation between a rise in exports and economic growth (as shown in figure 1).[6] In a comparative analysis of economic trends in Latin America and Asia between 1980 and 2003, Agosin (2005) also describes export growth as playing a major role in accounting for the different growth rates of the two regions.[7]

Figure 1
GDP GROWTH VS. EXPORT GROWTH
(Average annual rates, 1990-2004)



Source: Authors' calculations based on data from the Economic Commission for Latin America and the Caribbean (ECLAC).

Note: Ar: Argentina; Bo; Bolivia; Br: Brazil; Cl: Chile; Co: Colombia; Cr: Costa Rica; Ec: Ecuador; Sv: El Salvador; Gt: Guatemala; Ht: Haiti; Hn: Honduras; Mx: Mexico; Ni: Nicaragua; Pa: Panama; Py: Paraguay; Pe: Peru; Do: Dominican Republic; Uy: Uruguay; Ve: Bolivarian Republic of Venezuela.

The reasons why exports have a positive impact on growth, according to an analysis conducted by ECLAC (2004a), are as follows:

(i) Generation of the foreign exchange needed to purchase the imports required for economic expansion (external constraint);

(ii) Reallocation of resources to more productive activities and firms, thereby increasing the economy's average productivity;

[6] However, consideration of a longer period shows no positive correlation (Ffrench Davis, 2005b). Latin America's longest period of economic growth (1950-1980) was not accompanied by considerable export buoyancy, while the low growth rates from the 1908s onwards coincided with an export boom.

[7] Hausmann, Pritchett and Rodrik (2004) agree. They identify a total of 83 episodes defined as 'growth accelerations', which were found to coincide with average increases of 10.7% in the export ratio. They therefore conclude that, although this cannot be described as causality, growth accelerations appear to require more exports.

(iii) Existence of greater contact with the international economy and exposing export activities and suppliers to the demands of competitiveness (positive externalities). This impact grows stronger as product differentiation increases and the national capacity to absorb the knowledge acquired by export firms expands.

(iv) Use of economies of scale and specialization, based on the expansion of target markets for products made by local firms.

The first two factors are present in all types of exports, be they traditional primary products or manufactures. The third factor is arguably somewhat irrelevant for traditional agriculture and mining, which tend to involve limited technological content and offer little possibility of differentiating their products. As discussed below, however, it is possible to generate backward linkages in such activities, including the incorporation of knowledge. Nonetheless, these backward linkages are unlikely to occur spontaneously. In the case of non-traditional agriculture (fruits and vegetables) and aquaculture, there is greater scope for differentiating products and processes (including marketing), although not to the same extent as in certain industrial activities. Economies of scale and specialization based on the expansion of target markets for local products also seem more important for industrial activities. In particular, the generation of static and dynamic economies of scale within territorial clusters is becoming increasingly important and will be discussed in more detail in the next section.

There is some evidence that, in recent years at least, the increases in exports and growth are positively correlated. This evidence can be backed up from several standpoints.

This does not, however, change the fact that the growth of countries in the region remains low, especially compared with other experiences of outward-looking growth. These differences may simply be due to the fact that exports are not growing enough and/or that they do not generate enough linkages with the rest of the production fabric. After all, 62% of the region’s growth between 1990 and 2004 was attributable to non-export GDP (Ffrench-Davis, 2005a).

II. Export dynamics in Latin America and regional patterns of participation in the international economy

The region's economic history over the past 30 years includes a strong acceleration in export growth measured at constant prices (see figure 2). Thus far in this decade, the average 10-year growth rate for exports amounts is 9%, somewhat more than the 7.5% recorded in the 1980s and 1990s and the 5% in the 1970s.

Between 1990 and 2000, the physical volume of the region's exports grew at an annual rate of 9.5%,[8] which was above the world average. The problems that arose in the international economy in 2001-2002 interrupted this growth trend, but gave way to a recovery in 2003 that resulted in an expansion of Latin American exports at annual rates of over 10% in 2004 and 2005.

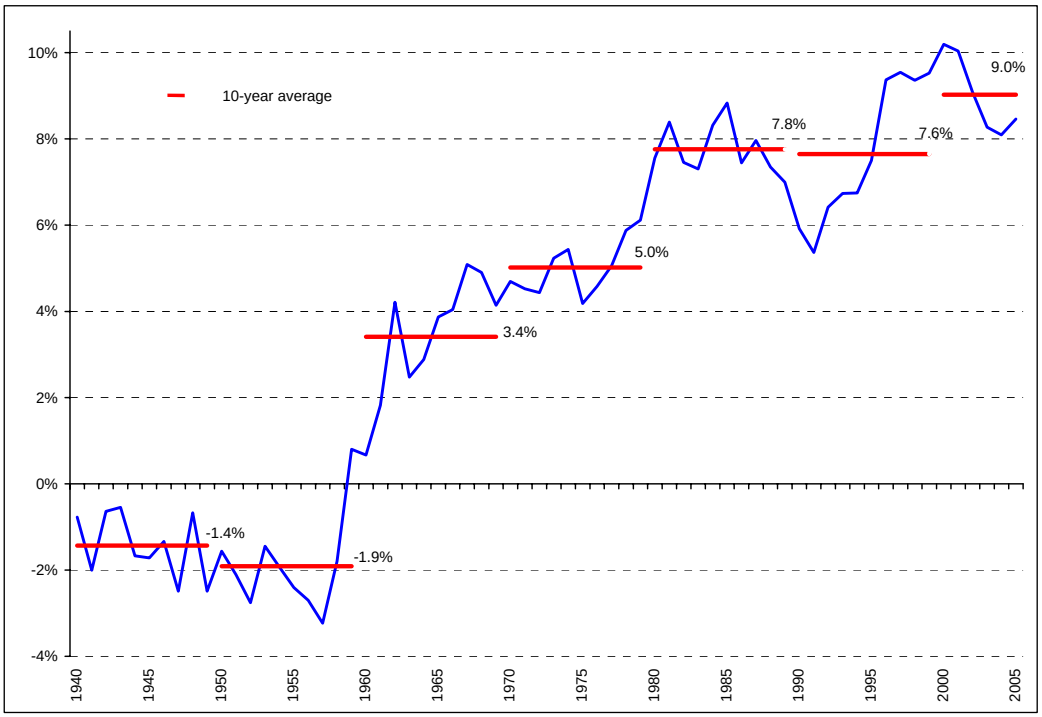
Although the rise in exports is part of a trend that has been observed over the last 25 years, exports have recently grown even more rapidly in terms of both volume and value. The expansion in exports has been led by Mexico and some of the Central American and Caribbean countries, including the Dominican Republic, Costa Rica, Guatemala, Haiti and Honduras. These and other countries in the area have continued to step up their maquila-based trade with the United States.

[8] Excluding the Bolivarian Republic of Venezuela, the annualized rate of increase is 10.2%. Venezuela was not included in figure 2 owing to the sharp decline in petroleum exports when the country joined the Organization of Petroleum Exporting Countries (OPEC) in the 1970s.

Indeed, in 2003, exports from Mexico and the Caribbean Basin represented around 53% of the regional total and 3% of the world total, compared with 38% and 1.9%, respectively, at the end of the 1980s (see figure 3a). The increase for Mexico and the Caribbean countries is entirely due to higher exports of manufactures, while South America has seen the strongest growth in the market for natural resources and resource-based products (see figures 3b and 3c).

Figure 2

LATIN AMERICA AND THE CARIBBEAN: 10-YEAR GROWTH RATES IN EXPORT VOLUMES [a]



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2004-2005* (LC/G.2279-P/I), Santiago, Chile, August. United Nations publication, Sales No.E.05.II.G-2.

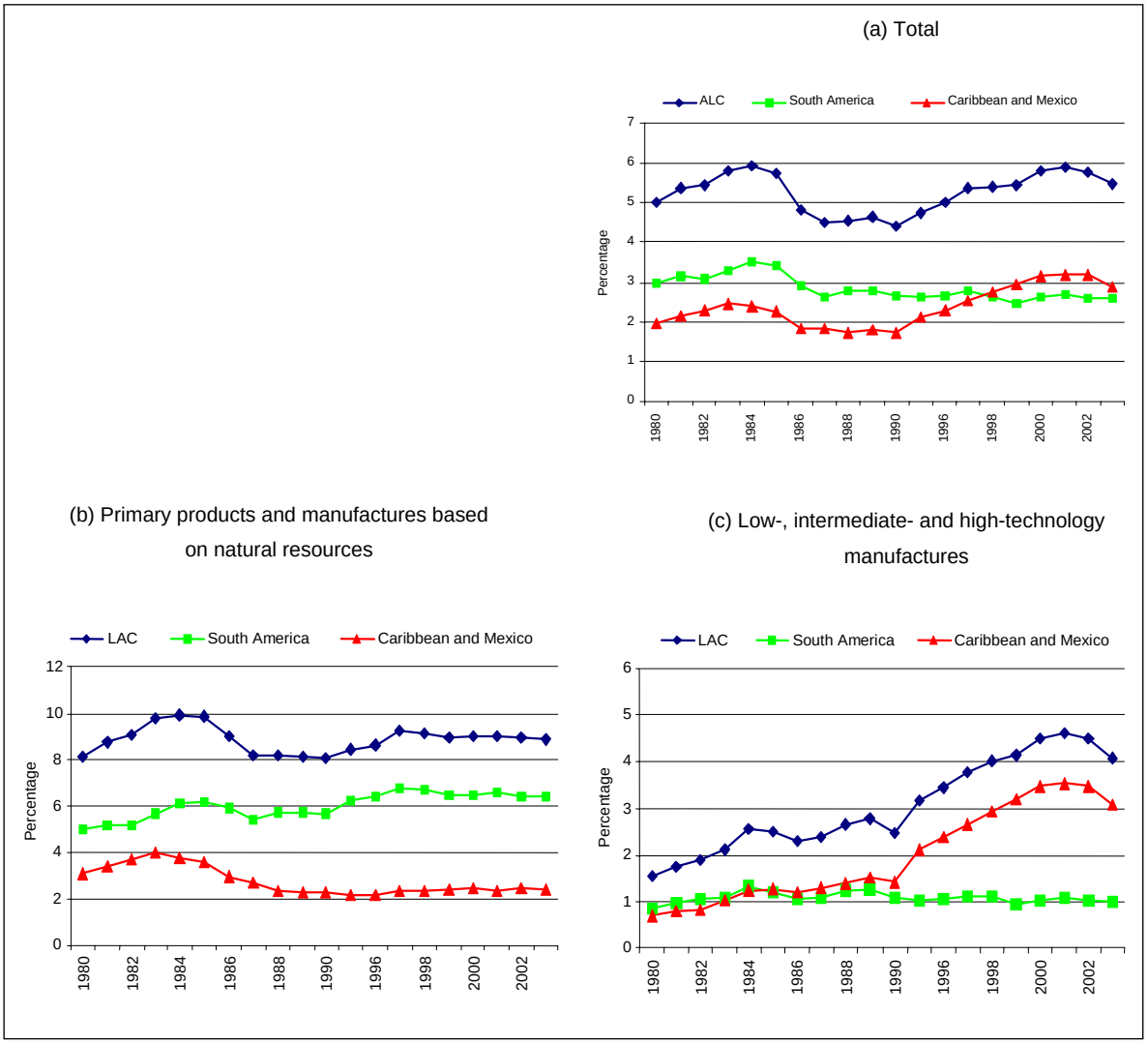
[a] Does not include the Bolivarian Republic of Venezuela.

In South America, on the other hand, all the countries except Chile registered considerably lower growth rates for exports. This situation was reversed in 2003, however, and since then the South American countries have been leading the region's export growth. Although these countries' share of world exports has diminished, they have recorded a slight increase in their share of world trade in primary commodities and manufactures based on primary goods (see figure 3b).

In many countries (especially in South America), the growth of external sales in the last two years has not been limited to raw materials, but increasingly includes industrial manufactures or non-traditional products.[9] In addition, this expansion of exports of manufactures is not confined to intraregional trade but also includes other markets such as the North American Free Trade Agreement (NAFTA) and Asia.

[9] In the first half of 2005, South America's industrial exports grew by an annual rate of over 30%, while those from Central America grew by over 15% and Mexico's by around 9%.

Figure 3
LATIN AMERICA AND THE CARIBBEAN: SHARE IN WORLD IMPORTS



Source: Economic Commission for Latin America and the Caribbean (ECLAC), Division of International Trade and Integration, on the basis of information from the Commodity Trade Database (COMTRADE).

1. Are export dynamics enough to overcome external constraints?

External constraints have placed a major limitation on the region's growth rate and, when they have been "overcome" by means of excessive external borrowing, the region's vulnerability has increased due to the volatility of capital flows.

Improved terms of trade (see figure 4) have helped maintain significant trade surpluses in the last two years, despite the increase in the volume of imports. Backed by these trade surpluses and inflows in the form of transfers from emigrants, the region's economies have, in a departure from past trends, been able to grow without relying on external financial resources. In fact, the region's

posting of a surplus on its current account in the years leading up to 2005, at a time when it is also experiencing economic growth, is an unprecedented event (ECLAC, 2005a).[10] [11]

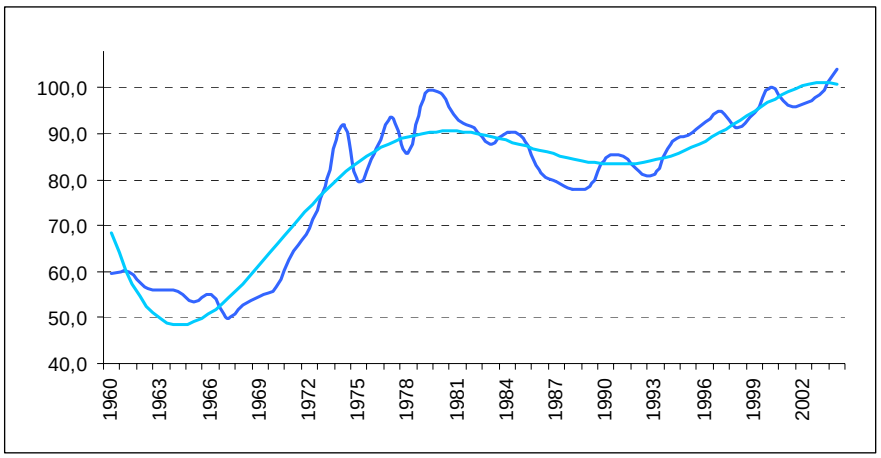
Given Latin America's history, we might well wonder whether the region's new-found export buoyancy will be sufficient to cancel out the external constraints that tend to accompany economic growth –a feat achieved by most of the Asian countries that have been growing rapidly during the last few decades. There are two main issues involved in this question: the first is linked to future developments in the terms of trade, and the second to import dynamics.

Many recent discussions have centred on the first issue,[12] namely, the way in which the growing participation of the large Asian economies in world trade has tended to alter the structure of global demand, skewing it more towards primary products and commodities, while at the same time prompting a considerable expansion in the supply of manufactures. Over the last few years, this has resulted in higher relative prices for commodities and lower prices for certain manufactures. The lower prices for some manufactures are responsible for almost half of the improvement in the region's terms of trade in recent years. This, however, has a negative effect on several countries that find themselves faced with lower prices for their export products. Between 1990 and 2004, for instance, the terms of trade improved by 32% for the South American countries and 22% for Mexico, but actually fell by 1% for the Central American countries.[13] Although the factors are not necessarily predictable, the terms of trade can safely be expected –aside from the inevitable ups and downs along the way– to be higher than in the last 40 years.[14]

Figure 4

LATIN AMERICA AND THE CARIBBEAN: TERMS OF TRADE FOR GOODS

(Index: 2000=100)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2004-2005* (LC/G.2279-P/I), Santiago, Chile, August. United Nations publication, Sales No. E.05.II.G-2.

[10] Although a current account surplus may be good news in the short term, it is a long-term weakness in a region that needs external saving on account of the traditionally low levels of domestic saving. The long-standing problem has been an excessive dependence on foreign capital.

[11] The surplus is basically a result of what is happening in South America, since Mexico and Central America have a deficit of slightly more than 1% of GDP.

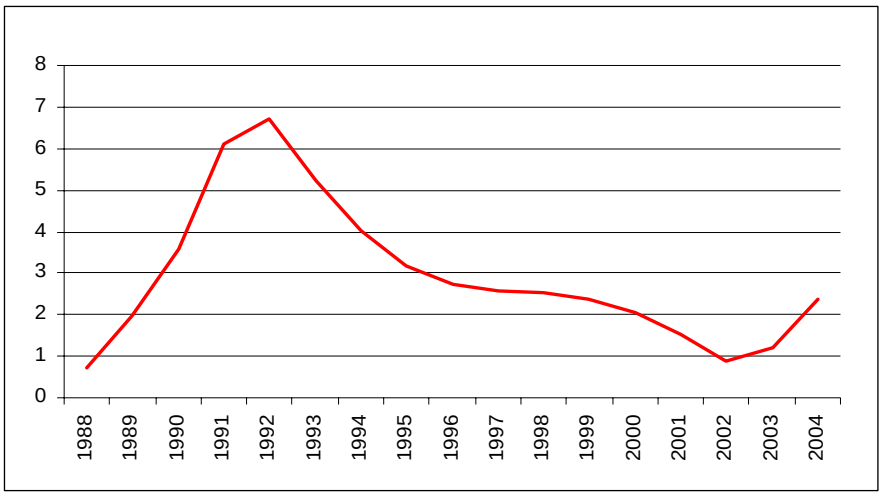
[12] See, for instance, ECLAC (2005a).

[13] Excluding petroleum, the improvement in the terms of trade was 36% for South America, 2.7% for Mexico and 3% for Central America.

[14] See Kaplinsky (2005) for an assessment of the structural change in the international context resulting from the emergence of China and India.

As far as the second issue –import dynamics– is concerned, the "over-adjustment" seen in the early 1990s was followed by a downward trend in the gross elasticity of imports relative to GDP growth that lasted until 2002, although the tendency appears to have been reversing in the last few years (see figure 5).

Figure 5
LATIN AMERICA: GROSS INCOME ELASTICITY OF IMPORTS
(Linear regression, rolling 6-year periods)



Source: Author's calculations based on data compiled by the Statistics and Economic Projections Division of the Economic Commission for Latin America and the Caribbean (ECLAC).

The increase in gross elasticity during the 1990s seems at least partly attributable to a compensatory reaction to previous years of import rationing (reduction of tariffs and non-tariff barriers) and the appreciation of the real effective exchange rate in a context of abundant external capital (see figure 6). In other words, the high level of gross elasticity appears to be the result of the dramatic change of relative prices associated with the trade liberalization process and currency appreciation. If this were indeed the case, elasticity would be expected to return to its previous levels once the liberalization process was completed and the appreciation of the exchange rate had been corrected.

However, preliminary estimates for 2005 suggest a gross import elasticity of around 3.[15] This could be because investment in earlier years was too low to cover the soaring demand of the last two years. If this were the case, it would be a cyclical phenomenon. The other possibility is that certain factors have altered the elasticity of imports, making it higher than it was prior to liberalization.

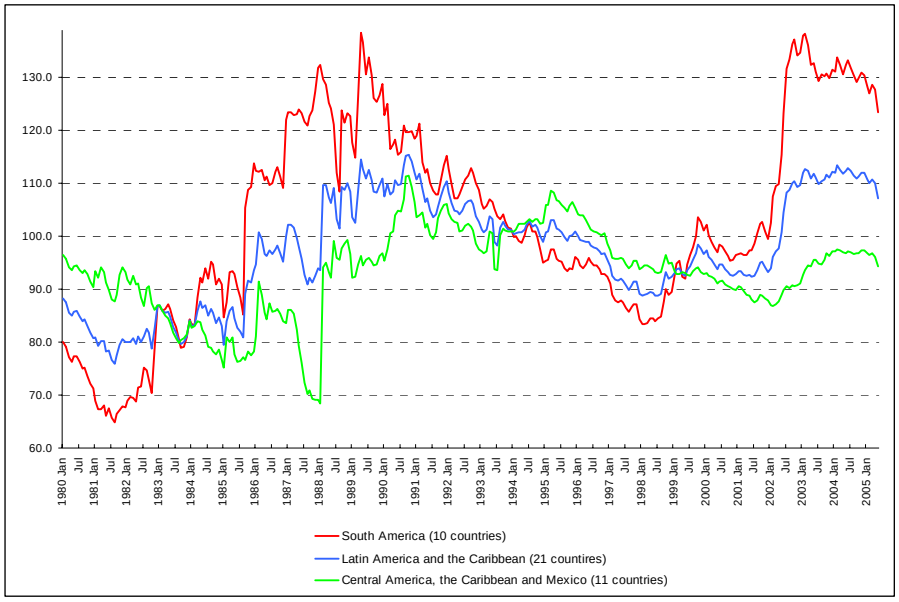
With a view to analysing the matter further, an import function was estimated for 19 Latin American countries using random-effects panel estimation methods[16] for the entire period and for two sub-periods: 1960-1989 and 1990-2003.[17] The following table shows the results of the regressions performed using annual data for 19 countries and the random-effects panel estimation method:[18]

[15] Gross elasticity is expected to be about four in the case of South America.
[16] See Annex A for information on the methodology used to arrive at these estimates.
[17] The year 1990 was taken as the approximate year in which liberalization processes began in Latin America.
[18] The estimates were made with random and fixed effects, but the results of the Hausman test suggest that the first method is the most appropriate.

Figure 6

REAL EXCHANGE RATE IN RELATION TO REST OF WORLD

(Index: 1990-1999=100)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Economic Survey of Latin America and the Caribbean, 2004-2005* (LC/G.2279-P/I), Santiago, Chile, August. United Nations publication, Sales No. E.05.II.G-2.

Table 1

ESTIMATION OF IMPORT FUNCTION

(Random-effects panel method: Latin America – 19 countries)

	1960-1989	1990-2003	Entire period (1960-2003)
	ln(imports)	ln(imports)	ln(imports)
ln(GDP)	***1.35*** (0.000)	**3.594** (0.000)	**1.793** (0.000)
$ln(GDP)_{-1}$	-1.267 (0.000)	-3.308 (0.000)	-1.681 (0.000)
$ln(Imports)_{-1}$	0.937 (0.000)	0.873 (0.000)	0.924 (0.000)
ln(real exchange rate)	-0.043 (0.003)	-0.183 (0.000)	-0.058 (0.000)
Dummy 1982	-0.141 (0.000)	------	-0.111 (0.003)
Dummy 1990-2003	------	------	0.088 (0.000)
Trend	-0.0003 (0.731)	-0.002 (0.412)	-0.001 (0.359)
Constant	-0.248 (0.090)	**-1.648** (0.000)	-0.435 (0.001)
Observations	523	247	789
R^2	0.9843	0.9912	0.9875

Note: p-value between brackets.

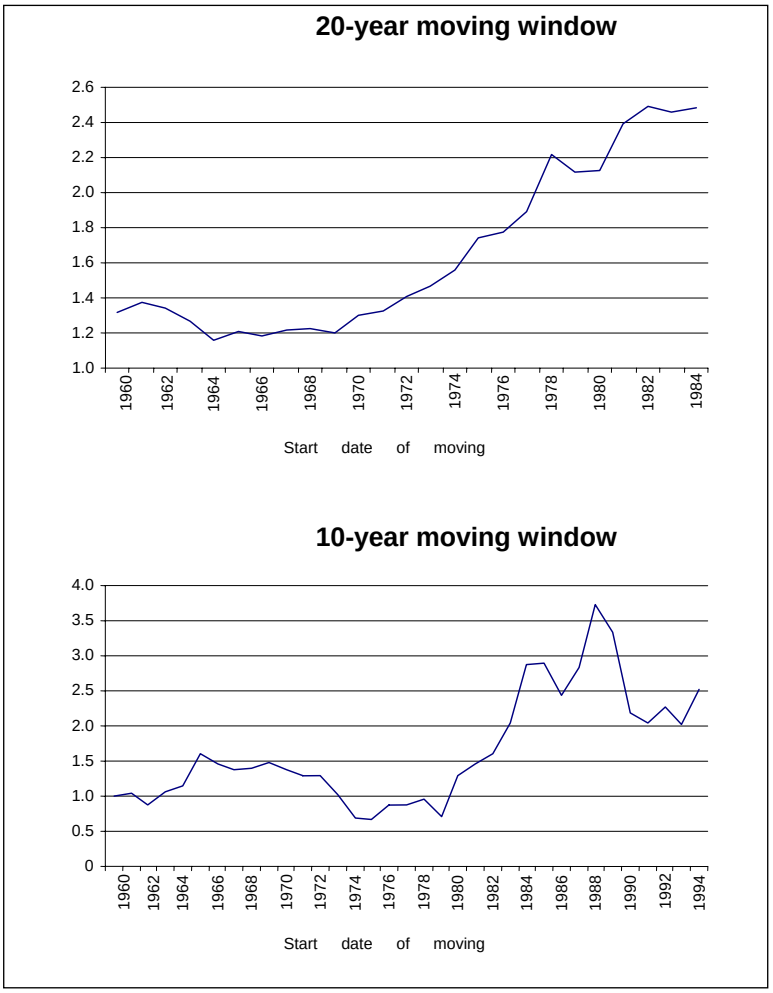
This indicates that import performance has changed dramatically since liberalization. Short-term elasticity relative to GDP went from 1.35 in the first sub-period to 3.6 in the second. Long-term elasticity was 1.32 in the first sub-period and 2.25 in the second. Long-term elasticity for the entire period was 1.5.

Another option for analysing elasticity over time is to carry out estimates involving moving windows. The same import function was estimated, but this time using moving sample periods of 20 years and then of 10 years in length. In figure 7, these estimates were used to calculate how elasticity evolves in the long term. Using 20-year windows, the calculations show that elasticity began to increase in the early 1970s, while calculations based on 10-year windows show an increase from the early 1980s. In both cases, this is consistent with an increase in import elasticity as the years from the 1990s are added to the window.[19]

Figure 7

LATIN AMERICA: LONG-TERM INCOME ELASTICITY OF IMPORTS

(Estimates of moving windows, random effects)



Source: Authors' calculations based on data from the Economic Commission for Latin America and the Caribbean (ECLAC).

This change in elasticity could be due to greater dependence on imported capital goods following liberalization in the 1990s and the consequent disappearance of a portion of the region's

[19] Although this methodology is not based on a statistical contrast of coefficient equality, the differences after 1990 suggest that long-term elasticity increases from that year onward.

industrial apparatus (particularly in the capital goods industry), together with the increased share of total supply that is made up of imports of sophisticated consumer goods. We are assuming here that both types of goods have elasticity greater than 1 relative to GDP growth.[20]

This high elasticity raises a question as to how much export volumes have to grow in order to avoid excessive dependence on external saving in a growth context. Although further research is clearly needed, it should be pointed out that high import elasticity in a context of considerable growth might exert some pressure on external financing. Although this does not appear to be a problem in the short and medium terms –at least so long as the terms of trade remain favourable– it is nonetheless important to emphasize the need to ensure high growth rates for exports and domestic saving. The latter is particularly important for financing much of the investment required to sustain high growth rates.[21]

2. Export patterns and the composition of trade

Three stylized patterns of export specialization seem to have been emerging in the region. These patterns influence both the diversification (by destination and by product) and the growth of exports. The first is based on integration into vertical flows of manufactures trade, with the maquila industry playing an important role. This is the case of Mexico, nearly all the Central American countries and some of the Caribbean countries. These countries' exports are fairly heavily concentrated in terms of target markets, since they go mainly to the North America, but are fairly diversified as regards the products that make up the export basket.

On the other hand, the South American countries have, for the most part, been involved in horizontal trade networks consisting largely of resource-based products, although their target markets are more diversified. They also have larger intraregional trade flows. A distinction should be made between the Andean countries and the MERCOSUR bloc, since the former have a much more concentrated export basket in terms of both destinations and products.

The third trade pattern, which is predominant in some Caribbean countries and Panama, corresponds to the exportation of services, mainly those connected with tourism, finance and transport. In Cuba, the Dominican Republic and some small island States, tourism-related services account for the bulk of service exports.[22] In Panama, Canal-related transport services represent more than half of such exports; these flows are complemented by trade connected with the Colón Free Zone, which contributed 86% of total exports in 2001. With respect to goods exports, the Caribbean countries' concentration indices (by product) are relatively high.

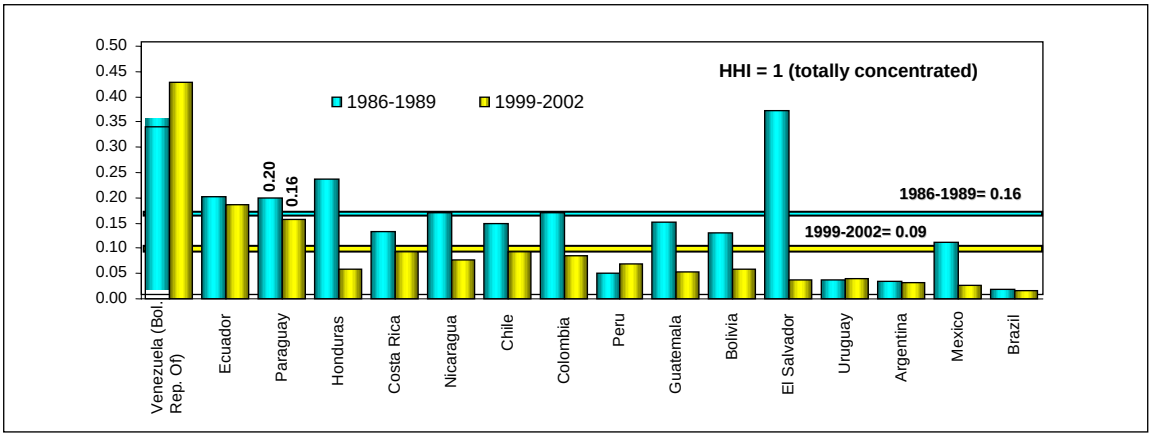
Generally speaking, over the past 20 years Latin America has significantly increased the diversification of its export basket (see figure 8), even as the concentration of its target markets has risen slightly, albeit with considerable differences across countries (see figure 9). As shown in figure 8, all the countries diversified their products, with the exception of the Bolivarian Republic of Venezuela and, to a lesser extent, Uruguay and Peru, although diversification was substantially greater in Central America and Mexico. Indeed, the improvement made by South America in that period was minimal, although the level of export diversification of some of this subregion's countries (Argentina, Brazil, Peru and Uruguay) has traditionally been higher.

[20] Lack of data made it impossible to verify whether gross elasticity was above one for sophisticated imported goods. For investment, however, a simple regression between the cyclical component of investment and GDP generated a coefficient of 3.28 (while the coefficient of a simple regression between the cyclical component of imports and GDP was 4.46). The coefficient of investment in relation to GDP was not significant in the random-effects panel estimation but was significant with fixed effects (as shown in Annex A). This difference in results may be due to the fact that the data used was from aggregate imports.

[21] Regional investment for 2005 is expected to stand at little more than 21% of GDP, while preliminary estimates from ECLAC show that 5% growth requires an investment rate of around 24%.

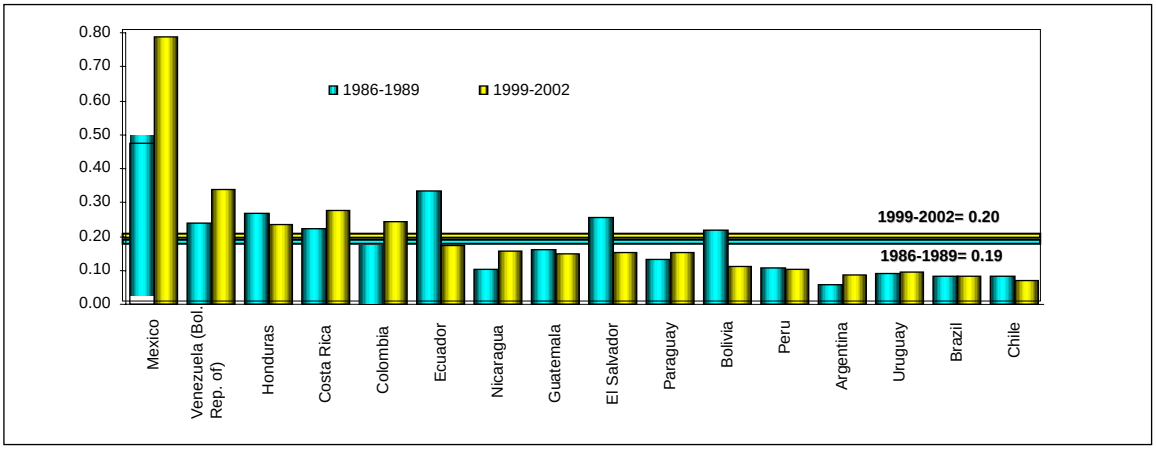
[22] For Cuba, exports of social services have also been a relevant factor in recent years.

Figure 8
EXPORT CONCENTRATION, BY PRODUCT
(Herfindahl Hirschman index, 1986-1989 vs. 1999-2002)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), Division of International Trade and Integration, on the basis of information from the Commodity Trade Database (COMTRADE).

Figure 9
EXPORT CONCENTRATION, BY DESTINATION
(Herfindahl Hirschman index, 1986-1989 vs. 1999-2002)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), Division of International Trade and Integration, on the basis of information from the Commodity Trade Database (COMTRADE).

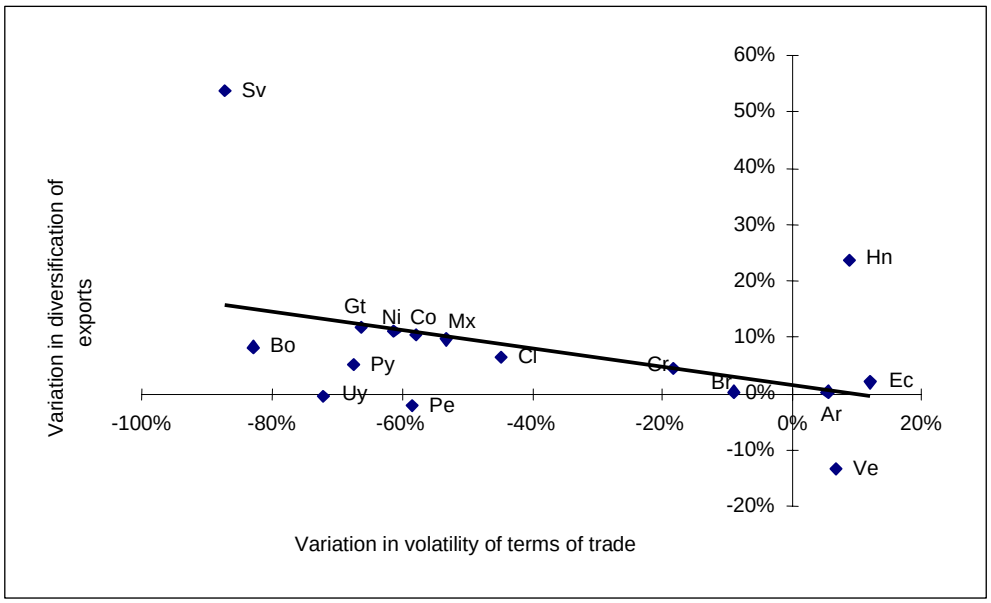
The greater diversity of the export basket has helped to reduce the volatility of the terms of trade (see figure 10) [23] and to limit the vulnerability of the region's economies to such crises.

[23] Calculations were based on export diversification defined as 1-HHI and the standard deviation of terms of trade volatility.

Figure 10

DIVERSIFICATION OF THE EXPORT BASKET AND VOLATILITY OF TERMS OF TRADE

(Variation around 1986-1989 and 1999-2002)



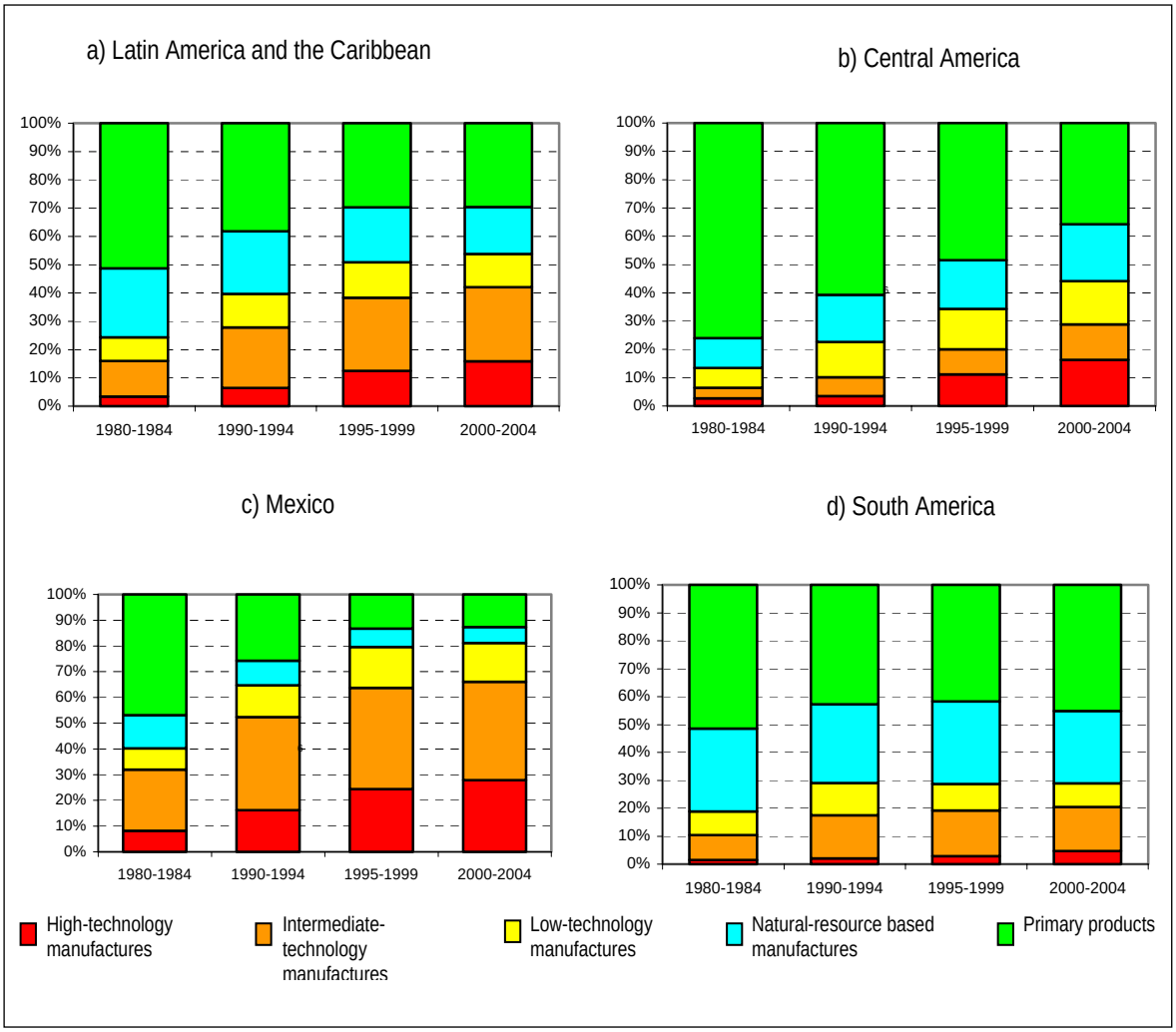
Source: Authors' calculations based on data compiled by the Division of International Trade and Integration of the Economic Commission for Latin America and the Caribbean (ECLAC).

This diversification is clearly linked to the fact that, since the 1980s, far-reaching changes have occurred in the technology intensity of the region's exports. Figure 11 shows the pattern of export specialization in various categories of goods and how it has changed between various sub-periods between 1980-1984 and the present.

In Latin America and the Caribbean, the proportion of commodity exports has declined steadily, falling from levels of close to 50% between 1980 and 1984 to less than 30% between 2000 and 2004, while the share of manufactures exports, including maquila output, has risen from approximately 50% to 70% over the same period. South America continues to be heavily dependent on primary commodities. Although its share of intermediate- and high-technology manufactures has increased, it still falls far short of the increases observed in Central America and Mexico, and reached significant levels only during the 1980s and early 1990s. Much of this change is accounted for by increased intraregional trade in MERCOSUR and the Andean Community.

Central America and Mexico have made much more progress in reducing their dependence on commodities. In Mexico, primary products and manufactures based on natural resources represented 60% of exports in 1980-1984, but now account for less than 20% of the total, while intermediate- and high-technology manufactures represent over 65% of total exports. In Central America, the change has been equally significant although somewhat slower. A similar, albeit much more limited, process has been observed in the Caribbean countries. In all three cases, these changes are chiefly attributable to the strong increase in the share of total exports represented by maquila products.

Figure 11
EXPORT STRUCTURE, BY DEGREE OF TECHNOLOGY INTENSITY



Source: Economic Commission for Latin America and the Caribbean (ECLAC), Division of International Trade and Integration, on the basis of information from the Commodity Trade Database (COMTRADE).

Note: Calculations based on annual averages.

It is interesting to observe how export patterns have changed during the same period in four successful, resource-rich countries: Australia, New Zealand, Malaysia[24] and Canada (see figure 12). Australia and New Zealand display an export specialization pattern based on primary commodities and natural-resource-based manufactures that has changed little over time.[25] Malaysia and Canada exhibit considerable export diversification in terms of intermediate- and high-technology products, with Malaysia displaying the most buoyancy (especially in high-technology products).[26]

[24] Malaysia has a lower level of development than the other three countries, and "successful" should therefore be understood in terms of growth of per capita GDP (annualized rate of 3.8% between 1985 and 2005).

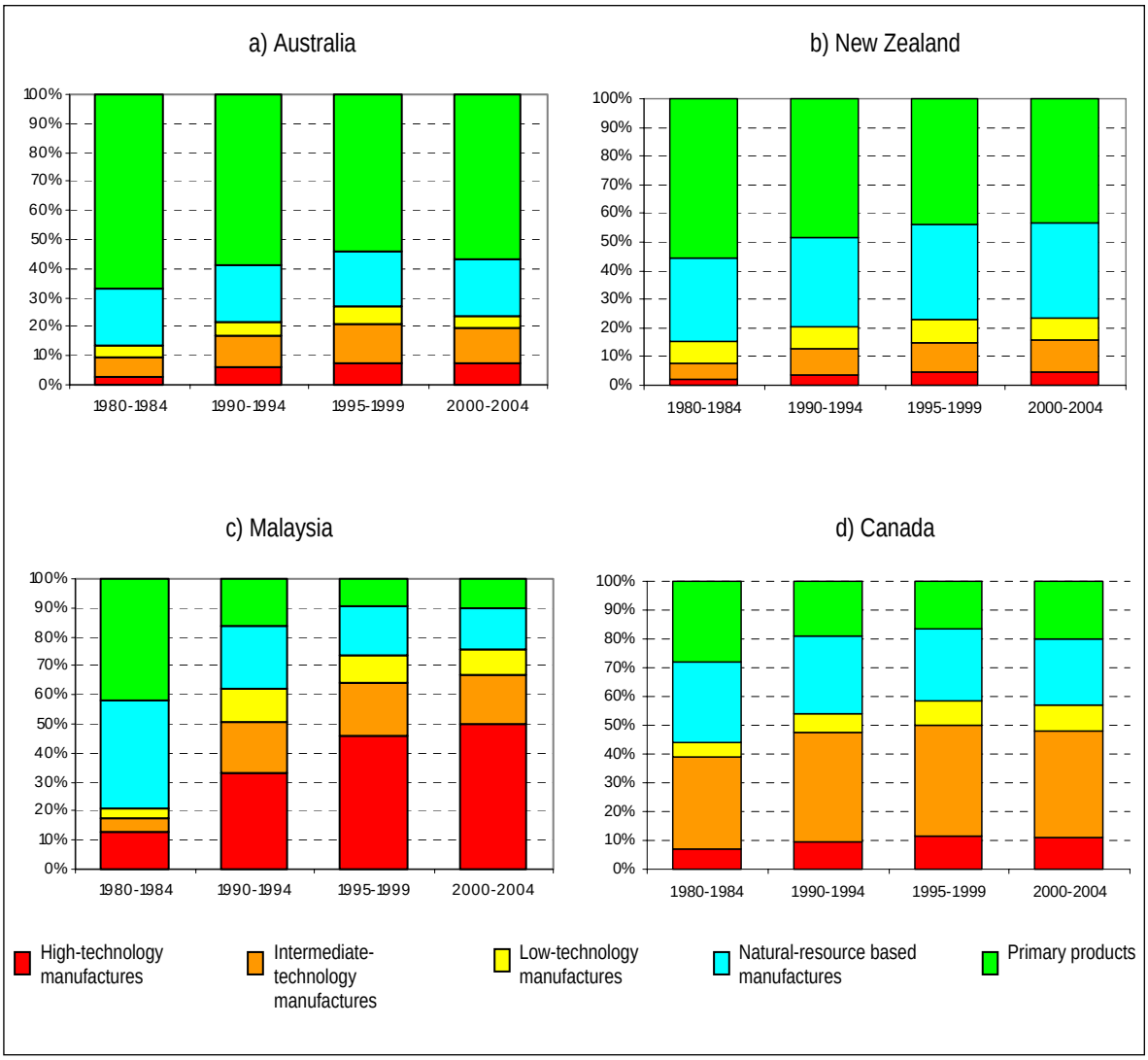
[25] This pattern is similar to the one observed in South America, especially in Chile, which has been the most successful country in the region in terms of growth.

[26] In Europe, the Nordic countries (which are also rich in natural resources) also show an export pattern closer to that of Malaysia, i.e. more intensive in intermediate- and high-technology products (see figure 13 in the next section).

This suggests that, in countries with large endowments of natural resources, export specialization does not appear to be a determinant of economic success. What does seem necessary is to create linkages on the basis of these activities and to innovate, in the broadest sense of the word. This issue will be dealt with in the next section.

Figure 12

EXPORT STRUCTURE, BY DEGREE OF TECHNOLOGY INTENSITY



Source: Economic Commission for Latin America and the Caribbean (ECLAC), Division of International Trade and Integration, on the basis of information from the Commodity Trade Database (COMTRADE)

Note: Calculations based on annual averages.

3. Manufactures or commodities: Is that the question?

It is often claimed that exports based on natural resources have limited potential spillovers for the rest of the economy and therefore have less of an impact on growth.

In section I, we argued that commodity exports may contribute less to growth because they generate fewer dynamic linkages, economies of scale and positive externalities for the rest of the economy. Several empirical studies have suggested that countries rich in natural resources tend to grow more slowly than those with few natural resources. For instance, Sachs and Warner (1995) find a negative empirical relationship between economic growth and the ratio of natural-resource exports to GDP, although this finding was questioned by several subsequent studies.[27]

Beyond possible methodological discussions, there are a number of reasons why natural resources may contribute less to economic growth:

(a) When there is a sharp difference in productivity levels between the natural-resources sector and the rest of the economy, the equilibrium exchange rate may generate hefty earnings for producers of natural resources, while at the same time preventing other industries from being competitive at the international level (including a large part of the manufacturing sector).[28] This sort of "Dutch disease", which reduces the importance of the manufacturing sector, can be a real problem if the traits of this sector make it crucial to growth (e.g., stronger productivity gains, greater production linkages, economies of scale or externalities associated with learning).

(b) Another reason may be suggested by Prebisch's hypothesis about the long-term deterioration of the terms of trade for countries that export natural resources. This hypothesis was relevant for much of the last century (Ocampo and Parra, 2003) but, as stated above, this may be changing now because of the growing importance of China, India and other Asian countries in the international economy.

(c) Commodity prices are more volatile than the prices of manufactures, which generates more volatile growth in the absence of export diversification (Ros, 2004).

(d) In many commodity-producing activities (particularly mining), remoteness from population centres hampers the formation of backward linkages, both in terms of service generation and goods production (ECLAC, 2005c).

(e) Exporters of differentiated products must innovate (including in terms of marketing channels) to distinguish themselves from the competition in order to maintain their profitability. This provides incentives for expenditure on innovation (defined in a broad sense to refer to the capacity to adopt, adapt and create), which in turn creates positive externalities (Chami Batista, 2004). Differentiated products are usually associated with manufactures, but non-traditional agricultural products can be differentiated as well.[29]

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[27] See, for instance, Manzano and Rigobon (2001); Lederman and Maloney (2003); and the World Bank (2002). In the latter, when the study reproduced the estimates of Sachs and Warner and controlled for degree of export concentration, the significance of natural-resource exports vanished. The study therefore concluded that the Sachs-Warner result operates through the export concentration channel.

[28] This issue has been discussed at length in some developing countries rich in natural resources, and has led to the recommendation of differential exchange rates. Diamand (1972) contests the suitability of this and other instruments in cases of imbalanced production structures in which a highly competitive primary sector exists alongside a less competitive manufacturing sector. A uniform exchange rate and tariff system would dispense with this duality, but this could only be achieved by reallocating factors from the manufacturing industry to the primary sector, which would result in a decline in the former (Mallon and Sourrouille, 1973).

[29] Indeed, some manufactures have limited differentiation, such as industrial commodities (steel, aluminium, or certain textile products).

These factors can be viewed in conjunction with the fact that high-technology manufactures whose production requires skilled workers are the category of goods whose share of world trade has expanded the most over the last 25 years (UNCTAD, 2002a and Lall et al., 2004). This means that, quite apart from the above-mentioned factors, it is difficult to imagine an across-the-board growth strategy for developing countries based on specialization in primary commodities.

Two points should be made in this regard. First, the buoyancy of the most technologically intensive products is exaggerated by the growing importance of international production networks that increase trade without adding value (UNCTAD, 2002a). This means that the volume of international trade (in the last two years at least) is not a good indicator of the buoyancy of demand. This does not, however, invalidate the fact that demand for such high-technology products is indeed more buoyant than the demand for products made from natural resources or for low-technology goods. Second, the differing access that primary (and particularly agricultural) products have to developed-country markets also partly explains this set of dynamics. The relevance of this factor to development strategies is uncertain, since it is not clear how long it will take for international negotiations to bring about a change in this respect; the progress made to date leaves little room for optimism, however.

According to a recent study by Ocampo and Parra (2005), there is a positive correlation in developing countries between the growth rate of per capita GDP and the increase in the proportion of intermediate- and high-technology goods within total exports. The relationship between the two variables appears less clear when the exercise is applied to the countries of Latin America, however. As shown in table 2, out of the four countries in the region that posted annualized per capita growth rates of more than 1.5% in 1985-2002, only one displayed growth of at least 10 points in the share of intermediate- and high-technology products within total exports.[30] And out of the four countries that displayed growth of at least 10 points for the share of intermediate- and high-technology products within total exports, again, only one posted per capita growth of more than 1.5%.[31]

This is not to deny the importance of specializing in intermediate- and high-technology goods for the purposes of growth. Factors that may justify a preference for specializing in higher-technology goods include the creation of greater economies of scale, linkages, externalities and demand for skilled labour. What is more, the fact that most countries in the region have not achieved stronger growth could be attributed to their lack of specialization in high technology. It should, however, be borne in mind that increasing the proportion of intermediate- and high-technology goods in exports does not always lead to higher growth, as it does not necessarily represent a country's technological capacity. In today's globalized world, where production processes are becoming increasingly divided among countries (with global production chains organized by transnational enterprises), exporting a high-technology product may simply mean that the exporting country completed the final link in the production chain. The knowledge involved in producing the product is actually spread among several countries participating in the process and is not necessarily present in the country that exports the final product. Indeed, much of the technology contained in such manufactures is incorporated in the components made in more technologically advanced countries, while developing countries are often involved in assembling the products using processes that entail very little technological sophistication, relatively unskilled workers and low value added (UNCTAD, 2002a; ECLAC, 2004a).

[30] Over a similar period, South-East Asian countries increased that share by more than 20 percentage points.

[31] Indeed, Brazil and especially Mexico increased the technological component of their exports, but their per capita GDP grew by less than 1%.

Table 2

PER CAPITA GDP GROWTH VS. INCREASE IN THE PROPORTION OF INTERMEDIATE AND HIGH-TECHNOLOGY GOODS WITHIN TOTAL EXPORTS

(1985-2002)

		Growth of proportion of intermediate- and high-technology goods in total exports	
		> 10 percentage points	**< 10 percentage points**
Growth of per capita GDP (annualized)	**>1.5%**	Costa Rica	Chile, Dominican Republic, El Salvador
	<1.5%	Mexico, Colombia, Brazil	Uruguay, Argentina, Guatemala, Bolivia, Ecuador, Honduras, Paraguay, Peru, Bolivarian Republic of Venezuela, Nicaragua, Haiti

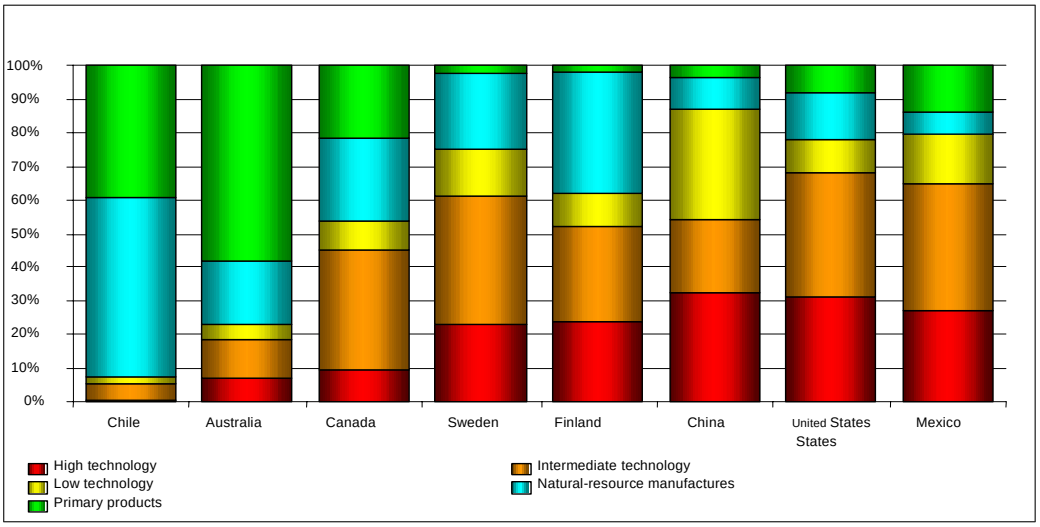
Source: Authors' calculations on the basis of World Bank, World Development Indicators (WDI) and Tradecan, 2005.

A closer look at Mexico's exports as compared with the export structures of certain developed countries shows that, although its structure is similar to that of the United States and Finland and its exports' technological content is higher than the exports of Sweden, Australia or Canada (see figure 13), almost half of Mexican imports (46% in 2004) come from the maquila industry. In Central American countries, maquila exports represent between 40% (Guatemala) and 77% (Dominican Republic) of total exports. These products generally contain a large proportion of imported inputs and low domestic value added. In the case of Mexico's maquilas, for instance, the value added is equivalent to just slightly over 25% of the total value of their exports, and this figure has remained virtually constant over time.

Contending that specialization in the exportation of intermediate- and high-technology goods does not automatically increase growth is not tantamount to concluding that diversification towards such goods is not advisable for growth. Nonetheless, there are successful countries that have not specialized in intermediate- and high-technology exports. A common pattern in these countries is for exports to act as an engine of growth by creating domestic linkages and generating new associated technologies and processes (such as new agricultural products in New Zealand, mining in Australia, salmon in Norway or wood –and design-based forward and backward linkages– in Finland and Sweden).

For Latin America, however, although the region's exports have increased and diversified significantly in recent years (in some cases shifting towards intermediate- and high-technology goods and away from commodities), the results have not been satisfactory in terms of growth. While acknowledging that the growth rate depends on a combination of factors, above and beyond export performance, there is no evidence that exports have the same growth-boosting potential in Latin American countries as in economies such as those of South-East Asia or China. As previously stated, this deficiency is independent of each country's position within the international economy or patterns of export specialization.

Figure 13
BREAKDOWN OF EXPORTS, BY TECHNOLOGICAL CONTENT (2004)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), Division of International Trade and Integration.

Even countries whose export position is based on services (some Caribbean countries and Panama) have failed to exploit the economy-boosting potential of the services sector. Although the extent of this potential naturally depends on the types of services involved,[32] it is always possible to implement policies specifically aimed at generating multi-directional production linkages within the services sector.

Beyond the generation of production linkages, another difference appears to lie in the greater value-added of products exported by successful countries compared with those exported by Latin America, and this is reflected in the higher unit value of those goods. This higher level of value-added includes not only a greater degree of processing of raw materials (which may be imported), but also activities that differentiate the product, such as design, marketing strategies, brand positioning, packaging etc. This is why even low-technology manufactures and those based on natural resources have more value added in these countries. Figure 14 shows the ratio between the average unit value of a series of exports in the three "successful"[33] countries where this average is the highest and the average unit value in the three Latin American countries where it is the highest. In most cases, the ratio is above one.[34]

[32] There is obviously less potential to generate linkages from financial services than from software or tourism. In tourism, for instance, backward linkages could include food production and textiles (linen) to supply hotels.

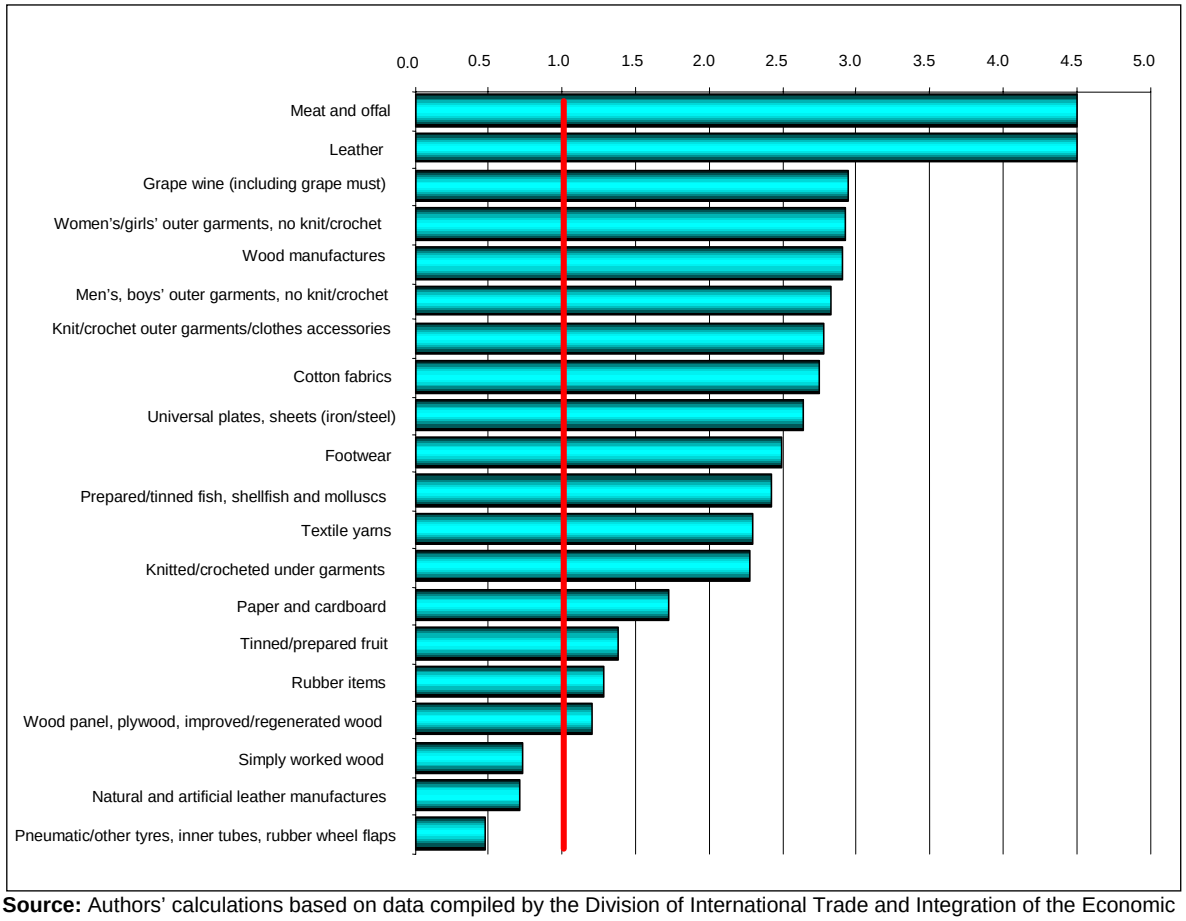
[33] Besides Nordic countries, the "successful" countries include Australia, Canada, China, France, India, Italy and the United States. In the case of Italy and France, their low-technology exports have high value-added incorporated in the form of design, brand positioning, etc.

[34] The result is not the same if the ratio is calculated for the unit value of exports by China and India compared with those of the two Latin American countries with the highest unit value.

Figure 14

RATIO OF UNIT VALUES OF EXPORTS

(Three highest in "successful" countries vs. three highest in Latin American and Caribbean countries)



Source: Authors' calculations based on data compiled by the Division of International Trade and Integration of the Economic Commission for Latin America and the Caribbean (ECLAC).

The higher unit value of products exported by "successful" countries is partly a reflection of the innovation activities within their production processes. The conventional way of measuring innovation effort, based on R&D expenditure, may be too restrictive if it does not include costs associated with adopting and adapting new technologies that are particularly relevant for Latin America. In the light of the limited information available, that variable has been used to measure the degree of countries' innovation effort, and Latin America is also lagging behind somewhat in these areas. Table 3 shows that the sums used for R&D in the region are considerably lower in relative terms. In addition, the effectiveness of R&D expenditure, measured as R&D expenditure per patent registered, is also substantially lower in the region than in other countries included in the table. It is particularly interesting to compare the differences in levels of expenditure and expenditure efficiency compared with other countries rich in natural resources.[35]

[35] The number of patents registered at the United States Patent and Trademark Office (USPTO) was used as an indicator of the results of innovation activity. However, this indicator only measures innovation in the strict sense, i.e., the *discovery* of new technologies, goods or services. Also, it is not necessarily comparable between countries with different labour stocks and levels of exports to the United States. For an analysis of a more precise methodology for measuring R&D expenditure effectiveness, see Bosch, Lederman and Maloney (2005).

Table 3
EXPENDITURE ON R&D AND PATENTS – SELECTED COUNTRIES

	Patents granted by USPTO	Patents granted by USPTO per million people	Total R&D expenditure as % GDP	Business R&D expenditure as % of total expenditure	Effectiveness of R&D expenditure (cost of each patent in US$ millions)
Argentina	70	1.8	0.4	29	7.6
Brazil	180	1.0	1.1	40	25.8
Chile	15	1.0	0.5	35	36.4
Colombia	11	0.3	0.2	18	9.7
Costa Rica	10	2.5	0.2	23	5.2
Mexico	92	0.9	0.4	31	28.2
G-7	23 152	153	2.2		
Australia	1 047	53	1.5	48	5.8
New Zealand	165	41	1.0	37	5.0
Canada	3 893	123	1.9	55	4.1
Sweden	1 629	182	4.6	74	7.4
Norway	279	61	1.6	57	12.2
Finland	944	181	3.4	70	6.0
Malaysia	63	3	0.5		10.6
China	424	0.3	1.1	62	43.9
Korea	4 132	86	3.0	76	3,9

Source: World Bank, Knowledge Assessment Methodology (KAM); United States Patent and Trademark Office (USPTO); and United Nations Conference on Trade and Development (UNCTAD), World Investment Report, 2005, New York, 2005.
Note: Data from 2003 or most recent figures available.

The difficulty that Latin American countries have had in adding value, and especially knowledge, to exports is what has limited their growth-boosting potential. In other words, although it is possible to add value on the basis of natural resources, it is not usually a spontaneous process but one that requires coordinated action between the public and private sectors. In this sense, the region's export base, which has been growing stronger and has been extremely buoyant in recent years, may be a promising platform for launching strategies aimed at increasing the domestic value-added of exports, as well as strategies for intensifying and extending learning processes, technical progress and innovation, and more generally, for developing systemic competitiveness.

The experience of the Nordic countries, Canada and Australia shows that, like high-technology manufacturing sectors, natural-resource-based sectors also can achieve large productivity gains and find opportunities for incorporating knowledge, technology transfer and the creation of linkages with other production sectors. In turn, the development of such linkages and the incorporation of knowledge may give birth to sectors with higher levels of technology, which may eventually increase their participation in world trade (Nordic countries and possibly Malaysia) or be able to increase the productivity of commodity-producing activities while maintaining the same export base (Australia and New Zealand). In any event, it is vital for these new sectors to increase the complexity of the production structure and build their domestic technological capacity.[36]

[36] Agricultural products in general, and particularly those linked to "new agriculture", might have greater potential than mining products in this area.

The maquila industry can create jobs and contribute to training by introducing modern business management and developing local production capabilities. This, however, requires investment in material and human resources, together with public policies to support productive development.[37] The same is true of services: linkages in various directions can indeed be generated, but this will not usually happen spontaneously unless specific policies are implemented. These issues will be discussed in section 3. First, however, we will briefly examine the role of foreign investment in growth and its relevance for the region.

[37] Another relevant factor is the bargaining power needed to encourage multinationals to add greater domestic value (UNCTAD, 2002b). However, the bargaining power of China, for instance, in this area clearly differs from that of any country in the region (particularly the smaller ones).

III. Trade and growth: the role of FDI

In recent decades, the world economy has witnessed a striking increase in the rate and scope of technological change. Scientific and technological advances drive the constant appearance of new activities and new ways of producing, distributing and consuming goods, services and knowledge, as well as the restructuring of existing activities. Unfettered access to technology and know-how generated in other countries is a key factor for countries behind the technological frontier that are striving to capitalize on these changes in order to close the productivity gap that separates them from more advanced nations.

Economies open to international trade and investment can thus use the shortcut offered by the possibility of importing technologies embedded in machinery, equipment and inputs or intangible assets (expertise, licenses, patents, trademarks, technical assistance, network access, etc.) to acquire the production technologies, processes, organizational structures and management skills they need to narrow the productivity and quality gaps between them and more technologically advanced countries. However, as we have argued with respect to trade openness, the process is not automatic, either in the case of links between openness and foreign investment, or between the latter and growth.

1. Openness and FDI

In the context of closed economies, such as those of Latin America up to the 1980s, one of the factors that attracted FDI was the possibility of "tariff jumping" by supplying the market from within the host country. This type of horizontal investment is also characteristic of public utilities involved in the privatization programmes implemented by the countries of the region. In this case, the incentive has been the possibility of "jumping" over the natural barrier that keeps such activities outside the sphere of international trade.

On the other hand, *vertical* FDI, in which investors are seeking the location where they can produce a particular good most competitively, which has lately been fuelled by the practice of dividing up the various phases of a production process among different countries, is complementary to trade.[38] This type of FDI seeks those locations that offer the best conditions in terms of the relative supply of factors and natural resources in relation to the good to be produced, geographical proximity to the target market, institutional quality, favourable treatment for foreign capital and macroeconomic stability (including the real exchange rate) (Bittencourt and Domingo, 2002).[39]

While the size of the local market is fundamental in the case of horizontal investment, this factor is of less relevance to vertical investment. Thus, economic liberalization tends, relatively speaking, to favour small countries.[40] These are the countries in which economic openness will lead to a larger increase in the potential market.

Bilateral or regional trade agreements are a special type of openness. Such agreements generate vertical investments that reallocate capital within the bloc, together with horizontal investments from outside the bloc, since third-party countries pay higher tariffs. In addition, the increase in the market's size constitutes an incentive for investment within it (Levy-Yeyati, Stein and Daude, 2002). In this case, the trade diversion generated by the regional agreement *diverts investment* towards the region.[41] Obviously, the greater the market size of any of the partners, the greater the incentives.[42]

Generally speaking, the relationship between trade and FDI is not clear. On the one hand, there is an incentive to reallocate capital between countries in order to take advantage of geographic proximity or a given supply of production factors, which would point to a positive link between trade flows and vertical FDI. On the other, horizontal foreign investment should be negatively correlated with foreign trade flows in the case of import-substituting investments and should have no correlation in the case of investments are aimed at the production of non-tradables. Thus, bilateral or regional trade agreements may attract more foreign investment than unilateral liberalization will by diverting investment toward the bloc formed by the parties to the agreement.

[38] The reduction in trade and regulatory barriers has been one of the very factors that have facilitated internationally shared production.

[39] Empirical results obtained by Stein and Daude (2001) suggest that lower taxes on foreign companies have a positive effect in terms of the location of FDI. These effects, nevertheless, prove less decisive than those associated with the quality of institutions.

[40] This is based on the assumption that all other variables remain constant, which is not necessarily the case, since size can be related to other factors that encourage location in a specific place (for example, quality of infrastructure or presence of a skilled workforce).

[41] This could have occurred in some Central American countries following the signing of the North American Free Trade Agreement (NAFTA). Since exporters in some Central American countries specialized in categories for which NAFTA granted Mexico a special tariff advantage, this could have resulted in FDI being diverted away from these countries and into Mexico. This intuitive possibility is difficult to prove empirically, one reason being that the NAFTA period coincided with a major devaluation of the Mexican peso, which could have been another reason for redirecting FDI towards Mexico (Lederman, Maloney and Servén, 2005). That study found little evidence of a shift in FDI away from Latin America and in particular Central America, as a result of NAFTA (in Central America, new incentives for foreign investment were introduced as compensatory measures, which could have mitigated the effect). Within Central America, however, the countries reacted differently, which would seem to reflect the importance of a country's individual characteristics for attracting FDI.

[42] In a review of empirical studies on the link between regional agreements and FDI, Lim (2001) states that various studies found evidence of the reallocation of FDI within the region, as well as increases in FDI from countries outside the agreement.

Although distinguishing between horizontal and vertical FDI is no easy task, from the standpoint of empirical analysis, the existence of a negative or positive correlation between trade and foreign investment should be indicative of the type of investment that predominates in each case. In a recent study, Aizenman and Noy (2005) analyse the link between trade and FDI through panel regressions for a total of 83 countries between the years 1982 and 1998.[43] The divide the countries into *developed* or *developing* nations to capture the fact that the nature of FDI (horizontal or vertical) may be different in the two cases.[44] In general, they find that past trade flows have a positive impact on current foreign investment in developing countries, while the link is not clear for the developed countries.[45]

Although an OECD study (2002) finds a positive link between foreign trade (in terms of GDP) and FDI in a cross-section of OECD countries, determining the direction of the causal relationship between the two variables is no simple matter. There are reasons for thinking that FDI should increase the trade of the host country, partly because the entry costs in external markets are usually lower, as the entire operation is often the result of a decision to globalize the production process of a given product. Aizenman and Noy (2005) find that merchandise trade is very positively affected by past FDI flows, both in industrialized and in developing countries. This effect has surely tended to increase over time as production processes become globalized.

2. Growth and FDI

FDI may affect growth rates in various ways. First, it is an important source of external finance and, in the particular case of Latin America, it has been the most stable source of financing since the early 1990s.

If foreign investment is used to finance greenfield projects, it will generate an increase in production and in employment in the host economy. Similarly, FDI geared to external markets should have an indirect positive effect by boosting exports. Foreign investment is usually regarded as being a supplier of capital,[46] technology, know-how and market access, all of which will presumably held increase host-country exports (UNCTAD, 2002b).

Positive effects may also derive from the potential linkages between FDI and local activities. In this case, the impact of FDI may spread from the microeconomic sphere to the macroeconomy through the spillovers generated by the operations of transnational corporations which demand higher standards than the market average.[47] [48]

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[43] Estimated regressions of net and gross FDI flows (inflows and outflows) against the average trade openness ratio (exports plus imports over GDP) for the four preceding periods. They also include explanatory control variables, such as per capita GDP, interest rate spread with respect to the international rate, a dummy variable for the 1990s and political and institutional variables (corruption and "democracy" indices).

[44] The countries belonging to the Organisation for Economic Co-operation and Development (OECD) in 1990 are classified as developed countries while all others are considered to be developing countries. Islands are excluded since, in many cases, they operate as off-shore banking centres and, as such, their capital flows are governed by other factors.

[45] Although the coefficient is positive, it only proves significant in some cases.

[46] FDI is thought to play a key role in increasing exports in countries that lack the finances to exploit a resource, as in the case of foreign investment in mining activities (OECD, 2002).

[47] So far, the empirical analysis of microeconomic effects has not yielded conclusive results. While several studies have supported the existence of beneficial spillover effects (see, for example, OECD reports (1998; 2002) and the review produced by Lim (2001), various studies on firms have not been able to find the relevant spillover effects (see the studies reviewed in Blomström and Kokko (2003)).

[48] In the case of Argentina, Chudnovksy, López and Rossi (2004) generally found that domestic firms with high absorption capabilities reaped positive spillovers from TNC presence while those with low absorption capabilities were more likely to receive negative spillovers. They measured absorptive capacity on the basis of a summary indicator encompassing quantitative elements such as proportion of total workers involved in R&D and qualitative elements like the importance assigned to product innovation in the firm's corporate strategy, for instance.

In this case, the effects on the economy's growth rate will depend on the capacity to generate multidirectional linkages between the activities receiving the FDI and other local activities.[49] This will depend on the type of FDI involved and on the sectors concerned[50] and, hence, on what interests have attracted the FDI in question (i.e., whether it is seeking natural resources, local (national or regional) markets, efficient access to third markets and/or technological assets) (ECLAC, 2004b). Ideally, production linkages will generate benefits in terms of technology transfer, human resource training and the development of local businesses, among others. In order for this to occur, however, the firms must not be set up in enclaves. Potentially negative effects could include the crowding out of local businesses by transnationals (either financially or in terms of access to inputs) (ECLAC, 2004b).

In this regard, Alfaro (2003) finds evidence that the effect of FDI on GDP growth depends on the sector in which it is located. The effect of FDI will tend to be negative in the primary sector, positive in the manufacturing sector and ambiguous in the services sector, while total FDI does not have a clear impact on growth. These results are not surprising, since the relevant microeconomic effects tend to be greater in manufacturing activities. In certain enclave-based primary activities, no such effects are generated and, in some cases, the only impact is the depletion of natural resources and massive capital outflows in the form of royalties and dividends. However, other primary activities usually offer greater potential for stimulating the productive structure. If most FDI in the primary sector is channelled into mining activities, this might explain the negative effect of such investment on growth in that sector. Clearly, this does not have to be the outcome even for mining activities, since specific incentive policies can be devised to generate linkages and technological contributions (as appears to be the case in Australia).

As for the service sector, the impact of FDI clearly depends on the characteristics of the target activity and whether the investment involves greenfield projects or the purchase of existing assets. For instance, an investment in the electricity sector that replaces local investment will certainly have less of a growth effect than a new tourism investment. The same could be said about off-shore financial activities compared with buoyant labour-intensive sectors such as software.

Some research projects based on cross-sectional analyses across countries have found evidence of a positive correlation between FDI and growth, although the results are dependent on the countries' achieving a minimum threshold in certain key variables.[51] Other studies have found a Granger-type causality between FDI and growth.[52]

In short, the nature of the link between FDI and growth is unclear, since it depends on the type of FDI and on characteristics of a given host country that may make it more or less likely to assimilate the potential benefits of FDI. In fact, in the region's experience, the linkages in the primary sector and particularly in mining have been minimal.[53] It is also true that, in many cases, the dearth of linkages and local research is at least partly due to the limited capacity of local firms and the absence of human capital.[54] Hence the importance of the productive policies that will be discussed in section IV. Under the following heading we will look at the region's situation in terms of the foreign investment flows received in recent years.

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[49] Linkages may be not only backward (towards the input providers) but also forward (supplying some type of previously non-existent input). The productivity of local firms could increase once they have access to new inputs supplied by FDI projects. This would constitute one of the positive externalities of FDI for the host economy (Navaretti, Haaland and Venables, 2002).

[50] For a discussion on the relevant literature, see Alfaro (2003).

[51] These include a minimum threshold for: per capita GDP (Blomström et al., 1994) and human capital development (Borenztein et al., 1998); plus a certain degree of: trade openness (Balasubramanyam et al., 1996) and development of financial markets (Alfaro et al., 2004). See Hansen and Rand (2004) for a review of this literature.

[52] Hansen and Rand (2004): despite the very mixed results for the different countries, these studies find that, on average, FDI does have some positive impact on growth.

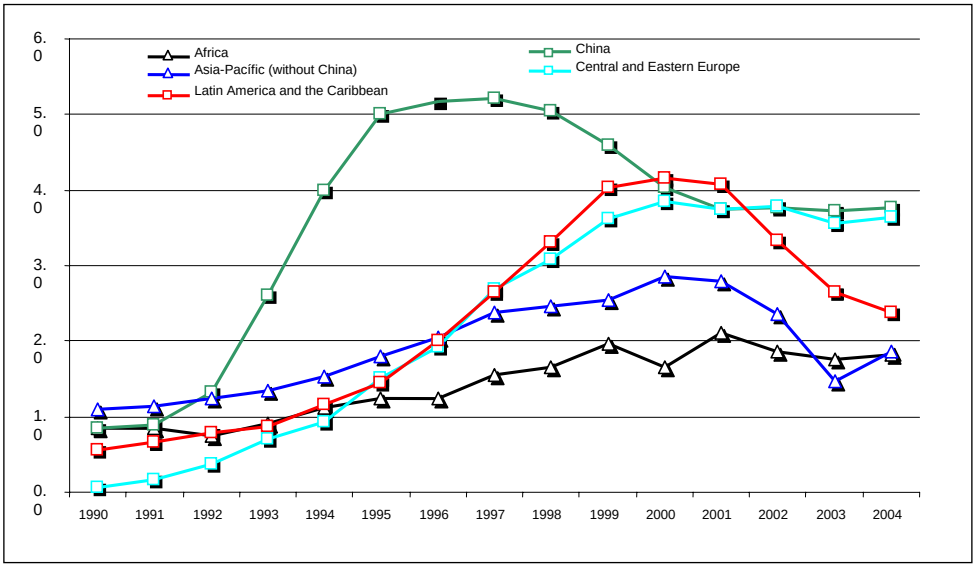
[53] In some cases, the spillovers may be negative, as was the case in the purchase of Yacimientos Petrolíferos Fiscales (YPF) (an oil company) by Repsol, which resulted in a decision to transfer the YPF research laboratory from Argentina to Spain (Katz, 2005).

[54] Blomström and Kokko (2003) review a series of studies that examine how particular characteristics of firms receiving FDI in the host country can be an obstacle to their benefiting from positive spillovers.

3. Situation in the region

After China, the Latin American and Caribbean region is the one that has received the most FDI, measured in terms of GDP, since the mid-1990s. This situation has changed during the current decade, however, owing to the increase in FDI in Central and Eastern Europe (see figure 15). Meanwhile, the major privatizations in South America made it the main recipient of FDI within Latin America (see figure 16).

Figure 15
FDI FLOWS IN RELATION TO GDP
(Percentages) [a]



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

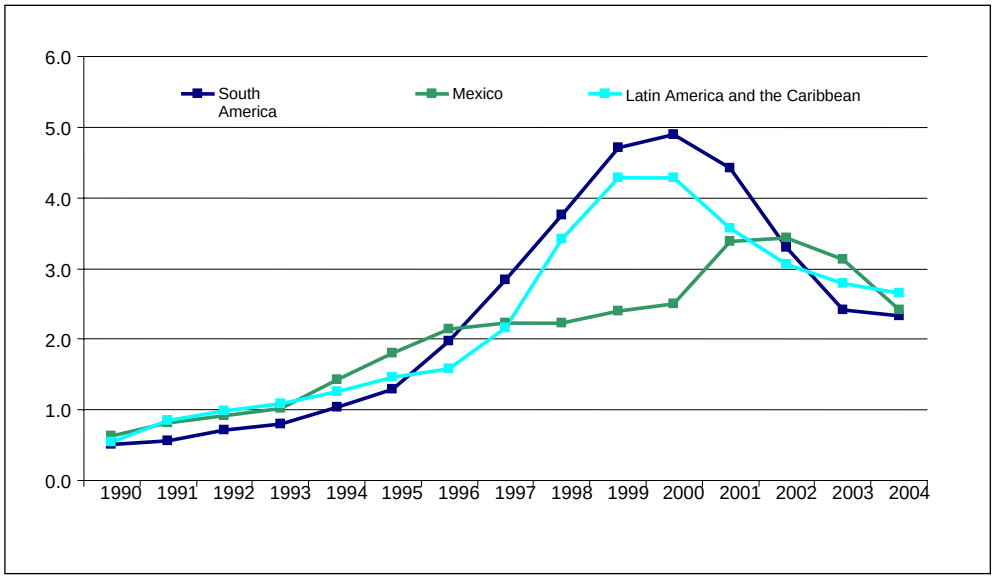
[a] Three-year moving averages.

In Mexico and the Caribbean Basin, FDI inflows have come mainly from United States corporations interested in setting up portions of their international integrated production systems in the manufacturing sector (ECLAC 2005d). In Mexico, 49% of FDI inflows over the past 10 years have gone to the manufacturing sector (see figure 17).[55]

These FDI flows have generally involved the creation of new assets and have succeeded in raising the subregion's level of international competitiveness, as measured by its international export share. Indeed, 71% of the investment received by Mexico and the Caribbean Basin from 1990 to 2003 was in the form of greenfield projects.

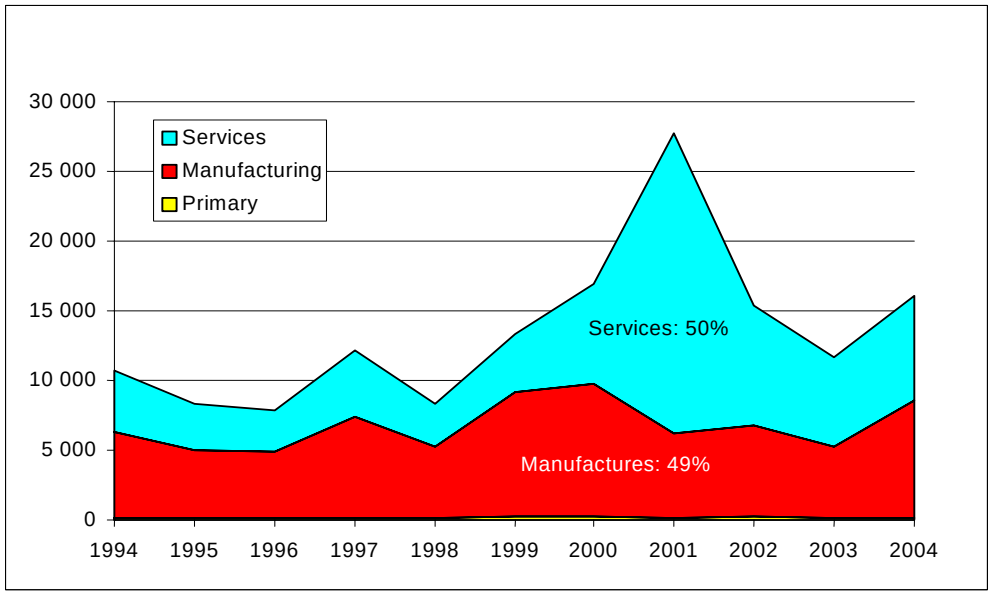
[55] Excluding 2001, when there was a major purchase in the financial sector, investment in the manufacturing sector stood at 56%.

Figure 16
FDI FLOWS IN RELATION TO GDP, BY SUBREGION
(Percentages) [a]



Source: Economic Commission for Latin America and the Caribbean (ECLAC).
[a] Three-year moving averages.

Figure 17
MEXICO: FDI, BY DESTINATION SECTOR
(US$ millions)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on information from national investment promotion agencies.

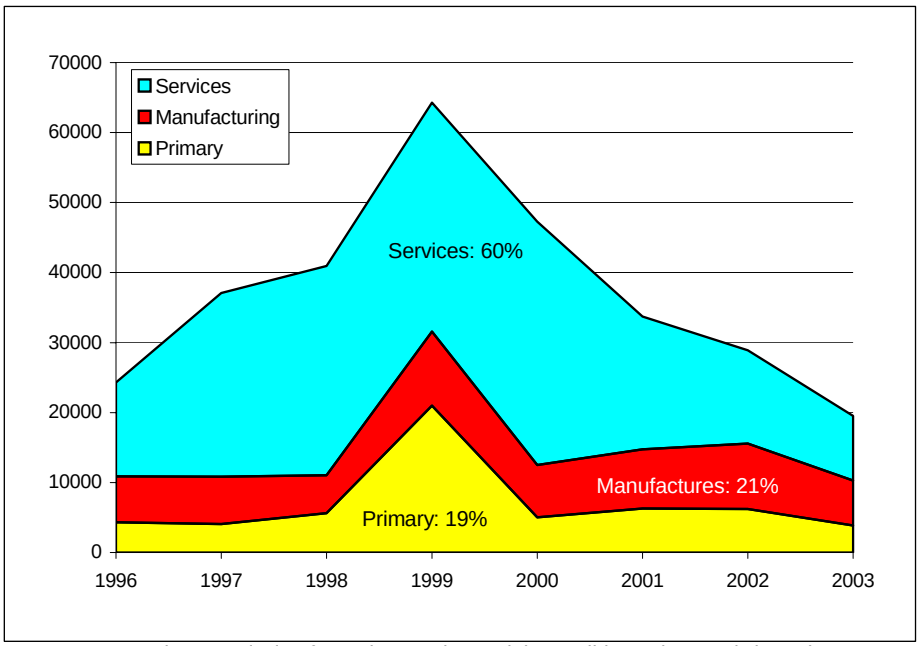
In most cases, there has not yet been any impact in terms of national integration, particularly from the standpoint of technology transfer and assimilation, production linkages, human resources training or local enterprise development.

In South America, most such inflows have consisted of market-seeking FDI from European transnational corporations (TNCs) in service sectors, which received 60% of investment from 1996 to 2003 (see figure 18).[56] Natural-resource-seeking FDI is also significant in this subregion and accounted for 19% of total FDI during the period under review (ECLAC 2005d). FDI oriented towards the manufacturing sector (about 21%) has usually been aimed at taking advantage of the benefits of regional integration, particularly in the context of MERCOSUR. Much of the market-seeking FDI has been in the form of mergers and acquisitions (about 55% of the total) and has been driven by the privatization and deregulation processes implemented throughout the 1990s. While, thanks to these flows, these economies' systemic competitiveness has been raised by the improvements made in infrastructure and services to support the export drive, their international competitiveness remains weak, and numerous regulatory and competition problems have emerged (ECLAC, 2005d).

Figure 18

SOUTH AMERICA – FDI, BY DESTINATION SECTOR

(US$ millions)[a]



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on national investment promotion offices.

[a] Includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador and Peru.

What can be said about the impact of FDI on exports? Although there is insufficient data for a detailed assessment, figure 19 shows the sales performance of the largest foreign corporations in relation to the region's total exports.[57] As the figure shows, there is clear evidence that these companies are playing a leading role in the region's new-found export buoyancy. This is particularly apparent in the manufacturing sector, but also applies to primary goods. Although more evidence is needed, it would seem that increased FDI in the region is one of the reasons for its stronger export growth. Bearing in mind that the increased role of transnational corporations in exports applies not only to Mexico, but also to Argentina, Brazil and Peru,[58] it is hard to explain

[56] The percentage of investment in services rises to 67% if Argentina is excluded, owing to the sums involved in the sale of YPF to Repsol in that country in 1999.

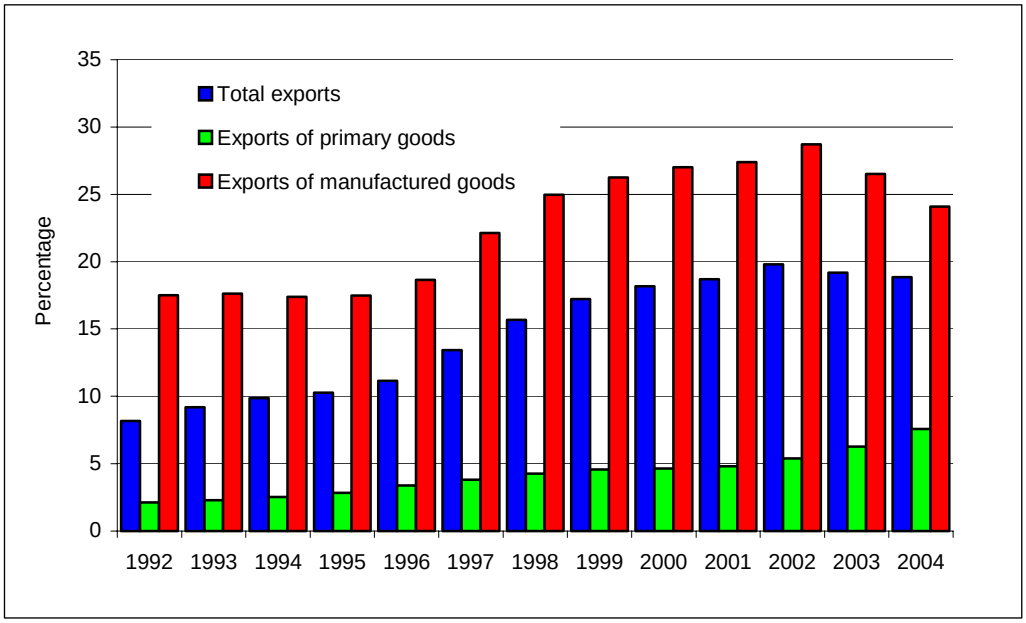
[57] Includes foreign companies' ranking among the 200 biggest exporters.

[58] In all these cases, the selected transnational corporations' share of total exports has at least doubled and now represents more than 20% of the total.

why, in countries where FDI has mostly gone into service sectors, there has been a considerable increase in the transnational corporations' share of total exports. A partial explanation may be found in the sharp downturn seen in the growth rates of those countries from 1998 onwards. Given those circumstances, it was easier for foreign corporations with idle capacity to turn to external markets to take up the slack left by weak domestic demand than it was for local companies.[59] The question is whether that learning experience has instilled permanent habits, in other words, whether it will become a longer-term goal for those companies to export from the countries of the region. More research is needed before that question can be answered, although it seems to be true for some TNCs based in Brazil and, possibly, for some automotive companies located in Argentina.

Figure 19

LATIN AMERICA AND THE CARIBBEAN: TNC EXPORTS AS A PROPORTION OF TOTAL EXPORTS



Source: Economic Commission for Latin America and the Caribbean (ECLAC) based on data from *América Economía*, the World Development Indicators (WDI) of the World Bank, and the ECLAC *Statistical Yearbook*.

Note: The data refer to the largest foreign corporations within the group of the 200 biggest exporters. The group comprises about 100 corporations for each year.

Three-year moving averages.

There is one factor common to almost the entire region, although with variations across countries: the generation of insufficient linkages. Once such linkages are created, they can then spread out from the activity where FDI is sited through the rest of the productive fabric and thus maximize its potential for fuelling domestic activity.[60]

[59] In the case of Brazil, the participation of transnationals in the productive structure and exports has traditionally been high. Indeed, a wider sample for a longer period that is available only for Brazil shows that the weighting of TNC exports as a proportion of the total has remained relatively constant at about 50% over the last 20 years.

[60] In any event, the limited evidence available shows a higher level of linkages in Brazil than in other economies in the region.

Just as with the impact of trade on growth, it is clear that general conclusions cannot be drawn regarding the effect that FDI has on growth. In any event, it seems clear that –as in the case with trade liberalization– the benefits of FDI have been exaggerated. Nonetheless, FDI can be a factor in helping to boost exports and raise the region's low levels of investment (especially FDI that involves increases in operating capacity), and it should therefore be welcomed. Judging from the experience of recent years, however, it is clear that not all foreign investment produces the same benefits. As part of their creation of an FDI-friendly environment, the countries of the region should make an effort to attract the kinds of FDI that will have a greater impact in terms of linkages and R&D resources. Clearly, however, this strategy will not yield many benefits unless the countries are in a position to supply the local capacities needed by such activities.

IV. Productive development policies

1. Introduction

In the previous pages we have argued that trade and FDI can contribute to growth, but that there is no automatic mechanism ensuring a positive relationship between them. Increased relations with the outside world through FDI and trade are a means of "learning" from organizational best practices and adopting the best technologies. However, the various forms that liberalization and foreign investment can take, as well as the different circumstances in which FDI and trade are conducted, are determining factors in the impact they will eventually have on growth.

It can safely be said that that more and better exports are correlated with growth, and there are grounds for supposing that the direction of the causal link runs from exports to growth.[61] "Better exports" means exports that have a greater impact on growth through externalities and linkages with local activities. This certainly leaves room for trade policy, but, clearly, countries export what they produce, and the characteristics of the production structures therefore determine whether trade policy will be capable of increasing exports and improving their quality. For the reasons explained below, those structures depend, in turn, on what we have referred to as productive development policies (ECLAC, 2004a).

[61] Growing economies obviously generate an enabling environment for investment and export growth.

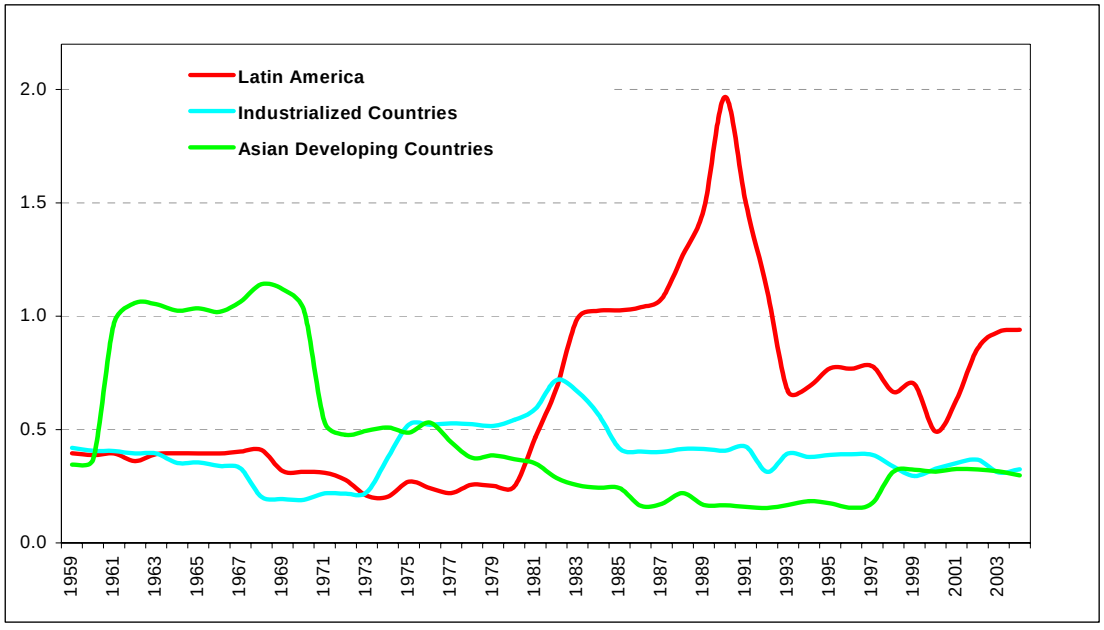
In a broad sense, economic policy for growth requires actions on a number of fronts, such as the macroeconomy, institutional framework, infrastructure development, and incentives for increased saving and investment. In the case of Latin America and the Caribbean, mechanisms for increasing social cohesion are also needed, since it is the most inequitable region in the world. Moreover, not only does the unequal distribution of income have implications from an ethical viewpoint, but –contrary to what used to be thought– it also has a dampening effect on growth.[62]

Many of these issues have been extensively analysed elsewhere from different viewpoints (see, for example, ECLAC, 2004a). The focus here is the role of trade policy and particularly of production policies. Before examining those subjects, however, we would like to briefly refer to some aspects of what we consider to be a form of macroeconomic and financial management that can serve the purposes of economic development.

Good macroeconomic management

A notable aspect of the recent performance of Latin America is the real instability that has accompanied the region's low growth over the past 25 years (see figure 20). This instability has been very costly in economic and social terms (Ffrench-Davis, 2005b; ECLAC, 2000 and 2004a). Consequently, in addition to the traditional goal of a macroeconomic environment that reduces financial volatility (inflation), there is also the need to reduce the volatility of growth processes by applying countercyclical policies. It should also be borne in mind that another lesson of the last few decades is that volatility has arisen both out of private-sector imbalances and out of those generated in the public sector.

Figure 20
VOLATILITY OF ECONOMIC GROWTH
(10-year moving averages, coefficient of variation)



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

[62] See Bourguignon, Ferreira and Walton (2005).

Policies aimed at reducing real volatility must encompass fiscal, monetary and foreign-exchange policy, as well as financial policy. Fiscal policy should be countercyclical, with planning based on structural, rather than current, fiscal balances, and on the creation of stabilization funds to counteract the price volatility of natural resource exports.[63]

Monetary policy should include countercyclical reserve requirements and flexible exchange rates linked to inflation targets. It is important to avoid being overambitious in terms of bringing down inflation, at least when the rate is in the single-digit range,[64] and to remember that the "inflation band" is on hand to be used in case of supply-side shocks. It should also be borne in mind that a portion of real volatility is associated with excessive real exchange-rate variations and their negative impact on trade[65] and particularly investment, especially in tradable goods.[66] The difficulty of reducing exchange-rate volatility in a region exposed to sharp external shocks is substantial, but excessive appreciation would clearly be unhelpful in terms of the countries' position on world markets and particularly export diversification. Economic policymakers, especially central bankers, should therefore have a "second objective" of maintaining a competitive exchange rate. The tools available for this purpose should range from direct interventions and "deterrent" action by the central bank to controls over the short-term entry of capital, when appropriate (Ocampo, 2004 and ECLAC, 2004a). In the short term, improved fiscal discipline is required to implement more active monetary policies and sustain the real exchange rate.

Clearly, exchange rates cannot be maintained "at any cost" since, among other reasons, it is difficult to define an equilibrium exchange rate. Also, in some circumstances, supporting the exchange rate may give rise to inflationary pressures. What we want to emphasize here is that excessive variations in the real exchange rate, especially sharp appreciations, make it less likely that a country can improve its position in international markets based on export growth, as well as heightening real volatility. The real exchange rate must not, therefore, be a residual variable in economic policy.

The region is also now witnessing an appreciation of its currencies that may continue in the coming years, and the factors underlying this trend differ from those that were at work during the 1990s. During the current decade, the forces fuelling this appreciation are and will continue to be the improved terms of trade for the southern part of the continent and the oil-exporting countries in general, and remittances in Central America and Mexico. These trends are a major challenge for economic policy, among other things because higher exchange rates will make it much more difficult to achieve greater export diversification. On a more positive note, a larger supply of resources is available and, as a result, some can be used to increase productivity in the economy, although this is not an automatic process.

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[63] The design of the structural balance should take account of the need for the public sector to contribute to increasing saving in the economy. As for stabilization funds, they are easier to implement when the public sector is the main producer of the natural resource to be exported. The region has some experience in that area (Jiménez, 2005). When the private sector is the main exporter, the issue is more complex but, without completely eliminating price stimuli, possible measures include taxes and variable reimbursements in accordance with international prices, although considerable restrictions are imposed by WTO in this area.

[64] Chile had single-digit inflation (8.2%) in 1995 and the figure did not fall below 3% until as recently as 2002.

[65] This link between volatility in the real exchange rate and trade flows, although it is intuitive, is not clearly backed up by conclusive empirical data. McKenzie (1999) reviews a long list of empirical studies and concludes that they have not demonstrated a significant relationship between volatility and trade or, in those cases where it proved to be significant, it was not systematically in one direction or the other. Wei et al. (2004) conducted a comprehensive study, but nonetheless also failed to find a systematically negative and robust relationship. There are, however, studies by IDB (Giordano and Monteagudo, 2002; Estevadeordal, Frantz and Sáez, 2001), and by ECLAC (1998) which demonstrate the existence of a negative effect of exchange-rate volatility on exports in the case of developing countries. Among other causes, it is reasonable to think that the impact of exchange-rate volatility on trade should be greater in developing countries, where there is less potential for hedging on foreign-exchange markets.

[66] Profits in tradable sectors are more sensitive to variations in the real exchange rate, with prices and costs moving in opposite directions. Real appreciation means a lower relative price for tradables in relation to non-tradables, and this is generally accompanied by rising wages. The opposite occurs with real depreciation. In the non-tradable sector, however, there tends to be a positive correlation between changes in prices and costs, making profits more stable in relation to changes in the real exchange rate (Hausmann, Rodríguez and Rodrik, 2005).

Lastly, financial policy should aim to reduce vulnerability and ensure access to credit at reasonable interest rates and repayment periods. This involves improving prudential regulation, deepening the financial system, discouraging dollarization, and working to avert currency mismatches and excessive mismatches of maturities.

2. Improving patterns of international integration

As we mentioned earlier, when we refer to an improved international market position or greater integration into the international market, we are referring to an increase in the quality and quantity of exports; in other words, exporting more, diversifying products and destinations, and especially strengthening linkages between exports and the domestic production structure as a whole.

An export strategy's success depends on access to markets, particularly high-consumption ones. In the attempt to avoid protectionist policies, especially those of the developed world, and to obtain advantages in relation to other competitors, at least in the short term, there has been an unprecedented rise in the conclusion of bilateral and plurilateral trade preference agreements over the past 10 years.[67] The lack of progress in the multilateral trade round has further encouraged the negotiation of such agreements. This strategy may bear fruit in the short term, particularly for those countries that are quick off the mark in obtaining trade preferences (although they will gradually disappear as the number of such agreements increases). In the long run, however, there appear to be two constants: (a) a considerable increase in the administrative costs of trade, which in some cases may exceed the reduction in tariffs; and (b) substantial progress in the agenda of the developed countries (intellectual property, foreign investment, government purchases and services), without any concessions in agricultural areas.

Improved and more stable market access is only one aspect of improved integration. Finding new export markets (new destinations and products) usually entails "prospecting" costs. Once new markets have been identified by pioneering exporters, other companies take advantage of that information without having incurred the costs or taken the risks (Ramos, 2000). These new exporters are a special kind of innovator, but they make no particular profit by entering a new market or exporting a new product, since the initial benefit rapidly disappears once others have "followed the leader." Given the existence of non-appropriable benefits (positive externalities), and in the absence of State incentives, market prospecting is therefore a suboptimum activity.

In this context, transitional measures should be introduced to promote exports of non-traditional items and those destined for new markets, such as a special time-bound drawback mechanism for exports of new products or exports destined for new markets.[68] Alternatively, market prospecting could be fostered by specialized agencies that help to identify and promote new markets, provide support for business and investment fairs and travel to support export efforts, thereby facilitating involvement in marketing chains or joint ventures with enterprises in the destination market. The idea is to reduce the cost of market entry, and subsidies would therefore be discontinued once this had been achieved.[69]

[67] Further evidence is the fact that in 1991, 6% of the region's exports occurred in the framework of preferential agreements; in 2004, the figure stood at 61% (ECLAC, 2005b).

[68] Chile applied a similar policy for a certain period, but it had to be abandoned in response to demands made by WTO.

[69] Reducing the cost of entry does not rule out the need for other incentives, such as those aimed at avoiding the anti-export bias of tariff structures and facilitating access to financing and export insurance for small- and medium-sized enterprises that are unable to access international capital markets.

However, as we have said, quantitative and qualitative improvements in the positioning of the region's economies in the global economy require simultaneous and coherent advances within the framework of a systemic approach in a number of policy areas that go well beyond trade policy alone. To rely solely on trade policies and ignore the development of the rest of the production structure may, in the best of cases, lead to export growth, but this will not spur the development of the rest of the economy.

3. Policies for creating a level playing field

One of the main causes of the region's sluggish economic growth is its slow rate of productivity growth. From 1950 to 1980, total factor productivity increased at an annual rate of about 2%, but between 1991 and 2004 it rose by only 0.2% per year, after falling by 1.4% per year in the 1980s (ECLAC, 2004a). The trend in average productivity in each country conceals major differences across enterprises, of course. These variations grew considerably in the 1990s, since different economic agents were in very unequal positions in terms of dealing with the profound changes (especially economic liberalization) taking place at the time, so their success at adapting to these circumstances was unequal as well.

Average labour productivity is a linear combination of the productivity levels of formal and informal sectors. In the informal sector, labour yields diminishing returns because inputs of other factors of production (physical and human capital) must be regarded as constant owing to the constraints that limit informal production units' access to them. Consequently, a pattern in which the percentage of total employment provided by the informal sector is steadily on the rise will lead to a monotonic decline in the economy's average productivity. The formal sector, on the other hand, enjoys increasing returns to scale for a number of reasons, including the components of technological change embedded in equipment and hardware, improved logistics and organizational practices, and the formation of human capital achieved through education, vocational instruction and learning-by-doing. Consequently, a sustained upward trend in informality –as has been occurring in Latin America– brings down the average productivity of the economy as a whole.[70] In other words, heterogeneity in the region is not a reflection of the growth process but rather an increasing obstacle to expansion, especially because informal workers tend to reproduce their behaviour over time, so a growing proportion of the population finds it increasingly difficult to enjoy the advantages of economic growth and become part of the production process. In this context, strong productivity gains in leading sectors are accompanied by growth in unemployment and informality. This leads to a slow rate of increase in total productivity.

To achieve greater increases in productivity and improvements in equity, public policies must therefore focus on reducing structural heterogeneity in our economies. This means designing specific policies so that marginalized groups can share in the growth process and so that small and medium-sized enterprises can secure access to credit, technology, markets and knowledge and can become increasingly integrated into the production structure (ECLAC, 2004a).

This is why productive development strategies implemented in the region must respond to the need for a level playing-field by removing a variety of obstacles that have differing effects on businesses possessing clearly differentiated patterns of productivity: large corporations, small and medium-sized formal enterprises, and informal microenterprises.

These policies should be based on three major strategies: inclusion, modernization and densification (ECLAC, 2004a). Inclusion is designed to incorporate as many enterprises as possible into the formal sector. This is a key strategy in a region where the informal economy represents an

[70] Labour informality rose from 30% in 1980 to 47% in 2003 (ECLAC, 2005b).

average of 50% of employment.[71] Policies for implementing this strategy are broad in terms of coverage and include measures to reduce the cost of setting up a formal enterprise and to simplify the necessary formalities and procedures. In Latin America, the start-up costs for a formal enterprise (in terms of per capita GNI) are eight times more than in the high-income OECD countries, the number of formal procedures required is twice as high, and the process takes three times as many days.[72] These difficulties go above and beyond the formal establishment of small businesses. Once they are set up, they will be required to pay taxes and social security contributions and will most probably by subjected to inspections to monitor their compliance with the particular regulations concerning their field of activity. On the other hand, legal incorporation will bring them few benefits (Michelin and Vera, 2005). The policy in this area should therefore aim to reduce the tax burden on small enterprises, cut back on administrative requirements, and offer benefits to compensate for the costs of formalization (such as readier access to credit on advantageous terms and training programmes).

However, as can be seen from the day-to-day operation of relatively small enterprises, formal incorporation does not guarantee access to information, credit, technology, commercial services etc. The second level of these policies, therefore, should aim to facilitate access to the services that businesses need in order to develop in a globalized world. This type of strategy, designed to contribute to the modernization of smaller businesses, entails helping them to overcome the potential pitfalls in terms of market failures in their area of business, which, in stylized terms, can primarily be attributed to information costs. It should be borne in mind that public initiatives in these areas should move away from the idea that they should try to reach every single enterprise and towards more organized efforts to reach groups of businesses assembled in associations. This not only simplifies and reduces the cost of implementing support, but also produces clear externalities.

The third suggested area of action, which may be referred to as "densification", involves designing a strategy for public policies aimed at promoting the incorporation of knowledge into the national productive fabric and setting up a more organized network of production, technological, business and labour relationships. This issue is discussed in more detail below.

4. The role of production policies in open economies

One of the main features of the development process is that the production structure is constantly changing as companies appear and others disappear. The ability to generate new and dynamic activities is one of the main determinants of growth (Ocampo, 2003 and Rodrik, 2004). From this vantage point, economic development may be understood as a process of innovation that capitalizes on an elastic supply of factors (i.e., the ability to react to incentives) to produce changes in the economic structure. These changes stimulate the generation of supply and demand complementarities (linkages) which are disseminated throughout the economic system and mutually reinforce each other.

From a Schumpeterian perspective, innovative activities include both the production of new goods or services and the development of new production methods, opening of new markets, access to new sources of raw materials and the creation of new types of organizations. In industrialized countries, the greatest incentive to innovate is the generation of technology rents, whereas in less

[71] Informal enterprises tend to be smaller and have a reduced range of commercial linkages, since they try not to attract the attention of the authorities and regulators. This limited scale, in turn, means that they do not benefit from best practices in terms of technology and business, given that they face constraints if they decide to grow or to expand their activities (such as the need to regularize their past activities and their linkages with suppliers) (Michelin and Vera, 2005). As a result, informality and small size reinforce each other in a circle that restricts investment, and therefore lowers the productivity of the labour employed.

[72] According to data from the World Bank "Doing Business" database, the cost of setting up a formal limited company in Latin America (19 countries), is 66% of per capita GNI, whereas in the higher-income OECD countries it is only 8%. The number of formalities involved is 12, requiring an average of 75 days, compared with six formalities and 25 days in the OECD countries.

developed countries innovation is usually limited to the incorporation of branches of production, goods or processes that have already reached a certain degree of maturity in more advanced economies (Ocampo, 2003).

Nevertheless, to a large extent, technical knowledge cannot be transferred by the mere acquisition of know-how or by purchasing the capital goods in which it is incorporated. It is often a question of a tacit knowledge that cannot be codified and cannot be fully communicated. Even a mature technology developed in another geographical location can only be mastered if an investment is made in knowledge and organization; optimal use of the new equipment and facilities requires the acquisition of a basis of both formal and empirical knowledge to enable the adopting company to move down its costs curve as it makes gains in learning economies.

The generation of complementarities is understood as the development of suppliers of goods and services and of marketing channels, together with organizations that disseminate information and provide coordination services. The complementarities produce supply and demand effects. The supply effects operate through positive externalities: economies of scale (reduction in average costs owing to the demands made by the new activities on their suppliers), agglomeration economies (reduction of transaction costs) and economies of specialization (development of specific inputs). Under these conditions, competitiveness involves more than an increase in efficiency at the microeconomic level, as it is systemic in nature (Fajnzylber, 1990; ECLAC, 1990). The demand effects are related to the quantity and size of the linkages that boost the growth impulses of certain activities.

If the process of structural change is to occur through the expansion of the fastest-growing and most productive activities, these production branches must have access to factors of production. If those factors are rationed or immobile, structural change cannot take place. The required factor elasticity may be obtained from existing unemployed or underemployed resources, through regional or international mobility of the factors of production (labour and capital) and through technical change which breaks through supply constraints (an increase in the productivity of land or the use of capital-intensive technologies in the case of an excess of labour demand).

The role of production policies is to help create the necessary conditions for carrying out the process of innovation, in a broad sense, and to enhance the complementarity of the production structure. The underlying idea is that this process is obstructed by market failures that weaken the process whereby new activities are created. These market failures may be considered as consisting of information and coordination problems (Rodrik, 2004). Given a specified relative price structure, the discovery of new activities in developing countries is a complex process, especially if the capacity to “innovate” by discovering new activities or processes cannot be appropriated by the innovator. This is because, unlike in the developed world, innovation in developing countries is often more closely related to the process of *adopting and adapting* new technologies or marketing forms than to the *creation* of new technologies or processes. Accordingly, in developing countries, innovation (broadly defined) is basically related to investment (Ocampo, 2003), but as the “discovery” cannot be patented, it is not fully appropriable, and the appearance of new activities or processes is therefore less frequent than the socially optimum level (Hausmann and Rodrik, 2002).

Coordination failures emerge as a result of positive externalities that various economic agents generate among themselves through cost reductions associated with a determined infrastructure or through the provision of goods and services. In particular, the provision of non-tradable goods (including logistics, knowledge and marketing) may play a central role in the development of certain activities or regions (Ocampo, 2003).

The historical evidence

The empirical evidence concerning the determinants of growth is not conclusive. This is partly due to the difficulties of isolating certain variables' effects on growth. Such variables include technology, investment in physical and human capital, saving and systematic changes in the production structure, as these elements are simultaneously both the determinants and the results of growth (Easterly, 2001 and Ocampo, 2003). It is even more difficult to isolate the impacts of economic policy on growth (Rodrik, 2004). In more general terms, there is no simple rule that can be applied to all countries at a given point in time or to any one country over time. Indeed, there have been successful experiences based on policies that combine conventional incentives with unconventional institutional features (Rodrik, 1999 and 2003).

In view of these difficulties, it is hard to find economic development success stories in countries where productive development policies have not been applied. In any case, the difference lies in the importance that these policies have had in terms of the overall development strategy of a particular country. In this context, the cases where industrial policy appears to have played a decisive role in the development process are those of South-East Asia and, previously, Japan. China should now also be added to the list, although the incentives and form of industrialization are quite different in this latter case, particularly in relation to the role of foreign investment and the initial importance of assembly plants. Despite what is usually claimed, this group also includes (to some extent and with significant nuances) Chile, as the State played an important role in the start-up of the production of successful export goods such as salmon, fruit and wood (Agosin, 1999).

It is also true that Latin America's history reveals many examples of failed production policies, especially in the 1970s and 1980s. The problem was not the failures, per se, which are inevitable in any productive development strategy, but rather the fact that the underlying strategy made it difficult to generate innovation and investment. In particular, the main failure was the incapacity to move on from the process of import substitution to a strategy for enhancing global integration at a time when the incentives for firms oriented only to the domestic market were being reduced. The conclusion is that not just any production policy is useful to the development process and that in some cases it can be counterproductive, especially when it generates revenues that do not encourage investment.

It is difficult to determine the impact of production policies at the microeconomic level. In Latin America and the Caribbean, in particular, no evaluations have been conducted of the effects of specific programmes. Consequently, assessments are ultimately based on the results in terms of growth or the relative success of a particular activity in competing on international markets. For example, the Brazilian aircraft development programme (Embraer) has been quite successful if it is measured in terms of current competitiveness and of the technical externalities it has generated.[73] Nevertheless, an overall appraisal of the programme is still lacking. There are also cases in which programmes do not seem to have produced the expected benefits, but in which it is not clear whether this is due to the design of the programme, the choice of the activity or sector, or if, simply, the negative results are a result of the lack of continuity of the programmes (a recurrent issue in the region). Unfortunately, the lack of continuity is not due to a poor assessment but to the absence of a development strategy that goes beyond the Administration that happens to be in office. This is another element in the region that distinguishes it from the Asian success stories.

When comparing the experiences of Asia and Latin America, it has been argued that the main difference between the two regions' production policies is that in Asia industrial policy has given priority to international market integration, whereas in Latin America there has been more emphasis on import substitution. The Asian economies also went through a period of import substitution, however, which was encouraged by the high barriers to trade in various sectors. It would therefore

[73] Exports in 2004 amounted to US$ 3.35 billion.

be more accurate to say that Latin America did not make the transition in time from import substitution to international integration and so it stayed with an industrial structure in which the lack of international competition delayed technological progress.[74] What is more, when these economies were opened up to international competition, it was done abruptly and without adequate mechanisms for restructuring production. This meant that there was more "destruction" than "creation" and so the industrialization process remained incomplete.

The lack of a suitable strategy for making the transition to a more globally integrated economy is not explained by the State's failure to demand results from the recipients of the incentives it provided.[75] This is possibly the most significant difference between the experiences of Asia and Latin America in the implementation of production policies: in Asia, there were "carrots and sticks", while in Latin America there were no performance criteria and so no penalty for the inefficient (Amsden, 1989; Rodrik 2004). While competition on international markets offered a measuring rod for the success of incentives, the lack of such competition made it very difficult, and sometimes impossible, to evaluate the successes and failures of the strategy in Latin America.

Differences from past policies

When we talk about productive development policies, some people tend to think that past experiences can be replicated, both in Latin America and in the rest of the world. Quite apart from the value judgments which might be made in this respect, there are at least five objective reasons for thinking that today's policies should be different from those of the past: (a) production policies in open economies cannot be based on high levels of protection; (b) the growing pressure of social demands on public resources leaves less financing available for productive development policies, and it is therefore all the more necessary to target these efforts carefully; (c) multilateral agreements (WTO), not to mention bilateral agreements, are leaving increasingly less space for these policies; (d) the search for social legitimacy and the need to evaluate policies requires greater transparency than in the past and thus requires suitable institutions and, in particular, a public sector that can work closely with the private sector in designing and evaluating such policies; and lastly (e) subsidies must be for limited periods, and the required evaluation should lead to the discontinuation of certain programmes: if the policies are to be successful, some of the recipients of incentives must be losers.

The screening process

The first problem is to decide which sectors or activities to select, and the next one is how to convince the private sector that the incentive will be available for the period of time needed to make the activity profitable. From this standpoint, the import substitution era gave very clear signals: high tariffs were sufficient to ensure adequate revenues, and there was also the guarantee that they would not change in the short term. However, these advantages were also at the root of the problem: the incentive continued for many years after the establishment of the activity and outlived its efficiency. Similarly, the lack of international competition delayed investment and, in particular, the incorporation of new technologies. In contrast, the "Asian model" (with continued export incentives) was associated with the achievement of certain targets, which essentially required economic agents to compete with the rest of the world.

The constraints associated with operating in more open economies, together with the restrictions imposed by multilateral and bilateral agreements, place limits on this security. It therefore seems appropriate to focus on those activities that do not require long-lasting subsidies and, when necessary, to establish budget items through specific programmes having multi-year

[74] See Fajnzylber (1990).

[75] The reasons for this may have to do with a State that is increasingly influenced by the interests of some rent-seeking sectors associated with the substitution process.

budget coverage. An example of the former would be support for the discovery of new export markets, and an example of the latter would be to ensure cofinancing or a tax advantage for a research programme for a period of two or three years. Nevertheless, nothing can take the place of a political agreement that establishes certain priorities, such as, for example, giving priority to the allocation of resources for supporting innovation in universities and in the private sector.

In relation to the question of different sectors or activities, it has been argued that incentives should be offered to activities rather than to sectors (Rodrik, 2004). The distinction is certainly not always clear, yet most of the available success stories have been more concerned with incentives for sectors than for activities.[76] The concept of activities, however, is applied appropriately in three areas: innovation, job training and exports. The case of exports is one of the clearest examples, because it is a question of offering incentives for diversification of product and markets. As mentioned previously, the idea is to place emphasis on assisting the "innovative exporter" to seek new markets or to place new products. Thus, commodities are excluded from this scheme almost by definition. One advantage of offering incentives for these activities is that the beneficiary is someone who can compete on international markets, so that even when "mistakes" are made, there are no subsidies for inefficiency. Education should generally be understood as an activity that generates improvements in profitability in a number of sectors. Although supply factors should be brought into the equation once sufficient progress has been made with vocational training (i.e., in a context of scarce resources, a selection should be made of the activities in which the State wishes to place more resources), this does not entail the screening of sectors.

The situation is less clear in the area of R&D. In the developed world, around 70% of R&D expenditure is made by the private sector, although in many cases with encouragement from the public sector. If public-sector incentives are distributed on the basis of demand criteria only, an advantage will be given to activities (innovation) rather than sectors. Although this is the trend in developed countries, especially the middle-income ones, it may be appropriate to consider whether this makes sense in the developing world, where relative prices do not give the correct signals and it is therefore more difficult to discover new activities. In our opinion, expenditure in the developing world should have a greater supply component than in the developed world, although certainly less than at present, where in some cases around 80% of R&D expenditure is made by universities and the public sector.[77] This would require, in most cases, selection criteria for the activities in question –and in many cases the sectors– which are to be promoted. This does not mean that demand criteria cannot be used, once the sectors or activities to be promoted have been defined, however.

In the area of innovation, most countries in the region need to enhance the coordination between universities and research centres and the private sector within the framework of a national innovation system. Incentives offered by the system should never take the form of subsidies equal to 100% of the investment, and the subsidies should depend on an evaluation of the difference between the private and public benefits (Maloney and Perry, 2005).

In any case, it is clear that the selection of activities or sectors cannot be made by an inspired bureaucrat, but must be the result of interaction with the private sector. In particular, it would be useful to talk to the private sector in order to find out what kinds of problems it faces in carrying out certain activities. This discussion may reveal common patterns (such as a shortage of engineers, problems with regional legislation, lack of interaction with universities and uncertainty regarding tax refunds), which could then be taken into account in policymaking. In any case, as the distinction between "good ideas" and corporate interests is not always clear, the network of connections with the private sector must be sufficiently dense. This requires, inter alia, a degree of continuity in terms

[76] Salmon, wood and fruit in Chile (Agosin, 1999), aircraft in Brazil and many sectors in Asia, such as the motor vehicle industry in Japan and Korea.

[77] For Latin America see ECLAC (2004a), which contains a discussion of this issue and information on the distribution of research and development spending between the public and private sectors.

of the officials responsible for such contacts. Just as an institutional framework has been created to ensure the continuity of central bank presidents, similar principles should be established for those responsible for production policies. In addition, in the light of uncertainty as to the appropriateness of encouraging a particular sector or activity, incentives should never represent a significant proportion of the investments being made by the private sector.

In principle, a productive development strategy should be based on a combination of horizontal and selective policies. Horizontal policies are aimed at improving access to information, credit and technology, and thus benefit all enterprises. In general, a change will need to be made in the focus of policy implementation in order to move away from "facilitating access" and towards "promoting coordination". The traditional vision of production policies placed the emphasis almost exclusively on the supply of instruments and attempted to correct market failures. This strategy generally resulted in isolated efforts with little impact in terms of the productive fabric. Overcoming these shortcomings requires placing the emphasis on creating linkages, not only between the supply and demand for support mechanisms, but also between the parts of the public sector that represent supply and the beneficiary companies that comprise the demand. Experience has demonstrated that these policies are less costly, require interaction with the private sector and reduce the coordination problems referred to previously (ECLAC, 2004a).

Selective policies, in contrast, are oriented towards particular activities or sectors which are considered as being of strategic importance for development. The reasons may include rapid growth and export potential; their capacity to adapt, generate and disseminate innovations; or the intensity of their linkages with the rest of the production base.[78] It is natural to think that, in view of the important role that exports entailing a significant degree of local value added play in promoting growth, selective policies should be applied to areas where value is added to export activities. One advantage of this criterion is that the quality of the product is evaluated directly or indirectly by international markets. The other is that, in principle, there should be a fast-growing demand for the new product.[79] Unlike the situation during the period of import substitution, the linkages should not necessarily be "forward". The potential of "backward" or "sideways" linkages should also be considered. One example of this is the development of suppliers associated with a given export activity, whether of natural resources or manufactured goods, or research to discover products or processes that can be patented. An example of the former is the development of industrial clusters and services to support the development of natural resources in various countries in the region (Katz, 2005 and ECLAC, 2005c);[80] an example of the latter is Norwegian research into salmon or Australian mining research. In this area, and taking into account the comparative advantages of the region in food production, biotechnology would be an activity to encourage.

In other words, countries rich in natural resources should not ignore these advantages, but should instead use them to generate dynamic comparative advantages by creating new production activities related to these sectors. Moreover, the possibility of diversifying into high-technology goods and exports (according to the classification in section II) does not appear to be an option open to the countries of the region,[81] especially taking into account the forces of agglomeration present in the United States, Europe and Asia.[82] Obviously, this refers to diversification involving something more than the mere assembly of sophisticated goods in the absence of the capacity to produce the most valuable parts. It should once more be stressed that, for most countries in the region, the road to diversification should begin with strategies aimed at adding value and knowledge to natural resources.

[78] A classic approach to this question can be found in Prebisch (1964).
[79] One example is the natural-resource based clusters in Northern Europe.
[80] Promotion of the development of industrial clusters and services to support the use of natural resources opens up the opportunity for joint efforts between municipalities, regional universities, research centres and small family enterprises.
[81] Larger countries are more likely to be able to make progress in this area.
[82] See Ocampo and Parra (2005).

Emphasis on these sectors, however, does not rule out the possibility of selectively promoting initiatives aimed at creating new sectors that are not necessarily closely associated with the region's comparative advantages, at least from a static point of view, as exemplified by information technology in Costa Rica, or aircraft production in Brazil. A recent example would be the development of software in countries such as Argentina and Uruguay. This activity began in around the year 2000 in both countries and benefited from various incentives, including a reduction of labour taxes in Argentina, and exemption from industrial and commercial income tax in the case of Uruguay. A few years later, exports continue to grow, amounting to US$ 80 million for Uruguay in 2004.[83]

[83] Given the difficulty of calculating total software exports, these figures should be understood as minimum values.

V. Conclusions and policy recommendations

Throughout this document we have sought to analyse the reasons why there is no unequivocally positive link between trade openness and economic growth. The way and the context in which liberalization is carried out are crucial, as is the way in which changes are processed within economies so that the productive fabric is strengthened and new dynamic activities discovered. Even in the case of exports, whose positive correlation with economic growth appears to be more clear-cut, the causal relationship is still not an automatic one. Indeed, the impact that exports have on growth will depend on the types of goods or services involved and on their potential effectiveness in generating positive externalities and dynamic linkages with the rest of the production structure. Similarly, in the case of foreign direct investment, there is no unequivocally positive relationship between FDI and growth, as the link between the two depends on the type of FDI, on, in particular, the target sector, and on whether the investment involves greenfield projects or the purchase of existing assets.

Although such links can never be automatic, there is nonetheless considerable scope for productive policies to help to generate them through specific stimuli.

Although it is impossible to draw up a single policy agenda for the region (as it would depend on the restrictions imposed by the size of each country's markets, its accumulated capacities and institutional development), certain general principles can be established:

1. The objective must be greater global integration.
2. In view of the scant resources available, efforts must be targeted, and hence a mix of horizontal and selective policies should be implemented.
3. Selective policies should offer incentives for new activities with potential for stimulating the productive structure; in particular, there should be incentives for adding value to export activities.
4. Maintaining a stable and "competitive" exchange rate is a key element for the discovery of new goods, processes or markets in activities that produce tradable goods.
5. Although the public sector should lead the process of devising strategies, specific policies should be devised on the basis of significant interaction with the private sector.
6. Incentives should be limited in time, and performance criteria should act as a counterpart.
7. Innovation in the broad sense should be encouraged, so that information on technologies and general training should be equally or in some cases more important than investment in research and development.
8. Human resources training is an indispensable requirement for any development policy and, in particular, in a strategy intended to increase the linkages of the export sectors and of FDI.
9. The policy for attracting foreign investment should be based on clear and stable rules and not on special incentives, with the exception of those activities that are expected to generate positive externalities through innovation and productive linkages.
10. An institutional framework should be developed for productive policies based on the principles of: transparency, evaluation, coordination within the public sector and continuity of the officials dedicated to policy-making and coordination with the private sector.
11. The implementation of productive policies depends on the institutional capacity for designing and evaluating them, and hence their implementation may vary considerably between countries.
12. Countries should implement horizontal policies conducive to reducing informality.
13. Policies should be implemented to correct the market failures that affect small and medium-sized enterprises, while avoiding widespread bailout operations. These policies will be all the more effective if they encourage the establishment of linkages in the private sector, through business associations organized by region or activity.

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Annex

Annex A

Estimation of the income elasticity of imports in Latin America (1960-2003)

Panel estimation techniques were used to calculate the income elasticity of imports using data for 19 Latin American countries[84] covering the period 1960-2003. The equation is as follows:

$$\log(m_{it}) = \beta_0 + \beta_1 \log(y_{it}) + \beta_2 \log(y_{it-1}) + \beta_3 \log(m_{it-1}) + \beta_4 \log(tcr_{it}) + u_{it}$$

where $\mathbf{m_{it}}$ represents imports in constant dollars of country **i** at time **t**; **y** is GDP, and **tcr** is the real exchange rate.

Different specifications are estimated by adding dummy variables to control for different events:

(a) The 1982 debt crisis and devaluations. An impulse variable was used for this event. It was attributed a value of 1 for 1982 and of zero for all the other years.

(b) Economic liberalization. The variable used for this event that was given a value of 1 from 1990 on and of zero in the other periods. Its purpose is to capture any change in the *level* of imports that may have occurred in conjunction with the economic liberalization process, rather than attributing it to a change in elasticity.[85]

In order to analyse the possibility of a structural change in income elasticity based on the liberalization process, estimates were made for two separate sub-periods, with the cut-off point being 1990. In other words, regressions were estimated for 1960-1989, on the one hand, and for 1990-2003, on the other.

Table A1 shows the estimates for the complete period using random effects.[86]

Table A1

RANDOM EFFECTS – COMPLETE PERIOD (1960-2003)

Coefficients	(1)	(2)
Constant	-0.429	-0.435
	(0.001)	(0.001)
$Log(y_{it})$	**1.832**	**1.793**
	(0.000)	(0.000)
$Log(y_{it-1})$	-1.733	-1.681
	(0.000)	(0.000)
$log(m_{it-1})$	0.929	0.924
	(0.000)	(0.000)
$log(tcr_{it})$	-0.049	-0.058
	(0.000)	(0.000)
Trend	0.002	-0.001
	(0.001)	(0.359)
D82	-0.136	-0.111
	(0.000)	(0.003)
D90	------	0.088
		(0.000)

Note: p-value in brackets.

Except for the trend in specification (2), all the estimated coefficients showed the expected signs and were statistically significant. The estimated coefficient for dummy variable D82 is

[84] Argentina, Bolivarian Republic of Venezuela, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay.

[85] 1990 was used as the cut-off point because it approximates the year when liberalization measures began to be taken in Latin American economies.

[86] An attempt was made to include the investment-to-GDP coefficient in the estimates as an additional explanatory variable, but the result did not differ significantly from zero.

negative and differs statistically from zero. This provides evidence to support the hypothesis that, as a consequence of the debt crisis, the level of imports declined. On the other hand, the coefficient associated with D90 is positive and is also statistically significant. The intuitive conclusion suggested by this result is that the liberalization processes carried out in the 1990s had an impact on the increase in the *level* of imports. The instantaneous income elasticity of imports is approximately 1.8 for both specifications.

Although the Hausman Test indicated that the random effects were the appropriate ones in this case, estimates with fixed effects were also prepared. The results of these calculations for the complete period are shown in table A2.

Table A2

FIXED EFFECTS – COMPLETE PERIOD (1960-2003)

Coefficients	**(1)**	**(2)**
Constant	-0.38	-0.822
	(0.277)	(0.020)
$Log(y_{it})$	**1.714**	**1.684**
	(0.000)	(0.000)
$Log(y_{it-1})$	-1.542	-1.435
	(0.000)	(0.000)
$log(m_{it-1})$	.842	0.822
	(0.000)	(0.000)
$Log(tcr_{it})$	-0.43	-0.061
	(0.008)	(0.000)
$Log(invss_{it})$	0.094	0.098
	(0.000)	(0.000)
Trend	0.003	-0.002
	(0.010)	(0.265)
D82	-0.139	-0.11
	(0.000)	(0.003)
D90	------	0.118
		(0.000)

Note: p-value in brackets.

On the basis of the estimated coefficients, the long-term elasticities shown in table A3 were calculated.

Table A3

LONG TERM – INCOME ELASTICITY OF IMPORTS

	(1)	**(2)**
Fixed effects	1.089	1.400
Random effects	**1.394**	**1.474**

The results for the two separate sub-periods are reported in tables A4 (random effects) and A5 (fixed effects). In both cases, the instantaneous income elasticity of imports nearly triples between the first and second sub-period.

Table A4

SUB-PERIODS – RANDOM EFFECTS

Coefficients	1960-1989	1990-2003
Constant	-0.248	-1.648
	(0.090)	(0.000)
$Log(y_{it})$	**1.35**	**3.594**
	(0.000)	(0.000)
$log(y_{it-1})$	-1.267	-3.308
	(0.000)	(0.000)
$log(m_{it-1})$	0.937	0.873
	(0.000)	(0.000)
$log(tcr_{it})$	-0.043	-0.183
	(0.003)	(0.000)
Trend	-0.0003	-0.002
	(0.731)	(0.412)
D82	-0.141	------
	(0.000)	

Note: p-value in brackets.

Table A5

SUB-PERIODS – FIXED EFFECTS

Coefficients	1960-1989	1990-2003
Constant	-0.517	-0.995
	(0.217)	(0.417)
$Log(y_{it})$	**1.191**	**3.102**
	(0.000)	(0.000)
$log(y_{it-1})$	-0.803	-2.676
	(0.000)	(0.000)
$log(m_{it-1})$	0.633	0.553
	(0.000)	(0.000)
$log(tcr_{it})$	-0.038	-0.311
	(0.064)	(0.000)
$log(invss_{it})$	0.226	0.21
	(0.001)	(0.001)
Trend	-0.001	0.021
	(0.584)	(0.000)
D82	-0.106	------
	(0.003)	

Note: p-value in brackets.

The long-term elasticities calculated on the basis of the above coefficients are shown in table A6.

Table A6

LONG TERM – INCOME ELASTICITY OF IMPORTS

	1960-1989	1990-2003
Fixed effects	1.057	0.953
Random effects	**1.318**	**2.252**

An additional way of gauging whether there was a change in the level of imports between the two sub-periods is to compare the means of the countries' import-to-GDP ratios. This was done using Bartlett's variances test. Depending on what the result was, the appropriate comparison of means was conducted, since this depends crucially on the assumption that is made concerning the equality of variances. In the event that the null hypothesis of the Bartlett test was not rejected, a t-test of equality of variances was performed, while in the alternative case, a t-test was used which explicitly assumes that the variances between the two sub-periods are different.

Taking these results into account, the test of means was conducted. In this case, the assumption of equal means for the two sub-periods was rejected for all countries. The results indicate that for 17 countries, including the three biggest economies in the region, there was a statistically significant increase in the imports/GDP quotient. Chile and Panama, however, unlike the rest of the countries under consideration, exhibited a significantly higher mean in the first sub-period than in the second.

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