

2003



Foreign investment

**IN LATIN AMERICA
AND THE CARIBBEAN**



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ABSTRACT



In 2003, flows of foreign direct investment (FDI) to Latin America and the Caribbean continued to shrink for the fourth year running. With this latest decline, Latin America and the Caribbean turned in the worst performance of any world region. This situation was exacerbated by the steady increase in profit remittances and in outflows of other FDI-related resources, which has diminished its impact on the balance of payments. The decrease in FDI inflows over the past few years has varied across subregions and countries in Latin America and the Caribbean, however. In Mexico and the Caribbean basin, inflows have diminished less, while South America has been more strongly affected. Within South America, inflows were quite stable in the Andean Community but were down sharply in MERCOSUR and particularly so in Brazil.

This publication devotes special attention to the strategies employed by transnational corporations seeking to heighten their efficiency with a view to moving into new markets. Accordingly, one chapter is devoted to an examination of FDI trends in Latin America and the Caribbean, while the other two deal with different aspects of this kind of corporate strategy. One analyses events in Costa Rica, the Dominican Republic, Honduras and Jamaica, which are regarded as cost centres for labour-intensive activities producing low value-added goods, while the other looks at the challenges facing the Brazilian and Mexican automotive industry production chain with regard to upgrading to manufacturing centres.



SUMMARY AND CONCLUSIONS

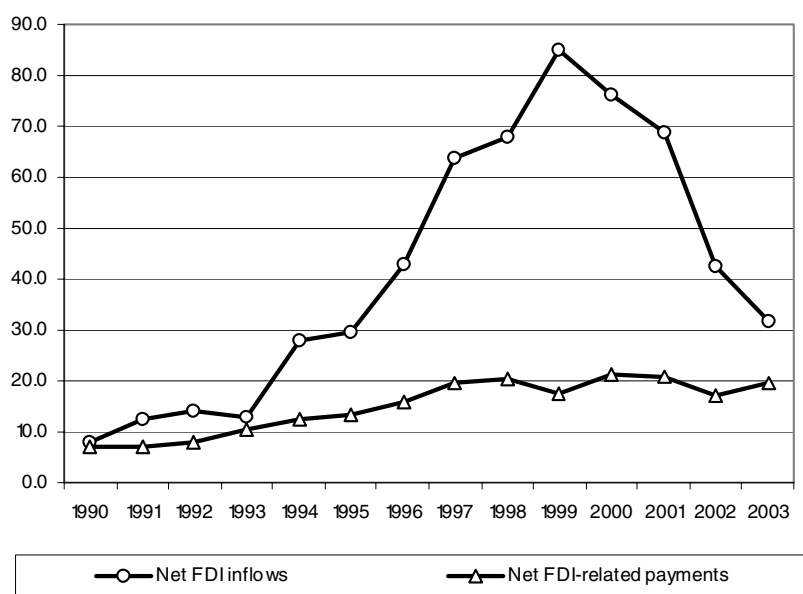


Foreign direct investment (FDI) has transformed Latin America, modernizing branches of industry and improving many of its services and some of its infrastructure. The evidence is everywhere, from the export platforms in Mexico and Costa Rica that assemble competitive motor vehicles and microprocessors, respectively, to the upgraded telecommunications network in Brazil, financial services in Argentina and road infrastructure and airport services in Chile. Although transnational corporations (TNCs) have been very active in recent years, some questions are now being raised as to the net benefits of their operations in the region. These doubts revolve around the existence, in some cases, of a disparity between host countries' expectations at the time such investments are made and the difficulties that have arisen along the way.

This process is attributable, in the first instance, to the continuing shrinkage of FDI inflows. The volume of these inflows has been declining for four consecutive years now, after peaking in 1999, thus making the Latin American and Caribbean region the only one in the world to have experienced a protracted downtrend in such investment. Average annual inflows of FDI to the region almost quadrupled (from US\$ 15.8 to US\$ 61 billion)

between 1990-1994 and 1995-1999, but had receded by 40% (to US\$ 36.5 billion) by 2003. The decrease from 2002 to 2003 amounted to 19%, the worst result out of all regions in the world. This situation is compounded by the fact that, while FDI inflows have been moving steadily downward, profit remittances and other FDI-related payments continue to climb, thereby dampening the balance-of-payments effect.

Figure 1
**LATIN AMERICA AND THE CARIBBEAN: NET FDI INFLOWS
 AND FDI-RELATED PAYMENTS, 1990-2003**
(Billions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of balance-of-payments statistics from the International Monetary Fund (IMF).

Notes: Net FDI inflows are equivalent to the FDI received by the reporting economy minus the FDI-related outflows generated by the same foreign companies. It does not include FDI outflows generated by residents of the reporting economy. FDI-related payments cover net external profit remittances by foreign companies. This category does not include net payments made by residents to the reporting economy. Figures for 2003 are estimates.

The decline of FDI inflows has varied across subregions and countries, however. In Mexico and the Caribbean basin (Central America and the Caribbean), they have been more stable, with average annual FDI inflows doubling between 1990-1994 and 1995-1999 (from US\$ 6.8 billion to US\$ 15.4 billion) and then remaining at that level in 2003. South America has had a

rockier ride, as FDI inflows increased by a factor of five between 1990-1994 and 1995-1999 (from US\$ 8.9 billion to US\$ 45.5 billion) before sliding to less than half that level by 2003 (US\$ 21.5 billion). Within South America, FDI inflows to the Andean Community were much more stable than those directed towards MERCOSUR and Chile.

Table 1
LATIN AMERICA AND THE CARIBBEAN: NET FDI INFLOWS 1990-2003^a
(Millions of dollars)

	1990- 1994 ^b	1995- 1999 ^b	2000	2001	2002	2003 ^c
Mexico	5 430	11 398	16 449	26 569	14 435	10 731
Central America	575	2 067	1 964	2 017	1 354	1 742
Costa Rica	222	481	409	454	662	466
El Salvador	12	282	173	250	208	140
Guatemala	88	213	230	456	110	104
Honduras	41	120	282	195	143	216
Nicaragua	20	194	267	150	174	241
Panama	192	777	603	513	57	576
Caribbean	840	1 949	2 014	2 420	2 710	2 466
Jamaica	124	285	468	614	481	500
Dominican Republic	171	594	953	1 079	961	700
Trinidad and Tobago	270	550	472	685	737	700
Other	274	519	121	42	531	566
Mexico/Caribbean basin	6 845	15 414	20 427	31 006	18 499	14 939
Chile	1 207	5 401	4 860	4 200	1 888	2 982
MERCOSUR	4 880	30 188	43 590	25 039	17 496	11 397
Argentina	3 027	10 599	10 418	2 166	775	1 103
Brazil	1 703	19 240	32 779	22 457	16 566	10 144
Paraguay	99	185	119	95	-22	19
Uruguay	51	164	274	320	177	131
Andean Community	2 843	9 945	9 266	9 289	7 096	7 148
Bolivia	85	711	736	706	677	357
Colombia	818	2 796	2 299	2 500	1 974	1 291
Ecuador	303	639	720	1 330	1 275	1 637
Peru	801	2 350	810	1 070	2 391	1 332
Venezuela	836	3 449	4 701	3 683	779	2 531
South America	8 930	45 534	57 716	38 528	26 480	21 527
Regional total	15 775	60 948	78 143	69 534	44 979	36 466

Source: ECLAC, on the basis of balance-of-payments statistics from IMF and national reporting agencies in the region. The 2003 figures are estimates based on information from the countries' central banks. These figures differ from those published by ECLAC in the *Preliminary Overview of the Economies of Latin America and the Caribbean, 2002*, since in the *Overview*, net FDI is calculated as the difference between inflows to the reporting economy and FDI outflows generated by residents of that same economy.

^a Does not include financial centres. Net FDI inflows are defined as FDI inflows to the reporting economy minus capital outflows generated by the same foreign companies.

^b Annual averages.

^c Estimates.

The presence of TNCs remains significant in spite of the decline in FDI inflows. The transnationalization process which accompanied the surge in FDI during the preceding decade is also still a powerful force in the economic affairs of the region. For example, during 2000-2002, TNCs accounted for 39% of the sales of the top 500 companies in the region, 55% of the top 100 manufacturing firms' sales, 38% of the 100 leading service companies' sales, 42% of the exports of the top 200 exporters and 37% of the 100 largest banks' assets. Within this context, the possibility of a widening gap

between host-country expectations and emerging problems in TNC operations has fuelled the debate regarding FDI in the region. This is therefore a good time to re-evaluate the impact of FDI in Latin America and the Caribbean.

The point of departure for the present analysis is therefore an awareness of the fact that FDI can be viewed from a wide range of vantage points and that the choice of analytic approach often determines the conclusions that are drawn. There are two traditional schools of thought which to some extent reflect the wide range of

possible perspectives: (i) one views FDI in terms of external financing from a balance-of-payments perspective; and (ii) the other focuses on the microeconomic impacts of FDI from an industrial organization perspective. The first tends to evaluate FDI in terms of the volume of inflows, taking a “the more the better” point of view and sometimes linking the analysis of FDI inflows to macroeconomic variables such as growth, exports and employment. The second, on the other hand, associates FDI with TNC operations and assesses those operations based on their contribution to the development of local production based on criteria such as technology transfer and assimilation, the establishment and deepening of production linkages, the training of human resources and enterprise development. In this case, the quality of FDI or TNC operations is as important as its volume or scale. This second school of thought tends to believe that no matter how positive the impact of FDI might be, it can always be improved upon. Both lines of thought are necessary to achieve a better understanding of FDI as an economic phenomenon, but they are rarely found together.

There are several good reasons for combining these different analytical perspectives. On the one hand, considerable dissonance has emerged in the specialized literature in this respect. Most of the traditional studies tend to assume that elements identified with the microeconomic perspective (technology transfer, production linkages, human resource training and enterprise development) are spillovers that are generated once a critical level of FDI has entered the host economy. However, more recent empirical studies based on more refined methodologies have demonstrated that such outcomes are by no means a foregone conclusion and that the presence of such spillovers should be corroborated rather than simply assumed for the purpose of analysing FDI impacts. Furthermore, it can be shown that the information upon which both schools of thought are based, that is, official information on the balance of payments and FDI flows and the available data on the operations of TNC affiliates, suffers from significant shortcomings in terms of its coverage, coherence and usefulness.

The method used in this study draws upon a number of different information sources in evaluating corporate strategies in order to arrive at a coherent interpretation of FDI in Latin America and the Caribbean. The result makes it possible to define the four principal focal points of FDI from the perspective of the corporate strategies that drive them: (i) the natural-resource-seeking strategy

focuses on the petroleum and gas sector (Andean Community, Argentina and Trinidad and Tobago) and on the mining sector (Chile, Argentina and the Andean Community); (ii) the market-seeking strategy is centred on the larger economies of the region (in the case of goods, the best examples are the automotive industry of MERCOSUR and food, beverages and tobacco in Brazil, Argentina and Mexico, while in the case of services, the clearest examples are the financial, telecommunications and energy industries and retail trade, especially in South America); (iii) the efficiency-seeking strategy focuses on capturing new export markets and is applied primarily in Mexico (automotive, electronics and apparel industries) and the Caribbean basin (apparel); and (iv) the technological-assets-seeking strategy is based on TNCs that form partnerships or alliances for purposes of innovation and technological development (no clear examples of the application of this strategy are evident in Latin America or the Caribbean).

A great deal of research has gone into the preparation of the annual editions of *Foreign Investment in Latin America and the Caribbean*. Recent editions have included chapters dealing with the experiences of recipient countries (Brazil, Mexico, Chile, Argentina and the Andean Community), investor countries (United States, Japan, Spain and the European Union) and sectors in which FDI in the region is concentrated (the automotive, apparel and telecommunications industries, the hydrocarbons sector and financial services). On the basis of this research, the available statistical data on FDI inflows and TNC operations and the information compiled for this year’s study, a general picture can be pieced together of FDI and TNC operations in the region, which follow two main patterns:

- In **Mexico and the Caribbean basin**, the bulk of FDI comes from efficiency-seeking TNCs which set up export platforms in this subregion as part of their regional or international systems of integrated production. These local assembly operations – mainly of United States-based TNCs– are primarily cost centres for higher-technology activities, such as the automotive and electronics industries, or low-technology activities, such as apparel. The new global competition faced by these industries obliges TNCs to search for low-cost, large-scale production sites near major markets for the labour-intensive aspects of their production processes. Mexico offers preferential access to the North American market by way of the North American Free Trade Agreement (NAFTA), while many Caribbean basin countries offer special access to the United States market by

Table 2
LATIN AMERICA AND THE CARIBBEAN: TNC STRATEGIES

Corporate strategy/ sector	Natural resource-seeking	Local market-seeking (national or regional)	Efficiency-seeking (to capture export markets)	Technological asset-seeking
Goods	<i>Petroleum/natural gas:</i> Andean Community, Argentina, Trinidad and Tobago <i>Mining:</i> Chile, Argentina, Andean Community	<i>Automotive:</i> MERCOSUR <i>Chemical:</i> Brazil <i>Food products:</i> Argentina, Brazil, Mexico <i>Beverages:</i> Argentina, Brazil, Mexico <i>Tobacco:</i> Argentina, Brazil, Mexico	<i>Automotive:</i> Mexico <i>Electronics:</i> Mexico, Caribbean basin <i>Apparel:</i> Caribbean basin, Mexico	
Services	<i>Tourism:</i> Mexico, Caribbean basin	<i>Finance:</i> Mexico, Chile, Argentina, Venezuela, Colombia, Peru, Brazil <i>Telecommunications:</i> Brazil, Argentina, Chile, Peru, Venezuela <i>Retail trade:</i> Brazil, Argentina, Mexico <i>Electrical energy:</i> Colombia, Brazil, Chile, Argentina, Central America <i>Gas distribution:</i> Argentina, Chile, Colombia, Bolivia	<i>Business services:</i> Costa Rica	

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

way of the United States-Caribbean Basin Trade Partnership Act (CBTPA). As a result, Mexico and the Caribbean basin have witnessed a dramatic improvement in their international competitiveness as it relates to their participation as sources of the motor vehicles, electronics and apparel imported by the United States.

- In **South America**, FDI is primarily generated by TNCs following local-market-seeking and natural-resource-seeking strategies. The first of these strategies is most evident among European TNCs in telecommunications, energy infrastructure and finance, especially in the MERCOSUR countries and Chile. The deregulation and liberalization of these activities, coupled with broad privatization programmes and the active internationalization strategy of some (mainly Spanish) TNCs, have been key factors driving FDI flows to this subregion. One result of this type of FDI has been an improvement in the systemic competitiveness of these countries, specifically in terms of services and infrastructure that facilitate export activity but do not in themselves generate it. FDI that follows a natural-resource-seeking strategy has been centred in the

Andean Community, Chile and Argentina, which possess high-quality natural resources –especially petroleum, natural gas, copper and gold– and facilitating regulatory frameworks. One of the outcomes has been an improvement in the international competitiveness of these countries' natural resources.

This simplified overview of FDI in Latin America and the Caribbean can be taken as a starting point for the interpretation of corporate strategies in the region. This year's report builds on that foundation by tracking the progression of events with regard to natural-resource-seeking and market-seeking (services) strategies in chapter I, entering into a more detailed examination of the situation in respect of efficiency-seeking strategies in four countries of the Caribbean basin –Costa Rica, Dominican Republic, Honduras and Jamaica– in chapter II and comparing the situation in the automotive industry in Mexico and Brazil in chapter III. This analysis, coupled with the previous years' reports, makes it possible to examine the gap existing between host countries' expectations and actual FDI flows in terms of the benefits and costs associated with TNC operations driven by each of these various types of corporate strategies.

Table 3
IMPACTS OF CORPORATE STRATEGIES IN HOST COUNTRIES

FDI strategy	Potential benefits	Possible difficulties
Natural-resource-seeking	Increased natural-resource exports Improved international competitiveness of natural resources High local content of exports Employment in non-urban areas Tax revenues and royalty income	Enclave activities not integrated into local economy Little local processing of resources Cyclical international prices Low tax revenues from non-renewable resources Environmental pollution
Local-market-seeking (national or regional)	New local economic activities Increased local content New/deepened production linkages Local enterprise development Improved services (quality, coverage and price) and improved systemic competitiveness	Production of goods and services not internationally competitive (not world class) Weak position in terms of international competitiveness Regulatory and competition problems Disputes in relation to international investment obligations Crowding out of local companies
Efficiency-seeking (to capture export markets)	Increased exports of manufactures Improved international competitiveness of manufactures Transfer/assimilation of technology Training of human resources New/deepened production linkages Local enterprise development Evolving from an export platform into a manufacturing centre	Becoming stuck in the low-value-added trap Focus on static rather than dynamic advantages Truncated production linkages: dependence of assembly operations on imported components Crowding out of local companies "Race to the bottom" in production costs (salaries, social benefits, exchange rate) "Race to the top" in incentives (tax, infrastructure) Limited cluster creation
Technological-asset-seeking	Technology transfer Improved science and technology infrastructure Specialized logistics development	Low propensity to invest in technology Stagnation of production Unfocused national policy

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

Generally speaking, FDI from natural-resource-seeking TNCs has held steady because international petroleum, natural gas, copper and gold prices have recently been relatively high, and FDI in these activities is usually independent of the host country's macroeconomic situation. Significant investments have been made or committed to in the petroleum industry by TotalFinaElf, Statoil and ChevronTexaco and by Royal Dutch/Shell and Mitsubishi in Venezuela, Repsol-YPF in Argentina and a group led by Alberta Energy Ltd. in Ecuador. Hunt Oil and Tractabel have invested heavily in the Camisea natural gas project in Peru. BHP Billiton and Rio Tinto continue their major investments in the Escondida copper mine in Chile. Barrick Gold has

undertaken major investment commitments in gold mines in Argentina and Peru, as has Meridian Gold in Peru. Host-country expectations with regard to FDI driven by this type of strategy have been centred on increasing exports of natural resources with a view to raising international competitiveness in that industry. These countries also hope that these operations will help increase local content, create more non-urban jobs and raise their tax revenues and royalty income. Chapter I reviews some of the associated costs. For example, one of those costs –environmental degradation– has become a major factor in relation to past (the Texaco operations in Ecuador), present (curtailing United States EximBank credits to the Camisea project in Peru) and future (the

suspension of the Alumysa aluminium project in Chile) natural resource projects. In addition, the question as to whether or not to tax production activities based on non-renewable resources and charge royalty payments on such projects have sparked controversies in Bolivia and Chile. Despite these difficulties, natural-resource-seeking FDI continues to be a major economic activity in the region.

This situation is quite different from that of services-market-seeking FDI in the region, which has come to a virtual standstill. Until recently, this was the most significant category of FDI in Latin America and the Caribbean; however, the contraction of domestic demand in several of the major economies within the context of macroeconomic adjustment processes involving sharp currency devaluations has led to a sizeable drop in this type of investment. Chapter I shows that many public utility operators could not meet their external debt commitments when rates were frozen and thus stopped investing; in fact, some actually sold off their local assets. One of the most serious problems of this sort arose in Argentina, where in January 2002 the Public Emergency and Exchange Rate Reform Act redenominated public utility rates in Argentine pesos instead of dollars, froze them and assigned the Ministry of Economic Affairs the task of renegotiating the concessions of privatized service providers. In July of 2003, the new Administration created the Ministry of Federal Planning, Public Investment and Services and decided to review and renegotiate all public service contracts held by privatized companies (telecommunications, electricity, gas, water, railways, roads, postal service and airports) by the end of 2004. This decision was met with anger by the service providers, most of which are TNCs. More than 25 suits have been brought against the Government of Argentina by foreign investors for failure to comply with the investment treaties that it has signed. Another complicated case (but one in which a negotiated solution was achieved) arose in the electricity sector in Brazil, where the National Bank for Economic and Social Development (BNDES) bailed out a number of TNCs, including the United States firm AES Corporation. Given the severity of these problems and the slump in domestic demand, many of these firms are pulling out of the region, including Vodafone, BellSouth, Verizon, France Telecom and AT&T, among the telecoms, and Royal Ahold and JC Penney in retail trade. Some TNCs, such as Telefónica de España, have made further investments in order to maintain their market power as new regional competitors emerge, such as América Móvil; however, several local groups in retail trade in Chile and in financial services in Brazil have taken advantage of the new situation to position themselves better *vis-à-vis* foreign firms.

In the case of efficiency-seeking FDI in Latin America and the Caribbean that is focused on enabling firms to conquer other markets, two variants are associated with the relevant regional or international systems of integrated production: the Caribbean basin model for the apparel industry, and the Mexican model for electronics and motor vehicles. With respect to the Caribbean basin model, as exemplified by the experiences of Costa Rica, Dominican Republic, Honduras and Jamaica, chapter II demonstrates that FDI inflows are shrinking because this model, which is based on relatively low wages, export processing zone (EPZ) tax incentives and special access to the United States market via the HTS 9802 production-sharing mechanism, is losing its comparative advantages as the United States market opens up to new competitors. Host countries expected this model to boost apparel exports, improve international competitiveness and lead to positive impacts for the country in the form of technology transfer and assimilation, human resource training, new and deepened production linkages and local enterprise development. However, most countries have found that this model is based on unsustainable incentives and that it locks them into a low-value-added trap that has not permitted any significant kind of industrial or technological upgrading. The result has been illusory rather than authentic competitiveness. Costa Rica's experience has proved to be the exception thanks to greater clarity in terms of the country's strategic objectives, appropriate national policy instruments and solid institutions.

Chapter III indicates that a relatively large volume of efficiency-seeking FDI is flowing into the Mexican automotive industry. This is chiefly attributable to the fact that United States-based TNC automobile and vehicle parts makers are closing down plants in the United States and opening up others in Mexico to serve the North American market. The installed capacity for vehicle production in Mexico doubled between 1994 and 2003, and both the Mexican Government and the automotive TNCs operating there hope to see it double again by 2010. Host-country expectations originally focused on increased exports and gains in international competitiveness; more recently, however, the desire to improve local impacts in the form of technology transfer and assimilation, human resources training, production linkages, local enterprise development and the aim of growing the export platform into an integrated manufacturing centre have come to the fore. One of the problems that has arisen is that the Mexican automotive industry has tied its fortunes to the United States market and the country has not yet succeeded in attracting other, perhaps more competitive, firms such

as Toyota and Honda. Another problem is that the Mexican automotive supplier base is very closely integrated into the United States production base and is therefore unable to take advantage of the opportunities offered by the different free trade agreements to which Mexico is party while complying with the established rules of origin for each one. The Mexican supplier base is founded on strict cost-centre criteria that inhibit investment in the technology needed to turn the industry into an integrated production cluster. In order to turn this situation around, the Mexican authorities will probably have to use more active policies to attract more innovative firms and their suppliers, to improve upon the existing supplier base and to promote the production of models that are assembled solely in Mexico and that conform to the rules of origin of the major markets.

In conclusion, the Latin American and Caribbean region has benefited enormously from the FDI boom of the 1990s. However, when FDI inflows started to wane, specific problems related to the individual corporate strategies driving that boom began to grow more serious. Upon reflection, a very important lesson can be drawn from the events in the region: host countries should not only try to attract FDI but should

also be alert to its benefits and costs. Most Latin American countries have fulfilled only the first half of this equation. Recent experience in the region suggests that the benefits to be derived from FDI by a receiving economy are not a foregone conclusion and do not simply “spill over” into the host economy merely by virtue of the presence of FDI. Evidently, it is much easier to attract FDI that will have quite limited effects through the use of passive policies than to ensure adequate FDI benefits through the use of suitable policies designed to attract high-quality FDI and to minimize any problems that may arise. Other regions, such as Asia and Europe, appear to be employing more proactive policies. They are also obtaining more benefits per unit of FDI. This demonstrates that policy does indeed matter. The Latin American and Caribbean countries should employ productive development strategies that clearly set out their national priorities as a basis for defining what they expect to gain from FDI, with due regard for the differences existing among the various corporate strategies that are driving this kind of investment. This is why policies on FDI must have clearly defined objectives and be anchored in institutions equipped with rules and with human and financial resources that ensure they will be up to the task.

I. REGIONAL OVERVIEW

Total foreign direct investment (FDI) in Latin America and the Caribbean approached US\$ 36.5 billion in 2003, which represented a 19% retreat from the previous year's figure –the steepest fall recorded in any of the world regions (UNCTAD, 2004). Flows of FDI to the region have been trending downward since attaining an all-time high in 1999 but, despite this new reduction, transnational corporations (TNCs) still maintain a forceful regional presence. This situation can be characterized as the transnationalization of Latin American economic assets,

as foreign firms expand their presence in the various activities of the local economies.

Understanding the FDI phenomenon and TNC activities requires concepts and analytical frameworks that go beyond merely describing their scale. The following section sets out a framework for analysis based on the main strategies of TNCs, which makes it possible to gain a better understanding of the forces that drive the regional FDI phenomenon.

A. INTRODUCTION

Foreign direct investment is a phenomenon that can be analysed and interpreted from different standpoints, and choosing one perspective rather than another tends largely to predetermine the conclusions drawn about its trends. There are two traditional views of FDI: one focusing on aspects related to external financing from a balance-of-payments perspective, and the other focusing on productive development from an industrial organization standpoint. The first of these views generally takes an aggregate approach and tends to evaluate the FDI phenomenon in terms of the volume of net inflows. Linked to this perspective is the analysis that directly relates FDI flows to macroeconomic variables, such as gross fixed capital formation, exports and employment.

Even more important, FDI is generally assumed to automatically internalize more advanced technology in the recipient countries, along with enhanced human resource skills and better production linkages, among other benefits.

The second approach seeks to evaluate FDI in microeconomic terms. No assumption of automatic benefits is made, and the quality of FDI is usually considered to be as important as its volume. Moreover, the main analytical focus shifts from “FDI” to “TNC activities” in this approach. The analysis examines the extent to which transnational corporations contribute to the local economy, in terms of: (i) the emergence of new activities that extend or deepen the industrialization

process; (ii) technology access, transfer and assimilation; (iii) the establishment and deepening of productive linkages; (iv) human resource training and skill development; and (v) local business development. Both approaches are necessary to achieve a better and more complete understanding of the FDI phenomenon; yet they are seldom applied together.

There are additional reasons for using the two perspectives to analyse FDI. Firstly, the specialist literature displays considerable disagreement. For example, the traditional analysis of spillovers arising from FDI generally adopts a highly positive attitude, which assumes that the larger the FDI inflows the greater will be the benefits in the host economy. Nonetheless, recent empirical work on this subject, especially in developing countries, tends to adopt a more cautious stance, having

found mixed evidence for the benefits (see box I.1). This suggests the need for greater precision when analysing impacts.

Another reason for using both perspectives is the poor quality of statistical data available at the aggregate level, both on FDI flows and on TNC operations (see box I.2). The shortcomings of official statistics on FDI and on the operations of TNC subsidiaries in host countries are examined in sections B and C of this chapter, respectively. In this context, an adequate analytical framework that integrates both views and also draws on statistical data from a variety of sources, could help to overcome the deficiencies described, thereby leading to a better understanding of the fundamentals of the FDI phenomenon and TNC activities.

Box I.1

A NEW MESSAGE IN THE LITERATURE ON SPILLOVERS AND THE IMPACT OF FOREIGN DIRECT INVESTMENT ON HOST ECONOMIES

During the twentieth century, in the context of the Cold War, the traditional western view of the impact of FDI on host economies was excessively favourable, based frequently on the assumption that the effects would be automatic and clearly visible. The original criticism of this view, often supported by the communist bloc, claimed that the impact was by definition negative since it was a manifestation of imperialism or neo-colonialism. In this sense, the original debate on the effects of FDI was framed in terms that were more ideological than scientific. This has now changed, however.

The most widely known aspect of the western view is based on the original literature on foreign investment spillovers. The spillover concept

suggests that once foreign investment flows into the host economy have reached a certain level, a series of benefits such as technology transfer, productive linkages, human-resource skill enhancement, and local business development would “spill over” into the local economy, just like water overflowing from a glass.

Although this idea of automatic and effective benefits prevailed for a long time, this is no longer the case. A complete reassessment of the literature on FDI spillovers, based on empirical case studies, has produced new conclusions that suggest that the impacts are neither exclusively –nor necessarily– positive. In these new studies, which use improved methodologies, it is often argued that

the effects of foreign investment have been neutral or negative; or, in the best of cases, the resulting situation is unclear, especially in the case of developing and transition economies (see table below).

The debate has thus shifted from an ideological approach to a more technical one, in which it is clear that while positive impacts from FDI in host countries are likely, they are far from automatic; so positive effects need to be demonstrated rather than assumed. These new findings have major implications, one of which is that policy towards FDI should focus less on achieving a critical mass of investments and more on ensuring that these are appropriate to the country's productive development goals.

(Box I.1 concluded)

**SUMMARY OF REPRESENTATIVE STUDIES FROM THE MODERN LITERATURE ON
FDI SPILLOVER EFFECTS**

Author and year	Country	Period	Type of data	Level	Results
1. Developed countries					
Liu et al (2000)	United Kingdom	1991-1995	Panel	Industry	+
Branstetter (2000)	United States	1990-1996	Panel	Firm	+
Girma et al (2001)	United Kingdom	1988-1996	Panel	Firm	?
Barry et al (2001)	Ireland	1990-1998	Panel	Firm	-
Barrios and Strobl (2001)	Spain	1990-1994	Panel	Firm	?
Keller and Yeaple (2002)	United States	1987-1996	Panel	Firm	+
2. Developing countries					
Blomstrom and Wolff (1994)	Mexico	1970-1975	Cross-section	Industry	+
Kokko (1996)	Mexico	1970	Cross-section	Industry	+
Haddad and Harrison (1993)	Morocco	1985-1989	Panel	Firm and industry	?
Kokko et al (1996)	Uruguay	1990	Cross-section	Firm	?
Sjohom (1999)	Indonesia	1980-1991	Cross-section	Firm	+
Chuang et al (1999)	Taiwan, Province of China	1962-1996	Panel	Firm	+
Aitken and Harrison (1999)	Venezuela	1976-1989	Panel	Firm	-
Cheng and Ku (2000)	Taiwan, Province of China	1986-1994	Panel	Firm	+
Kathuria (2000)	India	1976-1989	Panel	Firm	?
Kokko et al (2001)	Uruguay	1988	Cross-section	Firm	?
Kugler (2001)	Colombia	1974-1998	Panel	Industry	?
Liu (2002)	China	1993-1998	Panel	Firm	+
Romo (2003)	Mexico	1992-1995	Panel	Industry	? and -
3. Transition economies					
Djankov and Hoekman (2000)	Czech Republic	1993-1996	Panel	Firm	-
Konnings (2001)	Bulgaria, Poland,	1993-1997	Panel	Firm	-?-
	Romania	1994-1997			
Damijan et al (2001)	Bulgaria, Czech Republic, Hungary, Poland, Latvia, Romania, Slovakia, Slovenia	1993-1997 1994-1998	Panel	Firm	? or -, + only for Romania
Sgard (2001)	Hungary	1992-1999	Panel	Firm	- and +

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

Box I.2
STATISTICAL SHORTCOMINGS IN FDI DATA

The International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD) have been working to unify the criteria used by their member countries in preparing balance-of-payments statistics, one section of which records FDI flows. The fifth edition (1993) of the IMF Balance of Payments Manual (BPM5), proposes an integrated structure for recording economic transactions and stocks of financial assets and liabilities, which many countries have adopted, or are in the process of doing so. Surveys on the degree of implementation of methodological standards for recording FDI, carried out by IMF and OECD in 1983, 1991, 1997 and 2001, reveal steady progress in the adoption of these criteria. The latest version of the survey highlights major progress in the quality of FDI statistics –specifically in terms of their availability (such as the use of criteria relating to the country of origin and destination sector of FDI flows), and coverage (e.g., the inclusion of inter-enterprise loans, real-estate property owned by non-residents, and expenditure on natural-resource exploration, among other things). Progress, albeit less substantial, has also been made in other areas, including application of the “10% rule” which infers a direct-investor relationship when the investor acquires 10% or more of the equity of an enterprise. Lastly, there are other areas where, despite some progress being made, most countries are not yet following international standards, for example inclusion of the activities of firms indirectly owned by a foreign investor, and use of the “current operating performance concept” (COPC) to evaluate the gains from direct investment. This involves

measuring the normal operating revenues of the enterprise, before capital gains and losses.

Most countries in Latin America and the Caribbean have adopted the BPM5 guidelines, which results in substantially homogeneous statistics being available for the region. A major exception is Brazil, which, despite having implemented many of the manual’s recommendations, only considers inter-enterprise loans and equity shareholdings as components of FDI. The third component, reinvestment of profits, is not currently recorded in Brazilian statistics.

Foreign direct investment by country of origin and destination sector, does not appear in the balance of payments, so the countries of the region generally record such data in separate statistics, if at all. In many cases, this information is compiled by independent foreign-investment promotion agencies, whose recording standards differ from those used by their country’s central bank. Accordingly, the FDI figures may not coincide when the totals reported in the balance of payments are compared with totals by country of origin, destination sector, or both. A case in point is Chile, where FDI figures vary depending on whether they come from the Central Bank or the Foreign Investment Committee, a body that is independent of the central bank and maintains FDI records by country and sector. The Committee only classifies investment as FDI if it enters the country under the Foreign Investment Statute (about 85% of investment entering Chile since 1974), and it records its entry when the investment is agreed. In contrast, the Central Bank registers investment flows carried out under any mechanism, not only under

the Statute; and it records them when they actually enter or leave the country. Several Latin American countries have taken steps to improve their statistics and bring them up to international standards. In Mexico, which is the region’s only OECD member, FDI statistics are prepared by Banco de México and the Ministry of Economic Affairs. In order to unify methodologies and obtain internationally comparable statistics, since 2000 both institutions have operated under common rules that establish specific responsibilities for their preparation and publication. Formerly Costa Rica had several institutions that maintained historical records and prepared annual estimates and forecasts of FDI flows; but these did not always coincide with one another owing to methodological and coverage discrepancies. In 2000 an interagency group was created under the direction of the Central Bank of Costa Rica, with the key task of preparing statistics on net FDI flows entering the country, and adapting them to internationally prevailing methodological procedures. Lastly, in Venezuela the Central Bank has been in the process of adapting its balance-of-payments data to BPM5 guidelines since 1996, but only in 2003 did it revise, adapt and update all of its statistics dating back to 1997.

In short, while FDI statistics are very useful for gaining a better understanding of the phenomenon in question, the way they are prepared needs to be borne in mind, along with their virtues and defects, in order to avoid falling into conceptual error when working with them.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Organisation for Economic Co-operation and Development (OECD)/International Monetary Fund (IMF), *Foreign Direct Investment Statistics: How Countries Measure FDI 2001*, Washington, D.C., 2003; and *Report on the survey of implementation of methodological standards for direct investment*, 1999; International Monetary Fund (IMF), *Balance of payments statistics* [CD ROM], December 2003.

In recent years, in the context of preparing the annual reports on foreign investment in Latin America and the Caribbean, the research programme of the Unit on Investment and Corporate Strategies, of the Division of Production, Productivity and Management has shown that a useful way to combine these separate, and sometimes conflicting viewpoints is by analysing the corporate strategies that lead TNCs to invest in developing countries. Thus, based on the original model of corporate strategies prepared by John Dunning (1980,

1988), an analytical framework has been developed for the purpose of understanding the factors that determine FDI inflows. Table I.1 shows that there are at least four main motivations for FDI, ranging from the most traditional, such as the search for natural resources and markets for goods and services, to more modern and complex goals such as the search for efficiency through international operations or pursuit of strategic assets relating to the presence of a technological or scientific base, or both.

Table I.1
DETERMINANTS OF FDI IN RECIPIENT COUNTRIES, BY CORPORATE STRATEGY

FDI strategy	Main determinants
Natural-resource-seeking	Abundance and quality of natural resources Access to natural resources Trends in international commodity prices Environmental regulation
Local-market-seeking (national or regional)	Size, pace of growth and market purchasing power Level of tariff and non-tariff protection Entry barriers Existence and cost of local suppliers Market structure (competitors) Sectoral regulation
Efficiency-seeking (to capture export markets)	Access to export markets Quality and cost of human resources Quality and cost of physical infrastructure Services logistics Quality and cost of suppliers International trade agreements and foreign investment protection
Technological-asset-seeking	Presence of specific assets needed by the firm Scientific and technological base Scientific and technological infrastructure Intellectual property protection

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

The Unit on Investment and Corporate Strategies of the Division of Production, Productivity and Management has used this simple, yet penetrating analytical framework to describe the characteristics of FDI and interpret the corporate strategies pursued by TNCs in Latin America (see table I.2). The search for natural resources occurs mainly in the Andean Community and Argentina (hydrocarbons and mining), in Chile (mining), and in Trinidad and Tobago (oil and gas). Market-seeking strategies predominate in the region's largest countries.

In the case of goods, the main examples are the automotive industry in MERCOSUR, and the food, beverages and tobacco industry in Argentina, Brazil and Mexico. In the services sector, the leading areas are finance, telecommunications, retail trade and energy infrastructure in a variety of countries, especially in South America. Lastly, the efficiency-seeking strategy is concentrated in Mexico (the automotive, electronics and apparel industries) and in the Caribbean Basin (apparel).

Table 1.2
**LATIN AMERICA AND THE CARIBBEAN: THE STRATEGIES OF
 TRANSNATIONAL CORPORATIONS**

Corporate strategy and sector	Natural-resource-seeking	Local-market-seeking (national or regional)	Efficiency-seeking to capture export markets	Technological-asset-seeking
Goods	<i>Petroleum and gas:</i> Andean Community, Argentina, Trinidad and Tobago <i>Mining:</i> Chile, Argentina, Andean Community	<i>Automotive:</i> MERCOSUR <i>Chemicals:</i> Brazil <i>Food industry:</i> Argentina, Brazil, Mexico <i>Beverages:</i> Argentina, Brazil, Mexico <i>Tobacco:</i> Argentina, Brazil, Mexico	<i>Automotive:</i> Mexico <i>Electronics:</i> Mexico and Caribbean Basin <i>Apparel:</i> Caribbean Basin and Mexico	
Services	<i>Tourism:</i> Mexico and Caribbean Basin	<i>Finance:</i> Mexico, Chile, Argentina, Venezuela, Colombia, Peru, Brazil <i>Telecommunications:</i> Brazil, Argentina, Chile, Peru, Venezuela <i>Retail trade:</i> Brazil, Argentina, Mexico <i>Electric power:</i> Colombia, Brazil, Chile, Argentina, Central America <i>Gas distribution:</i> Argentina, Chile, Colombia, Bolivia	<i>Business services:</i> Costa Rica	

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

In the course of preparing successive editions of *Foreign Investment in Latin America and the Caribbean*, qualitative and quantitative research, of a significant and substantive nature, has been conducted to analyse the situation of various recipient countries (Brazil, Mexico, Chile, Argentina and the Andean Community), a number of investor countries (United States, Japan, Spain and the European Union as a whole), and some of the main industries of the region in which FDI is present (automotive, apparel, telecoms, hydrocarbons and financial services), all of which have been accorded chapters in previous editions of this report. Based on those studies, supported by statistical data on FDI flows and information available on TNC operations, and placing all of this in the context of the corporate strategies mentioned above, a simplified framework can be constructed for FDI and TNC activities in the region, in which the most salient feature is the existence of “two worlds”:

- In Mexico and the Caribbean Basin, FDI essentially reflects a TNC strategy that seeks efficiency to conquer external markets, by integrating local productive platforms into regional or international production systems. The countries in this subregion have cost centres both in high-tech (electronics and automotive) and in lower technology industries (apparel). The new patterns of competition in various industries encouraged firms to seek out the productive locations offering the lowest costs, and geographic locations that were specially favourable for large-scale exporting. The aim of the firms was to bring about a form of internationalization that would keep them in a competitive regional and global position, while they also took advantage of special access to the main markets available to Mexico (since the signing of the North American Free Trade Agreement, NAFTA) and the Caribbean Basin. This resulted in a significant improvement in

international competitiveness,¹ especially in Mexico, and the emergence of dynamic trading sectors, such as the automotive, electronics and garment industries, destined mainly for the United States market.

- In South America, FDI was basically established through TNCs implementing strategies in pursuit of natural resources and markets for services. The first of these was implemented mainly in the Andean Community countries and in Chile, given their high-quality natural resources and regulatory frameworks that favoured foreign investors. This fostered a relative increase in international competitiveness, albeit largely restricted to products that command low prices in world trade. The services-market-seeking strategy, meanwhile, was applied in the telecoms, energy, infrastructure and finance subsectors, especially in the MERCOSUR countries and Chile. Deregulation and liberalization of activities, wide-ranging privatization programmes and an active strategy by new international operators

were key factors in this phenomenon. This type of FDI produced significant improvements in systemic competitiveness² in these economies and, despite not directly affecting their international competitiveness, provided an opportunity to further the development of new export-oriented productive activities.

This view of FDI and TNC activities can be used as the basis for interpreting the following sections of this chapter, which describe the dominant trends in both investment flows and TNC activities, and provide a more detailed consideration of two of the main corporate strategies—the search for natural resources and the search for local markets for goods and services—which are not addressed in depth in the other chapters of this report. Chapter II is devoted to the efficiency-seeking strategy in Costa Rica, Dominican Republic, Honduras and Jamaica. Chapter III also analyses this type of strategy, but focuses on the changes experienced by the global automotive industry and their implications for the two main FDI poles connected with this activity in the region, namely Brazil and Mexico.

B. RECENT FDI TRENDS IN LATIN AMERICA AND THE CARIBBEAN

1. Foreign direct investment worldwide

The year 2003 witnessed a halt to the downward trend of global FDI flows seen during the two previous years, with volumes holding steady roughly at their 2002 levels. Preliminary figures published by the United Nations Conference on Trade and Development (UNCTAD), estimate worldwide FDI at nearly US\$ 653 billion for 2003 (see table I.3). This static result at the global level, however, is the outcome of diverging trends among the various regions, country groupings and individual economies. Among the developed countries, the United States—which in the last two years suffered

the steepest reduction in net FDI inflows—in 2003 recorded a vigorous recovery that compensated for the general decline in investment flows that affected all other developed economies. In the developing world, Latin America and the Caribbean has been the only region in which FDI continued to retreat—for the fourth straight year and at a still significant pace—whereas flows picked up in both Asia and Africa. In the countries of Central and Eastern Europe, FDI maintained the rising trend it has displayed since the early 1990s.

¹ International competitiveness reflects the force of a country's exports, which can be measured by their share of imports in the leading markets of the world.

² The term "systemic competitiveness" refers to the services and infrastructure in a given economy that support export activity without directly generating exports themselves. Systemic competitiveness directly affects the logistics of TNC activities, and hence also their location decisions.

Table I.3
REGIONAL DISTRIBUTION OF NET FDI INFLOWS WORLDWIDE, 1991-2003
(Billions of dollars)

	1991-1996 ^a	1997	1998	1999	2000	2001	2002	2003 ^b
World total	254.3	481.9	686.0	1 079.1	1 393.0	823.8	651.2	653.1
Developed countries	154.6	269.7	472.3	824.6	1 120.5	589.4	460.3	467.0
Western Europe	91.0	139.3	263.0	496.2	709.9	400.8	384.4	345.8
European Union	87.6	127.9	249.9	475.5	683.9	389.4	374.4	341.8
Germany	4.8	12.2	24.6	55.8	203.1	33.9	38.0	36.4
France	18.4	23.2	31.0	46.5	43.3	55.2	51.5	36.3
United Kingdom	16.5	33.2	74.3	84.2	130.4	62.0	24.9	23.9
Other Western European countries	3.4	11.4	13.1	20.7	26.0	11.4	10.0	4.0
North America	53.4	114.9	197.2	308.1	380.8	172.8	50.6	97.7
Canada	6.6	11.5	22.8	24.7	66.8	28.8	20.6	11.1
United States	46.8	103.4	174.4	283.4	314.0	144.0	30.0	86.6
Other developed countries	10.2	15.5	12.0	20.3	29.9	15.8	25.3	23.5
Japan	0.9	3.2	3.2	12.7	8.3	6.2	9.3	7.5
Developing countries	91.5	193.2	191.3	229.3	246.1	209.4	162.1	155.7
Latin America and the Caribbean ^c	27.1	73.3	82.0	108.3	95.4	83.7	56.0	42.3
Africa	4.6	10.7	8.9	12.2	8.5	18.8	11.0	14.4
Asia and the Pacific	59.4	109.1	100.0	108.5	142.1	106.8	95.0	99.0
China	25.5	44.2	43.8	40.3	40.8	46.8	52.7	57.0
Central and Eastern Europe	8.2	19.0	22.5	25.1	26.4	25.0	28.7	30.3

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2003. FDI Policies for Development: National and International Perspectives* (UNCTAD/WIR/2003), New York/Geneva. United Nations publication, Sales No: E.03.II.D.8, 2003; and for preliminary 2003 figures, *Global FDI decline bottoms out in 2003*, Press Release, 12 January 2004.

^a Annual averages.

^b Preliminary figures.

^c The figures for Latin America and the Caribbean include financial centres.

The fact that global FDI flows have not recovered more strongly, following the steep falls recorded in 2001 (41%) and 2002 (21%), and despite the recovery in the world economy in 2003, is the result of the persistent decline in transborder merger and acquisition activity, which had been the driving force behind FDI growth in the 1990s. According to UNCTAD, such operations decreased in 2003, by 25% in amount and by 7% in number, to reach their lowest levels since 1998.

In developed countries there was a 1% increase in net FDI inflows, in developing countries a 4% decline,

and in Central and Eastern Europe a 6% expansion. In the first case, the slight increase is wholly explained by the performance of FDI in the United States, where its 2003 level virtually tripled the 2002 figure to reach US\$ 86 billion. In the other developed countries, declines were widespread, albeit heterogeneous: 10% in the European Union, 20% in Japan and 46% in Canada. Among developing countries, those of Latin America and the Caribbean as a whole were again the worst hit, posting a 25% decline. The countries of Asia and the Pacific, in contrast, recorded an increase of 4%, while flows to Africa were up by 31%.

2. Foreign direct investment in Latin America and the Caribbean: flows and trends

In 2003 net FDI flows into Latin America and the Caribbean declined sharply for the fourth year running, this time by an estimated 19%, falling to a level of US\$ 36.466 billion.³ This figure represents around 60% of the annual average entering the region in the second half of the 1990s (see table I.4). The behaviour of FDI was very similar across subregions in 2003, since the fall in relation to the 2002 figure approached 19% both in the Mexico, Central America and Caribbean zone, and also in South America. In the first-mentioned group of countries, which have been the leading destination for TNCs following an efficiency-seeking strategy, FDI has maintained very similar levels to the average recorded in 1995-1999. In South America, however, where it has responded to natural-resource-seeking strategies (especially in the Andean Community and Chile) and market-seeking strategies (particularly MERCOSUR and Chile), FDI in 2003 amounted to 47% of the 1995-1999 average. In this second group of countries, a deterioration

in macroeconomic conditions undermined domestic demand, which, when compounded by the financial problems experienced by a number of the parent companies of international firms present in the region, caused foreign firms to postpone new business initiatives.

The steep fall in FDI flows to Latin America from 1999 onwards has meant that these are no longer sufficient to compensate for the negative balance of financial flows observed since 1996. The net resource transfer (NRT) towards the region turned positive in 1991 –for the first time since 1981– reflecting the return of capital flows, both financial and FDI. In 1996, however, financial flows started to have a negative effect on the balance of payments, although the net resource transfer remained positive until 1998 thanks to the dynamism of FDI. The retreat of the latter began in 2000, and from 2002 onward it has been unable to offset the transfer of financial flows abroad (see figure I.1).

Table I.4
LATIN AMERICA AND THE CARIBBEAN: NET FDI INFLOWS, BY SUBREGION, 1990-2003^a
(Millions of dollars)

	1990-1994 ^b	1995-1999 ^b	2000	2001	2002	2003 ^c
Mexico, Central America and the Caribbean	6 845	15 414	20 427	31 006	18 499	14 939
South America	8 930	45 534	57 716	38 528	26 480	21 527
Total	15 775	60 948	78 143	69 534	44 979	36 466

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of balance-of-payment statistics published by the International Monetary Fund (IMF) and data from official sources in the respective countries. The figures differ from those presented in *Preliminary Overview of the Economies of Latin America and the Caribbean, 2002* (ECLAC, 2002a), since that document records investment in the reporting economy, less direct investment carried out by residents of that economy abroad.

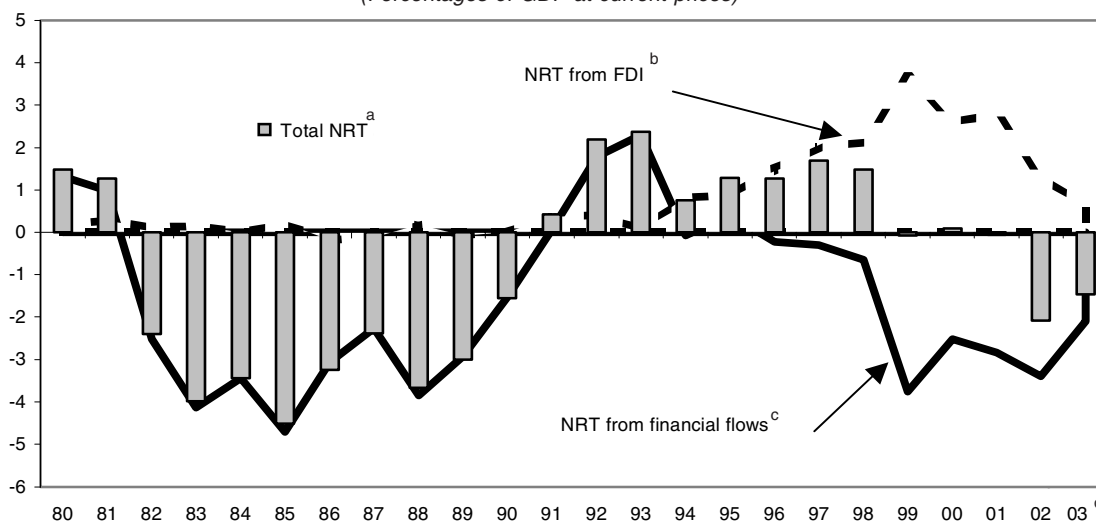
^a Figures do not include financial centres. Net FDI inflows correspond to FDI inflows in the reporting economy, minus capital taken out of the country by the same foreign firms.

^b Annual average.

^c Estimates based on information provided by central banks.

³ This report does not consider statistics on net FDI inflows to tax havens and/or financial centres in the Caribbean, because the data suffers from problems of quality, coverage and possible double-counting.

Figure I.1
LATIN AMERICA AND THE CARIBBEAN: NET RESOURCE TRANSFER, 1980-2003
 (Percentages of GDP at current prices)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Preliminary Overview of the Economies of Latin America and the Caribbean, 2003* (LC/G.2223-P), Santiago, Chile. United Nations publication, Sales No. E.03.II.G.186, December 2003.

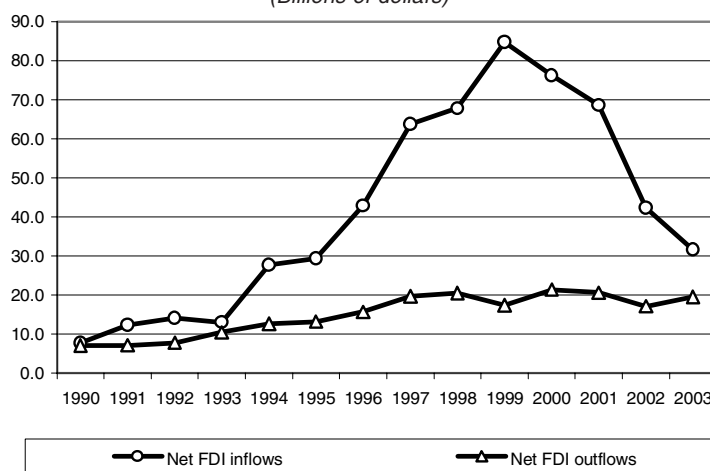
^a To calculate the net resource transfer (NRT), the balance on the income account (net payments in respect of FDI profits, dividends from portfolio investments and interest payments) is subtracted from the balance of total capital flows. The latter corresponds to the balance on the capital and financial account, plus errors and omissions, loans, and the use of IMF credits and exceptional financing. Negative figures indicate resource transfers abroad.

^b Equivalent to the balance of foreign direct investment (FDI) less net profit remittances.

^c Equivalent to the balance of other capital, excluding FDI, less net dividend payments on portfolio investments and interest payments.

^d Preliminary estimate.

Figure I.2
LATIN AMERICA AND THE CARIBBEAN: NET FDI INFLOWS AND OUTFLOWS OF FDI-RELATED INCOME, 1990-2003
 (Billions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of balance-of-payments statistics published by the International Monetary Fund (IMF).

Notes: The figure for net FDI inflows only includes foreign direct investment entering the reporting economy, minus capital taken out of the country by the same foreign firms. It does not include FDI made abroad by residents of the reporting economy, which was included in figure I.1.

The figures for outflows of FDI-related income only consider net dividends sent by foreign firms abroad, and not net dividends received by residents of the reporting economy, which were considered in figure I.1.

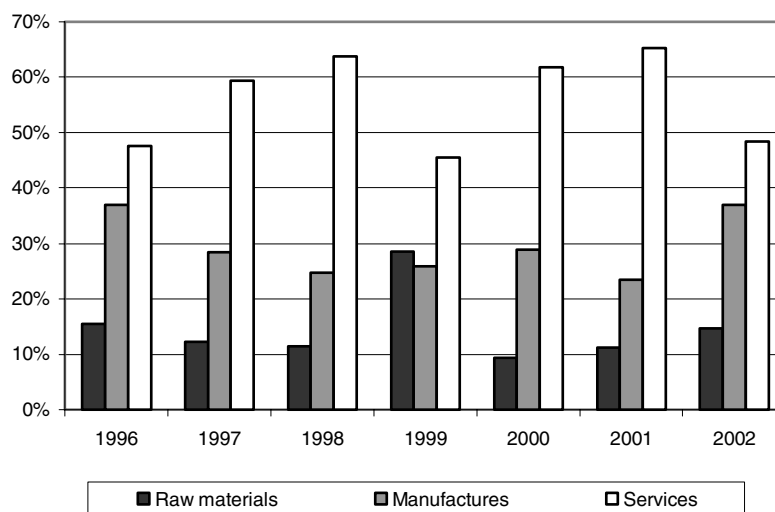
Figures corresponding to 2003 are estimates.

The trend of net FDI inflows to the region, on the one hand, and the net outflow of FDI-related income, on the other, show that from 2000 onward the prevailing pattern of the 1990s has been reversed (see figure I.2). Net inflows have declined substantially, while net outflows have grown. Although foreign firms are investing less in the region, they have not cut back on the dividends they send abroad, the level of which has fluctuated around US\$ 20 billion since 1997.

In sectoral terms, services have been the main destination for FDI in recent years; in 1996-2002 this sector absorbed about 57% of total FDI, followed by manufacturing (28%) and the primary sector (15%). Starting in 2001, however, FDI in services began to decline, and a substantial drop was recorded in 2002;

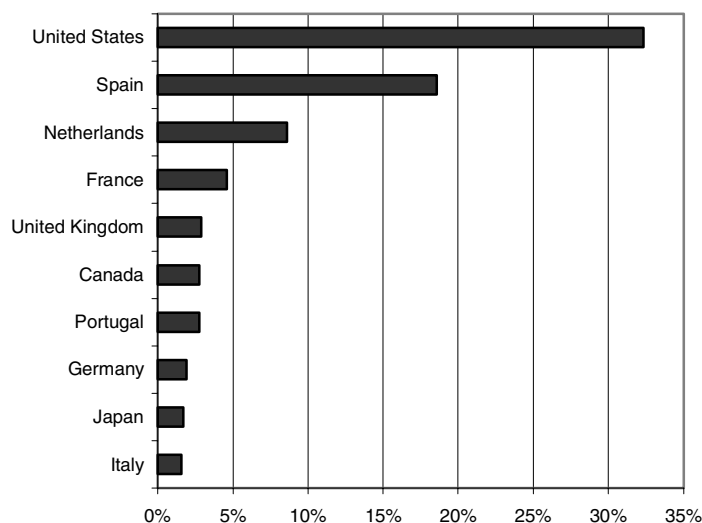
preliminary estimates suggest that this trend has been maintained in 2003 (see figure I.3). Accordingly, FDI flows towards Latin America have been heavily influenced by the dynamic of the services sector, the behaviour of which explains both the vigorous expansion recorded in the 1990s and also its abrupt decline from 1999 onward. As regards the main investor countries in the region, the 10 largest are all developed economies and members of the Organisation for Economic Co-operation and Development (OECD). The United States is in first place, accounting for 32% of the total, followed by Spain, with 19% (see figure I.4). The Netherlands, France and the United Kingdom lead the next group. European Union countries significantly increased their presence as from the second half of the 1990s.

Figure I.3
LATIN AMERICA AND THE CARIBBEAN: NET FDI INFLOWS TO THE LEADING ECONOMIES,
BY SECTOR, 1996-2002 ^a
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of figures provided by the central banks of the respective countries, except in the case of Chile where the data are supplied by the Foreign Investment Committee.
^a The six leading recipient countries are: Brazil, Mexico, Argentina, Chile, Venezuela and Colombia. These countries captured 83% of net FDI flows to Latin America and the Caribbean (excluding financial centres) during the period 1996-2002.

Figure I.4
**THE TEN LEADING INVESTOR COUNTRIES IN THE SIX LEADING FDI
 RECIPIENT COUNTRIES, 1996-2002^a**
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of figures provided by the central banks of the respective countries, except in the case of Chile where the figures are supplied by the Foreign Investment Committee.
^a The six leading recipient countries are: Brazil, Mexico, Argentina, Chile, Venezuela and Colombia. These countries captured 83% of net FDI flows to Latin America and the Caribbean (excluding financial centres) during the period 1996-2002.

Table I.5
MEXICO, CENTRAL AMERICA AND THE CARIBBEAN: NET INWARD FDI, 1990-2002^a
(Millions of dollars)

	1990-1994 ^b	1995-1999 ^b	2000	2001	2002	2003 ^c
Mexico	5 430	11 398	16 449	26 569	14 435	10 731
Central America	575	2 067	1 964	2 017	1 354	1 742
Costa Rica	222	481	409	454	662	466
El Salvador	12	282	173	250	208	140
Guatemala	88	213	230	456	110	104
Honduras	41	120	282	195	143	216
Nicaragua	20	194	267	150	174	241
Panama	192	777	603	513	57	576
The Caribbean^a	840	1 949	2 014	2 420	2 710	2 466
Jamaica	124	285	468	614	481	500
Dominican Republic	171	594	953	1 079	961	700
Trinidad and Tobago	270	550	472	685	737	700
Other	274	519	121	42	531	566
Total	6 845	15 414	20 427	31 006	18 499	14 939

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of balance-of-payments statistics published by the International Monetary Fund (IMF) and data from official sources in the respective countries. Figures for 2003 are estimates based on information provided by central banks. The figures shown in this table differ from those presented in *Preliminary Overview of the Economies of Latin America and the Caribbean, 2002* (ECLAC, 2002a), since that document records investment in the reporting economy, minus direct investment carried out by residents of that economy abroad.

^a Excluding financial centres. Net FDI inflows correspond to gross inflows in the reporting country, minus capital taken out of the country by the same foreign firms.

^b Annual average.

^c Estimates, except for Mexico.

(a) Foreign direct investment in Mexico, Central America and the Caribbean

Mexico

Net FDI inflows to Mexico shrank for the second straight year in 2003, to reach US\$ 10.731 billion—down by 26% on the previous year's figure, although very close to the average for the five-year period 1995-1999 (see table I.5). There are two key factors explaining the retreat of FDI from its 2002 level. Firstly, the process of market penetration by foreign banks that had begun in 2000 culminated in 2002 with foreign control of over 90% of the country's banking system (ECLAC, 2003a, chapter III). Secondly, competition from Asian countries, especially China, for FDI seeking lower costs in order to improve competitiveness in the United States market, prevented the upturn in that country from generating a more substantial increase in investment flows to export-processing zones in Mexico. Even so, in 2003 Mexico was still the leading FDI recipient in Latin America and Caribbean, ahead of Brazil.

A sectoral breakdown shows that investment flows have mostly been channelled to the manufacturing sector, especially since the signing of the North American Free Trade Agreement (NAFTA) in 1994 (see appendix table I-A.2). The financial sector also became a major pole of attraction from 2000 onward, resulting in a wave of foreign takeovers of Mexican financial institutions, in which the leading players were Citicorp and the Spanish banks, Santander Central Hispano and Bilbao Vizcaya Argentaria (ECLAC, 2003a, chapter III).

Foreign direct investment flows diminished in these sectors in 2003. Flows to the services sector shrank by 36% compared the 2002 figure, and an even steeper fall of 57% was recorded in flows to the financial sector. In manufacturing industry, export assembly activities have aroused major interest among foreign investors since the signing of NAFTA—especially in the automotive, electronics and clothing segments. The geographic location of Mexico continues to represent a major advantage for foreign investors eyeing the North American market, and this has been boosted by the

significant upturn in economic growth in the United States and a consequent increase in shipments to that country. Nonetheless, Mexican industry still faces major challenges, including competition from China as an FDI destination.⁴

As regards the leading investor countries, Mexico is highly dependent on the United States, which has invested a cumulative net total of US\$ 70.579 billion between 1996 and 2003, representing 66% of total net flows to the country. The next largest investors are the Netherlands (9%), followed by Spain (6%) and the United Kingdom (4%) (see table I-A.2). The five leading investor countries accounted for 87% of net FDI flows entering Mexico.

Central America and the Caribbean

Total FDI inflows to Central America and the Caribbean in 2003 are estimated at US\$ 4.2 billion, which represents growth of 4% compared to the previous year's figure and also with respect to the 1996-1999 average (see table I.5). As from the mid-1980s, several countries in this subregion began to receive investments from foreign firms seeking to exploit: (i) the incentives offered by export processing zones and preferential access to the United States market for exports with a high North American content; and (ii) low labour costs to improve their competitiveness in the United States market. Several assembly firms were established as a result, mainly in the apparel industry. In 2003, economic recovery in the United States gave a renewed boost to exports by these firms, which had suffered a sharp slowdown since late 2000. Nonetheless, the countries of this subregion, the vast majority of which have specialized in the labour-intensive assembly industry, will soon have to face profound changes in the international arena, as a result of competition from Asian countries, especially China, and the ending of the Agreement on Textiles and Clothing of the World Trade Organization (WTO), which abolishes import quotas as from 1 January 2005. Chapter II of this report makes a detailed analysis of the cases of Costa Rica, Dominican Republic, Honduras and Jamaica.

⁴ In order to restore competitiveness to the maquila export industry (MEI), the Government of Mexico issued a new decree reforming the law on MEI development and operations entitled "Diverso para el Fomento y Operación de la IME". The new decree takes note of the key demands made by maquila-sector representatives, including a request for correct definition of the terms "maquila controller" and "maquila operation", in order to resolve ambiguities; abolition of the requirement to present the rental contract for future plant location; and extension of the exemptions granted under NAFTA Article 303 to indirect exports, rather than direct ones alone (Comercio Exterior, 2004).

(b) Foreign direct investment in South America**MERCOSUR**

Net FDI flows to Brazil in 2003 amounted to US\$ 10.144 billion, which marks a fall of 39% compared to the previous year's figure and was 47% below the average for the five-year period 1995-1999 (see table I.6). As a result, Brazil dropped to second place behind Mexico in the region's FDI recipient ranking. The several factors behind this sharp decline: firstly, the country has suffered a reduction in its foreign-currency

purchasing power, as result of the steep devaluation of the *real* and the economic slowdown that has undermined demand and discouraged FDI targeting the domestic market; secondly, the crisis that privatized public utilities have been enduring since 2001 worsened further in 2003. Since the second half of the 1990s, the public-utilities sector had been the main focus of investor interest (see appendix table I-A.2). In an initial phase the sector received large privatization-related flows, and then this was followed up by investments to fulfil the commitments entered into with the regulatory authorities.

Table I.6
SOUTH AMERICA: FDI INFLOWS, 1990-2003^a
(Millions of dollars)

	1990-1994 ^b	1995-1999 ^b	2000	2001	2002	2003 ^c
Chile	1 207	5 401	4 860	4 200	1 888	2 982
MERCOSUR	4 880	30 188	43 590	25 039	17 496	11 397
Argentina	3 027	10 599	10 418	2 166	775	1 103
Brazil	1 703	19 240	32 779	22 457	16 566	10 144
Paraguay	99	185	119	95	-22	19
Uruguay	51	164	274	320	177	131
Andean Community	2 843	9 945	9 266	9 289	7 096	7 148
Bolivia	85	711	736	706	677	357
Colombia	818	2 796	2 299	2 500	1 974	1 291
Ecuador	303	639	720	1 330	1 275	1 637
Peru	801	2 350	810	1 070	2 391	1 332
Venezuela	836	3 449	4 701	3 683	779	2 531
TOTAL	8 930	45 534	57 716	38 528	26 480	21 527

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of balance-of-payments statistics published by the International Monetary Fund (IMF) and data from official sources in the respective countries. Figures for 2003 are estimates based on information provided by central banks. The figures shown in the table differ from those presented in *Preliminary Overview of the Economies of Latin America and the Caribbean, 2002* (ECLAC, 2002a), because that document records investment in the reporting economy, minus direct investment carried out by residents of that economy abroad.

^a Figures correspond to FDI inflows in the reporting economy, minus capital taken out of the country by the same foreign firms.

^b Annual average.

^c Estimates, except for Brazil, Chile, Peru and Venezuela.

The trend of sectoral flows in 1996-2003 shows that 72% of FDI in Brazil was channelled to the services sector, basically telecommunications and electricity, the former a result of the privatization of Telecomunicações Brasileiras (Telebrás), while 24% was absorbed by manufacturing, largely in the automotive sector (see appendix table A-I.1). In 2003 the services sector lost further ground as an FDI target, continuing the trend that had begun in 2001. Having absorbed 80% of flows in 1996-2000, the sectoral share had shrunk to 35% by 2003. In contrast, manufacturing industry, which had accounted for an average of 18% of net FDI inflows between 1996 and 2000, saw its share expand to 36% between 2001 and 2003. With regard to FDI-origin countries, there is greater diversification in Brazil than in the case of Mexico. The United States is the leading investor country, accounting for 22% of the total (see appendix table A-I.1); Spain is ranked second (17%), followed by the Netherlands (11%). The five leading investor countries account for 68% of total FDI in Brazil.

Net FDI inflows to Argentina in 2003 are estimated at US\$ 1.1 billion, representing a 42% rise on the previous year's figure, but just 10% of the average amount received in 1995-1999 (see table I.6). In fact, net inflows in 2002 and 2003 –which slumped to late-1980s levels– are a long way from the annual average of US\$ 7.8 billion recorded between 1991 and 2000. As mentioned in the previous report on foreign investment in the region, this steep decline reflected the crisis the country has been going through, characterized by restrictions on withdrawals of bank deposits and foreign-currency remittances abroad, and then, with the ending of the convertibility regime in January 2002, by a steep devaluation of the local currency and a freeze on public-utility charges.

During 2003 the restrictions on bank deposits have been gradually lifted, foreign-exchange controls have been eased, and monetary reunification has begun by redeeming the quasi-currencies issued by the provinces during the crisis. In addition, presidential elections were held, and the new Government signed an agreement with the International Monetary Fund (IMF) in September. Despite the initial demands of the Fund, in this agreement the authorities refused to make any commitment on public service charges or any adjustment timetable. The sharp 10.9% contraction in the economy in 2002 was followed by a robust recovery

of 8% in 2003, leading to an improvement of the country's risk perception.

As mentioned in the previous edition of this report, although the crisis in Argentina hurt all foreign firms, its effects were not uniform. Firms that had invested with a view to the national or regional market, or both, were the worst hit, by a combination of two factors: currency devaluation among the countries of the region, in particular the Argentine peso and the Brazilian *real*, and a weakening of domestic demand as a result of the crisis. Secondly, public-utility firms found themselves trapped with liabilities in dollars, stemming from the loans with which they had financed their rapid expansion in the 1990s, and a steep fall in their incomes, resulting from the freeze on prices, devaluation, and the slump in demand. Investments linked to the search for natural resources for export –hydrocarbons and mining– emerged relatively unscathed from the domestic crisis; and devaluation has actually favoured certain traditional exports, such as agriculture. In 2002, therefore, FDI flows were negative in the services sector and positive in manufacturing, mining and hydrocarbons. In the latter case, FDI was maintained at the average levels seen since 1992, except for 1999 when Yacimientos Petrolíferos Fiscales (YPF) was sold (ECLAC, 2000).

As regards investor countries, Spain is the leader with a 43% share of total FDI flows in 1996-2002 (see appendix table I-A.2), as a result of an investment wave driven by large firms such as Repsol-YPF, Telefónica de España and others (ECLAC, 2002b). Some way behind come the United States (12%) and the Netherlands (10%); the five largest investor countries accounted for 76% of FDI in this period. In 2002, however, investment flows from this group of countries were negative, reflecting the deteriorating FDI climate (see appendix table I-A.2).

Chile

Net FDI flows to Chile in 2003 posted a vigorous 58% recovery following their 55% slump in 2002. Although this growth is significant, the level of inflows, on the order of US\$ 3 billion, amounts to no more than 55% of the annual average recorded in 1995-1999 (see table I.6). Chile has the most stable economy in Latin America and is the region's best rated country in terms of corruption, competitiveness, general business climate and risk rating.⁵ Since 2002, Chile has signed three free

⁵ The authorities of this country consider that the slackening of FDI flows may partly be explained by foreign firms' seeking funding locally rather than abroad.

trade agreements, giving it improved access to several important markets: the United States, the European Union and the European Free Trade Association (EFTA).⁶ In 2003 it also signed double taxation conventions with Spain and the United Kingdom; in early 2004 it approved a free trade agreement with the Republic of Korea; and negotiations are ongoing for a trilateral trade treaty with Singapore and New Zealand. Estimates for 2003 are even more encouraging. A significant proportion of FDI inflows has taken the form of mergers and acquisitions; and the authorities hope that the signing of free trade agreements will provide an additional incentive for foreign investors to choose Chile as a service platform (ECLAC, 2002b, p. 34).

There have been two major poles of attraction for FDI in Chile: the primary sector, of interest to TNCs seeking natural resources; and the services sector, which attracts firms pursuing a strategy of local and regional market penetration (ECLAC, 2000). In the first half of the 1990s, the mining sector accounted for the bulk of FDI. In the second five years, however, the services sector, basically energy, telecommunications and banking, took over as the main destination (see appendix table I-A.1). It is worth noting that Chilean assets are relatively expensive when measured in dollar terms, so TNCs face high entry costs, for example in the retail trade sector where local players have a strong presence. The United States and Spain have been the predominant investor countries, accounting for 25% and 24% of total flows in 1996-2003, respectively (see appendix table I-A.2). In that period, the five leading investor countries generated 78% of total FDI flows.

Andean Community

FDI inflows to Andean Community countries totalled an estimated US\$ 7.148 billion in 2003, which represents growth of just 1% compared to the previous year's figure, but a reduction of 28% with respect to the average for 1995-1999 (see table I.6). The increase in FDI occurred despite major political crises in two member countries, which had serious repercussions on their economic performance. The trends in investment flows have been varied, expanding in Venezuela and Ecuador, but declining in Bolivia, Colombia and Peru (ECLAC, 2003a, chapter II).

Net FDI flows to Bolivia in 2003 are estimated at US\$ 357 million –47% less than the 2002 figure and 50% below the 1995-1999 average. This retreat is mainly explained by the low level of investment in the hydrocarbons sector, which between 1996 and 2002 captured just under 50% of all FDI inflows. This negative trend is associated with political problems and uncertainty surrounding the natural gas sector (see box I.5). The United States is the leading investor country, providing 34% of flows in 1996-2002; next comes Argentina –basically as a result of operations carried out by Repsol-YPF; and then Brazil, Italy and Spain, each with shares of around 10% (see appendix table I-A.2).

In Colombia, net FDI inflows shrank by 35% in 2003, to a level far below the average recorded in 1995-1999 (see table I.6). The services sector was the leading FDI destination in the second half of the 1990s; but since 2001 that sector has lost much of its attractiveness, and primary activities (hydrocarbons and mining) have become the main recipients, in a trend that consolidated further in the first quarter of 2003 (see appendix table I-A.1). In origin terms, investments come mainly from Spain (25%) and the United States (9%) (see appendix table I-A.2).⁷

In Ecuador, the net FDI inflow in 2003 amounted to US\$ 1.637 billion, which represented a 28% increase, thereby confirming the rising trend displayed since the early 1990s (see table I.6). Investments by transnational petroleum companies largely explain the FDI channelled to this country. In 1996-2002, the primary sector, dominated by oil activities, has absorbed 85% of total FDI (see appendix table I-A.1). The United States is the leading investor country, with a 34% share in 1996-2002, followed by Canada, with 24%. The five leading investor countries accounted for 75% of total FDI in the period (see appendix table I-A.2).

In Peru, net FDI flows in 2003 totalled US\$ 1.332 billion, equivalent to 43% of the average amount entering the country in 1995-1999, but down by 44% compared to the 2002 figure. This steep fall in FDI flows does not reflect the profusion of FDI projects in natural resources (hydrocarbons and mining) observed in 2003. During the past year, Peru signed a free trade agreement with MERCOSUR, which admitted it as an associate member of the bloc on the same basis as Bolivia and Chile. In the

⁶ Consisting of Liechtenstein, Iceland, Norway and Switzerland.

⁷ Excluding oil investments, Spain and the United States have shares of 18% and 17%, respectively.

investment area the agreement seeks to encourage the signing of reciprocal investment promotion and protection conventions, in addition to a double taxation agreement. The aim here is to encourage investment between the countries of the bloc, in order to facilitate trade and technology flows.

The Venezuelan economy registered an unprecedented contraction in 2003, on the order of 9.5%, as result of the strike called by opposition political parties and business entities, which lasted from December 2002 until February 2003. In addition, the imposition of stringent price and foreign-exchange controls have caused difficulties for firms that have to carry out their transactions in foreign currency. Despite this climate of economic and political instability, FDI flows to Venezuela grew more than threefold to reach US\$ 2.531 billion in 2003, which marks a return to levels near those achieved in 1995-1999, following the steep fall that occurred in 2002 (see table I.6). Nonetheless, about 30% of that amount corresponds to investments by *Compañía Anónima Nacional Teléfonos de Venezuela (CANTV)*, owned by Verizon Communications of the United States, that were actually made in 1996 but only registered in June 2003.⁸ In sectoral terms, the hydrocarbons area has been the strongest pole of attraction for foreign investors. Since partially opening up to foreign investment in the early 1990s, which was boosted in 1995 by the possibility of entering strategic partnerships with *Petróleos de Venezuela (PDVSA)*, this sector has become the country's leading FDI recipient. In fact, 49% of FDI flows have targeted the primary sector, mainly in relation to hydrocarbons exploitation (see appendix table I-A.1). In terms of investor countries, 25% of flows between 1996 and 2002 were sourced from the United States, followed by Spain which provided 9% of the total.

To summarize, although statistical data on FDI in Latin America still suffer from a number of shortcomings, they nonetheless make a major contribution to understanding the phenomenon. Based on various statistical sources and weighing up the regional experience as a whole, it can be stated that FDI in 2003

continued on the same downward trend that had begun in 1999. The steepest fall occurred in the MERCOSUR countries and in the services sector, both of which were major destinations during the FDI boom of the 1990s. MERCOSUR countries had mainly absorbed market-seeking FDI channelled into the services sector, and to lesser extent manufacturing. There were also reductions, although less accentuated, in Mexico, Central America and the Caribbean, which have absorbed efficiency-seeking FDI targeting the export assembly industries. In Chile, although the natural-resource-seeking strategy was very important during the first half of the 1990s, the search for services markets began to prevail from 1995 onward. In this country FDI posted a revival in 2003, although it is still far from the levels attained during 1996-1999. In the Andean Community, where most FDI inflows are natural-resource-seeking, flows have increased despite the major economic and political instability prevailing in some of these countries in 2003. This shows that FDI with this aim, which has scant linkage to local economies and is focused exclusively on exports, is relatively immune to domestic conditions in the host countries.

Since the start of current decade, the region seems to have embarked upon a new stage marking the end of the FDI boom seen in the 1990s. This is mainly explained by the exhaustion of the privatization process and by TNC debt levels, especially among firms involved in public services, which have forced them to be more cautious in their investments. In this new phase, the amounts being invested by foreign firms are substantially smaller, but levels of repatriation abroad in respect of returns on earlier investment are equal to, or comparatively larger than during the preceding period. This is starting to raise the problem of the impact of FDI on external accounts, especially in countries where investment does not generate significant exports, such as in MERCOSUR. Looking to the future, the prospects are brighter in the international context, particularly as regards trends in the United States economy, which suggests a more encouraging outlook for FDI flows to the region.

⁸ CANTV reported a 1996 investment of US\$ 879 million in June 2003, in order to comply with regulations established for obtaining foreign currency, according to a statement made to Dow Jones Newswires by Miriam Aguilera, director of the Foreign Investment Superintendency (*El Universal*, 2003).

C. THE OPERATIONS OF TRANSNATIONAL ENTERPRISES IN LATIN AMERICA AND THE CARIBBEAN

This section aims to show the breadth and depth of the ongoing process of asset transnationalization in the economies of Latin America and the Caribbean, among goods and services producers, and in financial

institutions. This process has been particularly intensive in the public-utility and finance areas, which, certain precautions are needed when analysing this type of data (see box I.3).

Box I.3

ORIGIN AND CONSIDERATION OF TNC STATISTICS

The information used to prepare this section is drawn from the database maintained by the magazine *América Economía*. This fortnightly publication prepares an annual list of the 500 largest firms operating in Latin America and the Caribbean, ranked by net sales. It also incorporates other relevant data, such as profits, assets, exports, ownership and stockmarket quotation, among others. The study carried out by *América Economía* is the only regional attempt to produce a map of the largest firms operating in the region. The publication includes information not only on firms quoted on the stock exchange, as is the case with the database maintained the firm Economática, but also on closed companies. As a result, the analysis is broadened in scope to encompass public enterprises, most of which are not quoted on stock markets, together with other private firms and TNC subsidiaries which also tend not to be quoted.

Other publications carry out similar studies. The magazines *Fortune* and

Forbes prepare separate lists of the largest firms in the United States and worldwide. In Latin America, *Expansión* of Mexico, *Exame* of Brazil and *Mercado* of Argentina, among others, also publish data on the leading firms, but only covering enterprises operating in their respective countries. Accordingly, the effort made by *América Economía* is unique at the regional level, and has become the main input source for this section.

Nonetheless, for several reasons the data need to be handled with care. Firstly, sometimes a firm is assigned all the sales of its subsidiaries, even if other investing partners are involved. Problems of double counting also occur in enterprise sales when the parent or holding company and its subsidiaries are considered at the same time. An example of this is the Mexican subsidiary of the autoparts enterprise Delphi Corp., which appears in the list along with its subsidiaries Delphi

Packard Electronics Systems and Delphi Delco Electronics. A similar situation obtains in the case of several subsidiaries of foreign companies and, to a lesser extent, of local firms and their subsidiaries, which results in the data published by *América Economía* tending to over-represent the presence of foreign subsidiaries in the region. Throughout the period covered by the *América Economía* databases, the Unit on Investment and Corporate Strategies decided to correct the situation only in the case of Petróleos Mexicanos (PEMEX), since this has the largest sales volume of a parent firm and its subsidiaries. It was decided to keep PEMEX alone on the list and to eliminate its subsidiaries.

Despite problems in certain specific situations, the information provided by *América Economía* nonetheless makes a valuable contribution to elucidating the trends that have prevailed among the region's largest firms.

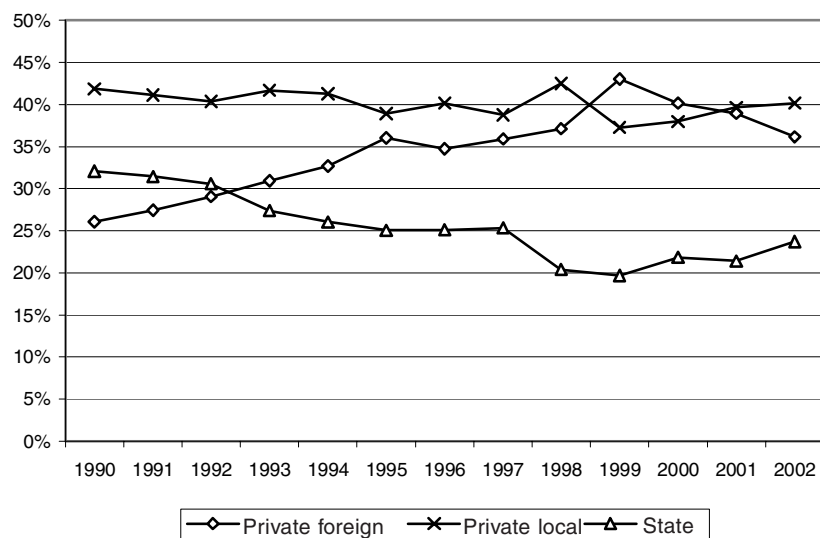
Source: Economic Commission for Latin America and the Caribbean (ECLAC).

1. Transnational corporations

Ever since the 1990s, the arrival of large volumes of FDI in the region's countries has resulted in a major process of asset transnationalization among the economies of Latin America and the Caribbean (ECLAC, 2001). This process is revealed in the importance acquired by TNCs both in goods-producing activities and in service provision, as indicated by sales data for the 500 largest enterprises operating in the region. Whereas in 1990

TNCs accounted for 25% of total sales, by 1999 their share had peaked at 43% (see figure I.5), just at the time when FDI also reached its highest level. Starting in that year, the foreign share began to decline, coinciding with the sharp drop in FDI inflows to the region. Nonetheless, this retreat does not mean that transnational firms have lost importance – they still account for 36% of the sales of the 500 largest companies.

Figure I.5
LATIN AMERICA: TOTAL SALES OF THE 500 LARGEST FIRMS,
BY OWNERSHIP, 1990-2002
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information provided by the Special Studies and Projects Department of the magazine *América Economía*.

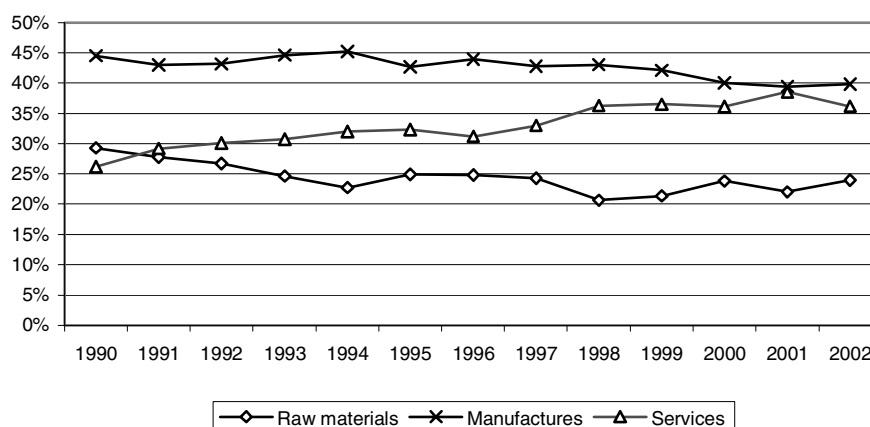
Transnational corporations have gained a forceful presence both in the manufacturing sector and in services. In the first case, many medium and high-technology industries (automotive, autoparts, electronics) are largely dominated by TNCs, which have concentrated their operations in assembly plants located in Mexico to supply the North American market –and, to a lesser extent, in Brazil and Argentina, although in this case with a more

marked orientation towards the domestic market and MERCOSUR (see chapter III). Along with medium and high-technology industries, a wide range of low-tech manufacturing industries such as clothing, also operate under the assembly-plant system, and are located both in Mexico and in the Caribbean Basin countries (see chapter II for the cases of Costa Rica, Dominican Republic, Honduras and Jamaica).

The services sector also reveals a broad-based TNC presence, which has been growing steadily since economic reforms were implemented to privatize, deregulate and liberalize public utilities in most of the region's countries. This was the sector that received the largest FDI inflow in the second half of the 1990s. The new regulatory context for public-utility provision allowed TNCs to gain ground steadily by purchasing State-owned assets –and sometimes businesses owned

by local private capital– mainly in the energy, telecoms, finance and infrastructure areas. This process explains the growing preponderance of service-providing TNCs, while the importance of State-owned firms has waned (see figure I.5). It also explains the largest firms' declining participation in the primary and manufacturing sectors, although the latter still displays the largest overall presence (see figure I.6).

Figure I.6
LATIN AMERICA: TOTAL SALES OF THE 500 LARGEST FIRMS, BY SECTOR, 1990-2002
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information provided by the Special Studies and Projects Department of the magazine *América Economía*.

The relative decline in the TNC presence since 1999 has enabled locally owned private firms to expand in a number of service areas, specifically those where foreign firms previously held a large share. The economic crises suffered by several countries in the region generated disappointing results for several firms in this sector, especially those providing non-tradable services. In crisis periods, where demand slumped across the board, the inability to redirect production towards other markets was decisive in the results of these firms, even causing some of them to withdraw altogether from the countries in which they had operations. This occurred most intensively in Argentina, where the economic crisis, compounded by social and political instability, forced a number of TNCs established in the country to refocus their strategies, and several of them closed down their operations, thereby opening up opportunities for local

enterprises to take on more active roles (see section D of this chapter). In this way, whereas in 1998-2002 only about 30% of mergers and acquisitions in the region were of an intra-border nature –investors from one country buying assets in the same country– in 2003 about half of such operations were of this type (see appendix table I-A.3). This phenomenon, in which local agents take advantage of investment opportunities such as the purchase of foreign-held assets, probably indicates that in situations of regional uncertainty local agents are better informed and more willing to take risks. Alongside these factors, the repositioning process was facilitated by the fact that several local groups were in situations of high liquidity, as a result of the previous merger and acquisitions process in which foreign firms had acquired local assets on a massive scale (see box I.4).

Box I.4

LOCAL PLAYERS GAIN GROUND IN THE SERVICES SECTOR

In South America the opening up of the services sector to foreign investment in the early 1990s triggered an unprecedented inflow of foreign capital into this sector, making it the main target of market-seeking FDI in the subregion. During this period foreign firms expanded vigorously as service providers in South America, to the detriment of local enterprises, both private and State-owned. Since 2002, this trend has been changing however, with foreign service providers withdrawing and those owned by local capital expanding by buying the devalued assets put up for sale by the former group. This is occurring both in the public utilities sector, especially telecoms, and in the financial and retail trade sectors.

Telecommunications: Advance of the Mexican enterprise América Móvil

In the telecoms area, Teléfonos de México S.A. (TELMEX) launched a new expansion strategy for its mobile telephony businesses in Latin America in late 2000. In order to prevent the firm's finances being affected by the investments and results of new businesses abroad, which require large volumes of funds, it decided to spin off its Telcel subsidiary into an independent enterprise engaging exclusively in mobile telephony. The new enterprise began trading under the name of América Móvil. The firm implemented an aggressive expansion strategy in Latin America, based on numerous acquisitions, boosted by the decision by several of its foreign competitors to quit the region. Against this backdrop, in 2002 it acquired the shares of its foreign partners in the Telecom Américas conglomerate, SBC of the United States, and Bell Canada, taking control of the latter which, in turn, owned four mobile phone operators in Brazil. In 2003 it invested over US\$ 1 billion in the acquisition of mobile phone enterprises in several South American countries, purchasing the Brazilian firms BSE Sistemas Eletrônicos Ltda. and BCP

Telecomunicações de São Paulo from BellSouth for US\$ 171 million and US\$ 625 million, respectively. It gained total control of Consorcio Ecuatoriano de Telecomunicaciones (Conecel) by acquiring the remaining 20% of this firm that it did not already own; it paid US\$ 90 million for an option to buy a controlling stake in the Argentine operator CTI Móvil, a subsidiary of Verizon Communications (United States); and it announced the purchase of 51% of Compañía de Telecomunicaciones de El Salvador (CTE) from France Telecom for US\$ 417 million. With these latest acquisitions, América Móvil now has a subscriber base of over 40 million, distributed across Mexico, Brazil, Argentina, Venezuela, Colombia, Ecuador, El Salvador and Guatemala. In addition, TELMEX purchased the assets of AT&T Latin America in 2003. This list of countries could be joined by Spain, if the intention of América Móvil to purchase the Spanish telecom operator Auna Telecomunicaciones comes to fruition. Its current market presence and potential acquisitions make América Móvil the leading competitor of Telefónica de España in Latin America. In March 2004, in reaction to the aggressive expansion of América Móvil, Telefónica reached an agreement with the United States operator BellSouth to take over its interests in Latin America.

Banking: Local institutions are leading consolidation of this sector in Brazil

In clear contrast to the rest of the region, the consolidation of banking activity in Brazil has been led by local banks, thereby reversing the trend observed since 1997, when foreign operators were vigorously penetrating the Brazilian market. As mentioned in the previous edition of this report, two locally owned banks –Bradesco and Itaú– have expanded significantly in the local market over the last two years, as a result of active participation in the privatization of public institutions and

the takeover of several other private enterprises, both local and foreign. In 2003, Bradesco pressed ahead with its aggressive acquisition policy by taking over two foreign operators: the local subsidiary of the Spanish bank, Banco Bilbao Vizcaya Argentaria, for US\$ 700 million, and the asset management subsidiary of JPMorgan for US\$ 1.8 billion. Itaú, for its part, announced the purchase of the life insurance and retirement pension operations of Assurances Générales de France (AGF) in October 2003, for which it paid US\$ 84.4 million. Foreign banks, in contrast, which had been very dynamic in this area five years earlier, in this decade so far have been virtually absent from this type of offensive, and have even lost ground to local banks by divesting assets. The exceptions are ABN Amro of the Netherlands and the British-based Hong-Kong & Shanghai Banking Corp. (HSBC), which, for the first time since the crisis, displayed a desire to grow and consolidate their position in the Brazilian market. ABN Amro paid US\$ 760 million to Banca Intesa (Italy) for Sudameris, while HSBC, which has been present in Brazil since 1997, paid US\$ 815 million for all the operations and assets of the British bank, Lloyds TSB, which had been operating in the country for 140 years.

Retail trade: Foreigners exit the Chilean market, while Chileans expand their regional presence

Chilean retail trade enterprises have engaged in intensive activity in recent years, gaining dominant positions in the local market and forcing large foreign players in this subsector to abandon their operations in the country. Their strategy has focused on expanding activities in their core business or through horizontal integration into additional areas, together with the conquest of new foreign markets. The Falabella department store has spearheaded the Chilean expansion abroad, in addition to having completed large-scale business deals within Chile. Falabella began to internationalize its activities in 1993, by opening stores in the

(Box I-4 concluded)

Argentine cities of Mendoza, Rosario, Córdoba and San Juan, and then venturing into the Peruvian market in 1995 with its purchase of Saga. In 1997, it embarked upon a horizontal diversification process, acquiring 33% of the Chilean subsidiary of the home improvement store The Home Depot (United States), which it now totally controls, in addition to setting up travel and insurance businesses through Viajes Falabella and Corredores de Seguros Falabella,

respectively. In 1998, it made purchases to further expand the range of its businesses: the Chilean subsidiary of ING Bank, which in 1999 gave birth to Banco Falabella; and 20% of Farmacias Ahumada, which has a presence in both Mexico and Brazil. In 2002, it entered the hypermarket business in Lima, through Tottus. Lastly, in 2003 it merged with Sodimac, a Chilean home improvement chain, and this operation makes the new firm the second largest in this subsector in

Latin America, surpassed only by Wal-Mart México. With the aim of breaking into the supermarket segment, in late 2003 it attempted to purchase the Chilean subsidiary of the French Carrefour chain which had decided to leave the country following disappointing results (see table I-A.5 of the appendix). Nonetheless, it was Distribución y Servicios S.A. (D&S) that finally landed Carrefour, so Falabella is now studying other options in this area, such as opening outlets in its own stores.

Sources: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of The Economist Intelligence Unit, *Business Latin America*, several editions; *América Economía* (various editions); the websites of the firms Invertia (<http://www.invertia.com>) and Bloomberg (<http://www.bloomberg.com>); *El Mercurio*, "Por qué Carrefour optó por abandonar Chile", Santiago, Chile, 30 December 2003; *Estrategia*, "D&S realiza aumento de capital por US\$ 287 millones y firma compra de Carrefour Chile", Santiago, Chile, 8 January 2004.

Despite a relative weakening of TNC sales in the last few years, the consolidated sales of the 50 largest firms in Latin America amounted to about US\$ 220 billion in 2002 (see appendix table I-A.4); in other words, 29% of the total sales of the 500 largest firms in the region, which is similar to the percentage recorded in 1999. In the manufacturing sector, where TNCs are basically concentrated in the automotive and autoparts industry, they account for 62% of sales of the largest 50 TNCs, thereby confirming the leadership of manufacturers among the 500 largest enterprises (see appendix table I-A.4). Established mainly in Mexico and Brazil, from where they supply the North American and MERCOSUR markets, respectively, these enterprises are the leaders in sales-volume terms. Key examples include General Motors, Volkswagen, DaimlerChrysler, Ford and Nissan. In addition, enterprises engaged in the autoparts trade have emerged very strongly, such as Delphi, Lear Corporation, Visteon Corporation and TRW, Inc. (the automotive industry is analysed in detail in chapter III).

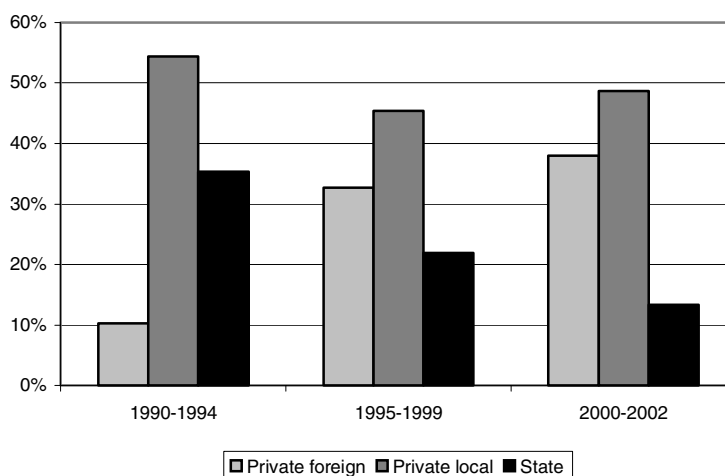
Firms in the services sector contribute 28% of the sales of the 50 largest TNCs, with those in the telecoms sector posting the most vigorous expansion. In fact, Telefónica de España is currently the largest foreign firm in the region: between 1999 and 2002, its total sales more than tripled, raising it from third place in terms of sales in 1999 to first in 2002 (see table I-A.4 of the appendix). It has also expanded practically throughout the continent, with its main operations in Argentina, Brazil, Chile and Peru, and a presence also in Colombia, Venezuela, Mexico and a number of Central American countries.

Meanwhile, firms such as Telecom Italia, MCI (formerly WorldCom) and Verizon, joined the list of the 50 largest transnationals in the region thanks to their operations essentially in Brazil and Argentina.

In the primary sector TNCs account for just 10% of total sales, largely corresponding to hydrocarbons. This is consistent with what has been stated earlier, namely that this is a sector dominated essentially by State-owned enterprises. The large TNCs operating in this activity are firms that traditionally have had a major presence in the region, such as Royal Dutch/Shell, ExxonMobil and ChevronTexaco. Alongside these, Repsol-YPF is the largest transnational in the sector, and is also the only large Spanish enterprise operating outside the services sector.

In terms of origins, TNCs are dominated by those based in the United States, which account for 45% of total sales of the 50 largest transnationals (see appendix table I-A.4). Further behind come the Spanish firms, whose sales account for about 20% of the total, and German enterprises with 11%. The countries in which TNCs have the strongest presence are Mexico and Brazil, where they generate 53% and 31%, respectively, of the sales of the 50 largest TNCs operating in Latin America. Firms in the automotive industry are very important in both countries, but especially in Mexico. In Brazil, meanwhile, the services sector has also become important, with the local subsidiary of Telefónica de España becoming the largest of the TNC subsidiaries present in the region. The case of Argentina is also notable, given the huge reduction in its share of the sales

Figure I.7
**LATIN AMERICA: TOTAL SALES OF THE 100 LARGEST SERVICE ENTERPRISES,
 BY OWNERSHIP, 1990-2002**
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information provided by the Special Studies and Projects Department of the magazine *América Economía*.

of the 50 largest transnationals. As a result of the bad results obtained by the subsidiaries of these firms, which in some cases led them to abandon their operations in the country, just 6% of the sales of the largest TNCs were generated in Argentina in 2002, compared to 13% in 1999.

Latin American State-owned firms have maintained a strong position in the primary sector, despite having lost some ground as a result of privatization processes. In fact it is largely thanks to State activity in the primary sector that these firms are still major players among the largest in the region, since State-owned enterprises had roughly a 75% share of the sales of the 25 largest firms in the primary sector throughout 1990-2002. In the last few years, and as result of strong international oil prices, the State share has actually increased. Although the State has shed much of its old role as producer of goods and services, leaving the space vacated to foreign enterprises, this did not happen in the hydrocarbons sector, where, given the strategic nature of this resource, the enterprises generally remained in State hands.⁹ The only exceptions to this pattern are Argentina, Bolivia and Peru, which privatized their oil companies in the 1990s. Accordingly, the region's largest firms are to be found in this sector,

including *Petróleos Mexicanos (PEMEX)*, *Petróleos de Venezuela (PDVSA)* and *Petróleo Brasileiro (Petrobras)*, giants which almost without exception have shared the three first places in the general list of the 500 largest firms. In 2002, these three corporations between them accounted for over 15% of the total sales of this list.

The phenomenon of TNC expansion in services can be seen more clearly by considering the hundred largest firms in the sector. In this group, TNCs have expanded vigorously, whereas State-owned enterprises have generally declined. Until 1994, TNCs accounted for about 10% of total sales (see figure I.7), with a few firms, mainly in Argentina and Brazil, operating in the retail sector (*Carrefour* and *Makro*) and in telecoms (*Telefónica de España* and *Telecom Italia*). Starting in the second half of the 1990s, however, the foreign presence in the services sector became increasingly clear, as other countries carried out large-scale privatizations. In addition to increasing in number, their range also expanded—in terms of subsectors covered (telecoms and energy, mainly), and the countries in which they were establishing their operations. Although Argentina and Brazil continued to be major hosts for these firms, Chile and Mexico also gained importance.

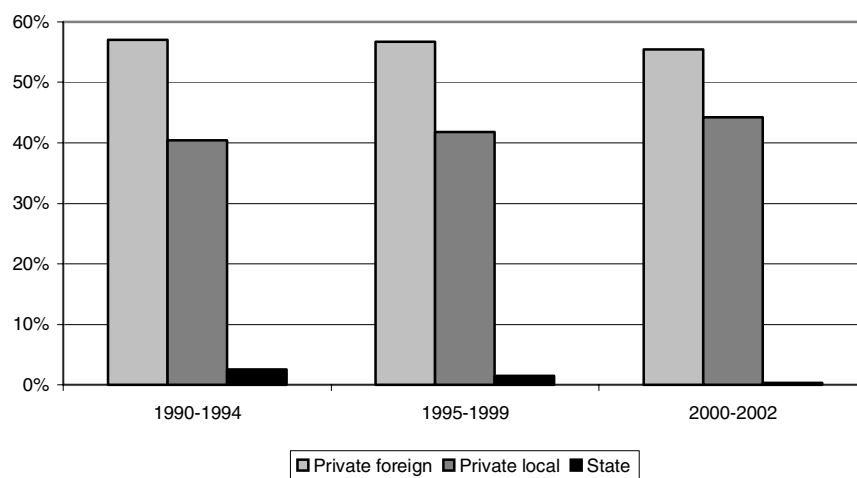
⁹ The same phenomenon occurs in a number of firms in the mining subsector, such as the State-owned *CODELCO* in Chile.

The most significant moves illustrating the transnationalization of the sector included the so-called “Operación Verónica” whereby, at the end of the last decade, Telefónica de España consolidated its regional system by raising its equity stake in its Brazilian, Argentine and Peruvian subsidiaries to almost 100% (ECLAC, 2001). The takeover of the Chilean electric power enterprise Enersis by Endesa España was also highly significant in the configuration of the regional map of the electric power subsector, because this acquisition led to a series of operations to acquire energy assets in Argentina, Peru, Brazil, and elsewhere (ECLAC, 2001). In the retail trade area, the Wal-Mart subsidiary in Mexico expanded vigorously, taking over various supermarkets in that country to become a major sectoral player at both local and regional levels. The entry of Royal Ahold (Netherlands) and Carrefour (France) in the late 1990s also contributed to the regional restructuring of the sector. Nonetheless, from 1999 onwards, sales growth among TNCs in the services sector began to falter, and, as mentioned above, several of them abandoned the region altogether, thereby opening up spaces for local investors (see box I.4).

The largest manufacturing enterprises have faced a different situation. This is the sector in which TNCs

display a major and virtually unchanging presence, in contrast to State participation which has been practically nil (see figure I.8). Among manufacturing firms, the leading enterprises have permanently been subsidiaries of the large automotive firms established in Brazil and Mexico, such as General Motors, DaimlerChrysler, Ford, Volkswagen, Nissan and Fiat. Other important subsectors, although way behind the automotive group, have been the food industry, with firms such as Nestlé, and computer and electronics, involving the subsidiaries of Samsung, Hewlett-Packard, Sony and IBM, among others, located mainly in Mexico. The largest operations carried out in the manufacturing sector, involving the entry of new transnational players, include the purchase of Grupo Embotellador México (Gemex) by PepsiCo in late 2002. The panorama in the brewing sector has also altered, with operations involving regional groups, such as Cisneros (Venezuela) and Bavaria (Colombia), together with TNCs, including Heineken (Netherlands) and Budweiser (United States) (ECLAC, 2003b, chapter I). In March 2004, the merger between the Brazilian brewer AmBev and Interbrew of Belgium created the world’s largest brewery, pushing Anheuser-Busch (United States) into second place.

Figure I.8
**LATIN AMERICA: TOTAL SALES OF THE 100 LARGEST MANUFACTURING ENTERPRISES,
 BY OWNERSHIP, 1990-2002**
 (Percentages)



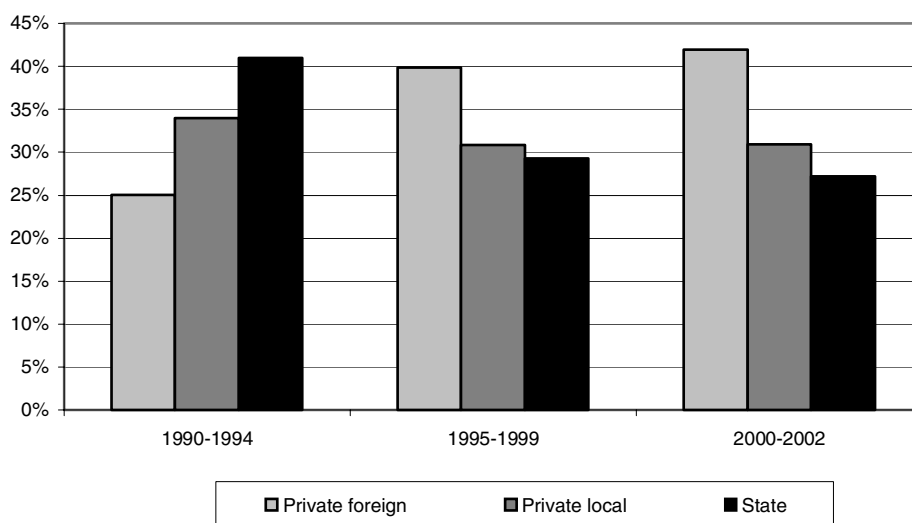
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information provided by the Special Studies and Projects Department of the magazine *América Economía*.

An analysis of the 200 largest exporting firms in Latin America and the Caribbean also reveals a process of transnationalization in the economies concerned. In the five years 1990-1994, 25% of all exports were generated by TNCs, whereas 10 years later their share amounted to 42% (see figure I.9). The most dynamic sector, and the one in which TNC presence is greatest, is manufacturing, which is explained largely by automotive and electronics activities in Mexico, and clothing and electronics in Central America and the Caribbean, based on an efficiency-seeking strategy. Manufacturing exports virtually quadrupled between the first five years of the 1990s and the first three years of the new decade, to top US\$ 113 billion. With such explosive growth, this sector's share in the total exports of the largest exporting firms grew from 42% in the early 1990s to 56% in the first few years of the new millennium. This increase has also

resulted in a relative loss of share for firms in the primary sector, whose exports, although slightly more than doubling, have accounted for a declining share of the total, shrinking from nearly 50% at the start of the 1990s to 36% in the first few years of the new century.

The primary export sector, which plays a key role in the economies of several South American countries, also displays a heavy presence of TNCs engaged in hydrocarbons extraction, including ChevronTexaco, Royal Dutch/Shell and ExxonMobil; and in mining, where subsidiaries of BHP Billiton and Anglo American among others are operating. Although the exports of this sector grew by 115% over the period 1990-2002, its relative share among the 200 largest exporting firms has declined, given the remarkable expansion of the manufacturing share.

Figure I.9
**LATIN AMERICA: TOTAL EXPORTS OF THE 200 LARGEST EXPORTING FIRMS,
 BY OWNERSHIP, 1990-2002**
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information provided by the Special Studies and Projects Department of the magazine *América Economía*.

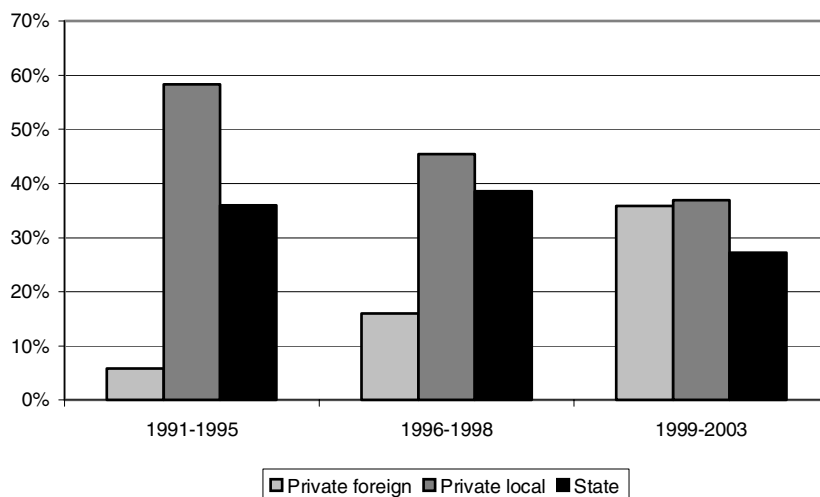
2. Transnational banks

Banking activity has also been subject to a vigorous transnationalization process, especially in the last few years of the 1990s. Until 1995, foreign operators had a negligible share in the total assets of the 100 largest banks in Latin America, compared to their local and State-owned counterparts (see figure I.10). In the second half of the decade, however, several of the region's countries embarked upon financial reform, aimed at strengthening and restructuring the system, to be better able to withstand the crises that may buffet it in the future. The aim was to enhance systemic solvency by selling local banks to large international financial groups; but the results showed that far from helping overcome crisis situations, such as that suffered in South America, in some cases international banks chose to abandon their host economies (ECLAC, 2003b, chapter III). By 2000, the banking map in Latin America had changed radically, and although foreign banks were still behind their local and State-owned counterparts in asset terms, the former group was in a boom situation while the second group was in clear retreat. Nonetheless, the explosive expansion of foreign banks has been reversed over the last few years, mainly

as a result of the crises in Brazil and Argentina, which forced several of them to close down their operations.

Spanish banks, particularly Banco Bilbao Vizcaya Argentaria (BBVA) and Banco Santander Central Hispano (BSCH), were the key players in the purchase of domestic assets in the second half of the 1990s, and this has made them the largest transnational banks operating in Latin America, with operations in several countries (see table I.7). At a time when Spanish banks needed to grow, BBVA and BSCH chose to expand their businesses towards Latin America, as a way of defending themselves from the progress of their European competitors (given the problems Spanish banks faced in achieving expansion in Europe), and also to take advantage of the new policy of financial-sector openness implemented by the region's Governments. For this reason Latin American subsidiaries are a fundamental pillar of the Spanish banks' global businesses –unlike other large foreign banks, such as Citibank of the United States or ABN Amro of the Netherlands, for which Latin American operations represent only a minor part of their worldwide activity (ECLAC, 2003b, chapter II).

Figure I.10
LATIN AMERICA: THE 100 LARGEST BANKS, BY ASSETS AND TYPE OF OWNERSHIP, 1991-2003^a
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information provided by the Special Studies and Projects Department of the magazine *América Economía*.

^a Figures correspond to data for the first half of 2003.

Table I.7
**LATIN AMERICA: LARGEST FOREIGN BANKS BY CONSOLIDATED ASSETS,
 FIRST HALF OF 2003**
 (Millions of dollars)

Rank in 2003	Rank in 1999	Bank	Country of origin	Assets	Main subsidiaries in ^a
1	1	Banco Santander Central Hispano (BSCH)	Spain	62 894	Brazil, Chile, Mexico, Argentina, Venezuela
2	3	Banco Bilbao Vizcaya Argentaria (BBVA)	Spain	61 019	Mexico, Argentina, Chile, Peru, Venezuela, Colombia, Panama, Uruguay
3	2	Citibank	United States	59 463	Mexico, Brazil, Argentina, Chile, Colombia, Peru, Venezuela, Uruguay, Paraguay
4	5	ABN Amro Bank	Netherlands	16 174	Brazil, Chile; Argentina, Colombia, Paraguay
5	4	FleetBoston Financial Corp.	United States	13 754	Brazil, Argentina, Chile, Uruguay, Mexico, Panama, Peru
6	6	HSBC Holdings	United Kingdom	12 203	Brazil, Argentina, Panama, Chile
7	10	Scotiabank	Canada	11 455	Mexico, Chile, Panamá, El Salvador, Dominican Republic
8	11	Sudameris	France	5 337	Peru, Argentina, Panama, Colombia
9	^b	J.P. Morgan Chase	United States	4 476	Brazil, Mexico, Chile
10	7	Lloyds TSB Group	United Kingdom	3 761	Brazil, Argentina, Colombia
		Total		250 537	

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data provided by the Special Studies and Projects Department of the magazine *América Economía*.

^a Figures include subsidiaries with assets in excess of US\$ 250 million. The countries are ordered according to the assets of their respective subsidiaries.

^b In 1999, JPMorgan and Chase Manhattan had not yet merged, so it is impossible to compare the position of the joint enterprise in 2003 with the ranking of the two banks when independent. In 1999, JPMorgan was ranked 21st, while Chase Manhattan was in ninth place.

The composition of the 10 largest foreign banks present in Latin America reflects the regional importance of the Spanish banks. By the end of the first half of 2003, the two leading Spanish operators accounted for 49% of the total assets of the top ten (see table I.7). In comparison, the three United States banks accounted for 31%. Citibank has become the most important of the three, following its 2001 purchase of Banamex in Mexico. With total assets in the region of US\$ 60 billion, of which its Mexican subsidiary accounts for two thirds, Citibank is now third among the 10 largest foreign banks. These figures confirm the importance of the United States and Spain in FDI inflows to Latin America, in this case targeting the banking sector, following a service market-seeking strategy. Other countries with a regional banking presence include the United Kingdom, the Netherlands, Canada and France, although their shares are all well below 10%.

In the banking sector generally, 35 of the region's 100 largest banks were foreign at the end of the first half

of 2003, accounting for 34% of total assets. There are also 48 local private banks which jointly account for 40% of assets, while the 17 State-owned banks hold 26%.

To summarize, foreign investment inflows to Latin America explain the vigorous process of asset transnationalization experienced by the region's economies. This is revealed through the changing structure of the largest firms operating in Latin America, with TNC presence growing at the expense of State and local participation. The change was particularly forceful in the public utility and financial services areas, where the State had traditionally played a leading role, but which it steadily gave up in the wake of the reforms implemented in the 1990s. Services joined manufacturing, where the transnational presence is longer established, as the main targets of TNC activity. Exports by TNCs have also expanded vigorously, especially in manufacturing, favoured by preferential conditions for entry into the North American markets. The largest TNCs come predominantly from the United States (largely

manufacturing) and Spain. It is important to highlight the tremendous growth achieved by Spanish firms, which at the present time are key players in the telecom and energy areas, and also in banking –in a process that has generated very substantial improvements in the quality and coverage of basic utilities previously delivered by the State.

The position achieved by TNCs has been undermined somewhat by the economic crisis. The space vacated by firms that decided to close down their operations in the region, given bad results and economic uncertainty, has

gradually been occupied by various local actors, which saw the crisis as an opportunity to gain new positions, particularly in the services markets. The next section makes a more detailed analysis of the strategies that guided the behaviour of TNCs over the last year, making it possible to conceptualize and better understand recent changes in the trends prevailing in the transnational segment of individual economies.

D. STRATEGIES OF TRANSNATIONAL CORPORATIONS

This section of the ECLAC foreign investment report traditionally analyses the three major types of strategy under which transnational enterprises operate in Latin America and the Caribbean. In this edition, however, chapters II and III are devoted to the corporate strategy of efficiency-seeking, through detailed case studies of a number of Caribbean Basin countries and the automotive industry,

respectively. This section will therefore address the other two strategies in greater detail, namely the search for natural resources and the search for services markets, thereby offering a more balanced overview of the three strategies followed by TNCs operating in the region.

1. Transnational corporations in search of natural resources

Transnational enterprises continue to show interest in investing in the region's raw materials sector, despite the crises that have affected several Latin American countries, which discouraged new investments in other productive sectors and, in some cases, called into question the key role of TNCs in the extraction of natural resources, mainly hydrocarbons and minerals. As has been traditional in the region, FDI in the primary sector is basically concentrated in the South American countries, since they offer abundant natural resources and favourable regulatory frameworks. Such conditions have largely defined the primary-exporting characteristics of the productive structure of several countries in the subregion. With the expectation that FDI in this sector would be positive for the host countries in terms of foreign-currency generation, high local content and job creation in non-urban zones, Governments implemented policies to attract foreign firms, and the latter established themselves in the subregion through partnerships with large State-owned enterprises, or through the concession of areas for natural resource exploitation, especially in hydrocarbons.

In 2003, various investments were made in the mining, oil and natural gas subsectors. The crises in several of the region's countries had little effect on TNC investment decisions in those subsectors since this type of FDI is largely disconnected from local economic activity. Nonetheless, these firms have been confronted by a crisis of another type in which their role in the host country has been called into question, firstly because they do not provide sufficient resources to the State, and secondly because their operations cause substantial environmental harm.

In the mining industry major investments are currently being carried out in Argentina, Peru and Chile –countries that have high-quality reserves and offer attractive tax breaks to the subsector. During the current decade, a large part of mining FDI has been aimed at the exploitation of gold deposits, although other minerals and metals, such as copper, have not lost importance. In addition to institutional factors offering long-term stability, the development of mining projects has been driven by an increase in

the demand for metals which, in turn, partly explains the high international prices attained by these commodities. The gold price has been rising since the second half of the 1990s, and in late 2003 it topped US\$ 400 per ounce. In addition, thanks to the increased demand for copper, especially in China, and the control over world reserves established in Chile by the State-owned CODELCO, the price of copper rose strongly to reach US\$ 1.40 per pound in March 2004, having been very depressed in recent years.

In Argentina and Peru there has been significant activity by the Canadian enterprise Barrick Gold (the world's second-largest gold producer), whose development plan for 2003-2008 includes investments totalling US\$ 2 billion in three deposits: Alto Chicama in Peru, Veladero in Argentina and Pascua-Lama on the border between Argentina and Chile. The latter contains proven and probable reserves of 26 million ounces of gold, making it one of the largest in the world. A key factor for exploitation of the Pascua-Lama mine was the late-2002 signing of a mining treaty between Argentina and Chile, through which a legal framework was created to regulate the activity when this spreads across both sides of the border. In addition, the Canadian operator Meridian Gold is developing another project for exploitation of a gold deposit with reserves of 3 million ounces.¹⁰ Copper mining, meanwhile, is led by Chile, where Minera Escondida, owned by BHP Billiton and Rio Tinto, inaugurated phase 4 of its expansion project, requiring an investment of around US\$ 1.045 billion. This raises the productive capacity of Escondida by 50%, to 1.2 million tons of copper per year (Portal Minero, 2003). Plans to expand Escondida are moving ahead, and in June 2003, a US\$ 400 million investment was announced in the Escondida Norte project, which is set to come onstream in 2005. This will make it possible to maximize the synergies of the different operations, in order to achieve the firm's goal of maintaining its production around 1.2 million tons per year.

In the hydrocarbons subsector, the various political upheavals –unlike the economic crises– that affected resource-rich Venezuela and Bolivia undermined TNC investment plans in this area. The same situation occurred in Brazil, where investments have slowed down in the wake of the decision by the Government to review its policy of opening up hydrocarbons activity to private enterprise. The situation in Argentina and Peru has been

different, however, with major investment plans being announced in the subsector. Nonetheless, investment in natural gas in Argentina, which is mainly used in the domestic market, has been undermined firstly by a price freeze –not only for natural gas but also for electricity, which uses gas as a fuel in thermoelectric power plants– and secondly by a lack of clear regulations regarding public utilities.

Oil activity in Venezuela was brought to a virtual standstill by the strike that occurred in the country between December 2002 and January 2003. Production slumped to just 200,000 barrels per day –a negligible volume compared to the daily rate of almost 3 million barrels before the strike. Against this backdrop, the investment of over US\$ 600 million in the two development phases of the Yucal Placer gasfield, operated by the Franco-Belgian TotalFinaElf,¹¹ originally scheduled for the first half of 2003, had to be postponed to early 2004. The State-owned PDVSA is also looking for partners to carry out a natural gas project on the Deltana platform, located on the maritime border with Trinidad and Tobago, involving an investment of nearly US\$ 6 billion. In late 2002, Statoil (Norway) and ChevronTexaco (United States) were chosen as partners for PDVSA in areas 2 and 4, but it is not yet clear who will carry out the exploration work in areas 1, 3 and 5. In addition there is the Mariscal Sucre project, whose main activity will be a gas liquefaction plant for export to the United States. With an investment of US\$ 2.7 billion, this project involves PDVSA in partnership with the Anglo-Dutch firm Royal Dutch/Shell and the Japanese Mitsubishi (ECLAC, 2003b, chapter II).

In Argentina, the Spanish enterprise Repsol-YPF is planning to invest US\$ 5.5 billion between 2003 and 2007, while the Brazilian State-owned Petrobras, which expanded its presence in Argentina by purchasing Pérez Companc in 2002, has a US\$ 2 billion investment planned for the same period, aimed at increasing its oil production in the country by 66%. In the case of natural gas, the Cruz del Sur Consortium completed construction of a gas pipeline through which 4.5% of Argentine gas production will be exported to Uruguay (Oil & Gas Journal, 2003). Nonetheless, as mentioned above, investment in the subsector is currently at a halt, pending definitions regarding contracts with privatized firms, since a large part of the gas is consumed in the local market.

¹⁰ There is also interest in exploiting deposits in the Argentine Patagonian area, where AngloGold of South Africa is already working the Cerro Vanguardia mine.

¹¹ TotalFinaElf is the lead operator with a 69.5% stake. Other participants include Repsol-YPF (15%), and the Venezuelan firms Inepetrol (10.2%) and Otepi (5.3%).

In Ecuador the heavy crude oil pipeline, construction of which by several transnational oil companies¹² began in June 2001, has now come on stream. This will facilitate a major increase in the country's crude oil exports, by adding transport capacity for 400,000 barrels per day (ECLAC, 2003b, chapter II).

In Peru, investment has tended to be concentrated in the Camisea natural gas field, a project currently over 85% complete, and which has committed investments of about US\$ 1.2 billion. One of the consortium partners, Hunt Oil of the United States,¹³ signed an agreement with Tractebel (Belgium) to sell it 2.7 million tons of liquefied natural gas to generate electric power in Mexico. This export project, which involves investments totalling US\$ 1.8 billion, will turn Peru into a net exporter of petroleum products. In addition to this agreement, the Camisea project received loans for US\$ 135 million and US\$ 75 million from the Interamerican Development Bank (IDB) and the Andean Development Corporation (ADC), respectively, to finance the processing and distribution (downstream) phases of the project. The granting of these credits aroused opposition from environmentalist and indigenous groups opposed to the Camisea project; and these groups succeeded in forcing the United States Export-Import Bank (Eximbank) to reject disbursement of a US\$ 214 million credit for Camisea.

The opposition that this project has met with is not an isolated phenomenon in the activity of natural-resource-seeking TNCs in Latin America. The previous edition of this report mentioned that FDI aimed at natural resource exploitation was the category least affected by the economic crisis in South America. This was because extractive activity carried out by TNCs is mainly aimed at export, is highly capital intensive, mainly uses imported inputs and generates little value-added, with the result that it is poorly integrated into local productive structures

(except in the case of natural gas), and gives rise to very few productive linkages. As a result, local economic conditions have little effect on investment decisions. Although these characteristics enable the activity to remain relatively immune to economic crises, they also raise serious doubts as to the real contribution made by this type of FDI in the host countries.

Opposition to TNC activity has been two-pronged. Firstly attention is drawn to the environmental harm that extractive operations usually cause to the surrounding area, the aftermath of which is hard to mitigate in the short or medium term, compounded by its effects on neighbouring populations. The lawsuit against Texaco which is ongoing in Ecuador, and the forced postponement of the Alumysa project in southern Chile as result of protests by the local community, are two examples that highlight the real or potential consequences of extractive activity in the absence of appropriate environmental regulations (see box I.5). The second prong questions the contribution made by TNCs to fiscal revenues in the host country, through tax payments and royalties. It has been suggested that firms should have to pay for the right to extract nonrenewable natural resources, bearing in mind that the countries of the region generally have abundant resources and good physical conditions for their extraction, which lowers the firm's costs. From different domains and with different consequences, the payments made by firms for natural resource extraction have been called into question in both Bolivia and Chile. One of the main causes of the serious crisis in Bolivia was the requirement that natural gas should not leave the country without firstly making sure it would generate major gains for the nation. Similarly, in Chile the possibility of reviewing the taxation of copper mining is emerging as an issue once again, and the idea of charging a royalty for this activity has been suggested (see box I.6).

¹² Members of the consortium are mostly firms that currently produce oil in the Ecuadorian Amazon: Alberta Energy Ltd. (Canada, 31.4%), Repsol-YPF (Spain, 25.69%), Petrobras (Brazil, 15%), Occidental Petroleum (United States, 12.26%), Agip (Italy, 7.51%), Kerr-McGee Corp. (United States, 4.02%) and Techint (Argentina, 4.12%).

¹³ Hunt Oil has a 40% stake in Camisea. The other partners are the Argentine Pluspetrol (40%) and SK Corporation (Korea) with 20%.

Box 1.5

FOREIGN DIRECT INVESTMENT AND ENVIRONMENTAL PROBLEMS

FDI aimed at natural resource exploitation generates positive impacts in the host countries basically through the payment of taxes and local expenditure by the firm (wages and input purchases). It also has negative impacts, however, stemming from the environmental damage caused by extractive activities and consequent disruption of traditional ways of life among neighbouring communities. For this reason, firms have been facing growing opposition from the inhabitants of the regions in which they operate, as a result of greater awareness of the environmental issue –initially promoted in the 1970s in developed countries– which frequently transcends national borders. As a result, both firms and Governments have been forced to take the demands of affected sectors into account. The lawsuit filed against Texaco in Ecuador, and the postponement of the Alumysa project in Chile, are illustrative of the way local communities have forced firms to account for the damage they cause, in the case of Texaco, and delayed a project because of potential to cause environmental damage, in the case of Alumysa.

“Case of the century” against Texaco in Ecuador

Indigenous communities in Ecuador are currently in litigation against the United States transnational petroleum company Texaco (now known as ChevronTexaco), which they accuse of having withdrawn from Ecuador in 1990 following 23 years of extractive activity, leaving in its wake considerable economic damage in the country’s Amazon jungle caused by the dumping of tons of waste and crude oil in the area. The first lawsuit against the petroleum company had been filed in 1993 before the New York Federal Appeals Court, which in 2002 ruled that the case should be heard in

the Ecuadorian courts, and ordered the firm to submit to its jurisdiction. The case began on 21 October 2003, in the small chamber of the Court of Lago Agrio, a jungle town in the northeast of Ecuador. The plaintiffs are demanding the following from Texaco: economic compensation of US\$ 1 billion; the cleanup of some 600 oil wells and toxic and hazardous waste dumps that were abandoned in the zone; decontamination of polluted rivers, streams and lakes; installation of a potable water network in all the villages of the region; medical care for inhabitants of the zone who are suffering chronic diseases as a result of environmental pollution; and help for affected indigenous communities to enable them to regain the way of life they enjoyed before the start of oil activities in the region. ChevronTexaco does not deny the environmental damage caused by the toxic materials, but it invokes Ecuadorian law at that time, to which the relevant industrial standards adhered. Moreover, it denies responsibility for decisions taken by a foreign subsidiary which participated in a consortium with Gulf Oil and the State-owned PetroEcuador (which eventually held a majority share when Gulf Oil sold its stake), even though Texaco was the consortium operator. Lastly, it argues that ChevronTexaco cannot be held accountable for the actions of Texaco, which was taken over in 2001 by Chevron, and bear the costs of “supposed acts imputed to a firm of which it is not the successor” (*Clarín*, 2003). The lawsuit has been dubbed the “Case of the century”, given its complexity and the scale of the damage caused, which makes it the worst ever ecological disaster in the western hemisphere. The quantity of toxic wastes discharged into the environment is three times as large as the Exxon Valdéz oil spill off the coast of Alaska in 1989, which required an enormous investment to clean up.

Opposition to the Alumysa project in Chile

In Chile, the Alumysa project, involving an investment of US\$ 2.75 billion, was suspended by the Canadian operator Noranda, following the decision by the Regional Environment Corporation (Corema) to reject the environmental impact assessment presented by the firm. The project, which has been in the development stage for over a decade, entails construction of an aluminium production plant, three mega-hydroelectric plants, and a port at Chacabuco Bay in the Aysen region in the southern part of the country. The plant would import over a million tons of minerals per year (aluminium, calcined coke, tar, cryolite, fluoride salts and others) from Jamaica, Brazil and Australia, for the purpose of producing 440,000 tons of aluminium ingots, destined mainly for the external market. The project has aroused fierce opposition from local inhabitants, environmentalist groups and the salmon and tourism industries, since the industrial process for aluminium production is well known to be one of the most polluting in the world, and the Aysén region is one of the areas of greatest environmental value in Chile. Opponents of the project accuse the Canadian firm of choosing Chile as the location for its project in order to avoid the costs of complying with the strict environmental laws in force in its home country. Given that Chile does not have its own bauxite, which is the raw material used in aluminium production, nor great industrial demand for aluminium products, they argue that industrial waste would be the only thing left in the country; and they fear this would set a precedent for other highly polluting projects to choose Chile as the destination for their investment. According to estimates made by Fundación Terram, of the US\$ 467 million in value added

(Box 1.5 concluded)

that Alumsya would generate per year, only 15% would remain in the country. Of this, 3% (US\$ 13.5 million) would directly benefit the Aysén region through wages paid to local workers. According to the project's opponents,

the project would mean selling the country's environment and water to a foreign firm on the cheap; and having developed comparative advantages as an exporter of natural resources, the country would move into selling its

ecosystems and serving as an industrial rubbish bin. The firm, which is seeking financial partners, decided to halt the project in August 2003, in order to exert pressure in response to the delay in authorization.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Gary Hughes, "Canadian industrial giant prepares invasion of Patagonia", *Native Forest Network*, 2002; *Global Reporter*, "Texaco Era, el precio del oro negro", 2003 (<http://www.global-reporter.net/spanish/index.html>); Arnaldo Pérez, "¿Se retira Alumsya?", *La insignia*, Madrid, 2003; Glenn Switkes, "Folket i Ecuador mot Texaco", *Tidskriften Kommentar*, 1994; Fundación Terram Megaproject "Alumsya: de reserva de vida a basurero industrial", *Análisis de políticas públicas, serie APP*, 2002; Judith Kimerling, "Impacto ambiental y acciones legales", 2002 (<http://www.accionecologica.org>); *Amazon Watch*, "Timeline. The case against Chevron Texaco". (http://www.amazonwatch.org/amazon/EC/toxico/index.php?page_number=5).

Box 1.6

FOREIGN DIRECT INVESTMENT AND ITS CONTRIBUTION TO FISCAL REVENUES

Natural gas export project suspended in Bolivia

In Bolivia, a project to export natural gas to the United States and Mexico triggered a major political crisis which in October 2003 led to the resignation of the President of the Republic elected only the previous year. This project involves a total investment of US\$ 6 billion, of which one third would be carried out in Bolivia and in the country chosen as the location for the export port (Peru or Chile), while the rest would be invested in the destination country (Mexico or the United States). The project is being carried out by the Pacific LNG consortium – operated by Repsol-YPF of Spain and British Petroleum (BP) to exploit the Margarita deposits in the Department of Tarija in southern Bolivia. The protests were triggered by the Bolivian Government's choice of Chile rather than Peru as the location for the Pacific coastal port through which the gas would be exported. Nonetheless, the project's opponents soon moved to a stance of outright rejection, regardless of the port chosen, and now are even calling into question the 1996 Hydrocarbons Act

which allows private firms to exploit, extract, transport and market the production obtained, subject only to the requirement to pay royalties, but exempt from the obligation to share their profits. The project's opponents claim that Bolivia would obtain a negligible share of the overall business. According to Centro de Estudios para el Desarrollo Laboral y Agrario (CEDLA), the current price at which natural gas is being sold to Brazil is US\$ 1.77 per thousand cubic feet (MPC). The gas exported to the United States would be sold for just US\$0.70 per MPC, of which the Treasury would receive 18%, in other words about US\$ 0.13 per MPC. The project's opponents insist that the hydrocarbons shortfall on the domestic market should firstly be covered, which raises the paradox that, despite having the second largest gas reserves in Latin America after Venezuela, Bolivia has the lowest coefficient of natural gas consumption per capita in the continent, and its inhabitants are forced to make use of other more expensive energy sources, such as electricity or liquefied gas (which is also more dangerous), or simply use firewood or other fuels.

They also insist on the need to add greater value to the gas through industrial processing within Bolivia. In his inaugural address, the new President of Bolivia promised to hold a binding referendum to decide whether or not to export the gas, and whether the Hydrocarbons Act should be amended. In response, Repsol-YPF, the operator of the Pacific LNG Consortium, has suspended its investment plans and decided to exploit natural gas in Indonesia for export to the Mexican and United States markets.

The debate over royalty payments in copper mining in Chile

Chile is a country with great geological-mining potential; and it has the world's largest copper reserves located in high-quality deposits close to ports, which allows production costs to be kept low. In addition, FDI in the mining sector operates under a favourable institutional framework, and in a context of economic and political stability, all of which makes the mining sector attractive for FDI. Large-scale mining in Chile is subject to the general tax regime, except that

(Box I.6 concluded)

D.L.600 offers the possibility of tax invariability. Certain special characteristics of large-scale mining enable it to take better advantage of a number of general incentives. One of these is accelerated depreciation, which allows for rapid recovery of the investment and acts as a major stimulus to a capital-intensive activity. Under the legal status of "Contract mining company", these firms have to pay income tax (first category) and a tax on dividend payments at 35%. Nonetheless, the law contains mechanisms that make it possible to evade payment, for example by making remittances abroad without paying dividend tax, provided these are not reported as profits. Moreover, as interest payments are taxed at a rate of just 4%, firms record part of their contributions to subsidiaries as intra-enterprise loans, in order to

avoid paying the 35% tax on dividends.

This tax regime has enabled transnational mining firms to keep their costs down after payment of taxes and still earn a good return, but their contributions to fiscal revenues have been slight, especially in comparison to those made by the State-owned CODELCO. The tax regime for mining became a major issue in 2002, following the sale of the Disputada de Las Condes mine by Exxon Mobil for US\$ 1.3 billion. The problem arose because throughout its 20 years of operation of the country, the firm had always declared losses, thereby avoiding payment of income tax.

As a way of improving the tax system, debate has begun on the possibility of requiring a royalty payment from private firms engaging

in large-scale mining activities. This would take the form of a duty (rather than a tax), which firms usually have to pay for the extraction of a nonrenewable natural resource. The opponents of this proposal claim that it would discriminate against the country's leading economic activity; its promoters counter that non-payment of royalties for the extraction and use of the mineral creates positive discrimination, since mining is the only activity that obtains its raw materials free of charge. Generally speaking, firms interpret tax amendment bills as a change in the rules of the game, and threaten to scale back their projects if the changes are implemented. Nonetheless, the geological and institutional conditions prevailing in Chile would still enable it to offer highly favourable advantages even if the royalty were applied.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Carlos Arze, "El problema del gas: desarrollo económico versus intereses de las transnacionales", *Informe de coyuntura*, N° 1, 2003; Miguel Lora, "Es cuestión de tiempo, Chile dependerá del gas boliviano", 2003 ([http:// www.pulsobolivia.com](http://www.pulsobolivia.com)).

These disputes highlight the need to consider the way the region's countries have acted to attract foreign investment. The main problem that needs to be resolved is how to strengthen the links between TNCs and the countries that accommodate them, in order to break the enclave status that the firms adopt. In addition, fiscal policies (regulatory and tax laws mainly) need to be consistent with the objectives of reducing adverse impacts and increasing positive ones. The first of these includes avoiding major harm to the environment, or to the terms of trade—given the negative effect on international prices—in addition to improving integration with local economic activity. The second includes the search for better exploitation of technologies brought into the country by the investing firms, and increased use of local resources,

which means input suppliers and technical and professional staff, along with other local services.

In conclusion, transnational enterprises remain interested in pursuing their activities in Latin America, despite the fact that several projects have run into problems that have led to their suspension. Unlike what will be seen in the following section, these obstacles have not resulted in a significant decline in natural resource-based projects, since they do not stem from economic crises being faced in the host countries, but instead involve institutional disputes. These new conditions have forced countries to rethink the way they set entry conditions for foreign investors. In the primary sector, although the State presence has traditionally been very important, private enterprises have managed to establish their businesses,

either independently or else through partnerships with State-owned firms. Public policies towards natural resources need to consider the sustainable development of the sector and include ways of overcoming the problems that have arisen from TNC activities in this area. Thus, it is necessary to ensure the revenues to be received by the State in return for exploitation of non-renewable natural resources. In addition, policies are

needed to integrate foreign business activity with the local economy, in order to strengthen productive linkages and generate greater value-added in production. In this way, countries with natural resource abundance could expand their productive structure, by moving from simple extraction and export, to a stage in which there are also initial (upstream) processes and secondary (downstream) processing of the resource in question.

2. Transnational firms in search of local markets for services

The search for services markets has been the most important strategy pursued in Latin America in the second half of the 1990s. Implemented by TNCs, the strategy has been applied in a wide range of activities, such as energy, telecommunications, banking and retail trade. The largest investments have been concentrated in the member countries of MERCOSUR and Chile, although Mexico and a number of Central American and Caribbean countries have also attracted investors to the financial and retail trade sectors, and to a lesser extent public utilities (ECLAC, 2000, 2001 and 2002b). Thus, South American countries received major FDI inflows channelled to the tertiary sector, which, although traditionally controlled by State-owned firms, resulted in a growing presence of foreign enterprises. From the second half of the 1990s onward, TNCs became increasingly important players among the region's major service providers, as discussed above.

Although characterized more by the transfer of existing assets than by new investments, the dynamic private investment process seen in the initial years of the reforms gave the sector an injection of resources for modernization of facilities, which led to significant improvements in both coverage and service quality, thereby increasing the systemic competitiveness of the economies in question.

As mentioned in the previous edition of the foreign investment report, foreign firms that made investments in order to enter local markets are those that suffered most, both from the impact of the crises suffered by several South American countries since the start of this decade, and as a result of the slide on world stock markets that began in late 2000. In the countries of this subregion, the contraction of domestic demand in the wake of adjustment policies and devaluations seriously impaired the revenues of public-utility firms in dollar terms. This

situation highlights a significant difference with respect to enterprises seeking natural resources and efficiency for their exports, which could better protect themselves from such upheavals by sending most of their production to the external market. The consequences of the crises meant that firms in the services sector had serious difficulties in meeting their high foreign-currency liabilities contracted during the expansion phase in the 1990s. This situation, compounded by a poorly defined regulatory framework, generated conflicts between the regulatory authorities and firms, which tried to raise their charges at a time when consumer incomes were shrinking.

At the world level, the crisis that shook large corporations mainly in the public utilities sector, between 2000 and 2002, revealed the fragility of enterprises which, in the midst of merger and acquisition fever, had expanded their businesses in the 1990s on the back of heavy borrowing. Unlike what happened in the last decade, they are now finding it much harder to obtain the funding needed for their activities, which makes them reluctant to contribute to their subsidiaries when these encounter problems. As a consequence, many of the subsidiaries not only have failed to meet their investment commitments, but have actually declared a suspension of payments on their liabilities. In addition, as result of the problems that have arisen, several firms have decided to withdraw from the region, the counterpart of which has meant progress for locally owned firms in the services sector (see box I.4).

The crisis raised new challenges relating to the regulatory frameworks under which the firms operate. Often, such regulations were established after the privately owned firms have been set up, so the regulatory framework design was adapted to the pre-existing industry structure, which was generally monopolistic or

otherwise uncompetitive.¹⁴ In addition, the regulatory framework was frequently defined under pressure both from the fiscal area and from multilateral agencies that were urging countries to speed up the reform process. As a result, the regulatory framework could not prevent concentration or monopoly conduct leading to higher charges and worker layoffs; nor did it provide the tools needed to solve the regulatory disputes that quickly began to appear. In this new context, the definition of new rules was not problem-free, as competent regulatory bodies in

many cases were not available for this task. The examples of Argentina and Brazil clearly illustrate how the authorities have had to rethink their relationship with privatized firms, which has meant questioning previous agreements, redefining rate structures in the case of Argentina, and using public funds to bail out the subsidiaries of large TNCs in financial difficulties, as has happened in the electric-power subsector in Brazil (see boxes I.7 and I.8).

Box I.7

RENEGOTIATION OF UTILITY RATES IN ARGENTINA

In Argentina, as a result of the steep devaluation of the local currency, the Public Emergency and Exchange-Rate Regime Reform Act was passed in January 2002, which froze public utility rates and expressed them in pesos, and appointed the Ministry of Economic Affairs to renegotiate concession contracts with privatized firms. Fierce social and political resistance has succeeded in keeping utility rates frozen, despite tremendous pressure exerted by the firms themselves and by the IMF for them to be raised. In 2002 the Government tried to adjust charges on three occasions, but these initiatives were suspended as result of judicial rulings in each case. In July 2003, the new Government created the Ministry of Federal Planning, Public Investment and Services, from which a special commission was given the task of reviewing and renegotiating all contracts with privatized enterprises (telecommunications, electric power, gas, water, railways, highway concessions, postal services and airports, among other areas). It was also announced that the renegotiation period would be extended until late 2004. Firstly, each

of the contracts will be individually reviewed to determine whether there has been non-compliance by the firms. Then, the firm, the Government, the corresponding regulatory body and various NGOs will renegotiate a new contract, which will finally be sent to Congress for approval and implementation (Latin America Energy Report, 2003).

The most conflictive situation has arisen in the electricity subsector, where power outages have occurred. Mutual recriminations between the Government and the firms, concerning the causes of the power cuts, have generated a climate of tension between the two parties. The firms, which have reduced their levels of investment to the minimum, state that the outages were due to a lack of funds to invest in system expansion and maintenance, precisely because charges have been frozen. The Government, for its part, claims that the power cuts are a deliberate attempt to force a rise in rates. The privatized firms also complain that they have liabilities in foreign currency but receive their revenues in the devalued local currency and at frozen rates. In fact, several of them have ceased payment on their debts, and are negotiating loan restructuring with

their creditors. They also complain about the delay in renegotiating contracts and establishing clear regulatory rules. They warn that with the current charges and uncertainty generated by the lack of definition in the rules, they can neither undertake new investments nor carry out those needed to maintain the system.

The authorities' response is that the firms cannot exempt themselves from the crisis in the country, nor ignore the inability of the consumer to pay higher rates. They add that it is the firms, rather than consumers that must assume responsibility for having borrowed in dollars, just as they must bear the inherent risks of business activity. There are currently 25 lawsuits in process against State of Argentina in the Arbitration Court of the International Centre for Settlement of Investment Disputes (ICSID), filed by privatized firms seeking support from investment protection treaties. The lawsuits, amounting to about US\$ 12.55 billion, together with a further US\$ 2.5 billion in claims filed before other courts, are founded on the firms' not having been authorized to tie their rates to the dollar, as stipulated in the contracts, a point that has been a key issue throughout the public-utility rates problem in Argentina (Clarín, 2003).

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of *Latin America Energy Report*, 11 July 2003; *Clarín*, Buenos Aires, 2 November 2003.

¹⁴ See ILO (1999), Campodónico (2000), Cárdenas (2003), Paliza (1999), Fisher, Gutiérrez and Serra (2000), Fernández and Birhuet (2002).

Box I.8

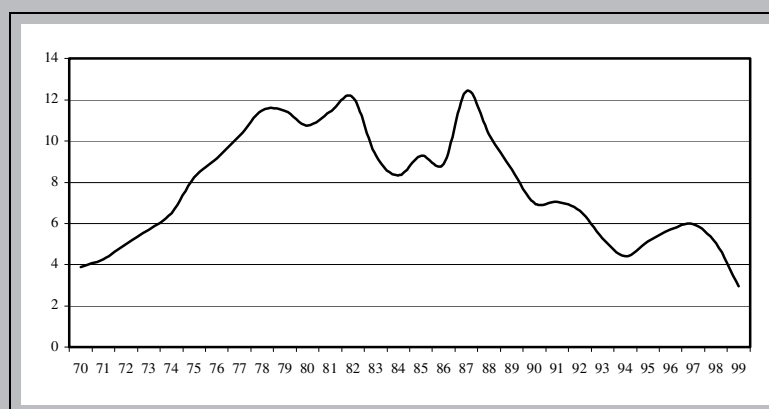
THE BRAZILIAN STATE BAILS OUT TRANSNATIONAL ELECTRIC POWER FIRMS

One of the main objectives of privatization and reform of the electric power industry was to solve the chronic problem of investment financing that arose in the 1980s, as a result of the external debt crisis. Not

only was this goal not fulfilled, but privatization was followed by an abrupt reduction of investment in the sector (see figure below). In addition, and to avoid systemic collapse, the State of Brazil, acting through the

National Bank for Economic and Social Development (BNDES), had to provide a financial bailout for the subsidiaries of large corporations from developed countries.

TREND OF INVESTMENT IN THE BRAZILIAN ELECTRIC POWER INDUSTRY, 1970-1999
(Billions of dollars)



Source: Hermes de Araujo, *Investment in the Brazilian ESI. What went wrong? What should be done?*, Instituto de Economia da Universidade Federal do Rio de Janeiro, 2001, quoted in Hugo Altomonte, *Políticas públicas para el desarrollo sustentable del sector energético*, Fifth Inter-Parliamentary Conference on Mining and Energy (Santiago, Chile, 18-20 July 2001).

The underlying causes of this situation are regulatory failings and the design of the reforms, compounded by bad financial management on the part of the parent companies and their subsidiaries.

The problem stems from the fact that the private sector was given responsibility for investment, but without sufficient incentives in terms of competitive markets and knowledge of how the wholesale power market operates (Altomonte, 2001). For example, prices for the power plants operating in the system were set in 1997 to last till 2002, without defining what would happen thereafter. The previous system was reformed to provide centrally guaranteed fuels (coal and residual oil or "óleo combustível"), in order to partly compensate for variations in rainfall. Nonetheless, the alternative system proposed by the Government had still not been approved by late 2003. Lack

of definition in the new model generated a climate of uncertainty for the firms, which made them reluctant to invest.

In addition, the globalization of electric power companies, which is still a very recent phenomenon, was financed with a high level of debt, which caused major financial imbalances in the parent companies when the stock market bubble burst in late 2000. In addition, subsidiaries in Latin America assumed a high degree of exchange-rate risk, by maintaining heavy liabilities in foreign currency while their revenues are in local currencies. On this latter point, the regulatory authorities are also culpable for failing to raise the alarm concerning the risk involved in this situation.

In 2003, BNDES offered a bailout package for distributor firms, subject to certain conditions. Firstly it reached an agreement with AES

Corp. of the United States, which had suspended payments in early 2003 on expiry of a US\$ 1.2 billion debt with BNDES itself. The loan had been granted to AES Corp. guaranteed by its stake in Eletropaulo Metropolitana, a firm that would have returned to State ownership if it failed to pay its debt. Based on this agreement, Novacom was created as a new enterprise jointly owned by AES Corp. (50.1%) and BNDES (49.9%). Half of the debt owed by AES Corp. will be capitalized in the new firm, while US\$ 515 million will be paid back over a 10 to 12-year period; AES Corp. will have to put up US\$ 85 million of its own funds. The agreement means that AES Corp. retains control of the firm, its most important asset in the country, while offloading half of its debt with the Brazilian Government.

For the other distributor firms, BNDES offered a bailout package

(Box I.8 concluded)

worth US\$ 3 billion. Under this plan, BNDES would purchase 10-year equity-convertible bonds from the firms, on condition that an agreement is reached with creditors to restructure 30% of their short-term debt. The restructured debt must have a repayment term of at least three years, with the first installment not falling due until at least 12 months have elapsed from the signing of the financing agreement with BNDES.

The amount to be lent by BNDES (through the bond purchase), will be equal to the amount of the debt that the firm succeeds in restructuring, up to a maximum of 50% of its total short-term debt. In addition, the firms must join the “Novo Mercado” –a new stock market with stricter rules– to force them to adopt better patterns of corporate management. A final condition is that the debts owed by Brazilian subsidiaries to their parent

companies must be fully capitalized in those subsidiaries. This condition is dampening enthusiasm among a number of firms, whose parent companies are not willing to make capital contributions. Nonetheless, Light Serviços de Electricidade, controlled by Electricité de France, which has the highest debt with its parent company (US\$ 410 million), does seem willing to accept the plan.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of *Latin America Energy Report*, 11 and 25 September 2003; Hermes de Araujo, *Investment in the Brazilian ESI. What went wrong? What should be done?*, Instituto de Economia da Universidade Federal do Rio de Janeiro, 2001; Hugo Altomonte, *Políticas públicas para el desarrollo sustentable del sector energético*, document presented at the Fifth Inter-Parliamentary Conference on Mining and Energy, (Santiago, Chile, 18-20 July 2001).

3. Investments and asset purchases in the services sector

In the telecoms area, where revenues declined sharply in 2002 following a lengthy growth period, a number of foreign firms, mostly from the United States, are withdrawing from the region, while two others, Telefónica de España and the Mexican operator América Móvil, are advancing vigorously (ECLAC, 2001, chapter IV). These two firms are competing for control of the mobile telephony market in Latin America, taking advantage of sharply lower asset prices (see table I.8). Interest in expanding market share is being driven by upbeat projections made by analysts for this subsector. For example, *Pyramid Research*, a United States consultant in the telecoms area, is projecting 6% annual average revenue growth in this industry for 2003-2008, twice that estimated for Europe and the United States, although less than in the emerging countries of Eastern Europe and Asia. These healthy prospects, together with a significant drop in the valuation of corporate assets as a result of the crisis in the region and the difficulties that many firms are encountering in divesting assets, have offered attractive business opportunities for

buyers. For example, in the telecom boom years, investors paid over US\$ 2,000 per subscriber to buy mobile telephony firms, whereas in mid-2003 this value in some cases dropped as low as US\$ 400-US\$ 500 (EIU, 2003b).

In the 2002-2003 biennium, América Móvil and Telefónica de España accelerated their asset purchases in the region –essentially in Brazil, where the struggle for regional leadership is being waged most intensively, but also in Argentina, in the case of América Móvil (see box I.4 and table I.6), and in the mobile segment in Mexico, in the case of Telefónica. Another of the major players is Telecom Italia, operating through its TIM subsidiary. Consequently, the market is in the hands of just a few firms, and the four largest mobile telephony operators in Latin America control 82% of all subscribers. América Móvil, Telefónica and TIM now account for 73% of mobile phone customers, compared to 64.4% in 2001. In Europe and Asia, by comparison, the four largest firms control less than half of the market (EIU, 2003b).

Table 1.8
TELEFÓNICA DE ESPAÑA AND AMÉRICA MÓVIL: NUMBER OF MOBILE
TELEPHONE CUSTOMERS, 2003

	Telefónica ^a	América Móvil
Argentina	3 311	1 411
Brazil	20 656	9 521
Chile	3 571	...
Colombia	1 915	3 674
Ecuador	816	1 537
El Salvador	248	216
Guatemala	409	870
Nicaragua	229	100
Mexico	3 454	23 444
Panama	420	...
Peru	2 149	...
Puerto Rico	175	...
Uruguay	146	...
Venezuela	3 307	...
Total	40 806	40 773

Source: *El Mercurio*, 7 March 2004.

^a Includes subscribers to BellSouth, after Telefónica had acquired its Latin American assets in March 2004.

Latin America remains the key pillar of growth for Telefónica de España, and, despite suffering the effects of economic instability over the last few years, the firm has deepened its involvement in the region during this period, as shown by the fact that the vast majority of its subscribers are in Latin America. In Mexico, Telefónica has increased its presence through two operations: in 2001, purchase of the four local operators owned by Motorola, and in 2002, the acquisition of Pegaso PCS, which made it the second largest mobile telephony operator in Mexico. In Brazil, in 2002 it acquired 14.7% of Telesp Celular Participações (TCP), a subsidiary of Portugal Telecom, in the framework of an agreement with the latter to merge under BrasilCel all the mobile phone companies owned by the two enterprises in Brazil. In 2003, BrasilCel announced the acquisition of Tele Centro Oeste Celular Participações (TCO), whose 3 million subscribers raised the firm's total number of customers to 17 million. Currently it is implementing a project worth roughly US\$ 1.5 billion to construct a national GSM (Global System for Mobile Communications) and GPRS

(General Packet Radio Service) network in Brazil. In March 2004 it reached an agreement with BellSouth (United States) to purchase its Latin American interests for US\$ 5.85 billion. With this latest operation, Telefónica de España has consolidated its position as the region's leading telecoms enterprise, equalling the number of subscribers to América Móvil in the mobile phone segment (see table 1.8).

Another foreign telecoms firm that has consolidated its presence in the region is Telecom Italia. Already the owner of 50% of Nortel, which in turn held a controlling 54.7% stake in Telecom Argentina, the Italian operator paid US\$ 60 million for an option to purchase a further 48%, which would give it total control of the consortium. Its former partner in Nortel, France Telecom, with which it had an equal share of the equity, sold 48% to a local group belonging to the Wertheim family.¹⁵ The buyer paid US\$ 125 million in cash and absorbed a prorata share of Telecom Argentina's defaulted debt, which, at US\$ 3.3 billion, was the largest amount ever accumulated by a local private group.¹⁶ The share purchase option would

¹⁵ France Telecom retains 2% of Nortel for regulatory reasons, since the rules of privatization stipulated that the majority owner of the Nortel controller group must be foreign. Telecom Italia owns the other half of Nortel.

¹⁶ This figure is reduced to US\$ 2.7 billion when money held in cash to meet liabilities when necessary is deducted. Nonetheless, the debt is now in the process of renegotiation and when this concludes the real amount will likely be considerably lower, bearing in mind that similar renegotiations in the telecoms subsector resulted in haircuts of over 60% (*Clarín*, 2003c).

allow Telecom Italia to take full control of the Argentine company at any time between early 2009 and late 2013, and enable Werthein today to become the owner of half of the country's second-largest phone company, with a real outlay of between US\$ 60 and US\$ 70 million (*Clarín*, 2003c).

In contrast to the firms described above, others are scaling back their presence in the region: Verizon (United States) and Vodafone (United Kingdom) sold their stakes in Iusacell in Mexico; Verizon also sold its Argentine subsidiary, CTI Móvil, to América Móvil; AT&T sold its Latin American assets to the Mexican operator Telmex; MCI, formerly WorldCom, has put its stakes in Avantel and Embratel in Mexico and Brazil, respectively, up for sale; BellSouth sold BSE and BCP to América Móvil in Brazil, and then the remainder of its Latin American interests to Telefónica de España. Lastly, Sprint is looking for a buyer for its stake in Intelig, partly owned by France Telecom, which is also currently withdrawing from the region.

In the electric power subsector, the problems that have faced public-utility firms in general, as described at the start of this section, were compounded by others relating to organization and regulation. These situations have provoked a number of disputes between the firms and regulators, which on occasions have delayed implementation of the company's business plans.

One of the largest investments is that announced by Endesa España, which is planning to invest US\$ 2.853 billion over the period 2004-2008 (US\$ 484 million to be used in 2004) in new power plants in Latin America, thereby increasing its installed capacity in the region by 1,056 MW (*La Tercera*, 2004).

In Argentina, few investments are being carried out owing to the tension that exists between the Government and electric power enterprises as a result of pricing problems. The most important of those that are going ahead include two projects to export electricity to Chile. In October 2003 AES Corp. announced investments totalling US\$ 50 million in an electric-power distribution line to interconnect the networks of its subsidiaries in the south of Argentina and Chile. Petrobras Energía is also studying an electric-power interconnection project similar to that of AES Corp., to be implemented through Transener, an enterprise owned by the Brazilian firm in

partnership with the British National Grid. The Transener project involves an investment of US\$ 135 million to build a 500 kV power line between the hydroelectric dam complex in the south of Argentina and Chile, which could be inaugurated between 2006 and 2007 (*El Cronista Comercial*, 2003).

Since early 2002 firms in the subsector in Chile have been awaiting developments in the "Ley Corta" electric power bill, which aims to solve the causes of underinvestment in the sector, especially in the transmission segment. The most conflictive point has been lack of agreement on who should pay electric power transmission tolls, an issue that generated major friction between the National Energy Commission (CNE), the subsector regulator, and the Ministry of Economic Affairs, resulting in the resignation of the CNE executive secretary. Some analysts believe that investments by electric power firms have been frozen until a new regulation is in place. In January 2004, the "Ley Corta" bill was finally passed, and the authorities now expect major progress in improving and modernizing the sector, with increased investments in the transmission segment, particularly in the southern zone of the country. This new regulatory framework is expected to elicit investments in new projects totalling about US\$ 3 billion (*Estrategia*, 2003).

The retail trade segment has gone through hard times over the last two years, as a result of the steep reduction in purchasing power in Latin America, which was even worse in foreign-currency terms. Nonetheless, the declining sales trend levelled out in 2003, and an increase of 2.6% is forecast in the consumption of food, beverages and tobacco for 2004 (EIU, 2003c). In 2003, the performance in this subsector has varied across countries: retail sales retreated in Brazil and Venezuela, while Argentina and Mexico posted recoveries compared to the previous periods.¹⁷ Faced with this situation, some chains have decided to leave the region, or to offload some of their assets. The Dutch enterprise Royal Ahold, for example, having made two acquisitions in 2002 in Argentina and Brazil, changed course and in early 2003 announced its intention to divest its assets in the region. In that year it sold its interests in Chile, Paraguay and Peru, and in March 2004 reached an agreement to sell most of its Brazilian assets to Wal-Mart. Meanwhile, JC Penney sold six of

¹⁷ In Brazil and Venezuela, retail trade sales fell by 2% and 16%, respectively, between January and August 2003, compared to the same period a year earlier. In Mexico, supermarket sales grew by 5.6% during the first half of 2003, while economic recovery has had a positive effect on retail trade in Argentina (EIU, 2003c).

its stores in Mexico to the Sanborns group, which forms part of the Mexican conglomerate Grupo Carso.¹⁸ Among the chains that remain, the strategies observed to cope with the decline in purchasing power involve selling own-brand products, which enables the firms to offer significant discounts, in conjunction with the purchase of other chains, or partnerships with them, to increase both their scale and their bargaining power with suppliers, and the horizontal diversification of their activities. The merger and acquisitions movement is intensifying the level of concentration in the area. The Chilean groups have performed outstandingly, having consolidated in the local retail market and expanded to several other Latin American countries (see box I.4).

The financial subsector has also been affected by the crisis in South America, the repercussions of which have caused the exit of a number of foreign financial institutions, mainly from the Argentine and Brazilian markets. In the latter country, the largest in the region and where foreign banks have penetrated least, these have also faced harsh competition from large local banks, whose strengthened competitiveness prevented foreign competitors from gaining dominant market positions. Those that have entered the country in the last five years, such as HSBC, BBVA and ABN Amro, have found it hard to compete and forge an identity in the market, for which reason several of them decided to divest their Brazilian assets. In contrast, locally owned banks, particularly Bradesco and Itaú, have expanded considerably over the last two years, leading the consolidation movement that has occurred in the banking system by purchasing assets put on sale by the State, and others that were privately owned both locally and by foreigners (see box I.4). National banks continued to progress in 2003, as a number of foreign competitors

withdrew, but the novelty was that other foreign banks also made acquisitions, thereby signalling a desire to grow and consolidate in the Brazilian market. Currently, high rates of interest, combined with heavy government reliance on borrowing, are providing banks with a chance to acquire assets of lower risk and higher yield, such as government bonds. Some analysts believe that if a reduction in the public deficit is achieved and inflationary pressures are eased, in the medium-term the banks will start to look for business opportunities with the private sector, mainly in the consumer credit market. Foreign banks such as Citigroup (United States) and HSBC (United Kingdom) have already begun to focus their strategy in that direction (EIU, 2003d, 2003a).

In conclusion, the services sector, which was where TNCs penetrated most in the 1990s, suffered a reverse, or a slowdown in progress, during the first few years of the current decade. The economic crisis, with attendant weakening of domestic demand, left firms in this sector in an uncomfortable position, since they cannot redirect their production towards markets where demand conditions are more favourable. On the other hand, the crisis revealed regulatory conflicts that served to further complicate the situation for these firms. As a result, several of them redefined their strategy and decided to offload their operations in the region. This enabled local enterprises to increase their presence in the sector by buying up assets put on sale, as was clearly seen in the banking subsector in Brazil and in retail trade in Chile. At the same time, other companies that decided to remain, especially European telecom operators, managed to consolidate their positions. The telecoms area in particular has displayed great dynamism over the last few years, with major operations carried out by both European and Latin American companies in the largest regional markets.

¹⁸ JC Penney had already withdrawn from Chile in 1999, having sold its assets to the local group that owns the Almacenes París department store chain.

E. CONCLUSIONS

The analysis presented in this chapter suggests that the FDI phenomenon is generally somewhat more complex than normally assumed, and the different standpoints from which it is usually studied only provide a partial view. Accordingly, a combination of the various perspectives, using different statistical sources, is needed to build a conceptual framework that affords a more thorough and deeper understanding of the nature and fundamentals of both FDI and the activities of transnational corporations. ECLAC is therefore proposing a reference framework for interpreting the phenomenon in Latin America and the Caribbean, in which TNC strategies are fundamental.

This chapter points out that FDI flows have continued to decline, and this has caused additional concerns especially in terms of external financing. In Mexico, Central America and the Caribbean, the preferential destination for firms pursuing an efficiency-seeking strategy, FDI retreated less than in South America, where natural resources- and market-seeking strategies have predominated. Despite this, the presence of TNCs in both goods- and service-producing activities remains strong. In addition, the review of situations facing the natural resources- and regional market-seeking strategies confirms that FDI seems to have entered a stage of smaller volumes, which in turn has generated macroeconomic instability. Moreover, the gap between expectations and reality in terms of FDI flows has widened. The research carried out suggests that this gap is different in each of the corporate strategies that determine FDI destinations and amounts (see table I.9).

When a few examples are examined, it can be seen that in designing policies FDI-recipient countries generally expect natural-resource-seeking FDI to generate exports based on natural resources with high local content, in order to generate employment in non-urban zones, along with increased fiscal revenues through taxes, among other benefits. Recent experience in the region, however, suggests that a number of problems have arisen from the fact that TNC activities adopt an enclave modality without integrating into the local economy; they generate little value-added, and the level of local processing is low; in addition, revenue from taxes levied on nonrenewable resources is very small, and this is

compounded by complications resulting from the instability of international commodity prices and environmental pollution.

With regard to FDI associated with a local-market-seeking strategy (goods and services), the main expectations held by the Governments of recipient countries focus on the creation of new productive activities, improvements to the economy's systemic competitiveness, increased local content, promotion of new productive linkages, greater local business development and improvements in the coverage, cost and quality of local services, among other things. Here again, recent experience shows that this category of FDI in Latin America has been accompanied by problems of various kinds. Higher costs and lower quality among these products or services, compared to international norms, tends to limit their competitiveness; and there have also been regulatory and standards-related problems especially in countries facing macroeconomic difficulties. As a result, there is a considerable mismatch in the region between the expected benefits and those that have effectively been materialized in the case of FDI driven by natural-resource-seeking strategies, and an even larger one in the case of FDI motivated by the search for local markets. The situation with respect to the strategy that seeks efficiency to conquer external markets will be addressed in depth in chapters II and III.

The conclusions of this analysis ultimately suggest that it would be advisable for national policymakers to take a more broad-based view both of the FDI phenomenon and of TNC activities, even if only to ensure external resource flows. Clearly there are causal relationships between the economic determinants, host countries' expectations, and the problems that have arisen following several years of the transnationalization process in local economies –relations that can best be understood from a perspective that takes account of the strategies of TNCs operating in the region. It would therefore seem prudent to have a contingency plan in place to cope with the various types of problem that are starting to emerge in relation to FDI. Host countries should define what they expect from FDI, and the role it will play in the context of their national productive development strategy, in order to prioritize the corporate strategies seen as most important in this context.

Table 1.9
IMPACT OF BUSINESS STRATEGIES ON RECIPIENT ECONOMIES

FDI strategy	Potential benefits	Possible difficulties
Natural-resource-seeking	<ul style="list-style-type: none"> Increased natural-resource exports Improved international competitiveness of natural resources High local content of exports Employment in non-urban areas Tax revenues and royalty income 	<ul style="list-style-type: none"> Enclave activities not integrated into local economy Little local processing of resources Cyclical international prices Low tax revenues from non-renewable resources Environmental pollution
Local-market-seeking (national or regional)	<ul style="list-style-type: none"> New local economic activities Increased local content New/deepened production linkages Local enterprise development Improved services (quality, coverage and price) and improved systemic competitiveness 	<ul style="list-style-type: none"> Production of goods and services not internationally competitive (not world class) Weak position in terms of international competitiveness Regulatory and competition problems Disputes in relation to international investment obligations Crowding out of local companies
Efficiency-seeking (to capture export markets)	<ul style="list-style-type: none"> Increased exports of manufactures Improved international competitiveness of manufactures Transfer/assimilation of technology Training of human resources New/deepened production linkages Local enterprise development Evolving from an export platform into a manufacturing centre 	<ul style="list-style-type: none"> Becoming stuck in the low-value-added trap Focus on static rather than dynamic advantages Truncated production linkages: dependence of assembly operations on imported components Crowding out of local companies "Race to the bottom" in production costs (salaries, social benefits, exchange rate) "Race to the top" in incentives (tax, infrastructure) Limited cluster creation
Technological-asset-seeking	<ul style="list-style-type: none"> Technology transfer Improved science and technology infrastructure Specialized logistics development 	<ul style="list-style-type: none"> Low propensity to invest in technology Stagnation of production Unfocused national policy

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



APPENDIX

Table I-A.1
LATIN AMERICA: SECTORAL DISTRIBUTION OF FDI, 1996-2003
(Millions of dollars and percentages)

	1996	1997	1998	1999	2000	2001	2002	2003 ^a	Cumulative total	Share (%)
Mexico^b										
Primary	116	140	71	210	282	38	209	25	1 090	1
Manufacturing	4 719	7 306	5 123	8 985	9 309	5 854	5 435	4 532	51 262	48
Services	2 887	4 715	3 048	3 971	6 858	20 677	7 615	4 875	54 646	51
Brazil										
Primary	111	457	143	846	1 299	1 494	637	1 482	6 469	4
Manufacturing	1 740	2 036	2 767	7 003	5 088	7 000	7 620	4 480	37 734	24
Services	5 814	12 817	20 362	20 140	24 139	12 547	10 499	6 940	113 258	72
Argentina										
Primary	1 728	177	1 324	17 845	2 736	898	1 225	...	25 934	43
Manufacturing	2 776	3 308	1 147	1 950	1 487	49	596	...	11 314	19
Services	2 096	4 888	3 648	3 153	4 749	1 261	-1 036	...	18 759	31
Other	350	788	1 173	1 038	1 445	-42	-9	...	4 743	8
Chile^c										
Primary	1 090	1 758	2 523	1 388	363	975	2 002	...	10 098	28
Manufacturing	917	627	530	828	240	754	209	...	4 105	11
Services	2 829	2 833	2 981	6 983	2 419	3 053	1 166	...	22 264	61
Colombia										
Primary	866	696	110	-73	27	1 020	837	483	3 966	19
Manufacturing	731	514	785	505	514	236	285	140	3 710	18
Services	1 515	4 354	1 934	1 019	1 758	1 244	851	312	12 987	63
Ecuador										
Primary	307	562	769	605	681	1 139	1 078	...	5 141	85
Manufacturing	24	45	30	8	10	59	56	...	232	4
Services	169	117	70	36	28	132	141	...	693	11

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Ministry of Economic Affairs of Mexico, Directorate General of Foreign Investment; Central Bank of Brazil; Ministry of Economic Affairs of Argentina; Foreign Investment Committee of Chile; Banco de la República de Colombia; and Central Bank of Ecuador.

^a In the cases of Mexico and Brazil, the figures for 2003 cover the whole year. In the case of Colombia, they refer to the period January-June.

^b The global total of FDI flows broken down by destination sector differs from the total reported in the balance of payments, because the former only includes amounts notified to the National Foreign Investment Register (RNIE), in addition to imports of fixed assets by maquila enterprises. RNIE notifications tend to be made with a significant lag compared to the date on which the investments are actually made. This means that the amount of FDI reported to RNIE in any given month largely corresponds to investments carried out several months earlier. Similarly, the figure reported as FDI materialized during a given period is not definitive, because the amount subsequently increases as RNIE receives notification of the remainder of investments carried out in that period.

^c The differences between figures obtained from the Foreign Investment Committee and the balance of payments (Central Bank) (see table I.8) arise from the types of record used by each institution. The Committee only considers investment carried out under the auspices of D.L.600, which covers over 85% of the total investment entering the country. Moreover, while the Central Bank records investment flows received under all mechanisms, it does not classify as FDI long-term credits granted to foreign firms, which are very significant in the case of large-scale mining projects. Another source of discrepancy relates to the deadlines under which flows are registered. The Central Bank does this when the money actually enters or is withdrawn, while the Investment Committee records flows at the date on which the investment contract establishes their entry.

Table I-A.2
LATIN AMERICA: LEADING INVESTOR COUNTRIES, 1996-2003
(Millions of dollars and percentages)

	1996	1997	1998	1999	2000	2001	2002	2003 ^a	Cumulative total	Share (%)
Mexico										
United States	5 187	7 455	5 340	7 067	11 841	20 362	8 227	5 101	70 579	66
Netherlands	493	359	1 070	1 000	2 583	2 563	1 155	470	9 693	9
Spain	74	329	345	997	1 908	743	293	1 381	6 068	6
United Kingdom	83	1 830	184	-193	265	87	1 144	853	4 252	4
Canada	516	240	208	623	665	984	208	160	3 605	3
Other	1 367	1 948	1 095	3 672	-813	1 830	2 233	1 467	12 800	12
Brazil										
United States	1 975	4 382	4 692	8 088	5 399	4 465	2 614	2 383	33 998	22
Spain	587	546	5 120	5 702	9 593	2 767	587	710	25 612	17
Netherlands	526	1 487	3 365	2 042	2 228	1 892	3 348	1 444	16 332	11
Cayman Islands	655	3 382	1 807	2 115	2 035	1 755	1 555	1 909	15 213	10
France	970	1 235	1 805	1 982	1 910	1 913	1 815	825	12 455	8
Other	2 783	4 008	5 777	6 843	7 648	8 250	8 834	5 632	49 775	32
Argentina										
Spain	146	1 792	908	16 830	6 750	494	-900	...	26 020	43
United States	2 021	2 017	920	1 307	947	533	-193	...	7 552	12
Netherlands	1 079	1 757	1 073	424	378	1 302	-87	...	5 926	10
France	418	168	1 310	1 536	656	521	-175	...	4 434	7
Italy	109	284	339	655	910	-60	-118	...	2 119	3
Other	3 180	3 140	2 742	3 233	778	-624	2 251	...	14 700	24
Chile										
United States	2 285	904	1 402	1 395	778	1 776	594	480	9 613	25
Spain	488	1 508	896	4 580	678	351	248	122	8 871	24
Canada	585	1 058	988	458	1 165	207	506	187	5 155	14
United Kingdom	298	542	704	370	183	390	1 510	130	4 126	11
Italy	325	19	6	51	96	920	30	7	1 453	4
Other	856	1 187	2 039	2 345	122	1 137	489	351	8 525	22
Bolivia										
United States	131	257	357	339	368	351	289	...	2 092	34
Argentina	7	95	221	106	81	100	31	...	641	11
Italy	138	149	110	65	52	63	27	...	604	10
Brazil	38	68	35	139	40	72	182	...	574	10
Spain	14	83	46	10	46	59	268	...	526	9
Other	98	202	259	351	244	231	202	...	1 587	26
Colombia										
Spain	360	84	1 652	-85	-145	869	147	...	2 882	25
United States	366	587	87	819	158	629	-54	...	2 592	9
Netherlands	51	33	145	876	177	184	32	...	1 498	6
Cayman Islands	165	929	561	660	119	-432	-101	...	1 901	4
Virgin Islands	115	357	69	411	-64	571	3	...	1 463	4
Other	829	970	1 657	1 414	31	521	510	...	5 932	52
Ecuador										
United States	217	287	360	230	235	317	392	...	2 038	34
Canada	13	110	207	133	171	430	352	...	1 416	24
Italy	1	10	84	64	67	87	109	...	422	7
Argentina	14	31	28	88	25	64	58	...	308	5
Spain	18	26	1	0	86	85	87	...	303	5
Other	225	224	150	132	137	340	264	...	1 472	25
Venezuela										
United States	567	1 116	810	975	924	1 332	507	...	6 231	25
Spain	58	1 016	305	123	487	113	116	...	2 218	9
France	67	262	136	174	260	383	143	...	1 425	6
United Kingdom	84	560	171	207	21	55	-37	...	1 061	4
Argentina	136	303	228	213	25	64	-37	...	932	4
Other	1 271	2 279	2 842	1 598	2 747	1 501	676	...	12 914	52

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Ministry of Economic Affairs of Mexico; Central Bank of Brazil; Ministry of Economic Affairs of Argentina; Foreign Investment Committee of Chile; Central Bank of Bolivia; Banco de la República de Colombia; and Central Bank of Venezuela.

^a Figures for Mexico correspond to the period January-September; for Brazil they cover January-October.

Table I-A.3
LATIN AMERICA AND THE CARIBBEAN: ACQUISITION OF PRIVATE ENTERPRISES
FOR AMOUNTS EXCEEDING US\$ 100 MILLION, 2003
(Millions of dollars and percentages)

Enterprise sold	Country	Ownership ^a	Buyer	Country	Percentage	Amount paid
1. Primary sector						3 303
Valepar S.A.	Brazil	L	Mitsui & Co. Ltd.	Japan	15	830
Valepar S.A.	Brazil	L	National Bank for Economic and Social Development (BNDES)	Brazil	8.5	520
Caemi Mineração e Metalurgia	Brazil	L	Cia. Vale do Rio Doce (CVRD)	Brazil	43.4	426
Valepar S.A.	Brazil	L	Litel Participações	Brazil	5.5	287
Valepar S.A.	Brazil	L	Bradespar	Brazil	4.6	239
Minera Alumbreira Ltd.	Argentina	F	Wheaton River Minerals Ltd.	Canada	25.0	210
Oil fields	Mexico	F	Apache Corp.	United States	100	200
Minera Alumbreira Ltd.	Argentina	F	Wheaton River Minerals Ltd.	Canada	25.0	182
Yacimiento Boquerón (60%) and DZO (100%)	Venezuela	F	Perenco	United Kingdom	...	160
Vintage Oil Ecuador	Ecuador	F	Encana Corp.	Canada	100	137
Klabin Bacell S.A.	Brazil	L	RGM International	Singapore	81.7	112
2. Manufacturing sector						2 228
Seminis	Mexico	L	Fox Paine & Company LLC	United States	100	650
Riocell S.A.	Brazil	L	Aracruz Celulose	Brazil	100	611
Alcoa América Latina ^b		L	Alcoa Inc.	United States	40.9	397
Latasa	Brazil	F	Rexam plc	United Kingdom	88.6	324
Sonae Produtos Derivados	Brazil	L	Sonae SGPS	Portugal	50	144
Cia. Siderurgica Tubarão	Brazil	L	Arcelor	Luxembourg	8.8	102
3. Services sector: Electricity and water						10 282
Río Maipo	Chile	F	Compañía General de Electricidad (CGE)	Chile	98.7	203
Aguas Andinas	Chile	F	Aguas de Barcelona	Spain	9.6	189
Central Hidroeléctrica de Canutillar	Chile	F	Hidroeléctrica Guardia Vieja	Chile	100	174
Central Costanera	Argentina	F	Endesa S.A.	Spain	27.4	139
Ecoeléctrica	Puerto Rico	F	Natural gas	Spain	50	130
Termopernambuco	Brazil	L	Iberdrola S.A.	Spain	72.6	117
Líneas de Transmisión	Chile	F	Hydro Quebec	Canada	100	110
Telecoms						
Oi	Brazil	L	Telemar Norte Leste	Brazil	100	1 577
Grupo Iusacell	Mexico	F	Movil Access	Mexico	73.9	811
BCP S.A.	Brazil	L	América Móvil	Mexico	100	625
Tele Centro Oeste Celular ^c	Brazil	L	BrasilCel	Portugal/ Spain	61.1	430
Compañía de Teléfonos de El Salvador (CTE)	El Salvador	F	América Móvil	Mexico	51	417
BSE Sistemas Eletrônicos Ltda.	Brazil	F	América Móvil	Mexico	95	171
Finance						
Banco BBA Creditanstalt S.A.	Brazil	F	Banco Itaú	Brazil	95.8	936
Lloyds TSB	Brazil	F	HSBC	United Kingdom	100	815
BBV Banco Brasil	Brazil	F	Banco Bradesco	Brazil	100	796
Banco Sudameris Brasil	Brazil	F	ABN Amro	Netherlands	94.6	769
Grupo Financiero Inverlat	Mexico	F	Bank of Nova Scotia	Canada	36	323
Banco Fiat	Brazil	F	Banco Itaú	Brazil	100	244
Grupo Nacional Provincial S.A.	Mexico	F	GNP Pensiones	Mexico	40	200
Orígenes AFJP	Argentina	F	Banco Santander Central Hispano	Spain	20	150
Other						
Sodimac S.A.	Chile	L	S.A.C.I. Falabella	Chile	100	569
Infraestructura 2000	Chile	F	Obrascón Huarte y Laín (OHL)	Spain	60	273
TMM Puertos y Terminales	Mexico	L	SSA Mexico Inc.	United States	51	114
Total						15 813

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information published in Bloomberg and in specialized magazines.

^a L = prior to the sale, the firm was under local ownership. F = prior to the sale, the firm was foreign-owned.

^b Alcoa (United States) paid US\$ 397 million to Grupo Camargo (Brazil), for a 40.9% stake in the firm's South American operations (including a presence in Argentina, Brazil, Chile, Colombia, Peru, Uruguay and Venezuela).

^c Tele Centro Oeste Celular (TCO) was acquired by BrasilCel through its subsidiary Telesp Celular Participações. BrasilCel is a joint venture formed in equal parts by Portugal Telecom (Portugal) and Telefónica (Spain), which controls a large proportion of the fixed and mobile telephone market in Brazil. Mobile telephony operates under the brand name "Vivo", and TCO became part of this enterprise.

Table I-A.4
LATIN AMERICA: 50 LARGEST TRANSNATIONAL ENTERPRISES BY CONSOLIDATED SALES, 2002
(Millions of dollars)

Position in 2002	Position in 1999	Firm	Country of origin	Sector	Sales	Main subsidiaries ^a
1	3	Telefónica de España S.A.	Spain	Telecommunications	34 230	Brazil, Chile, Peru, Argentina, Mexico
2	2	General Motors Corporation	United States	Automotive	14 862	Mexico, Brazil, Colombia
3	20	Delphi Automotive Systems Corp.	United States	Autoparts	13 267	Mexico
4	9	Wal-Mart Stores ^b	United States	Commerce	10 676	Mexico, Brazil, Argentina
5	1	Volkswagen A.G.	Germany	Automotive	10 293	Mexico, Brazil, Argentina
6	4	DaimlerChrysler A.G.	Germany	Automotive	9 908	Mexico, Brazil, Argentina
7	6	Ford Motor Company ^b	United States	Automotive	6 742	Mexico, Brazil, Argentina, Venezuela
8	8	Repsol-YPF	Spain	Oil/gas	5 781	Argentina
9	-	Samsung Corporation	Korea	Electronics	5 050	Mexico
10	26	Nissan Motor	Japan	Automotive	4 996	Mexico
11	13	Pepsico	United States	Beverages/beer	4 666	Mexico, Argentina
12	-	Sony Corporation	Japan	Electronics	4 652	Mexico
13	12	Royal Dutch/Shell Group	Netherlands/ United Kingdom	Oil/gas	4 420	Brazil, Argentina, Chile
14	-	Telecom Italia Spa.	Italy	Telecommunications	4 293	Brazil, Argentina, Chile
15	14	Nestlé ^b	Switzerland	Food	4 246	Mexico, Brazil, Colombia, Argentina
16	34	Koninklijke Philips Electronic N.V.	Netherlands/ United Kingdom	Electronics	4 189	Mexico
17	28	Hewlett-Packard (HP) ^b	United States	Computers	4 110	Mexico, Brazil
18	17	ExxonMobil Corporation ^b	United States	Oil/gas	4 028	Brazil, Colombia, Chile, Argentina
19	11	International Business Machines (IBM) ^b	United States	Computers	3 992	Mexico, Brazil, Argentina
20	7	The Coca-Cola Company ^b	United States	Beverages/beer	3 931	Mexico, Brazil, Venezuela, Argentina
21	19	General Electric	United States	Electronics	3 830	Mexico
22	10	Carrefour Group ^b	France	Commerce	3 785	Brazil, Mexico, Colombia, Argentina
23	27	Siemens A.G.	Germany	Electrical appliances	3 776	Mexico, Brazil
24	-	Lear Corporation	United States	Autoparts	3 551	Mexico
25	5	Endesa	Spain	Electric power	3 450	Chile
26	25	ChevronTexaco ^b	United States	Oil/gas	3 153	Brazil, Colombia, Argentina
27	-	Matsushita Electric Industrial (Panasonic)	Japan	Electronics	3 065	Mexico
28	-	AES Corporation ^b	United States	Oil/gas	2 987	Brazil, Venezuela, Chile, Argentina
29	31	British American Tobacco Plc. (BAT)	United Kingdom	Tobacco	2 522	Mexico, Brazil, Venezuela, Chile, Argentina
30	-	Visteon Corporation	United States	Autoparts	2 380	Mexico
31	-	TRW, Inc.	United States	Autoparts	2 300	Mexico
32	24	Cargill, Inc. ^b	United States	Agribusiness	2 296	Brazil, Argentina
33	-	Flextronics International Ltd.	United States	Electronics	2 097	Mexico
34	-	MCI (ex WorldCom)	United States	Telecommunications	2 012	Brazil
35	-	Verizon Communications	United States	Telecommunications	1 909	Venezuela
36	40	Procter & Gamble	United States	Hygiene/cleaning	1 718	Mexico
37	22	Fiat Auto ^b	Italy	Automotive	1 688	Brazil, Argentina
38	16	Koninklijke Ahold N.V. ^b	Netherlands	Commerce	1 614	Brazil, Chile, Argentina
39	-	LG Electronics Inc.	Republic of Korea	Electronics	1 609	Mexico
40	29	Kimberly-Clark Corporation	United Kingdom	Pulp/paper	1 551	Mexico
41	23	Unilever ^b	United Kingdom	Hygiene/food	1 457	Mexico, Argentina, Colombia, Brazil

(Table I-A.4 concluded)

Position in 2002	Position in 1999	Firm	Country of origin	Sector	Sales	Main subsidiaries ^a
42	36	BASF A.G.	Germany	Chemicals	1 407	Brazil, Mexico
43	18	Philips Morris Companies Inc. ^b	United States	Tobacco	1 400	Mexico, <i>Argentina</i>
44	43	Eastman Kodak Company	United States	Photography	1 379	Mexico
45	-	BP Amoco Plc.	United Kingdom	Petroleum	1 306	<i>Argentina</i> , Colombia
46	-	MIM Holdings	Australia	Mining	1 254	<i>Argentina</i>
47	37	Renault	France	Automotive	1 123	Brazil, Colombia, Mexico, <i>Argentina</i>
48	32	E.I. Du Pont de Nemours ^b	United States	Chemicals	1 088	Mexico, <i>Brazil</i> , <i>Argentina</i>
49	-	Avon Inc.	United States	Hygiene/cleaning	1 070	Mexico, Brazil
50	-	Electricité de France	France	Electric power	1 033	Brazil
Total					222 142	

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information provided by the Special Studies and Projects Department of the magazine *América Economía*.

^a Includes subsidiaries with sales in excess of US\$ 100 million. Countries are ordered according to the sales of their respective subsidiaries.

^b For these enterprises, the countries in which they are known to operate are indicated in italics, but as they did not publish their results in 2002, *América Economía* could not include them in its listing. For the same reason, firms that usually appear among the largest transnationals in terms of sales volume, this year are not included. Some of the leading absentees are Motorola, BellSouth, Ericsson, Intel, Nokia, Toyota, Nortel and 3M.

Table I-A.5
LATIN AMERICA: MAIN ACQUISITIONS IN THE RETAIL TRADE SUBSECTOR, 2000-2004
(Millions of dollars and percentages)

Date	Firm	Country	Seller	Buyer	Percentage	Amount paid
2004	Bompreço	Brazil	Royal Ahold (Netherlands)	Wal-Mart (United States)	100	300
2004	Carrefour	Chile	Carrefour (France)	D&S (Chile)	100	124
2004	Las Brisas	Chile	Jürgen Paulmann (Chile)	Cencosud (Chile)	100	30
2003	Santa Isabel	Chile	Royal Ahold (Netherlands)	Cencosud (Chile)	100	95
2003	Supermercados Disco	Argentina	Royal Ahold (Netherlands)	Cencosud (Chile)	100	...
2003	JC Penney	Mexico	JC Penney (United States)	Grupo Sanborns (Mexico)	100	...
2003	Santa Isabel	Peru	Royal Ahold (Netherlands)	Grupo Interbank (Peru)/Grupo Nexus (Peru)	100	...
2003	Sodimac	Chile	...	Falabella (Chile) ^a	100	569
2003	Supermercados Stock	Paraguay	Royal Ahold (Netherlands)	Grupo A.J. Vierci (Paraguay)	100	5
2002	Farmacias Benavides (Far-Ben)	Mexico	Farmacias Benavides (Far-Ben México)	Farmacias Ahumada FASA (Chile)	67	45
2002	Disco	Argentina	Velox Retail Holdings (Argentina)	Royal Ahold (Netherlands) ^b	50	508
2002	G Barbosa	Brazil	n.a.	Royal Ahold (Netherlands)	100	...
2001	The Home Depot	Chile	The Home Depot (United States)	Falabella (Chile)	67	54
2001	Boticas Fasa	Peru	Local private investors	Farmacias Ahumada FASA (Chile) ^c	15	2
2001	The Home Depot	Argentina	The Home Depot (United States)	Cencosud (Chile)	100	87
2000	Drogamed	Brazil	n.a.	Farmacias Ahumada FASA (Chile)	77	25

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

^a Corresponds to a merger in which, through a capital increase equivalent to the total value of its assets (US\$ 525 million), Sodimac became part-owner of Falabella. According to its capital contribution, its stake will be 21%.

^b As a result of this acquisition, Royal Ahold controls 100% of Supermercados Disco.

^c FASA entered the Peruvian market in partnership with Santa Isabel, and then through successive purchases gained control of 100% of Boticas Fasa.

II. EFFICIENCY SEEKING STRATEGIES TO CAPTURE EXPORT MARKETS: TRANSNATIONAL CORPORATIONS IN COSTA RICA, HONDURAS, JAMAICA AND THE DOMINICAN REPUBLIC

A. INTRODUCTION

Transnational corporations (TNCs) have come to play a central role in manufactures exports (UNCTAD, 2002). Efficiency-seeking companies set up international systems of integrated production (ISIP) based on business strategies aimed at optimizing the configuration of their production processes by moving production to locations that offer significant advantages in terms of costs and access to export markets (Lall, Albaladejo and Zhang, 2004). The subdivision of the global value chain and the multiplication of supplier networks have opened up new opportunities for developing countries to take part in ISIP. Labour-intensive activities are moved to places where a low-cost but efficient workforce is available. The segmentation of the value chain has also generated new opportunities to export services for countries that are able to provide them competitively.

In terms of advantages for host countries, efficiency-seeking TNCs have the potential to increase the recipient economies' competitiveness, either by introducing value-added activities in industries in which such companies

had not invested previously or by making changes in established industries to move from labour-intensive, low-productivity, low-technology activities to knowledge-based, high-productivity, high-technology activities. In order for this industrial and technological upgrading of exports to occur, firms must make production more efficient and undertake a restructuring process geared to switching from static comparative advantages to dynamic ones in the host countries. Moreover, the TNC subsidiaries established in the host countries can forge linkages with local firms. When such linkages are in place, the resulting exports will be sustainable and beneficial for the recipient economies, will have higher domestic value added and will help strengthen the country's business sector (UNCTAD, 2001).

Labour-intensive exports are economically beneficial as long as domestic value added is positive at international prices, even if it does not grow as fast as the exports themselves. Countries are inclined to steer

their excess labour supply towards export-oriented production when they have little chance of employing it in better-paid or more economically desirable activities. This suggests, in line with any theory of comparative advantages, that such countries will specialize in labour-intensive processes as they begin their export drive. The challenge is to make exports sustainable through industrial and technological upgrading (Lall, Albaladejo and Zhang, 2004). To this end, local suppliers must provide innovation capacity, as well as the skills to carry out a wide range of value-added functions associated with the manufacturing process, including product and component design, sourcing and testing, inventory management, packaging and delivery logistics. These growing demands on key suppliers represent an additional market access barrier for smaller, newer suppliers in developing countries, even in low-technology industries.

The successful national industrialization strategies carried out by some economies (primarily Asian ones), which combined local capacity-building with efforts to attract export-oriented TNCs, serve as a model for other countries wishing to promote export-oriented foreign direct investment (FDI) and to make it an integral part of their national development strategies from which they will ultimately benefit (Lall, 2002; Loewendahl, 2002). The spread of ISIP and the upgrading of the activities of TNC subsidiaries in specific locations along the value chain depend not only on the strategies of the firms involved, but also on the host countries' policies. These policies can play a major role in determining the configuration of ISIP if the governments concerned have a clear understanding of how they fit in with the corporate strategies that determine the nature and location of these systems (Mortimore, Vergara and Katz, 2001). Host-country authorities thus face a twofold challenge: they must try to join the ISIP of expanding TNCs, on the one hand, and make sure that the relationship is beneficial for them, on the other (Mortimore and Vergara, 2004).

Meeting this twofold challenge may be harder than it looks. Two major problems have been identified in this regard. The first is that some developing countries have

found that their policies to attract efficiency-seeking FDI are not sustainable over the long term, owing to factors such as increases in local wages, limitations on the industrial and technological upgrading of the assembly operations imposed by export market access mechanisms, the rollback of the benefits provided under preferential trade agreements as a result of further global trade liberalization and the fiscal and financial burdens created by the incentives used to attract FDI (Oman, 2000; Mortimore and Peres, 1997). The second problem consists of the difficulties that form what could be called the "low-value-added trap" (UNCTAD, 2002). These difficulties are associated with the attraction of low-quality FDI, typically from firms that are relatively uninterested in forming linkages with the local economy, have little potential to generate spillovers and operate with a short-term time horizon. Such firms, which invest very little in productivity and skills development, are most commonly found in labour-intensive industries, which basically compete on price (more than on quality, timely delivery or fashion) and often see workers more as a cost to be contained than as a resource to be developed. Given the slightest downturn in the host country's competitive position (exchange-rate appreciation, wage hikes, social security cost increases, etc.), these so-called "fly-by-night" firms will quickly pull up stakes in pursuit of a better place to locate their cost centres.

In practice, this suggests that there is a broad spectrum of TNCs differentiated by their behaviour. At one end are those that can be caricatured as "fly-by-night", which often cause the host country to fall into the "low-value-added trap". At the other end are TNCs that are industry leaders, such as Intel in semiconductors or Toyota in automobiles, which, instead of seeking temporary advantages, aim to locate parts of their ISIP in countries that will become their partners. As the case of Toyota is considered in some detail in chapter III of this report, the experience of Intel will be analysed in more depth here to give a clearer idea of the nature of this class of TNCs that seek efficiency through direct investment in ISIP (see box II.1).

Box II.1

INTEL'S INTERNATIONAL EXPANSION STRATEGY

Intel has consolidated its position as the world's leading semiconductor firm by deploying a global investment strategy to reorient its ISIP. This is reflected in the fact that its average annual investment rose from less than US\$ 500 million in the 1980s to some US\$ 1.7 billion in the early 1990s, and later reached nearly US\$ 4.6 billion in the period 1996-2002. Intel's ISIP reflects its manifest technological leadership, expressed in its slogan "Intel Inside", which refers to the ubiquity of its products in electronic equipment.

Intel's international expansion was primarily shaped by three basic factors: security, logistics and cost reduction. The first is reflected by the firm's limited global expansion, which is designed to prevent any leakage of its main competitive advantage –its technology– to competitors. This is why over two thirds of Intel's employees work in its home country, the United States, even after the firm's recent international expansion. Security

concerns also explain why Intel's ISIP consists entirely of wholly-owned subsidiaries. This shows that the firm treads very carefully in taking decisions to expand internationally. The second factor, logistics, encompasses speed-to-market and market-access issues. Intel estimates that each new generation of microprocessors has, at most, a six-month lead over its competitors. Accordingly, its production sites must enable it to minimize the time needed to reach the market so it can keep its competitors at bay. Other logistical factors, such as transport costs, are less important because of the extremely high value of semiconductors in relation to their size and weight. The third factor, cost reduction, is taking on more importance as Intel's competitors continue to expand internationally to take advantage of lower-cost production sites. The combination of these three factors defines the particular characteristics of Intel's ISIP: a few large-scale operations in a small

number of countries outside the United States. As a result, the firm has become the leading exporter in countries such as Ireland, the Philippines and Costa Rica.

Intel's ISIP includes two kinds of plants: (i) those for manufacturing wafers and etching integrated circuits onto them, and (ii) those for assembly and testing, where the wafers are thinned to reduce internal stress and are then cut into 300 to 500 individual chips or microprocessors. These chips are mounted onto a lead frame and attached to thin gold wires that will eventually connect them to the other elements of the computer. Afterward they are encapsulated, inspected and tested. Intel's ISIP includes 18 wafer manufacturing plants, located in the United States (14), Ireland (2) and Israel (2), and 12 assembly and testing plants, located in the United States (1), Malaysia (4), the Philippines (3), Costa Rica (2) and China (2) (see table).

INTEL: FEATURES OF THE MAIN MANUFACTURING, ASSEMBLY AND TESTING PLANTS

Country/Region/ Year initiated	Functions and products	Process technology (microns)	Wafer size (mm)	Employees
United States				44 164
Oregon				15 000
1978	Manufacture of motherboards	n.a.	n.d.	
1992	Manufacture of logic and flash memory	0,25 0,35	200	
1996	Manufacture of logic	0,13	200	
1999	Manufacture of logic	0,13	300	
2003	Manufacture of logic (development)	n.a.	300	
Arizona				10 000
1996	Manufacture of logic	0,18	200	
1999	Assembly and testing	n.a.		
2001	Manufacture of logic	0,13	200	
California, 1988	Manufacture of logic and flash memory	0,13 0,18	200	8 500
New México				5 500
1980	Manufacture of flash memory	0,35	150	
1993	Manufacturas of logic and flash memory	0,18 0,25	200	
2002	Manufacture of logic	0,13	300	
Massachusetts, 1994	Manufacture of logic	0,28 0,35 0,50	200	2 700
Washington, 1996	Manufacture of production systems	n.a.	n.a.	1 400
Colorado, 2001	Manufacture of flash memory	0,18	200	1 064

(Box II.1 concluded)

Country/Region/ Year initiated	Functions and products	Process technology (microns)	Wafer size (mm)	Employees
Israel				2 300
Jerusalem, 1985	Manufacture of logic and flash memory	0,35 0,50 0,70 1,0	150	
Qiryat Gat, 1999	Manufacture of logic	0,18	200	
Ireland				3 400
Leixlip, 1993-1998	Manufacture of logic	0,18 0,25	200	
Leixlip, 2004	Manufacture of logic	n.a.	300	
Philippines				5 984
Manila, 1979-1995	Assembly and testing	Flash memory	50-200	
Cavite, 1997	Assembly and testing	Logic	200	
Cavite, 1998	Assembly and testing	Flash memory	200	
Malaysia				7 790
Penang, 1988	Assembly and testing	Logic, computer products	150-200	
Penang, 1994	Assembly and testing	Logics, computer products	150-200	
Kulim, 1996-1997	Assembly and testing, manufacture of motherboards	Logic, computer boards	200	
Penang, 1997	Assembly and testing	-	200	
Costa Rica				1 845
San José, 1997	Assembly and testing	Logic	200	
San José, 1999	Assembly and testing	Logic	200	
China				1 227
Shanghai, 1997	Assembly and testing	Flash memory	150-200	
Shanghai, 2001	Assembly and testing	Logic	150-200	

Security concerns account for the fact that most of the wafer plants—especially the most modern ones using the most advanced technology, such as 0.13-micron process technology—are located in the United States, where there is relatively less risk of war, terrorism or technology leakage. Nonetheless, even though a new wafer plant today can cost over US\$ 1 billion, and thus requires a huge financial outlay, in 1985 Intel decided to build its first wafer plant outside the United States in Israel, and added another new plant in 1999. The other foreign site for wafer manufacture is Ireland, where the firm established and upgraded a plant between 1993 and 1998 and is now building a more modern one (for 300-mm wafers).

Access to the European market played a major role in that site selection. Today, about 30% of Intel's wafer manufacturing capacity is located outside the United States. This shows that other factors have gradually taken precedence over the security concerns that originally prevailed in the selection of sites for the expensive wafer manufacturing plants.

While cost reduction is a priority, it is far from being the only factor that determines the siting of assembly and testing plants, which carry out labour-intensive tasks. In 1979 Intel began its expansion in this regard by building a plant in Manila, Philippines. Later, new plants were added in Penang, Malaysia (1988); outside San

José, Costa Rica (1997); and in Shanghai, China (1997). Intel has deepened its presence at each of these sites by building new assembly and testing plants to complement the original ones. In other words, one of the principal characteristics of the Intel ISIP is that it tends to grow in a handful of existing locations and that expansion to new ones is quite uncommon. Siting decisions are usually based on whether qualified technicians are available, construction costs, infrastructure quality, logistics, supplier capabilities and production costs. Thus, there are major differences between the siting of wafer manufacture and fabrication plants and that of assembly and testing plants.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Intel (www.intel.com); Michael Mortimore and Sebastián Vergara, "Targeting Winners: Can FDI policy help developing countries industrialize?", *European Journal of Development Research*, in press, 2004; United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2002: Transnational Corporations and Export Competitiveness* (UNCTAD/WIR/2002), New York/Geneva, 2002. United Nations publication, Sales No. E.02.II.D.4.

Lastly, it should be borne in mind that small developing economies face additional challenges in attracting FDI. By definition, they are unlikely to catch the attention of market-seeking TNCs. Their domestic markets are not big enough to enable them to reach the levels of productive efficiency demanded by the kinds of operations that can give them a foothold in the global market and make them major competitors. They often start their industrialization processes with simple, labour-intensive activities such as apparel manufacture, and seek to conclude trade agreements or to join integration arrangements to expand their markets, with the aim of strengthening their industrialization processes and enabling leading domestic firms to evolve into global players.

It is important to note that in today's world, small countries are gradually becoming the norm. Worldwide, 87 countries have fewer than 5 million inhabitants, 58 have fewer than 2.5 million and 35 have fewer than half a million. To put it another way, half the world's countries have populations smaller than that of the state of Massachusetts in the United States. Some small countries have been very successful in attracting ISIP nodes of efficiency-seeking TNCs and in upgrading the activities carried out by those nodes. The best-known cases are those of Ireland (see box II.2) and Singapore (Lall, 2000). In Latin America small countries account for more than half the total, especially in the Caribbean Basin, yet none of them has even remotely approached the success of Ireland or Singapore.

Box II.2
IRELAND'S EXPERIENCE IN ATTRACTING EFFICIENCY-SEEKING FDI

Since the 1980s Ireland has been implementing an industrialization strategy based on efficiency-seeking FDI to promote the manufacture of fast-growing export products, especially in the information technology industries (electronics, computers and telecommunications). The entity

responsible for putting this strategy into practice is the country's vibrant, well-organized Investment and Development Agency (IDA). To meet its objectives, IDA was given a generous budget, which in 2000 amounted to 164 million euros for the provision of financing and 27 million euros for

promotional and administrative activities. Ireland, as a member of the European Union, has full access to the vast European market. This makes it a particularly interesting site for the establishment of production centres belonging to non-European (especially United States) investors.

IRELAND: SHARE OF WORLD IMPORTS AND EXPORT STRUCTURE, 1985-2001
(Percentages)

			1985	1990	1995	1999	2001
I. Market share			0.57	0.70	0.84	1.24	1.37
II. Export structure^a			100.0	100.0	100.0	100.0	100.0
Natural resources			19.1	13.8	9.7	5.4	4.3
Natural-resource-based manufactures			25.7	27.5	29.8	38.6	41.4
Non-resource-based manufactures			53.1	56.8	58.4	53.4	52.0
- Low technology			15.1	15.6	13.5	8.7	7.6
- Mid-level technology			15.2	15.8	13.4	10.0	9.6
- High technology			22.8	25.5	31.5	34.6	34.9
Other			1.9	1.8	2.0	2.5	2.2
III. 10 principal exports, by contribution			29.0	36.6	49.6	67.4	71.6
514 Nitrogen-function compounds	*	+	0.7	2.9	5.9	16.5	20.0
752 Automatic data processing machines	*	+	9.6	9.9	12.1	12.9	12.2
515 Organo-inorganic and heterocyclic compounds	*	+	5.0	4.7	7.4	11.3	12.0
541 Medicinal and pharmaceutical products	*	+	2.8	4.2	6.8	7.6	9.3
759 Parts and accessories for use with machines in groups 751 or 752	*	+	4.4	5.6	3.3	5.9	5.1
898 Musical instruments and parts and accessories thereof	+		1.7	4.0	5.6	4.2	3.3
764 Telecommunications equipment and parts	*	+	0.9	1.5	2.0	2.7	3.0
776 Electronic cathode lamps, tubes and valves	*	+	1.7	1.1	3.8	2.8	2.8
872 Medical instruments and appliances	*	+	1.4	1.5	1.8	1.9	2.0
551 Essential oils, perfume and flavour materials	+		0.8	1.2	0.9	1.6	1.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the TradeCAN software, 2002 edition.

^a For more details on the export structure, see table II.1.

^b (*) Groups of products that were among the 50 fastest-growing in world imports, 1985-2001.

^c (+)/(-) Groups in which Ireland gained/lost market share in world imports, 1985-2001.

(Box II.2 concluded)

Ireland's success is unmistakable (see table). Its share of global merchandise trade rose from 0.57% to 1.37% between 1985 and 2001, while the structure of its non-resource-based manufactures exports shifted considerably towards high-technology products. Ireland gained market share for each of its 10 principal export products, many of which were linked to the new focus of domestic policy. Between 1985 and 2001 the contribution of some of the country's priority exports –automatic data processing machines (SITC group 752), parts thereof (group 759) and telecommunications equipment (group 764)– to total export value rose from less than 15% to over 20%. Since 1988, 8 out of the 10 leading foreign exporters in Ireland have been in the electronics and computer industry (Intel, Dell, Microsoft, Gateway, Apple, EMC, 3Com and Motorola). Together, these firms account for more than a third of total merchandise exports by foreign companies and for over a fifth of total exports.

In 1990 Intel decided to open the first of its two manufacturing plants in Leixlip to serve the European market. The site selection was based on the large pool of qualified workers,

including engineers and technicians; the low tax rate (10%); the abundant supply of freshwater and electric power; and the existence of business-friendly government policies. That decision gave a strong boost to the IDA objective of attracting efficiency-seeking FDI in the electronics industry.

In 2003 Ireland's FDI intake reached a record high of US\$ 24.4 billion –more than double the amount received in 2002– and made that country one of the world's 10 leading FDI recipients. The FDI stock swelled from US\$ 32 billion to US\$ 157 billion between 1980 and 2002. This investment is highly concentrated in terms of origin: two thirds comes from the Netherlands, the United States and the United Kingdom, and is channelled mainly into the electrical, electronic, chemical and publishing industries, which are markedly export-oriented. Foreign firms have accounted for the bulk of the country's exports (nearly 90% in 1999). In fact, two thirds of Ireland's leading export firms are foreign (*E-Brief UNCTAD*, UNCTAD/PRESS/EB/2004/006, 19 February 2004).

Ireland is continuing to consolidate its strategy of knowledge-based development, with emphasis on the

further industrial and technological upgrading of skills and research capacities as key factors of competitiveness. To complement their success in attracting the above-described manufacturing activities, the authorities are trying hard to attract services, especially those related to information technology and the business world. The results speak for themselves: Intel's decision to establish its European Operations Centre in Ireland attests to the country's proven competitiveness in delivering customer support services –shared services and call centres–, as well as its leadership in Europe in attracting new FDI (greenfield investment) for software production, engineering and medical and financial services. It is expected that FDI will continue to play a major role in this strategy, which seeks to embed foreign firms more deeply in the local economy and to promote the internationalization of their suppliers. Business parks providing world-class services have been built in various parts of the country, while IDA acts as an intermediary between academic institutions and foreign companies in meeting the needs of high-technology industries.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the Investment and Development Agency (IDA) (<http://www.idaireland.com>).

The following sections review the experiences of four of the small Caribbean Basin economies –Costa Rica, Honduras, Jamaica and the Dominican Republic– to see how they have taken advantage of the new

opportunities opened up for developing countries as a result of the decisions taken by TNCs seeking to enhance their efficiency through FDI to establish or extend their ISIP in the subregion.

B. EXPORT COMPETITIVENESS IN COSTA RICA, HONDURAS, JAMAICA AND THE DOMINICAN REPUBLIC

The establishment of ISIP nodes in the Caribbean Basin has had an impact on each of the four countries selected for this analysis, whose participation in ISIP varies from one country to another, as do the impacts generated. One of the most striking effects is on the international competitiveness of the host economies.

Between 1985 and 2001 Costa Rica's share of the world import market rose considerably, from 0.07% to 0.12%, with a peak of 0.13% in 1999 (see table II.1). Over that period its export structure changed: after having been heavily tilted towards natural resources in 1985 (67.5%), it was dominated by non-resource-based manufactures in 2001 (56.5%). High-technology manufactures in Costa Rica showed an interesting pattern of brisk growth and progressively replaced low-technology manufactures,

which had accounted for most of the export basket up until the mid-1990s. As a result of the opening of the Intel microprocessor plant, high-technology exports soared from 3.3% of total sales in 1995 to 28.1% in 2001 (having reached 29.5% in 1999). In 2001 the 10 principal products represented 67.4% of total exports, with the most sophisticated electronics manufactures (SITC groups 759 and 776) accounting for 24.4% (25.8% in 1999), while the share of apparel, as an example of low-technology manufactures, amounted to 7.7%. Thanks to this performance, Costa Rica gained market share for all of its 10 leading exports, not to mention the fact that 6 of these products were among the fastest-growing in world trade. Without a doubt, the country has become a shining example of how economies can progress towards better

Table II.1
COSTA RICA: SHARE OF WORLD IMPORTS AND EXPORT
STRUCTURE, 1985-2001
(Percentages)

		1985	1990	1995	1999	2001
I. Market share		0.07	0.07	0.09	0.13	0.12
II. Export structure		100.0	100.0	100.0	100.0	100.0
Natural resources ^a		67.5	57.5	49.8	32.9	31.7
Natural-resource-based manufactures ^b		7.6	6.5	9.8	8.5	9.1
Non-resource-based manufactures ^c		24.1	34.9	38.9	55.9	56.5
- Low technology ^d		14.5	25.4	27.0	18.3	18.4
- Mid-level technology ^e		6.3	6.0	8.0	8.1	10.0
- High technology ^f		3.3	3.5	4.0	29.5	28.1
Other ^g		0.7	1.0	1.4	2.5	2.5
III. 10 principal exports, by contribution		62.6	62.2	60.4	68.7	67.4
057 Fruit and nuts (not including oil nuts), fresh or dried	h +	30.2	31.9	28.6	20.5	20.5
759 Parts, n.e.s., for use with machines in groups 751 or 752	* +	0.1	0.0	0.1	20.8	13.6
776 Electronic cathode lamps, tubes and valves	* +	0.1	0.1	0.1	5.0	10.8
846 Undergarments, knitted or crocheted	* +	2.8	5.4	6.8	4.9	4.6
071 Coffee and coffee substitutes	+ +	23.9	13.2	10.6	5.5	4.2
872 Medical instruments and appliances	* +	0.0	0.3	1.1	1.7	3.6
842 Outer garments, men's and boys', of textile fabrics	* +	2.0	5.3	6.0	3.5	3.1
292 Crude vegetable materials, n.e.s.	+ +	2.5	4.0	4.1	2.5	2.5
058 Fruit, preserved, and fruit preparations	+ +	0.5	1.3	2.0	2.1	2.3
931 Special transactions and commodities not classified according to kind	* +	0.5	0.7	1.0	2.2	2.2

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the TradeCAN software, 2002 edition.

Product groups are based on the Standard International Trade Classification (SITC), Rev. 2.

^a Includes 45 simply processed commodities; includes concentrates.

^b Includes 65 groups: 35 groups of agricultural/forestry products and 30 groups of other products (primarily metals –except steel–, petroleum products, cement, glass, other).

^c Includes 120 groups representing the sum of ^d + ^e + ^f.

^d Includes 44 groups: 20 in the textiles and apparel category and 24 others (paper products, glass and steel, jewellery).

^e Includes 58 groups: 5 in the automotive industry, 22 in the processing industry and 31 in the engineering industry.

^f Includes 18 groups: 11 in the electronics category and 7 others (pharmaceuticals, turbines, aircraft, instruments).

^g Includes 9 groups not classified according to kind (mostly in section 9).

^h (*) Groups of products that were among the 50 fastest-growing in world imports, 1985-2001.

ⁱ (+)/(-) Groups in which Costa Rica gained/lost market share in world imports, 1985-2001.

conditions in the framework of assembly operations, since it upgraded these activities in two major steps: from natural resources to apparel and from apparel to electronics.

The Dominican Republic saw its share of the world import market increase from 0.08% to 0.09% between 1985 and 2001 (see table II.2). In 1985 its export structure was dominated by natural resources (24.6%) and natural-resource-based manufactures (23.1%). By 2001 this situation had changed so radically that non-resource-based manufactures had come to represent the bulk of the country's exports (82.9%). The fastest-growing exports were low-technology manufactures, whose share expanded from 28.2% to 61.6%. In 2001 the country's 10 leading exports accounted for 72.2% of its total exports. Of these, apparel (SITC groups 842, 846, 843 and 845) and other manufactures (SITC groups 872, 772 and 897) represented 56.6% of the total. The country has gained market share for 8 of its 10 leading exports, 6 of which are among the fastest-growing in world trade. The Dominican Republic, which was once a minor natural resource exporter, has become a major apparel exporter.

Honduras's international competitiveness improved appreciably between 1985 and 2001, during which time its share of the world import market rose from 0.05% to 0.07% (see table II.3). Its export structure underwent a major shift, moving from a strong dependence on natural resources (74%) and natural-resource-based manufactures (18%) in 1985 to a heavy concentration in non-resource-based manufactures (70%) in 2001. The fastest-growing of these manufactures were low-technology products, which jumped from 5.2% to 65.2% of total exports over the period under consideration. In 2001 the country's 10 leading exports represented 81.7% of its total external sales, with most of that share accounted for by apparel (SITC groups 846, 845, 842, 843 and 844) and electrical equipment (SITC group 773), which together represented 62.6% of the total, while natural resources (SITC groups 057, 071 and 036) continued to lose ground. As a result of this change, Honduras has gained market share for 8 of its 10 leading exports, 5 of which are among the fastest-growing in world trade. Of all the new exporters of apparel in the Caribbean Basin, Honduras boasts the best performance.

Table II.2
DOMINICAN REPUBLIC: SHARE OF WORLD IMPORTS AND EXPORT STRUCTURE, 1985-2001
(Percentages)

		1985	1990	1995	1999	2001
I. Market share		0.08	0.07	0.09	0.09	0.09
II. Export structure		100.0	100.0	100.0	100.0	100.0
Natural resources ^a		24.6	13.5	9.1	6.0	5.4
Natural-resource-based manufactures ^b		23.1	10.4	10.1	9.2	8.8
Non-resource-based manufactures ^c		39.2	69.7	77.1	81.9	82.9
- Low technology ^d		28.2	49.6	58.5	62.0	61.6
- Mid-level technology ^e		9.9	18.5	16.2	16.8	17.3
- High technology ^f		1.1	1.6	2.4	3.1	4.0
Other ^g		12.9	6.2	3.6	2.9	2.9
III. 10 principal exports, by contribution		31.2	59.5	65.1	72.7	72.2
842 Outer garments, men's and boys', of textile fabrics	* +	4.6	11.6	14.4	16.4	17.5
846 Undergarments, knitted or crocheted	* +	4.7	7.0	11.1	13.7	12.7
843 Outer garments, women's, girls' and infants', of textile fabrics	* +	4.8	8.8	9.3	8.6	8.6
872 Medical instruments and appliances	+ +	0.0	3.7	6.3	7.0	7.5
845 Outer garments and other articles, knitted or crocheted	* +	0.8	4.1	5.1	6.8	7.0
122 Tobacco, manufactured	+ +	1.6	1.2	1.9	4.6	4.5
671 Pig iron, spiegeleisen and sponge iron	- -	7.7	10.1	5.0	3.8	4.4
772 Electrical apparatus for making and breaking electrical circuits	* +	1.1	3.4	3.6	5.0	4.3
897 Jewellery, goldsmiths' and silversmiths' wares and other articles	* +	3.1	4.1	3.1	3.3	3.3
612 Manufactures of leather or of composition leather	- -	2.8	5.5	5.3	3.5	2.4

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the TradeCAN software, 2002 edition. Product groups are based on the Standard International Trade Classification (SITC), Rev. 2.

^a Includes 45 simply processed commodities; includes concentrates.

^b Includes 65 groups: 35 groups of agricultural/forestry products and 30 groups of other products (primarily metals—except steel—, petroleum products, cement, glass, other).

^c Includes 120 groups representing the sum of ^d + ^e + ^f.

^d Includes 44 groups: 20 in the textiles and apparel category and 24 others (paper products, glass and steel, jewellery).

^e Includes 58 groups: 5 in the automotive industry, 22 in the processing industry and 31 in the engineering industry.

^f Includes 18 groups: 11 in the electronics category and 7 others (pharmaceuticals, turbines, aircraft, instruments).

^g Includes 9 groups not classified according to kind (mostly in section 9).

^h (*) Groups of products that were among the 50 fastest-growing in world imports, 1985-2001.

ⁱ (+)/(-) Groups in which the Dominican Republic gained/lost market share in world imports, 1985-2001.

Table II.3
HONDURAS: SHARE OF WORLD IMPORTS AND EXPORT STRUCTURE,
1985-2001
(Percentages)

		1985	1990	1995	1999	2001
I. Market share		0.05	0.04	0.05	0.07	0.07
II. Export structure		100.0	100.0	100.0	100.0	100.0
Natural resources ^a		74.0	67.3	39.7	23.6	20.0
Natural-resource-based manufactures ^b		18.0	12.0	8.1	7.3	7.6
Non-resource-based manufactures ^c		7.5	19.5	51.2	67.4	70.0
- Low technology ^d		5.2	16.1	46.7	62.6	65.2
- Mid-level technology ^e		1.7	2.7	3.7	3.7	4.0
- High technology ^f		0.6	0.6	0.8	1.2	0.8
Other ^g		0.6	1.0	0.9	1.4	2.2
III. 10 principal exports, by contribution		70.5	70.6	76.4	80.6	81.7
846 Undergarments, knitted or crocheted	^h *	0.9	4.9	15.8	29.8	29.8
845 Outer garments and other articles, knitted or crocheted	ⁱ +	0.0	0.9	9.4	13.3	17.1
057 Fruit and nuts (not including oil nuts), fresh or dried	-	36.7	33.5	13.3	6.7	7.0
071 Coffee and coffee substitutes	+	24.5	15.7	13.6	9.3	6.7
842 Outer garments, men's and boys', of textile fabrics	* +	0.2	3.1	6.0	5.4	5.2
843 Outer garments, women's, girls' and infants', of textile fabrics	* +	0.1	1.8	5.0	4.7	4.7
844 Undergarments of textile fabrics (other than knitted or crocheted goods)	+	0.9	2.3	6.0	5.1	4.3
036 Crustaceans and molluscs, whether in shell or not	-	6.2	7.4	5.6	3.4	3.4
122 Tobacco, manufactured	+	1.0	1.0	1.3	1.8	2.0
773 Equipment for distributing electricity	* +	0.0	0.0	0.4	1.1	1.5

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the TradeCAN software, 2002 edition. Product groups are based on the Standard International Trade Classification (SITC), Rev. 2.

^a Includes 45 simply processed commodities; includes concentrates.

^b Includes 65 groups: 35 groups of agricultural/forestry products and 30 groups of other products (primarily metals –except steel–, petroleum products, cement, glass, other).

^c Includes 120 groups representing the sum of ^d + ^e + ^f.

^d Includes 44 groups: 20 in the textiles and apparel category and 24 others (paper products, glass and steel, jewellery).

^e Includes 58 groups: 5 in the automotive industry, 22 in the processing industry and 31 in the engineering industry.

^f Includes 18 groups: 11 in the electronics category and 7 others (pharmaceuticals, turbines, aircraft, instruments).

^g Includes 9 groups not classified according to kind (mostly in section 9).

^h (*) Groups of products that were among the 50 fastest-growing in world imports, 1985-2001.

ⁱ (+)/(-) Groups in which Honduras gained/lost market share in world imports, 1985-2001.

Lastly, Jamaica's international competitiveness has tended to falter. Between 1985 and 2001 its share of the world import market slipped from 0.04% to 0.03% (see table II.4). Between 1985 and 1995 its export structure changed somewhat, moving from a concentration in natural-resource-based manufactures (71.9%) at the beginning of the period to a growing emphasis on non-resource-based manufactures, which by 1995 had come to represent 36.7% of the total. Subsequently, however, between 1995 and 2001, natural-resource-based manufactures regained much of the ground they had lost (reaching 65.4%), while non-resource-based manufactures retreated (to 24.6%). In 2001 the country's 10 principal products represented 84.3% of its total exports. Natural resources and manufactures based on these resources accounted for 64.6%, while apparel (SITC groups 846

and 845) represented 18.1%. The weakness of Jamaica's performance is highlighted by the fact that only 5 of its 10 leading exports have gained market share, while only 4 of them are among the fastest-growing in world trade. Thus, in terms of international competitiveness, Jamaica's results were very different from those of the countries considered above and, in its case, the apparel industry played a much more minor role.

In the 1980s the economies of Costa Rica, Honduras, Jamaica and the Dominican Republic –like those of many Caribbean Basin countries– were essentially producers and exporters of natural resources. For this group of countries, changes in the structure of their external sales were even more important than increases in their export capacity. Natural resources –and manufactures based on them– became less and less important in relation to other

exports (temporarily, in Jamaica's case). The sluggishness of traditional exports from Costa Rica (bananas and coffee), Honduras (bananas, coffee and shrimp), the Dominican Republic (ferronickel, sugar, tobacco and coffee) and Jamaica (bauxite, alumina and sugar) triggered efforts to promote the production and export of manufactures, generally under an export processing zone (EPZ) arrangement. These manufactures were usually produced by foreign companies seeking to improve the productive

efficiency and cost-effectiveness of their ISIP. In most cases, this resulted in the proliferation of labour-intensive activities such as the apparel industry, which enabled foreign firms to take advantage of the low level of local wages (compared to United States wages). Nonetheless, some countries made efforts to diversify the activities carried out in EPZs; clear examples of such countries are Costa Rica (electronics) and, to a lesser extent, the Dominican Republic (the Cyberpark initiative).

Table II.4
**JAMAICA: SHARE OF WORLD IMPORTS AND EXPORT STRUCTURE,
 1985-2001**
(Percentages)

		1985	1990	1995	1999	2001
I. Market share		0.04	0.04	0.04	0.03	0.03
II. Export structure		100.0	100.0	100.0	100.0	100.0
Natural resources ^a		8.6	8.5	9.5	8.5	8.2
Natural-resource-based manufactures ^b		71.9	63.3	51.6	59.0	65.4
Non-resource-based manufactures ^c		17.8	26.7	36.7	30.1	24.6
- Low technology ^d		11.7	22.5	32.0	26.4	20.8
- Mid-level technology ^e		5.3	3.5	3.9	3.4	3.4
- High technology ^f		0.7	0.6	0.8	0.3	0.4
Other ^g		1.6	1.4	2.0	2.3	1.8
III. 10 principal exports, by contribution		73.8	79.9	79.7	83.2	84.3
287 Ores and concentrates of base metals, n.e.s.	h i	50.2	48.3	37.6	37.3	45.4
846 Undergarments, knitted or crocheted	* +	2.6	7.5	19.5	16.2	12.1
845 Outer garments and other articles, knitted or crocheted	* +	1.3	6.6	4.7	5.8	6.0
662 Clay construction materials and refractory materials	+	0.0	0.0	0.0	6.4	5.4
061 Sugar and honey	-	8.1	6.0	5.7	5.4	4.8
112 Alcoholic beverages	* -	5.4	4.0	3.4	3.5	3.8
057 Fruit and nuts (not including oil nuts), fresh or dried	+	2.1	4.0	4.3	3.3	2.6
512 Alcohols, phenols, phenol-alcohols and their derivatives	-	2.1	1.6	1.6	1.6	2.4
071 Coffee and coffee substitutes	+	1.2	0.8	1.5	1.6	2.1
931 Special transactions and commodities not classified according to kind	* -	0.8	1.1	1.4	2.1	1.6

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the TradeCAN software, 2002 edition.

Product groups are based on the Standard International Trade Classification (SITC), Rev. 2.

^a Includes 45 simply processed commodities; includes concentrates.

^b Includes 65 groups: 35 groups of agricultural/forestry products and 30 groups of other products (primarily metals –except steel–, petroleum products, cement, glass, other).

^c Includes 120 groups representing the sum of ^d + ^e + ^f.

^d Includes 44 groups: 20 in the textiles and apparel category and 24 others (paper products, glass and steel, jewellery).

^e Includes 58 groups: 5 in the automotive industry, 22 in the processing industry and 31 in the engineering industry.

^f Includes 18 groups: 11 in the electronics category and 7 others (pharmaceuticals, turbines, aircraft, instruments).

^g Includes 9 groups not classified according to kind (mostly in section 9).

^h (*)Groups of products that were among the 50 fastest-growing in world imports, 1985-2001.

ⁱ (+)/(-) Groups in which Jamaica gained/lost market share in world imports, 1985-2001.

In the 1980s macroeconomic imbalances and large external deficits prompted the authorities of the subregion's countries to devalue local currencies on successive occasions. At the same time they began to introduce reforms aimed at opening up and liberalizing their economies. Against this backdrop, and armed with significant competitiveness gains attributable to the devaluations, government authorities sought to

boost the role of exports as an engine of economic growth. To that end, they undertook to expand and diversify the supply of export products, mainly by creating incentives in the form of EPZs, complemented by the special market access conditions offered by the United States, particularly under the production sharing mechanism and the Caribbean Basin Initiative (CBI) (see box II.3).

Box II.3

CENTRAL AMERICA AND THE CARIBBEAN: MECHANISMS AFFORDING SPECIAL ACCESS TO THE UNITED STATES MARKET

Since the mid-1980s Costa Rica, Honduras, Jamaica and the Dominican Republic have benefited from a variety of trade agreements and programmes giving them special access to the United States market and, to a lesser extent, the European Union market.^a Mechanisms affording special access to the United States market –production sharing and the Caribbean Basin Initiative (CBI)– have been the most important, especially because of their transformative effect on the production structure of the Central American and Caribbean economies.

The United States established the production sharing mechanism (currently known as HTS 9802) in its customs regulations to promote the use of the incentive arrangements implemented in the Caribbean Basin countries and to enhance the competitiveness of goods produced by United States companies. Under this mechanism, products assembled abroad using United States inputs are subject to tax only on the value added outside the United States (mostly wages).

The CBI established unilateral preferential conditions for the entry of a wide range of Central American and Caribbean products into the United States market. However, it excluded products such as clothing, footwear, petroleum and petroleum products. These and other benefits were granted under the Caribbean Basin Economic Recovery Act, which entered into force

on 1 January 1984 and was amended in 1990. The benefits envisaged in the CBI could be granted in addition to those provided under the Generalized System of Preferences (GSP).^b

With the signing of the North American Free Trade Agreement (NAFTA) in the 1990s, the Caribbean Basin countries' conditions of access to the United States market deteriorated in relation to the terms enjoyed by Mexico. Those countries accordingly raised the possibility, with Canada and the United States, of establishing parity with Mexico in the treatment of their products. In May 2000 the CBI legislation was enhanced through the passage of the United States-Caribbean Basin Trade Partnership Act (CBTPA). The new agreement extended trade benefits to textile and apparel articles and to other products that had originally been excluded, eliminated tariffs on value added and extended the term of the arrangement up to September 2008. Nonetheless, while the enhanced CBI helped to redress the imbalance vis-à-vis Mexico, the treatment it provided was not nearly equivalent to NAFTA treatment. Specifically, the CBTPA provides for equal tariff treatment but does not establish parity with respect to rules of origin (regional content).

In September 2001 the Central American and United States authorities agreed to embark on an exploratory phase with a view to preparing for the official opening of

negotiations for a United States-Central American free trade agreement, to be known as CAFTA. These negotiations began in early 2003 –after the United States Congress had voted to give the President trade promotion (or “fast-track”) authority, which empowers him to negotiate trade agreements– and were substantially completed by December 2003. In general, CAFTA provides tariff- and quota-free access to the United States for all Central American manufactures, maintains the CBTPA^c and GSP preferences and guarantees that EPZ operations and tariff drawbacks will continue for as long as allowed by the World Trade Organization (WTO). With respect to textile and apparel articles, CAFTA provides immediate duty-free access for any apparel item produced in a Central American country with regionally sourced fabric and thread or with flat-weave fabrics from Mexico or Canada –in addition to those from the United States and Central America–, although the latter are subject to an initial limit of 100 million square metres equivalent (SME) of fabric.^d In January 2004 negotiations with Costa Rica continued with respect to a number of outstanding bilateral issues: telecommunications, insurance, services, representatives of foreign firms, textiles and agriculture.

On 15 March 2004 the Dominican Republic and the United States concluded their negotiations on a free trade agreement by deciding that the

(Box II.3 concluded)

former should become a party to CAFTA with the same obligations and commitments as Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua. As in the case of the Central American countries, individual market-access schedules were

negotiated for goods, agriculture, services, investment and government procurement (Trade Facts, Office of the United States Trade Representative, 15 March 2004, <http://www.ustr.gov>).

In summary, the Caribbean Basin countries first obtained special access

to the United States market through the production sharing mechanism; then, under the CBTPA, tariff treatment equal to that provided under NAFTA; and finally NAFTA parity with respect to rules of origin as a result of the signing of CAFTA.

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

^a Jamaica and the Dominican Republic first obtained preferential access to the European market under the Lomé Convention, concluded in 1975 and updated regularly thereafter. In 2000 the Lomé Convention was replaced by the Cotonou Agreement between the African, Caribbean and Pacific (ACP) countries and the European Union. This agreement offers unilateral preferences for entry into the European Union market, primarily for agricultural products, clothing and electronic components. In response to pressure from WTO, the parties concluded the new agreement with a view to abiding by WTO rules and eventually forming a reciprocal free trade area. WTO decided to allow the current system of preferences to remain in place until 2008, after which the parties will move gradually towards full liberalization, scheduled for 2020.

^b Launched in 1974, the GSP is a programme of preferences granted by developed countries to developing ones. Under this arrangement, import duties are unilaterally reduced for a wide range of products, provided that at least 35% of each product's value added is generated in the beneficiary country.

^c The enhancement of preferences under the CBTPA means that products such as canned tuna, textile and apparel articles, footwear and jewellery, among others, will no longer be subject to import duties.

^d This limit may be extended by an additional 100 million SME of fabric in 2004 as a result of a credit obtained in view of increased purchases of United States fabric and thread. Subsequently, it could increase by 200 million SME a year, without limits.

In most of the Caribbean Basin countries export promotion mechanisms have had similar features. Starting in the mid-1980s the four countries considered here established legal frameworks for EPZs that gave generous temporary tax breaks to companies operating in those zones. To complement the EPZs they established temporary admission regimes that allowed the duty-free entry of inputs and machinery used in producing goods for export. These instruments dovetailed perfectly with the production sharing mechanism introduced by the United States (see table II.5).

At the same time, these countries established regulatory frameworks to encourage and facilitate the entry of foreign firms. In this way, they gradually began

to strengthen the institutional framework for promoting investment and boosting exports. Specialized agencies were set up for this purpose, including the Costa Rican Investment Board (CINDE) and the Foreign Trade Corporation (PROCOMER) in Costa Rica, the Foundation for Investment and Development of Exports (FIDE) in Honduras, the Investment Promotion Office (OPI) in the Dominican Republic and the Jamaica Promotions Corporation (JAMPRO) in Jamaica. CINDE has been particularly successful, since it has played an active role in seeking out investors to jump-start certain strategic sectors of the Costa Rican economy. In fact, it was instrumental in bringing electronics firms, most notably Intel, to Costa Rica (see box II.4).

Table II.5
**PRINCIPAL INCENTIVES OFFERED IN EXPORT PROCESSING ZONES (EPZs) IN COSTA RICA, THE DOMINICAN
 REPUBLIC, HONDURAS AND JAMAICA**

	Costa Rica	Dominican Republic	Honduras	Jamaica
Exemption from import duties on raw materials, machinery and equipment used in the production process	Yes	Yes, for 15 years	Yes	Yes
Exemption from export taxes	Yes	Yes, for 15 years	Yes	Yes
Exemption from profit taxes	Yes, for 8 years for new investments; 75% for reinvestment	Yes, for 15 years	Yes	Yes
Exemption from local excise taxes	Yes		Yes	
Exemption from capital taxes	Yes, for 10 years			
Exemption from profit remittance taxes	Yes			

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

Box II.4
**THE COSTA RICAN INVESTMENT BOARD (CINDE): THE KEY INSTITUTION BEHIND
 THE COUNTRY'S SUCCESS**

In 1982 the efforts of prominent Costa Rican business people led to the establishment of the Costa Rican Investment Board (CINDE), with support from the government and financing from the United States Agency for International Development (USAID). The prime objective of this private, not-for-profit organization was to foster local economic development. To that end, it has worked to raise Costa Rica's profile abroad and has been very active in seeking out foreign investors and in providing advice and assistance to foreign firms setting up operations in the country. Moreover, thanks to its non-governmental status, CINDE has been able to carry out a long-term strategy without being constrained by domestic political changes.

The organization initially sought to attract FDI to sectors that made intensive use of unskilled labour. In the early 1990s, however, those activities were beginning to lose competitiveness in the country, just as USAID funding was about to be discontinued. Given those circumstances, CINDE decided to shift its focus towards attracting foreign companies to industries that

demand skilled labour. In 1993 CINDE chose three key subsectors: the electrical, electronics and telecommunications industries. That strategy proved to be particularly sound, since it led to significant improvements in the country's technological infrastructure and sweeping changes in its production structure. Thanks to the efforts of CINDE, a number of leading firms in these subsectors set up production in Costa Rica. One of them, and clearly the one with the biggest impact, was the United States chipmaker Intel.

Over its 20 years of experience CINDE has been quick to adapt its objectives. In the late 1990s the stalled United States economy and the difficulty of attracting new investment in higher technology segments posed new challenges for CINDE. Today the organization is working to support the formation of production clusters as a means of creating new high-skill jobs and boosting the country's development. In fact, one of the main competitive advantages on which it bases its promotional strategy is Costa Rica's human capital. Recently CINDE has concentrated on high-technology

industries: microelectronics, medical equipment and services, including call centres and software development. A fourth group comprises so-called special projects, including tourism, apparel and textiles. The agency has researchers who identify new investment opportunities in each of these areas. This kind of work is complemented by the efforts of the CINDE offices in New York and California, which proactively seek to expand the activities of foreign firms with operations in Costa Rica and to promote new endeavours in priority areas. In this connection, CINDE, with financial support from the Inter-American Development Bank (IDB), is working with small local companies to prepare them to become suppliers for foreign firms with a presence in Costa Rica, in order to strengthen production linkages, technology transfer and business development.

Clearly, CINDE, working with modest resources and a great deal of creativity, has assimilated successful experiences in other parts of the world and, by so doing, has made a very positive contribution to Costa Rica's modernization and development.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the Costa Rican Investment Board (CINDE) (www.cinde.or.cr); Andrés Rodríguez-Clare, "Costa Rica's development strategy based on human capital and technology: how it got there, the impact of Intel, and lessons for other countries", *Human Development Report 2001*, United Nations Development Programme (UNDP), 2001.

Thus, TNCs (primarily United States ones) invested in setting up new ISIP nodes to take advantage of the tax incentives granted by local authorities, special access to the United States market, low-cost labour¹ and proximity to the North American market.² Consequently, a growing

share of exports began to be effected under special EPZ regimes, so that apparel, electrical and electronic products and other labour-intensive manufactures quickly became some of the leading exports, bound mostly for the United States market (see table II.6).

Table II.6
COSTA RICA, HONDURAS, JAMAICA AND THE DOMINICAN REPUBLIC: GEOGRAPHICAL DESTINATION OF TOTAL EXPORTS, 1985-2002
(Percentages)

	Costa Rica			Honduras			Jamaica			Dominican Republic		
	1990	1995	2002	1990	1995	2002	1990	1995	2002	1990	1997	2002
United States	45.7	40.1	49.6	52.8	48.4	69.5	28.3	44.8	28.2	66.8	83.3	85.0
European Union	29.5	30.7	25.8	21.8	22.3	5.8	31.8	24.1	32.3	19.6	6.0	7.5
Latin America	16.5	21.2	18.2	6.4	19.3	13.9	8.4	5.6	7.0	3.8	3.1	3.4
Asia (incl. Japan)	2.3	3.3	5.3	5.1	3.2	1.2	0.9	4.2	5.7	6.7	2.0	1.7
Other	6.0	4.6	1.0	13.9	6.9	9.6	30.6	21.2	26.8	3.2	5.6	2.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from International Monetary Fund (IMF), *Direction of Trade Statistics Yearbook 2002*, Washington, 2002.

Although the phenomenon is not fully reflected in statistics, the development of the export sector in a number of small Caribbean Basin economies has to a large extent mirrored FDI inflows.³ The characteristics of this development in recent years imply that a large proportion of FDI has been channelled into manufacturing activities, particularly those associated with efficiency-seeking TNCs. Moreover, the share of United States capital is biggest in countries that have increased their capacity to export manufactured or assembled products. This pattern shows that there is a

strong synergy between trade and investment, as complementary elements in catering to specific markets.

This causal relationship is most evident, in quantitative terms, in the case of Costa Rica. Between 1997 and 2003 65% of total FDI inflows were concentrated in manufacturing activities –including categories such as electronic components and medical devices–, all under EPZ arrangements (BCCR, 2003). In Honduras and the Dominican Republic, foreign firms have been the dominant stakeholders in EPZs. As of late

¹ The impact of low wages is relative. In 1998, according to data from Werner International, Inc., hourly garment-industry wages were highest in Costa Rica (US\$ 2.52), lowest in Honduras (US\$ 0.91) and between the two extremes in the Dominican Republic (US\$ 1.48). Among the 25 countries in the world for which this information is available, Costa Rica ranked 13th, the Dominican Republic ranked 18th and Honduras ranked 25th. The United States was in fifth place, with an hourly wage of US\$ 10.12 in this industry (Mortimore, 2003).

² Firms can also take advantage of these benefits by outsourcing assembly operations to specialized firms (foreign or domestic) located in EPZs. The most sophisticated option in this regard is the so-called “full-package” model, which enables firms without an ISIP of their own –such as large retail chains– to order the finished merchandise directly from a supplier that produces it according to the design or instructions of the buyer. These services are not limited to the assembly of imported inputs, but also include other stages of production such as design, input selection and distribution of the finished product. This phenomenon is most common in East Asia and is starting to appear in Mexico, but there have been no cases of this type of activity in the Caribbean Basin (ECLAC, 2000; Gereffi, 2000; Gereffi, Bair and Spener, 2002; Gereffi and Memedovic, 2003; Gereffi and Bair, 2002; and Mortimore, 2002).

³ The real inflow of foreign investment to EPZs is hard to quantify, especially in comparative terms, owing to differences in the rules for recording such inflows and to the fact that machinery and equipment –like imported inputs– are deemed to be only temporarily present in EPZs.

2002 73% of all EPZ investments in the Dominican Republic (US\$ 1.214 billion) had been made by foreign companies, 80% of which were based in the United States. These investments were highly concentrated in just a few economic activities: apparel (37%), electronics (14%), medical equipment and instruments (12%) and tobacco and tobacco products (11%) (CNZFE, 2003). Similarly, 73% of the firms operating in Honduras's EPZs are foreign; 38% are based in the United States and nearly 30% are based in Asia (Hong Kong, Taiwan Province of China, China and the Republic of Korea). Most of these firms (61.5%) are in the garment industry (BCH, 2003).⁴ Thus, the bulk of United States investment in Costa Rica, Honduras and the Dominican Republic is export-oriented and is aimed principally at supplying the United States

market. Lastly, investment in Jamaica's manufacturing sector—more specifically in the textile and apparel articles subsector—, after having been the fastest-growing FDI segment since the mid-1980s, began to decline sharply and steadily in response to the country's fragile economic situation.

In summary, mounting international competition and the response of TNCs, which opted to establish and extend international system of integrated production, have opened up new opportunities for small economies located near large markets. The Caribbean Basin countries have tried to seize this opportunity by taking steps to facilitate inflows of FDI from efficiency-seeking TNCs, particularly in the apparel subsector.

C. STRATEGIES OF EFFICIENCY-SEEKING TNCs IN COSTA RICA, HONDURAS, JAMAICA AND THE DOMINICAN REPUBLIC

In recent years the attractiveness of Costa Rica, Honduras, Jamaica and the Dominican Republic to TNCs has changed significantly as a result of a variety of factors: the policies of host countries (export incentives), the policies of capital-supplying countries (special market access) and the new business strategies of companies seeking to establish ISIP that will enable them to reach major markets quickly, efficiently and at the lowest possible cost. Accordingly, TNCs chose some of these economies as sites for the production or assembly of manufactured goods in the framework of their ISIP.

United States firms, in particular, have made increasing use of offshore assembly to cut production costs as a way of staying competitive against their main rivals, both foreign and domestic. In so doing, they have tried to defend their market share in the United States

and enhance their competitiveness by taking advantage of low-cost assembly operations while maintaining high levels of production and employment within the country, which otherwise would not have been possible. The upshot is that United States TNCs have become key engines of investment and export growth in many Caribbean Basin countries. In the case of trade in manufactures—both finished products and inputs—, United States involvement is even greater and is concentrated in a small number of activities: apparel, electrical and electronic articles, medical equipment and other manufactures in the footwear and sporting goods categories, among others. In 2002 this set of products represented 75% of the Dominican Republic's exports to the United States, nearly 80% of Honduras's, about 60% of Costa Rica's and 33% of Jamaica's (see table II.7).

⁴ The Multi-Fibre Arrangement of the 1970s allowed countries that were major garment importers to set quotas for their supplier countries to keep their own clothing makers from being displaced. Asian exporters were among the most active in setting up operations in different EPZs to take advantage of the local economies' quotas in major markets.

Table II.7
**UNITED STATES: LEADING MANUFACTURES IMPORTS FROM COSTA RICA, HONDURAS, JAMAICA AND THE
 DOMINICAN REPUBLIC, BY TWO-DIGIT SITC CODE, 1990-2002^a**
(Percentages and millions of dollars)

		1990	1995	2000	2002
84: Articles of apparel and clothing accessories	Costa Rica	38.1	41.0	23.3	23.2
	Honduras	23.3	64.8	78.2	76.7
	Jamaica	41.7	63.4	42.5	33.2
	Dominican Republic	41.9	51.8	55.8	52.2
77: Electrical machinery, apparatus and appliances and electrical parts thereof	Costa Rica ^b	4.2	5.8	34.6	22.7
	Honduras	0.0	0.5	2.3	2.2
	Jamaica	-	-	-	-
	Dominican Republic	5.4	6.1	8.5	7.5
87: Professional, scientific and controlling instruments and apparatus	Costa Rica	0.6	2.0	5.2	10.9
	Honduras	-	-	-	-
	Jamaica	-	-	-	-
	Dominican Republic	4.6	8.4	8.3	8.7
89: Miscellaneous manufactured articles ^c	Costa Rica	3.8	4.5	1.7	2.9
	Honduras	1.9	1.5	0.9	0.9
	Jamaica	0.4	0.4	0.3	0.3
	Dominican Republic	5.3	6.0	4.7	6.6
Subtotal of the leading manufactures imports (percentages)	Costa Rica	46.7	53.3	64.8	59.7
	Honduras	25.2	66.8	81.4	79.8
	Jamaica	42.1	63.8	42.8	33.5
	Dominican Republic	57.2	72.3	77.3	75.0
Total United States imports (millions of dollars)	Costa Rica	1 006	1 842	3 555	3 146
	Honduras	486	1 441	3 091	3 262
	Jamaica	564	838	631	373
	Dominican Republic	1 725	3 385	4 378	4 167

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the United States International Trade Commission (USITC), *USITC Interactive Tariff and Trade DataWeb*, version 2.6.0, January 2004.

^a All USITC figures are based on SITC, Rev. 3, unlike the figures generated by the TradeCAN software used previously, which are based on SITC, Rev. 2.

^b Includes office machines and automatic data processing machines (division 75).

^c Basically includes jewellery, goldsmiths' and silversmiths' wares and other articles of precious or semi-precious materials (group 897); articles of plastics (group 893); and baby carriages, toys, games and sporting goods (group 894).

A major determinant of these results has been the production sharing mechanism. Operations of this type are part of the global efforts being made by United States TNCs to cut manufacturing costs, especially in North America and the Caribbean Basin. Imports with United States content can enter the United States either duty-free or at a reduced tariff under the production sharing provisions of the Harmonized Tariff Schedule (HTS), chapter 98 (formerly referred to as the 807 programme and now known as HTS 9802). While the

goods covered by these provisions represent only 6% to 10% of total United States imports, they account for a very sizeable share of the Caribbean Basin countries' exports: 30% to 40% of their total exports to the United States, and a much bigger proportion in the case of manufactures, particularly apparel (see table II.8). Indeed, between 85% and 96.5% of the Caribbean Basin countries' garment exports to the United States are effected under the production sharing mechanism (see table II.9).

Table II.8
COSTA RICA, HONDURAS, JAMAICA, DOMINICAN REPUBLIC: SHARE OF GOODS COVERED BY PRODUCTION SHARING PROVISIONS OUT OF TOTAL UNITED STATES IMPORTS, 1980-2002
 (Percentages)

	1980	1985	1990	1995	1998	1999	2000	2001	2002
Costa Rica	11.1	18.5	30.8	38.3	30.8	21.0	25.1	30.3	22.1
Honduras	...	6.7	...	46.9	63.0	69.4	61.1	49.0	33.3
Jamaica	...	21.8	28.4	54.4	52.4	45.6	38.0	39.6	30.3
Dominican Republic	11.8	28.9	40.3	57.8	63.1	65.2	62.3	49.8	37.1

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the United States International Trade Commission (USITC), *USITC Interactive Tariff and Trade DataWeb*, version 2.6.0, January 2004.

Table II.9
UNITED STATES: APPAREL IMPORTS UNDER THE UNITED STATES-CARIBBEAN BASIN TRADE PARTNERSHIP ACT (CBTPA), SELECTED COUNTRIES, 2001^a
 (Thousands of dollars)

	Production sharing			Other CBTPA preferences ^e	Other	Total	Percentage of production sharing
	CBTPA		Other				
	9802.00.80.44 ^b	9820.11.03-9820.11.18 ^c					
Honduras	921 579	537 078	533 888	1 499	349 547	2 343 591	85.0
Dominican Republic	944 014	581 844	540 149	8 925	176 713	2 251 645	91.8
El Salvador	559 272	371 813	454 164	3 468	223 012	1 611 729	85.9
Guatemala	137 712	278 681	359 176	3 039	825 370	1 603 978	48.4
Costa Rica	325 583	76 142	320 738	5 101	21 122	748 686	96.5
Nicaragua	42 229	37 661	26 993	24	267 433	374 340	28.6
Haiti	112 663	31 008	61 728	0	10 972	216 371	94.9
Jamaica	107 673	3 177	59 955	0	10 709	181 514	94.1
Other	16 017	2 043	14 376	17	8 525	40 978	79.2
Total	3 166 742	1 919 447	2 371 167	22 073	1 893 403	9 372 832	79.6

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Ralph Watkins, "Production-sharing update: developments in 2002", *Industry Trade and Technology Review*, Office of Industries, United States International Trade Commission (USITC), July 2002, on the basis of official statistics from the United States Department of Commerce, Office of Textiles and Apparel.

^a The figures include apparel subject to the old Multi-Fibre Arrangement (replaced by the WTO Agreement on Textiles and Clothing), which accounted for 97% of total United States apparel imports from CBTPA beneficiary countries in 2001.

^b HTS subheading 9802.00.80.44 accords duty-free treatment to apparel assembled in CBTPA beneficiary countries from fabrics wholly formed and cut in the United States from yarns wholly formed in the United States.

^c Includes apparel imported duty-free from CBTPA beneficiary countries under six HTS subheadings.

^d Includes apparel imported under HTS subheadings 9802.00.80.15 and 9802.00.80.16.

^e Includes apparel imported duty-free from CBTPA beneficiary countries under three HTS subheadings.

United States imports under the production sharing mechanism have fallen since 2000 because the Caribbean Basin countries have begun to receive more advantageous special treatment under other programmes (Dussel,

2004). After these countries lobbied for NAFTA parity, the United States began to implement the CBTPA, or enhanced CBI, in October 2000. The CBTPA incorporates all the benefits afforded under the CBI,

including both production sharing and the Special Access Program. What is newest and most important about this legislation is its treatment of textiles and clothing, along with the other segments that had been excluded from the benefits of the original CBI (Dussel, 2004). While the CBTPA represents a major improvement over the CBI in terms of market access, it is still significantly more restrictive than NAFTA, particularly because it imposes quotas and high tariffs on flat-weave fabrics.⁵ The conclusion of CAFTA should eliminate some of these problems, especially with respect to regional value added.

Nonetheless, while it is true that these countries' conditions of access to the United States market have progressively improved –to the point where tariff treatment is now equivalent to that enjoyed by Mexico under NAFTA–, the current situation is not enabling the local content and value added of the products exported

to the United States to increase sufficiently to allow for the industrial upgrading of these activities in the Caribbean Basin. Under the production sharing mechanism, the incorporation of local content was virtually nil and value added was extremely low; the CBTPA, for its part, did little to change that situation.⁶ This state of affairs is confirmed by the low utilization of the GSP, which requires a minimum of 35% local value added, and by the high United States content of the products which the United States imports from this group of countries under the production sharing mechanism (see table II.10). Consequently, specialization in a single market, access to which depended essentially on a single instrument, meant that the benefits for host countries were fairly limited. The recent conclusion of CAFTA could partially redress this situation (see box II.3).

Table II.10
COSTA RICA, HONDURAS, JAMAICA AND THE DOMINICAN REPUBLIC: UNITED STATES CONTENT OF TOTAL UNITED STATES IMPORTS UNDER THE PRODUCTION SHARING MECHANISM, 1980-2002
(Percentages)

	1980	1985	1990	1995	1998	1999	2000	2001	2002
Costa Rica	66.7	69.0	69.1	66.8	65.3	65.8	64.6	64.5	63.9
Honduras	...	69.8	...	71.0	71.2	70.6	68.7	69.0	67.1
Jamaica	...	72.5	74.5	80.9	81.0	81.9	80.8	77.3	74.2
Dominican Republic	67.3	71.7	69.4	65.0	62.9	64.2	62.3	62.0	61.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the United States International Trade Commission (USITC), *USITC Interactive Tariff and Trade DataWeb*, version 2.6.0, January 2004.

Below is a more in-depth analysis of some of the activities behind these international movements of merchandise and resources: apparel, electronics, medical equipment and certain services related to efficiency

seeking. This will shed more light on the benefits and problems related to the ISIP of efficiency-seeking TNCs in the Caribbean Basin.

⁵ The features that differentiate the CBTPA from NAFTA include the fact that it is temporary, is based on a variety of quotas and does not provide for a general “yarn forward” structure, meaning that the tariffs actually paid are much higher than the ones in effect under NAFTA. While NAFTA grants duty-free access to apparel assembled from fabrics formed and cut in the United States, the value added of such articles is subject to import duty under the CBTPA.

⁶ The CBTPA allows beneficiary countries to carry out a slightly higher level of processing and to incorporate a somewhat larger proportion of non-United States components than would normally be permissible for entry under HTS heading 9802. In the case of apparel, these processes include cutting, stone-washing and other processes, while the allowable inputs now include limited amounts of Mexican and Canadian fabrics.

1. Textile and apparel articles: a rootless industry⁷

The manufacture of textile and apparel articles was an important engine of industrialization in many developed countries and in some of the best-performing emerging economies in the last few decades. More recently, as industrialization processes turned increasingly to more technologically complex activities, this industry's importance gradually diminished in the first group of countries and increased in some countries of the second group. Even so, this activity became established as one

of the fastest-growing segments in international trade. Some countries (mostly Asian ones) made the most of the opportunities it offered for as long as they had the necessary comparative advantages (see box II.5). Others (nearly all of them in Latin America) achieved high export volumes on the basis of this activity, but found that this progress did not serve the purposes of industrial and technological upgrading (Mortimore, 2003b; Gereffi, Spener and Bair, 2002; Gereffi and Memedovic, 2003).

Box II.5

THREE MODELS OF ADAPTATION TO CHANGES IN THE GLOBAL APPAREL INDUSTRY

The challenges posed by the changes that have taken place in the apparel industry have forced countries to undertake processes of adaptation whose approaches differ from one region or country to another. Some countries have designed and implemented active policies for the establishment of an integrated apparel industry run by local companies. Others have used trade advantages to form special relationships with TNCs as a way of upgrading those firms' subsidiaries in the host country. Lastly, some countries have taken a passive attitude, settling for whatever is offered from outside.

(a) *The East Asian model*

The East Asian model is based on the experiences of highly successful textile and apparel exporters in Hong Kong, Taiwan Province of China and the Republic of Korea. These firms followed a sequence in which they evolved from assembly plants to original equipment manufacturers (OEM) and finally to original brand manufacturers (OBM). The newly industrialized economies of East Asia developed and refined their OEM capabilities in the 1960s and 1970s by establishing close ties with United States retailers and other stakeholders and then learning by watching in order

to build their own export capacity. Confidence in their performance, which they built through their successful dealings with United States buyers, enabled East Asian suppliers to use their OEM expertise internationally by introducing triangle manufacturing. Under this scheme, East Asian manufacturers became intermediaries between United States buyers and apparel factories in Asia and other developing regions in order to take advantage of lower labour costs and favourable quotas. The creation of these global sourcing networks helped the East Asian countries to sustain their international competitiveness when domestic economic conditions and quota constraints threatened to undermine the original bilateral relationships they had formed as OEM or full-package suppliers. The East Asian economies have gone beyond OEM by switching to higher-value-added upstream products (such as exports of textiles and yarn instead of apparel), moving downstream from OEM to OBM in apparel and joining new value chains in which they hope to replicate their export success in the apparel segment.

(b) *The Mexican model*

The emerging Mexican model involves a transition from assembly

operations to OEM production. The key factor in this case has been NAFTA, which, starting in 1994, eliminated the trade restrictions that had locked Mexico into an assembly role. The maquila system required Mexican suppliers to use United States inputs in order to gain duty-free access to the United States market. In the 10 years since NAFTA came into effect, more and more of the apparel supply chain (such as cutting, washing and textile production) has been relocated to Mexico as specific tariff restrictions in each of these phases are eliminated. The East Asian countries did not make use of the production sharing provisions established by the United States under its HTS 9802 programme because the distances involved made the use of United States textile inputs impractical. Moreover, United States textile mills had neither the output capacity nor the desire, because of their mass-production orientation, to supply the wide range of fabrics required for the manufacture of women's wear and high-fashion apparel, which became the speciality of East Asian exporters. This created an OEM niche that East Asian apparel firms were quick to exploit.

However, NAFTA alone cannot guarantee Mexico's success. While the massive peso devaluations of 1994-1995 made the country attractive to

⁷ For further details on the apparel industry in Latin America and the Caribbean, see chapter IV of *Foreign investment in Latin America and the Caribbean, 1999* (ECLAC, 2000).

(Box II.5 concluded)

United States apparel manufacturers with international subcontracting operations, Mexico has lacked the necessary infrastructure for full-package garment production. From a value-chain perspective, the solution to how to complete the transition to full-package supply and develop new production and marketing niches is to forge linkages with lead firms that can supply the necessary resources and tutelage. In other words, Mexico needs to develop new and better networks in order to compete with East Asian suppliers for the United States full-package market.

(c) The Caribbean Basin model

The Caribbean Basin model is almost exclusively limited to EPZ assembly under the HTS 9802 programme. The Caribbean Basin countries did not receive NAFTA parity until October 2000. They therefore encountered tighter quota restrictions, higher tariffs and more limited possibilities for vertical integration than Mexico. Nonetheless, they have had considerable success with export assembly. They are expanding their position in the United States market, primarily through large assembly plants

linked to the production-sharing operations of United States TNCs. However, Caribbean Basin exporters are losing ground to Mexican firms that can export similar goods to the United States more quickly and cheaply. They need to develop new networks with United States retailers and other stakeholders if they are to acquire the skills and resources they need to move into the more diversified activities associated with full-package production.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Gary Gereffi and Olga Memedovic, "The Global Apparel Value Chain: What Prospects for Upgrading by Developing Countries", *Sectoral Studies* series, Vienna, United Nations Industrial Development Organization (UNIDO), 2003.

The United States apparel industry faced intense and growing competition from Asian products, which forced the leading apparel companies to redefine their business strategies. Starting in the mid-1980s a number of United States firms launched a process of internationalizing production, making use of the comparative advantages offered by developing countries and absorbing new technologies and organizational practices that enhanced the efficiency of their global operations. Accordingly, there was a large-scale transfer of assembly operations to locations outside the United States and an increase in the share of imports in the domestic clothing market. Import penetration in the United States market, which was high to begin with, increased from 57% in 1997 to 74.5% in 2002 (AAFA, 2003).⁸ Endeavours in Asia were initially the most common, but these operations were subsequently extended to other locations. As a result, the Hong Kong

Special Administrative Region, the Republic of Korea and Taiwan Province of China gradually moved out of this industry and into other, more technology-intensive segments.

Between 1990 and 2002 the Caribbean Basin countries doubled their share of the imported clothing market in the United States, from 8.5% to 16.3%, while the Asian countries saw their share slide from 74.3% to 53.2% and Mexico consolidated its position as the primary export base, with 13% of that market. The standouts among the Central American and Caribbean countries are Honduras, the Dominican Republic, Guatemala, El Salvador and Costa Rica. Apparel accounts for a very significant share of the external sales of three of these countries, particularly Honduras and the Dominican Republic, in which this industry supplies about 80% and over 50%, respectively, of exports to the United States (see table II.11).

⁸ The sharp downturn in employment in this industry reflects sweeping changes in domestic clothing production in the United States. Between 1975 and 1995 this downturn was relatively gradual (from 1.24 million to 0.9 million jobs), but between 1995 and 2002 the number of jobs fell off suddenly, from 935,800 to 520,800 (AAFA, 2003).

Table II.11
UNITED STATES: APPAREL IMPORTS
(SITC, Rev. 3, 841-845), BY COUNTRY OF ORIGIN, 1990-2002
(Millions of dollars and percentages)

	1990	1995	1998	2000	2001	2002	1990	1995	2000	2002
	Millions of dollars						Percentages			
Asia	16 355	21 357	26 009	29 986	29 759	30 087	74.3	59.6	52.6	53.2
China	3 064	4 477	5 416	5 907	6 080	6 646	13.9	12.8	10.4	11.8
Hong Kong	3 813	4 223	4 415	4 454	4 153	3 861	17.3	12.1	7.8	6.8
Indonesia	615	1 172	1 642	2 034	2 178	2 025	2.8	3.4	3.6	3.6
India	570	1 151	1 531	1 787	1 738	1 903	2.6	3.3	3.1	3.4
Rep. of Korea	2 163	1 553	1 763	2 023	1 928	1 792	9.8	4.5	3.5	3.2
Philippines	950	1 431	1 686	1 836	1 830	1 768	4.3	4.1	3.2	3.1
Bangladesh	419	996	1 493	1 933	1 923	1 754	1.9	2.9	3.4	3.1
Thailand	424	1 022	1 436	1 803	1 807	1 715	1.9	2.9	3.2	3.0
Taiwan Province of China	2 079	1 808	1 877	1 813	1 548	1 355	9.5	5.2	3.2	2.4
Viet Nam	0	8	22	41	42	868	0.0	0.0	0.1	1.5
Malaysia	462	667	707	772	753	715	2.1	1.9	1.4	1.3
Other Asian	1 796	2 849	4 021	5 583	5 779	5 685	8.2	6.5	9.7	10
Mexico	636	2 743	6 486	8 329	7 739	7 344	2.9	7.9	14.6	13.0
Caribbean Basin	1 879	5 229	7 994	9 279	9 218	9 192	8.5	14.6	16.3	16.3
Honduras	112	931	1 895	2 399	2 413	2 457	0.5	2.7	4.2	4.3
Dominican Rep.	679	1 688	2 263	2 328	2 190	2 089	3.1	4.8	4.1	3.7
Guatemala	185	676	1 128	1 479	1 608	1 655	0.8	1.9	2.6	2.9
El Salvador	54	568	1 080	1 507	1 544	1 555	0.2	1.6	2.6	2.8
Costa Rica	373	729	794	762	681	637	1.7	2.1	1.3	1.1
Nicaragua	0	74	232	337	380	433	0.0	0.2	0.6	0.8
Jamaica	224	414	333	181	141	121	1.0	1.2	0.3	0.2
Other Caribbean	252	149	269	1 765	261	245	1.2	0.1	0.6	0.5
Other regions	3 130	5 528	7 564	9 427	9 740	9 903	14.3	17.9	16.5	17.5
Total	22 000	34 857	48 053	57 021	56 456	56 526	100.0	100.0	100.0	100.0

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the United States International Trade Commission (USITC), *USITC Interactive Tariff and Trade DataWeb*, version 2.6.0, December 2003.

Nonetheless, the very nature of the production sharing mechanism (HTS 9802) and the characteristics of the incentives offered, which reflect the keen competition to attract FDI to the Caribbean Basin countries, have had the effect of keeping domestic value added very low (see table II.9). Some 79% of United States apparel imports from the Caribbean Basin in 2001 entered under the production sharing arrangement, compared to 50% of those from Mexico and 1% of those from China (Watkins, 2002). In addition, given the importance of wages in the finished product, the transfer of assembly operations to locations with relatively cheap labour is an essential feature of TNCs' efficiency-seeking strategies. In fact, apparel accounts for about 75% of the total duty savings achieved on United States merchandise

imports under production sharing provisions (Brookhart and Watkins, 2000). Thus, the garment industry's existence in the subregion is basically contingent on wage levels, and there is little opportunity to make use of local physical inputs (Buitelaar and Padilla, 2000).

The fact that the sector is forced to use expensive United States inputs casts doubt on these countries' real competitiveness. What is more, the situation will be even more problematic when the transition period provided for in the WTO Agreement on Textiles and Clothing expires, owing to the expected massive inflow of inputs and finished products from Asia, primarily China.

In addition to the changes that have taken place on the production side, marketing has also been significantly transformed. Buyer-driven chains have gradually

replaced producer-driven ones. In the United States market, large retailers (Sears, Wal-Mart, J.C. Penney, Kmart) and branded marketers (Nike, Polo, Tommy Hilfiger) have acquired more influence over the entire marketing chain (Gereffi, 2001; Sturgeon, 2002). In these circumstances, Asian suppliers took on a more important role by switching to full-package production, edging out United States clothing makers. This change strengthened domestic Asian firms that were capable of organizing all phases of apparel production –from inputs to completed products– and, in the process, boosted the development of the local production system.

In contrast, the situation of this industry in the small Caribbean Basin countries is very different. In general, the manufacturers operating in these economies are subsidiaries of foreign branded manufacturers (especially of women’s undergarments) or domestic or foreign firms that compete for assembly contracts (particularly for men’s wear) from large United States retailers. This is why the full-package concept has not flourished in the Central American and Caribbean countries, since their competitive advantages are derived strictly from the characteristics that make them well-suited to final product assembly: EPZs, preferential access to the United States and low wages.

There are three kinds of apparel firms in the Caribbean Basin, each of which approaches its competitive position differently:

- Large subsidiaries of United States TNCs that have set up ISIP nodes in the subregion. Examples of these are firms that manufacture apparel, especially undergarments, for export to the United States; these include leading branded manufacturers such as Sara Lee (Hanes, Bali, Playtex, L’eggs), Fruit of the Loom (Fruit of the Loom, BVD, Gitano, Munsinger) and Warnaco (Warner’s, Olga, Lejaby). They usually have subsidiaries in three or four countries of the subregion. If the competitive position of their subsidiaries’ host countries changes, these firms react by adding or cutting back on assembly lines, without having to pull out of the site completely except in extreme circumstances. Accordingly, they add new assembly lines at sites where competitive conditions improve and cut back on them where such conditions worsen;
- Smaller United States manufacturers of other apparel items, which serve as subcontractors of bigger companies (either producers or buyers). These are generally companies that have been forced out of the United States under strong competitive pressure from Asian imports and have set up operations in the Caribbean Basin in a bid to survive. The ones

that operate at a single site tend to look for a better one when competitive conditions worsen. The “fly-by-night” firms mentioned earlier are in this category;

- Small domestic firms that can combine apparel manufacture for the domestic market with subcontracting for bigger firms (either producers or buyers). Since they usually have no subsidiaries in other countries, any downturn in competitive conditions tends to force them to engage in other activities in order to survive.

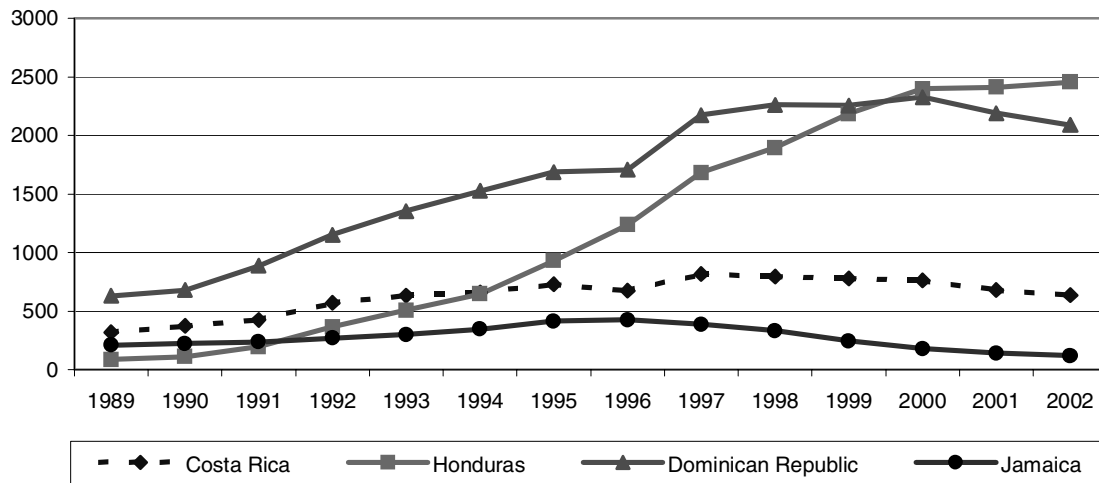
Of these three categories of apparel firms in the Caribbean Basin, subsidiaries of large TNCs are the ones that are best able to adapt to changing competitive conditions in the subregion’s countries.

In the four countries considered, this industry has had varying degrees of success in terms of apparel exports to the United States (see figure II.1). Although the Dominican Republic was once the strongest performer, it has been overtaken by Honduras. Costa Rica was in second place until 1994, when a quota dispute arose with the United States government. Even though WTO ruled in favour of Costa Rica in the dispute, the Costa Rican apparel industry has lost momentum since then. Jamaica used to be in third place, but problems deriving from macroeconomic stability, such as the local currency’s appreciation against the United States dollar, caused the subsector to lose competitiveness, as reflected by the decline in apparel exports to the United States since 1996. Although Honduras ranked fourth in the early 1990s, it subsequently turned in the best performance because it offered the lowest wages in the industry. Thus, these four countries achieved widely diverging results over the period considered.

In Honduras this industry has become highly specialized in knitwear, which represents 63.2% of its apparel exports to the United States and consists mainly of T-shirts, sweaters and brassieres, in addition to mass-market clothing. The Dominican Republic specializes in mass-market men’s wear –pants of all types, undergarments and T-shirts– and, to a lesser extent, women’s wear (pants and undergarments). Costa Rica’s apparel industry has focused primarily on knitted undergarments for women and girls, particularly brassieres, panties, nightdresses and pajamas, which account for more than 40% of the industry’s exports. Jamaica’s small production base is currently highly concentrated in T-shirts of knitted fabric, which represent just under half of its sales to the United States market.

The apparel industry’s loss of competitiveness in Costa Rica, Jamaica and the Dominican Republic is also

Figure II.1
**UNITED STATES: APPAREL IMPORTS (SITC, Rev. 3, 841-845) FROM COSTA RICA, HONDURAS,
 JAMAICA AND THE DOMINICAN REPUBLIC, 1989-2002**
 (Millions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the United States International Trade Commission (USITC), *USITC Interactive Tariff and Trade DataWeb*, version 2.6.0, December 2003.

attributable to external factors. Starting in 1994 the impact of Mexico's improved access to the United States market under NAFTA was most keenly felt in Costa Rica and Jamaica, especially in terms of their jeans exports (ECLAC, 2000, chap. IV). In contrast, the Dominican Republic's shipments to the United States continued to grow, enabling it to reorganize production in its assembly plants and to modernize its facilities with new machinery, equipment and technology. Increased productivity, combined with the containment of labour costs, were key determinants of this phenomenon (Buitelaar, 2000).

Despite these gains in terms of market share, the situation of the apparel industry in the Caribbean Basin countries is a far cry from what it has become in the Asian economies. For one thing, the former group of countries exports to only one market –North America, and particularly the United States– and the sector's impact in terms of industrialization and development of the production system has been much less pronounced. In this regard, the very nature of the production sharing mechanism has exacerbated these problems by accentuating the fragility of the production system's development and generating a form of competitiveness

that is temporary rather than lasting (Mortimore, 2003b; Vergara, 2004; Schrank, 2003). In none of the cases considered has the production sharing mechanism resulted in the development of major supply chains or of locally produced yarn, thread, fabric or accessories. Likewise, TNCs have done very little to boost industrial and technological upgrading in the host countries through technology transfer, production linkages or business development. Some progress has been made in terms of human resources training, but only from a strict "cost centre" approach.

Lastly, the industry's future prospects –particularly in Honduras and the Dominican Republic, where it is still very important– are not very promising, and questions arise as to the competitive development of this activity. The growth of competition as a result of China's engagement in world trade and changes in some of the rules of international trade, such as the WTO agreement that export subsidies should be eliminated by 2007, the phase-out of the Multi-Fibre Arrangement and the phase-in of new requirements under the Agreement on Textiles and Clothing, together with the loss of competitiveness vis-à-vis Mexico in terms of rules of origin, labour costs, tariffs and transport costs, have darkened the outlook

for attracting new investment and strengthening export activities.⁹

In summary, the four economies analysed started out in similar circumstances but achieved different degrees of success, as measured by their share of United States imports. All of them, however, share certain core

characteristics: on the positive side, they attracted important ISIP nodes of United States corporations; on the negative side, they did not reach the level of industrial and technological upgrading needed to sustain exports, and some of these countries are caught in the low-value-added trap.

2. The electronics industry: a broken chain?

In the 1990s the presence of electronics-industry TNCs in the Caribbean Basin countries was concentrated in Costa Rica. As part of their strategy of efficiency seeking with a view to capturing export markets, several electronic components manufacturers chose Costa Rica because of its high-quality human resources, proximity to the United States market, appropriate service infrastructure, EPZs and special access to the United States market, basically through the production sharing mechanism.

High-technology firms first came to Costa Rica in the 1970s, with the most notable arrival being Motorola. In the 1980s, while the subregion was going through a period of political and economic upheaval –including a number of civil wars–, Costa Rica was an exception, and therefore attracted new firms in the electronics subsector. However, this activity did not really take off, in the sense of attracting large inflows of FDI and generating an export boom, until the mid-1990s. In 1995 the country saw the arrival of the United States firms DSC Communications Corporation –which made the biggest manufacturing investment ever recorded in Costa Rica up to that time– and Sawtek Merrimac.

As the first electronics firms were setting up operations in Costa Rica, the country was progressing towards the design of a national strategy for boosting certain areas of production. To that end, the authorities drew up proactive policies for channelling investment into the electronics industry. A determining factor in their change of orientation was a 1995 study, prepared by the World Bank's Foreign Investment Advisory Service

(FIAS), that gave a positive assessment of the country as a possible site for investments in high-technology industries. The new strategy set the objectives of progressing towards skill-intensive activities and developing competitive advantages based on high-technology activities. In fact, Costa Rica had been losing competitiveness in the apparel industry and its prospects in that area were not encouraging, given the implementation of NAFTA. The Costa Rican authorities therefore decided to redirect their efforts towards attracting FDI to certain incipient subsectors such as electronics. The country's new image highlighted its political stability, geographical location and relatively high levels of education and human development, as well as the authorities' commitment to a development strategy based mainly on electronics, in contrast to the prior emphasis on apparel.

Thanks to the experience it had gained in facilitating the arrival of DSC Communications Corporation and Sawtek Merrimac, CINDE was able to play a key role in implementing the new strategy for attracting investment (see box II.4). The crowning achievement in this regard was the arrival of Intel, the industry leader in the manufacture of microprocessors, whose decision to open a plant in Costa Rica helped to strengthen the new strategic approach. Intel's arrival was significant not only because of the size and economic impact of its investment, but also because it raised the country's profile as a possible site for other leading high-technology firms (see box II.6).

⁹ Under the WTO Agreement on Subsidies and Countervailing Measures, all countries with a GNP per capita of more than US\$ 1,000 per annum must eliminate export subsidy programmes by 2007. This means that producers in the Dominican Republic will face much stiffer competition in the United States market. Moreover, under the Multi-Fibre Arrangement and the Agreement on Textiles and Clothing, apparel manufacturers will be subject to all the rules and procedures set out in the General Agreement on Tariffs and Trade (GATT) by the end of 2004.

Box II.6

SETTING ITS SIGHTS ON INTEL: THE IMPACT ON COSTA RICA

In the mid-1990s Intel was looking for a new site for a microprocessor assembly and testing plant. The main criteria for its decision included economic and political stability, economic openness, an adequate labour supply, a business-friendly environment, streamlined administrative procedures and, owing to the labour-intensiveness of the work to be performed in the new plant, a location well suited to a cost-cutting strategy (Mortimore and Vergara, 2004).

The significance of Intel's selection of Costa Rica is apparent in the light of its decision-making process (Shiels, 2000; Spar, 1998). Its long list of possible sites included both Asian countries (Indonesia, Singapore, India and Thailand) and Latin American ones (Mexico, Chile, Argentina, Brazil and Costa Rica). During the selection process the Costa Rican authorities decided to negotiate directly with the company. They felt that Intel's investor profile fit the country's new strategy and represented a good starting point for channelling FDI into high-technology activities (Salazar, 1998). Initial contact with Intel was made by the director of the CINDE office in New York, probably in 1995. As the first fruit of this effort, in early 1996 Intel sent a team of legal, tax and site selection experts to Costa Rica, whose activities were coordinated by the CINDE investment programme staff. Intel staff made numerous trips to the country in 1996, visiting the plants of firms such as Motorola and DSC Communications. Conversely, as part of the negotiations, CINDE executives toured the company's Arizona facilities. The preparatory process even included a visit by the then-President of Costa Rica, José María Figueres.

As the evaluation progressed, Intel became more and more convinced that the new plant should be located in Latin America. As a result, the short list of candidates consisted mainly of Latin American countries, including Brazil, Chile, Costa Rica and Mexico, while the only remaining Asian countries were Indonesia and Thailand. After painstaking study, the competition came down to Mexico and Costa Rica.

Although Mexico had considerable advantages, such as a more fully developed electronics subsector, appropriate labour costs and skills and proximity to the United States, Intel finally settled on Costa Rica because the country had demonstrated good organization and targeting in its negotiations with the firm. Also important in this regard was the authorities' willingness to act quickly and efficiently to accommodate Intel's needs.

Among the specific government actions that facilitated the firm's arrival were the modification of the programmes of study of the Costa Rican Institute of Technology (ITCR); the building of two electricity substations and the setting of special rates; a variety of road projects to facilitate the plant's construction and the transport of its products; an "open skies" policy to increase the frequency of flights between Costa Rica and the United States; the opening of consulates in the Philippines and Malaysia, where Intel already had assembly and testing plants; and the establishment of an exclusive-use call centre (Spar, 1998). In addition, to make certain of fully meeting the firm's requirements in setting up the plant and putting it into operation, the authorities mounted an all-out effort to coordinate the various spheres of government, such as CINDE, the Ministry of Energy and the Environment, the Ministry of Finance and ITCR. Thus, Costa Rica offered not only stability, a low-cost bilingual workforce and tax and tariff incentives for free-zone exports, but also flexibility and an institutional structure that would facilitate Intel's establishment in the country.

Five years after Intel's arrival, the impact it has generated is significant at both the macroeconomic and microeconomic levels. In terms of aggregate impact, the most obvious effects are those on Costa Rica's GDP, FDI inflows and exports. Intel's initial investment amounted to US\$ 400 million and was reflected in the country's growth rate: in 1999 Costa

Rica's economy grew by 8.4%, but if the "Intel effect" had been excluded this figure would have reached only 3% (Bortagaray, 2001). The impact on exports and competitiveness, meanwhile, has been tremendous. External sales rose fast enough to turn the country's US\$ 500-million trade deficit in 1997 into a US\$ 600-million surplus in 1999, the first positive balance in 50 years. In addition, the contribution of trade to GDP increased from 57% in 1991 to more than 83% in 1999. Moreover, the country's competitive position in the United States market has changed radically in recent years as a direct result of Intel's impact (see table II.1).

Another aggregate effect is the one observed in terms of the country's image. Intel's decision, taken after a rigorous selection process, has given Costa Rica a "certificate of quality", and many other firms are looking to this country as a possible investment site (Rodríguez-Clare, 2001). Even more significantly, several companies (Remec, Sawtek, Reliability, Protek and Sensortronics) have already set up operations in the electronics subsector, while others have done so in activities such as medical equipment manufacturing (Abbott and Baxter). At the same time, Intel "satellite" firms have established subsidiaries in the country (Robotic Vision Systems, Inc. (RVSI), Nortek, Tiros and Delta Design, among others). These subsidiaries generally have few employees and do not contribute much to the creation of an electronics cluster, but they are examples of how Intel's presence has given rise to a range of activities that go beyond the operations of Intel itself.

Intel's impact has also been significant at the microeconomic level. In terms of linkages with other kinds of activities, some of the firm's suppliers, for example, have received direct training from Intel, revamped their organizational practices or even changed their product lines as a result of Intel's arrival. Moreover, there is evidence that Intel has generated changes in the inputs market that

(Box II.6 concluded)

have even benefited its competitors (Larraín, López-Calva and Rodríguez-Clare, 2001). In the area of human resources, Intel employs some 2,200 people at relatively high pay levels. Training is provided in two ways: training of Intel's own workforce, which is usually quite specific and generates few externalities, and collaboration with ITCR. In view of this relationship, ITCR has adapted its programmes to meet the need for professionals trained in semiconductor fabrication; Intel, meanwhile, promotes teacher training, awards scholarships and donates equipment to build institutional capacity in the area of

electronics. In terms of logistics, Intel's arrival lured companies such as Federal Express, United Parcel Service (UPS) and AirExpress International to Costa Rica. Thus, the benefits produced span the areas of technology transfer, production linkages and human resources and business development, albeit with differences in terms of their extent and depth. Costa Rica's potential for software development was demonstrated by two decisions taken by Intel in 2001: to establish a centre for software development and semiconductor design and to invest in one of the country's leading software firms.

What is wrong with this picture, of course, is that local value added is still low, with the result that linkages with the local economy are limited. Most of the work still consists of manual assembly and visual quality control. It must be admitted that, owing to the nature of the product, not much can be expected in terms of supplying physical inputs. In the end, the way to benefit from this type of investment is to attract a number of investment projects similar to Intel's to generate a cluster of interrelated activities. In any event, it is clear that Intel's impact has been very significant, but needs more time to create competitive advantages.

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

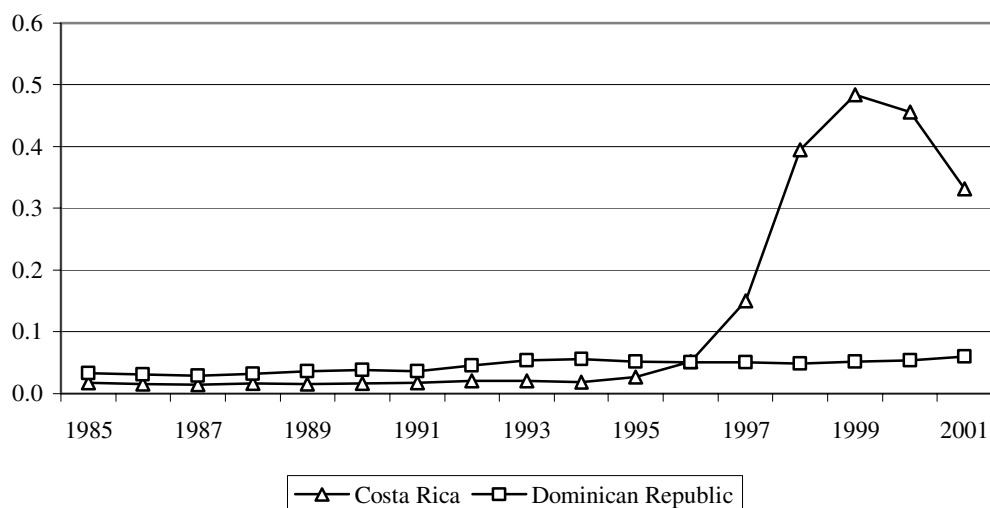
Costa Rica now hosts some 50 electronics firms directly employing about 10,000 technicians and professionals (www.cinde.or.cr). In addition to Intel and the two pioneering companies mentioned earlier, Remec, Conair, Reliability, Protek, Sensortronics and Colorplast have operations in the country. Intel "satellite" firms such as RVSI, Nortek, Philips, Tiros and Delta Design have also established subsidiaries there. The firms in this group are the ones that have given exports the biggest boost and are the main generators of employment in EPZs, where pay levels are 20% higher than in the rest of the private sector (Robles, 2000). These firms have also enabled a number of local companies to compete successfully in the software industry, making Costa Rica the leading exporter (per capita) of this product in Latin America (Rodríguez-Clare, 2001).

The impact of the operations of Intel and other electronics firms is directly reflected both in the spectacular growth of exports and in the shift in their composition. In terms of its market share of North American (United States and Canadian) electronics imports, Costa Rica had a very small share until 1995, after which its share leapt from 0.05% in 1996 to a peak of 0.48% in 1999 (see figure II.2). Major changes also took place in its export structure (see table II.1). In 2001

its external sales of electronics, primarily microprocessors, totalled US\$ 1.3 billion (26% of total exports) (www.procomer.com). Thus, the dramatic upsurge in FDI and in electronics exports, together with the formation of an institutional structure capable of targeting a specific type of FDI, have made Costa Rica one of the "winners" in terms of enhanced competitiveness (UNCTAD, 2002).

Costa Rica's pursuit of the Intel investment enabled it to learn some important lessons and to continue to wage its investment promotion campaign consistently, in the context of a better-defined national strategy. To the extent that the country consolidates its strategic framework, firms may expand their operations and form a cluster of interrelated activities. This plan entails a number of risks, however, and demands ongoing assessment of the results with a view to making any changes deemed necessary. In practice, electronics firms occupy market segments characterized by fierce international competition, owing to the key role of technological innovation in this industry. Since they belong to ISIP, they need to take global decisions concerning the advantages of locating in a given country. When this happens, the incentives offered by individual countries to attract these firms are less important. This means that if advantages in terms of

Figure II.2
COSTA RICA AND THE DOMINICAN REPUBLIC: MARKET SHARE OF THE ELECTRICAL AND ELECTRONIC PRODUCTS SUBSECTORS IN NORTH AMERICAN IMPORTS^a
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the TradeCAN software, 2002 edition.

^a Includes 11 product groups in divisions 71, 75, 76 and 77 of SITC, Rev. 2.

human resources, local suppliers and other factors are not maintained and constantly regenerated, firms may decide to close their operations.

Costa Rica has demonstrated a growing capacity to carry out a proactive strategy that demands coordination among its institutions and a commitment to national priorities and objectives and to finding ways to link these aims to the strategies of TNCs that are reconfiguring their global ISIP. The Intel experience shows how a small developing country can understand and visualize the strategies of TNCs with a view to coordinating its development policies with those strategies and achieving mutual benefits. In the future, this country's primary challenge will be to attract more firms in order to form an electronics cluster and forge more linkages with the rest of the economy.

The Dominican Republic has also begun to achieve solid growth in the electronics subsector, albeit on a considerably smaller scale (see figure II.2). Electronics firms currently account for 5% of all the companies operating in EPZs, electronics exports amount to some US\$ 500 million and investments in this area represent about 14% of the total (Vergara, 2004). In addition,

electrical apparatus for making electrical circuits (SITC group 772) has become the country's seventh most important export (see table II.2). Moreover, the Dominican Republic is trying to follow in Costa Rica's footsteps by developing an FDI targeting strategy. The poor outlook for the development of the apparel industry has prompted the authorities to make some initial efforts to bolster TNC activities in high-growth, technology-intensive segments. Accordingly, to diversify EPZ activities and increase the use of high technology, the government, together with private investors, created the Santo Domingo Cyberpark. The aim of this, the first technological free-zone industrial park, is to use telecommunications infrastructure to lure manufacturers of computer hardware and software and medical instruments, in addition to providing a range of telecommunication services.

In short, Costa Rica's success in the field of electronics indicates that the apparel industry's loss of competitiveness is forcing the Caribbean Basin countries to identify realistic options for designing and implementing the new policies that the situation demands.

3. Medical devices: the new frontier

Costa Rica and, to a lesser extent, the Dominican Republic have begun to see the arrival of a new group of manufacturers: producers of medical devices. The key element attracting these new ventures is the availability of a well-educated, high-quality workforce at very competitive wages.

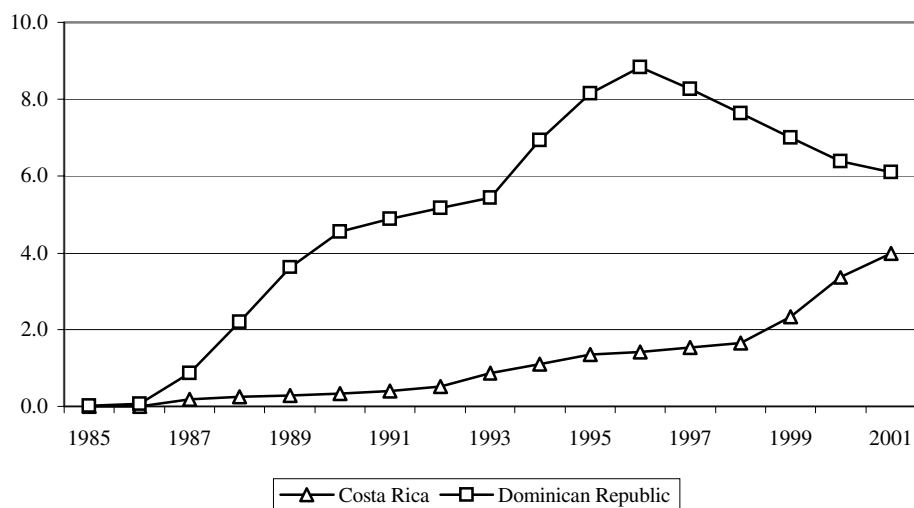
About 15 medical instruments companies employing over 3,000 people are now located in Costa Rica. Between 1999 and 2002 the medical technology industry became the fastest-growing segment of the Costa Rican economy, with export growth of over 200%. Medical devices are the country's fourth most important export (see table II.1) and have gradually gained market share in North America (see figure II.3). The principal foreign firms with locations in Costa Rica are Abbott Laboratories and Baxter Healthcare Corporation. In 1987 Baxter became the first company in this subsector to position itself in the Costa Rican market. It began production in 1991 and has continued to expand since then. It now manufactures some 200 products and employs nearly 1,400 people. Abbott Laboratories set up operations in the country in 1999, with a US\$ 60-million investment. Today it has about 1,200 employees.

As in the earlier case of the electronics subsector, the Costa Rican authorities saw the arrival of these firms as an opportunity to create a production cluster for the manufacture of medical devices in the country. In 2002 they launched a project to design a specific action plan for better coordinating the factors that affect activities in the medical devices subsector, eliminating obstacles and seizing the opportunities identified as priorities.

One of this industry's advantages over electronics is that it is among the ones that purchase the most inputs on the local market. For this reason, special attention is being paid to the supplier chain which firms in this area are generating in the country. For example, Baxter buys plastic packaging or molds and certain other locally produced goods in Costa Rica. The medical instruments and appliances subsector is the one that makes the most use of high-value-added production chains and involves the widest participation by local firms. New investments in this industry are expected in the next few years, since these plants are among the most efficient in the world.

In the case of the Dominican Republic, the rapid erosion of its competitiveness in this area (see figure II.3) shows that success may be short-lived if it is not backed up by dynamic policies that are quick to respond to changes in the country's comparative advantages.

Figure II.3
COSTA RICA AND THE DOMINICAN REPUBLIC: MARKET SHARE OF NORTH AMERICAN IMPORTS OF MEDICAL INSTRUMENTS AND APPLIANCES (SITC, Rev. 3, 872)
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the TradeCAN software, 2002 edition.

4. Efficiency seeking in the service sector

In recent years, given the global trend towards outsourcing and the technological advances made in the field of telecommunications, the Caribbean Basin countries have attracted FDI for the establishment of companies providing specialized services. The workforce profile, beyond the availability of low wage levels, is of paramount importance for this type of activity. In general, these firms demand bilingual (English- and Spanish-speaking) personnel with specific knowledge in the areas of information technology and electronics, among other qualifications. The relatively high quality of Costa Rica's human capital and the existence of an adequate technological platform for telecommunications were the factors that led to the proliferation of call centres, business centres, data centres, software developers and shared

services for the delivery of back-office functions, all under free-zone regimes. These firms seek efficiency through outsourcing or the establishment of subsidiaries abroad that can provide high-quality service at lower cost. The most successful operations of this type in Costa Rica include Procter & Gamble (P&G), with 28 administrative services (finance, human resources, logistics) for 55,000 P&G employees of 16 subsidiaries in the United States, Canada and Latin America (see box II.7), and Sykes, with a specialized call centre providing technical support and customer service in several different languages and regions. Since 2001 services of this kind have been receiving considerable amounts of FDI, on the order of US\$ 56 million annually (BCCR, 2003).

Box II.7

PROCTER & GAMBLE: REAPING THE BENEFITS OF COSTA RICA'S EDUCATION POLICY

Many efficiency-seeking firms are transferring some of their administrative, logistical and operational functions, as well as the technological elements of their business (back-office functions), beyond the borders of their home countries. The purpose of these cross-border movements is to build competitiveness on the basis of labour cost savings. As United States employees became more averse to performing certain tasks, such as telemarketing, firms began to transfer these operations to countries with a low-cost, well-prepared workforce. Moreover, in view of the increase in the number of knowledge workers—who, it is estimated, will contribute 75% of United States GDP in 2024—and the growing importance of managing them, more jobs that are less knowledge-intensive can be moved offshore (Hodges, 2003).

Procter & Gamble was one of the first companies to adopt this strategy, which led to the establishment of three call centres (Global Business Services) in the Philippines, the United Kingdom and Costa Rica. These centres bring

together business activities such as accounting, human resource systems, order management and information technology into a single global organization to provide these services to all P&G business units at best-in-class quality, cost and speed (Procter & Gamble, 1999).

The biggest and most important of these centres is located in San José, Costa Rica, and serves the entire western hemisphere. With a US\$ 60-million investment, some 300 jobs were created in 2000 and the centre expects to have about 1,200 bilingual, university-educated employees by 2005 (Luxner, 2000). Projections indicate that this location will save the company about US\$ 100 million a year (Country Monitor, 2000).

The selection of Costa Rica was not based on any special or extraordinary incentive. P&G was offered the standard package of eight-year tax and tariff exemptions. The determining factor was the quality, skill and flexibility of the local workforce, even though labour costs are higher in Costa Rica than in other Central American countries and

Mexico. P&G needed an educated, multilingual workforce, and found it in Costa Rica. In addition, the combination of proximity to the United States and location in the same time zone enables the centre to stay in constant contact with the home office. These factors, along with the country's history of political stability, transparency and appropriate infrastructure, put San José ahead of its competitors, which included Caracas and Mexico City.

Although the quality of Costa Rica's labour force was a key factor in the firm's decision, there are still some weaknesses in terms of English-language proficiency in areas such as accounting and finance. To address these problems, P&G is providing English courses for staff working in these areas, advising them that without an adequate mastery of the language, their opportunities for advancement within the company will be limited. It is expected that, in the future, more advanced P&G operations will be handled from Costa Rica.

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

D. CONCLUSIONS

Mention was made, at the end of chapter I of this report, of the gaps that sometimes emerge between host countries' expectations and the problems associated with the different strategies of TNCs investing in the region. In relation to TNCs that seek efficiency with an eye to capturing third markets, host countries aspire to improve the competitiveness of their manufactures exports, gain access to new technologies, train their human resources, deepen production linkages, boost domestic business development and, in more advanced cases, evolve from an assembly platform into a manufacturing centre. And yet the experiences considered in the region suggest that there are specific problems associated with efficiency-seeking strategies: stagnation at the level of basic assembly, concentration in static rather than dynamic advantages, limited linkages, strong dependence on imported inputs, slow progress towards the formation of production clusters and the crowding out of local businesses. As noted in the introduction to this chapter, two problems arise in relation to TNCs that seek efficiency based on cheap labour: (i) the advantages that initially attract such FDI are not sustainable over time, and (ii) the countries involved risk falling into the low-value-added trap. Consequently, with few exceptions, there is a wide gap between expectations and results in the Caribbean Basin countries, and this implies that the competitiveness achieved by these countries is more illusory than real (see box II.8).

What is most remarkable about the Caribbean Basin's competitive position is that many countries still cling to outdated arrangements that offer little opportunity to achieve genuine competitiveness. Unlike

the Asian EPZs, many of which were converted into industrial zones and became linked to science and technology parks (ESCAP, 1994), the Central American and Caribbean EPZs often get stuck in a rut. The impact of the transmission mechanisms associated with technology transfer and absorption, the building and deepening of production linkages, human resources training and business development has clearly been more limited than or different from what has generally been assumed in the literature on spillovers (see chapter I).

In summary, these countries have succeeded in attracting ISIP nodes of leading United States TNCs seeking to cut production costs in order to compete better with Asian imports in their own market. Unfortunately, these countries have reaped little benefit from this achievement in terms of the industrial and technological upgrading of the activities in question, since the advantages they used to attract TNCs were not sustainable and, instead, caused them to fall into the low-value-added trap.

However, these countries do have options for breaking out of the impasse represented by the production sharing mechanism in the apparel industry. Costa Rica, in particular, has shown the way in this regard. The essence of the country's success is that it was based on the design of a national strategy for developing the production system that involved setting priorities, designing policy tools and establishing appropriate institutions for meeting the primary goals, defining the role of FDI and TNCs within the national strategy and using the technique of targeting a specific kind of FDI and then working to attract the TNCs best suited to the strategy formulated.

Box II.8

ILLUSORY OR GENUINE COMPETITIVENESS?

If a kind of textbook were to be prepared on the apparel industry's capacity to propel the process of industrialization and production-system development in the Caribbean Basin countries, some interesting conclusions could be drawn from their experience. First, in terms of intensifying the industrialization process, reliance on the production sharing mechanism (HTS 9802) actually truncates the domestic industrialization process in respect of apparel. Only the assembly stage is located in the country and, aside from labour, no significant local inputs are incorporated into the final products. Moreover, the tax incentives offered for EPZ activities so limit the fiscal revenues generated by this central export activity that it cannot be said to provide resources for public-sector tasks such as stimulating the national industrialization process, promoting new exports and improving the economy's systemic competitiveness through the development of infrastructure and basic services, and even the training of human resources to perform more

sophisticated and better-paid kinds of work.

Second, as regards gaining genuine competitiveness, it is increasingly clear that these apparel exports are not linked to the domestic economy in any integral way. They are competitive only in the United States market, not in other markets. The question that needs to be asked is whether the apparel industry is creating domestic companies that evolve into major players in international markets, as did the full-package suppliers in Asia. The answer, however, is that the opposite occurred when the opening-up of the countries' economies gave rise to competition from imports that destroyed most of the integrated operations of domestic firms built on import-substitution-based industrialization. These firms do not have a Caribbean Basin network of assembly operations, and their fortunes wax or wane in keeping with demand from the United States market. Even their ability to compete for buyers' contracts is severely limited by the size and characteristics of the local economy and by whether they can manufacture (rather than just

assemble) apparel. They have a hard time surviving because their operations are not integrated.

It is clear, then, that the assembly model of the apparel industry in the Caribbean Basin contributes very little to the development of the production system. It is based on a mechanism designed exclusively to make United States apparel firms more competitive in their own market. What is needed is a mechanism that explicitly and consciously aims at strengthening the long-term growth of the host economy, and especially at achieving a steady rise in per capita income. The current model truncates domestic industrialization instead of deepening it. Also, instead of producing exports that represent the international extension of the industrialization process, it involves the simple assembly of foreign components. Such assembly activities were a starting point for the industrial activities of some Asian countries, but those countries had policies that promoted integrated activities as a means of developing the production system. Lastly, instead of giving birth to domestic companies that evolve into global competitors, the assembly model threatens their very existence.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Michael Mortimore, "Illusory Competitiveness: The Garment Assembly Model in the Caribbean Basin", *Comercio exterior*, vol. 53, No. 4, Mexico City, April 2003.

III. INVESTMENT AND BUSINESS STRATEGIES IN THE AUTOMOTIVE INDUSTRY

A. INTRODUCTION

International systems of integrated production (ISIP) designed to increase the efficiency of FDI-based TNCs are bringing about significant changes in the industries that adopt them. Two of the most strongly affected sectors have been the electronics and automotive industries. It may therefore be useful to examine the principal changes that have taken place in the electronics sector, which is the most globalized industry, with a view to predicting how events may unfold in the automotive industry. An analysis of the automotive industry is also of interest because it differs significantly from the apparel industry (see chapter II). Both these industries are important magnets for FDI in the region. However, automobile production is much more technologically sophisticated and generates greater added value, its supplier networks are more complex and it provides more training for its human resources.

Following the recovery of United States manufacturers vis-à-vis Asian—and especially Japanese—companies in the information technology and communications sectors, a new North American model of industrial organization has emerged based on the use of “turnkey” suppliers, that is, large outsourcers with modular production networks (Sturgeon, 2002). According to Sturgeon and Lester (2002):

In the early 1990s, some brand-name electronics firms in the United States moved beyond the tactical use of their contractors as providers of overflow capacity and began to use the most capable of them for more strategic purposes. The advantages included: manufacturing close to end markets or with low-cost labour; subjecting internal operations to market forces; keeping abreast of fast moving assembly technologies; and focusing their own activities on increasingly challenging “core competencies” such as product definition, design, sales and marketing. Today, production outsourcing in electronics has become a widely accepted practice for both large and small brand-name electronics firms based in the United States.

More recently, globally-operating lead firms have been in the process of consolidating their contract manufacturing relationships by giving a larger share of their manufacturing to a smaller group of large, technologically-sophisticated contract manufacturers, nearly all of them of American origin. Brand-name electronics firms are increasingly demanding that their contractors have a “global presence” as a way of streamlining the management of their outsourcing relationships. As

a result, American contract manufacturers have themselves been aggressively internationalizing since the mid-1990s. (Sturgeon and Lester, 2002).

The growth of modular production networks generated two major benefits, principally for United States electronics companies. First, it allowed brand-name TNCs to focus on their own competitive advantages, such as product strategy, product research and development, functional design, form design and prototype fabrication, and to allocate other tasks to outsourced manufacturers, such as process research and development, manufacturing design, parts purchasing, production, testing and packaging (see diagram III.1). Second, it allowed large manufacturers to improve their efficiency through economies of scale based on a reduction in processes and increased use of their plants' installed capacity, which led TNCs that manufacture branded products to lower their prices (see diagram III.2).

Hence, the overall production chain became more competitive. The large United States outsourcers focused on basic manufacturing processes common to most systems and began to carry out other, more complex activities related to the assembly of complete products. Therefore, an unprecedented transition is being witnessed in the electronics industry as it shifts from in-house production to complete outsourcing (Sturgeon, 2002). In other words, in the electronics industry, competition tends to take place between production chains rather than between individual companies, and success hinges increasingly on the efficiency of the supplier network.

Therefore, since the electronics industry is much more globalized than the automotive industry, the question arises as to whether changes in the former presage changes for the latter. This chapter examines the changes that have taken place in the automotive industry, especially in the North American market, and its consequences for the principal Latin American sites of this activity: Mexico and Brazil.

B. CHANGES IN THE GLOBAL AUTOMOTIVE INDUSTRY

As indicated in the 1998 edition of *Foreign Investment in Latin America and the Caribbean*, during the twentieth century automobile production played a very important –at times, a decisive– role in the industrialization of many countries. This activity was a pioneer in introducing innovations that later radically transformed the organization of manufacturing processes. In the second half of the twentieth century, the principal innovations in vehicle assembly were systematized in the revolutionary “Toyota Production System” (ECLAC, 1998). Current innovations are in modular assembly. This section will discuss the competitive advantages of these new systems and examine their significance for the automotive industry in Mexico and Brazil.

a) Competitive advantages of the Toyota Production System

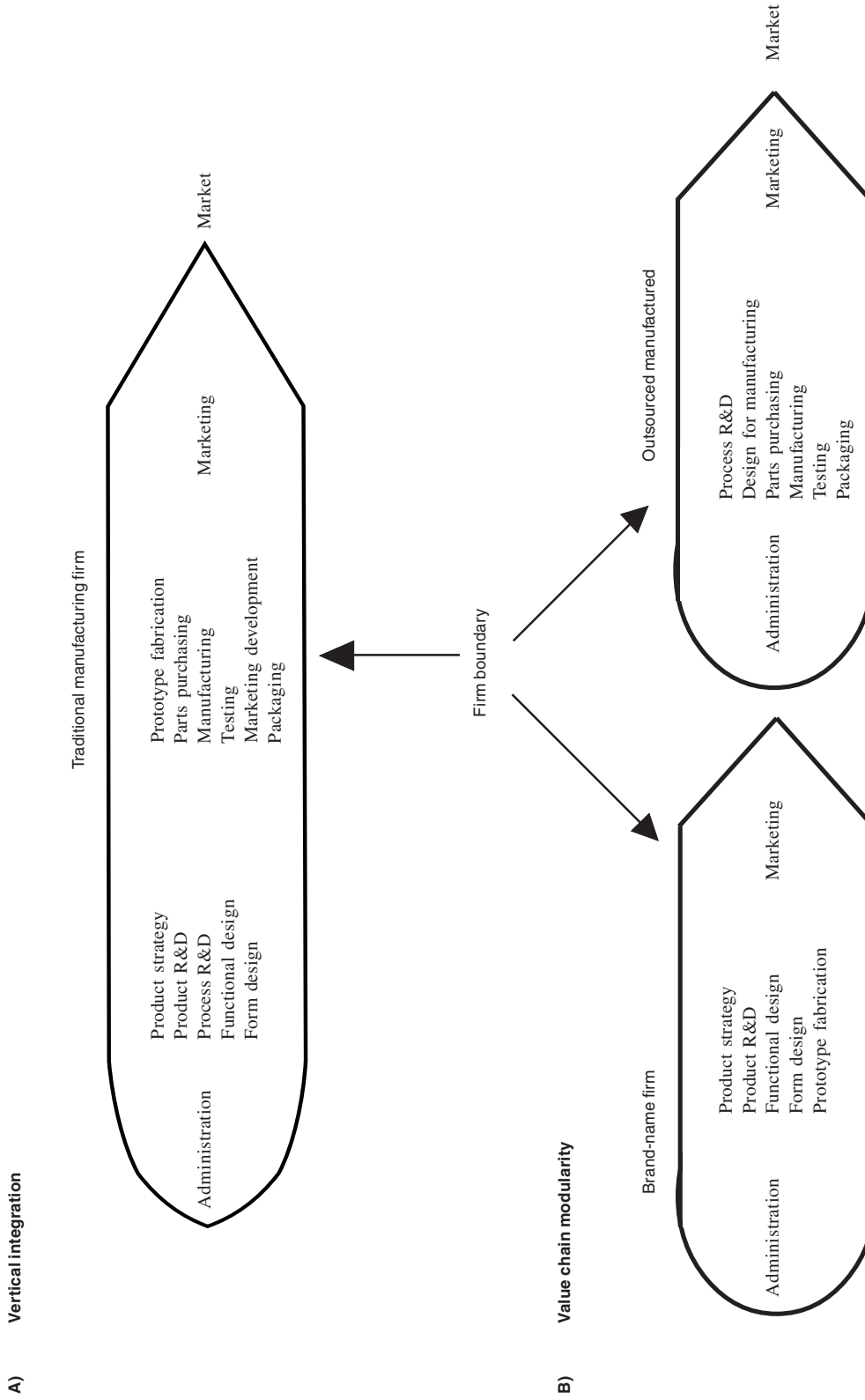
The second most important episode in the automotive industry's development –after the mobile production line introduced by Ford at the beginning of the last century– originated in Japan, after the Second World War, when Toyota radically redesigned the manufacturing of automobiles and autoparts. E. Toyoda and T. Ohno proposed a different way of organizing vehicle manufacturing, which would later come to be known as the Toyota Production System, or “lean production”. Their contribution allowed Japan's

automotive industry to make extraordinary gains in productivity, improve its quality and consolidate its supplier network, thereby transforming itself into a major competitor in the global market (Womack, Jones and Roos, 1990).

This system was based on an integrated concept of the manufacturing process, seen as a medium- and long-term commitment between the automaker and its employees, suppliers and distributors to generate added value all along the production chain. This commitment stressed teamwork and a less hierarchical structure on the assembly line. This collective effort, together with better and more fluid communication among the participants, makes it possible to detect and quickly eliminate potential sources of inefficiencies in all phases of production. It has three core elements:

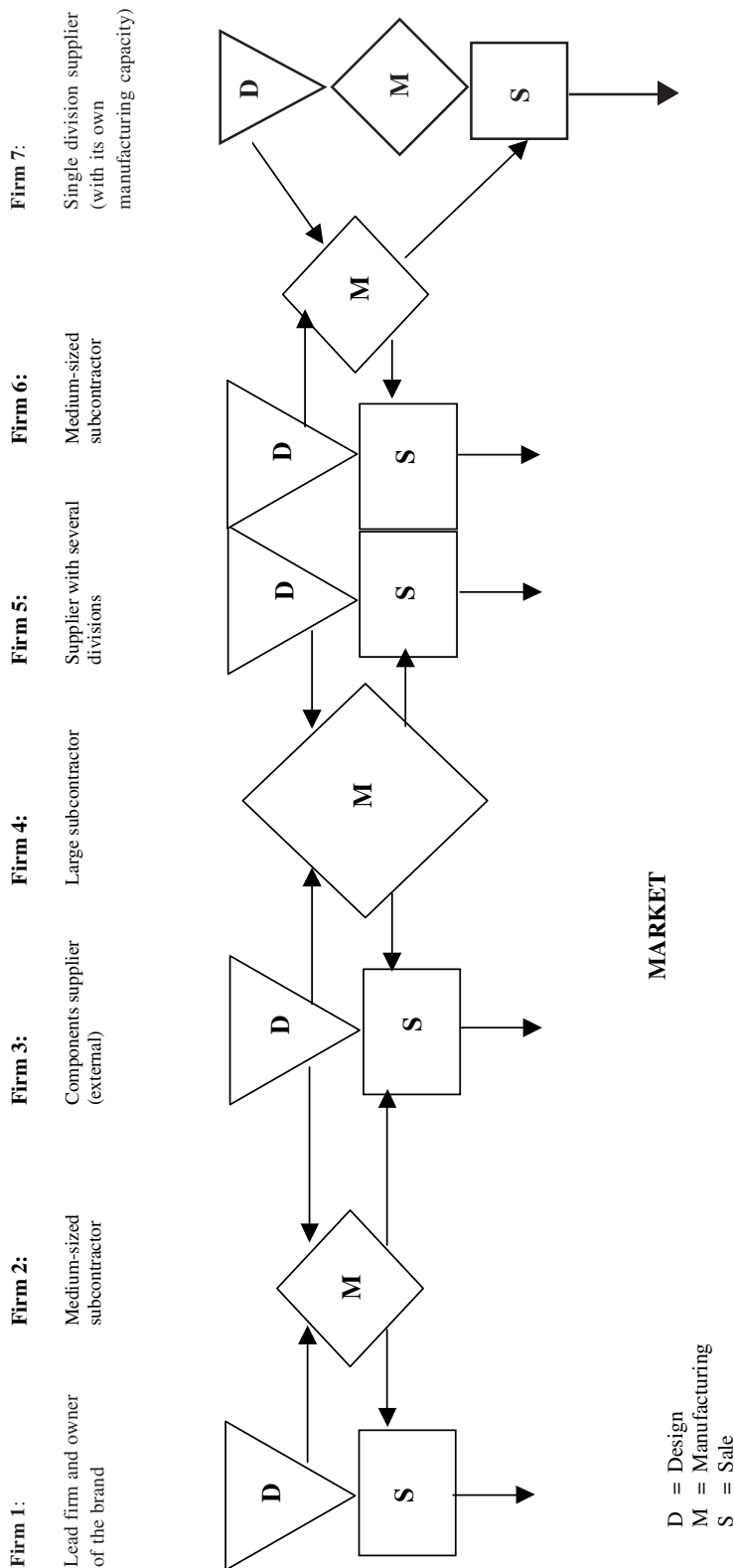
- Flexible organization of production. With regard to the workforce, this system entails a multi-task training model so that workers will be able to perform a variety of production, supervision and quality-control tasks. With regard to layout and capital assets, it means that the plant can profitably manufacture small production lots and quickly modify the various characteristics of the final product in response to sudden changes in demand and in order to meet the requirements of differentiated market niches. Production is thus responsive to

Diagram III.1
FROM VERTICAL INTEGRATION TO VALUE CHAIN MODULARITY



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on Timothy Sturgeon, "Modular Production Networks: A New American Model of Industrial Organization", *Industrial and Corporate Change*, vol. 11, No. 3, February 2002.

Diagram III.2
MODULAR PRODUCTION NETWORK MODEL



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on Timothy Sturgeon, "Modular Production Networks: A New American Model of Industrial Organization", *Industrial and Corporate Change*, vol. 11, No. 3, February 2002.

consumer preferences, unlike the Ford system, which is based on mass consumption, imposed on the market by the need to increase economies of scale. Toyota has achieved a truly global production system, through its global chain of automotive body assembly, by which the same line and equipment is used both in small-volume, labour-intensive plants and in larger-volume, more automated plants.

- The emphasis on “zero defects” to eliminate unnecessary costs. Unlike the concept of quality control based on detection of errors in the final phase of manufacturing, this system seeks to eliminate any possibility of defects, periods of inactivity or interruptions in the use of the installed capacity at the source. Thanks to this concept, the proportion of defective units has been drastically reduced, and operating costs have been lowered even further. The Toyota system currently represents best practice in motor vehicle quality.

- Better long-term relations among producers, suppliers and distributors, and an enormous reduction in the transaction costs inherent in short-term commercial relationships. Such alliances include, for example, multi-year purchasing schedules and the distribution of responsibility for the design of parts, models and methods in order to boost quality or cut costs. By fostering long-term relationships between suppliers and final assemblers, the system has created more room and momentum for the development of suppliers and outsourcing, in contrast to the vertical integration pattern of the big United States automakers. New inventory management methods have also been introduced based on an agreement with the suppliers to provide inputs and raw materials at the right times and in the exact proportions in which they would be needed at each phase of vehicle production. This inventory management practice became known as just-in-time production.

Box III.1

THE INTERNATIONALIZATION OF TOYOTA MOTOR CORPORATION

Toyota Motor Corporation of Japan is the world's second-largest automaker, after General Motors, and makes a broad range of models, from mini-vehicles to trucks. Its sales, including those of its subsidiaries Lexus and Daihatsu, rose from 4.1 million vehicles in 1994 to 6.3 million in 2003. While its sales in Japan (36%) levelled off, sales abroad increased, particularly in North America (32%), Europe (12%) and East Asia (10%). Its production structure comprises 12 manufacturing plants and 11 subsidiaries in Japan and close to 45 plants in 26 countries; the firm employs nearly 250,000 persons (up from 111,000 in 1994) and sells its products in 160 countries.

Starting in 1959, Toyota began developing an initial internationalization strategy with a small investment in Brazil (which continues to be small), primarily as a means of surmounting trade barriers, and continued with the installation of modestly sized manufacturing plants in markets inaccessible to its exports from Japan. The attempt to establish a regional and international production system began in earnest in 1984. Whereas 3.6% of the firm's production took place outside Japan in 1985, by 1990 this figure had risen to 14%, by 1995 it had increased to 28.3% and by 2002 to 38.2%.

Toyota's global-production structure comprises a series of plants that are based on various strategies. First, in

Japan, the firm has very productive and efficient plants, with large-scale production and a high propensity to export, linked to an efficiency-seeking strategy for exploiting the international market. Second, it has efficient plants outside Japan that are part of a regional and global integrated production system and that are linked to an efficiency-seeking strategy for moving into regional markets. Toyota has devised a large North American production system in the form of NUMMI (1984), TMMK (1988), TMMI (1988), TMMC (1988), TMMWV (1998), TMMAL (2003) and, currently, TMMBC (2004) and TMMTX (2006). Toyota is now accelerating the investments programmed for this market. For the European market, the firm has a system based on plants in the United Kingdom (TMUK in 1992), Turkey (TMMT in 2000), France (TMMF in 2001) and Poland (TMMP in 2002) and is currently building one in the Czech Republic (TPCA in 2005). A plant in Thailand (Siam in 1989 and TMT in 1995) was retooled for the Asian market and will be the first in that regional system. In addition, Toyota has a system for Oceania that is based on the retooling of its plant in Australia (TMCA in 1997). Third, there are plants with smaller scales of production and efficiency outside Japan, mainly in developing countries, that cater to the local markets and are based on a local-market-seeking

strategy. Starting in the late 1950s, Toyota invested in Brazil (1959), Thailand (1964), Malaysia (1968), Portugal (1969), Indonesia (1970), Venezuela (1981), Bangladesh (1982), Taiwan Province of China (1986), the Philippines (1989), Colombia (1992), Pakistan (1993), India (1999) and China (2000). The plants in China can be converted into part of an Asian regional system.

A breakdown of Toyota's sales in 2002 by region indicates that 36% of its sales were made in the Japanese market. In the rest of the world, more than 4 million units were sold, principally in North America, with 49% of that sum (1.9 million units); trailing far behind were sales in Europe, which represented 19% (770,000 units) of the company's total sales outside Japan, and East Asia, where nearly 600,000 units accounted for 15% of the total. With substantially smaller figures, the regions of southern Asia and the Middle East, Oceania, Latin America, and Africa accounted for 6%, 5%, 4% and 2%, respectively, of the firm's international sales.

Toyota's competitiveness was seen not only in its market shares but also in its market value (US\$ 112.8 billion in February 2004, whereas General Motors and Ford's numbers were below US\$ 28 billion) and in its stable and mutually beneficial relations with its principal suppliers (Just-autos.com, 2004d, and Toyota, 2003).

(Box III.1 continued)

**TOYOTA: PRINCIPAL ASPECTS OF ITS INTERNATIONAL
PRODUCTION SYSTEM**

Affiliate/year of initiation	Economy	Models	Export markets	Output 2002	Exports 2002
Subtotal North America				1 205 500	156 045
New United Motor Manufacturing Inc. (NUMMI) (1984)	United States	Corolla, Tacoma	Canada, Puerto Rico	310 300	2 703
Toyota Motor Manufacturing Kentucky (TMMK) (1988)	United States	Avalon, Camry	Taiwan, Canada, Japan, Middle East	490 591	17 831
Toyota Motor Manufacturing Indiana (TMMI) (1988)	United States	Tundra, Sequoia, Sienna	Canada, Oceania	186 573	8 022
Toyota Motor Manufacturing Canada Inc. (MTC) (1988)	Canada	Camry Solara, Corolla, Matrix	United States, Puerto Rico, México	218 018	127 489
Toyota Motor Manufacturing West Virginia (TMMWV) (1998)	United States	Motors, gearboxes			
Toyota Motor Manufacturing Alabama Inc. (TMMAL) (2003)	United States	Engines			
Toyota Motor Manufacturing Texas (TMMTX) (2006)	United States	Tundra			
Toyota Motor Manufacturing Baja California (TMMBC) (2004)	Mexico	Rear Boxes for Tacoma (2005)	North America		
Subtotal Europe				344 600	168 113
Salvador Caetano I.M.V.T. (1969)	Portugal	Dyna, Hiace, Optimo	United Kingdom, Spain, Germany	3 587	87
Toyota Motor Manufacturing (UK) (TMUK) (1992)	United Kingdom	Avenis, Corolla, engines	Europe, Africa, South America, Japan	209 016	120 636
Toyota Motor Manufacturing Turkey Inc. (TMMT) (1994)	Turkey	Corolla	Europe, Middle East	39 039	
Toyota Motor Manufacturing France (TMMF) (2001)	France	Yaris	Europe	135 406	47 390
Toyota Motor Manufacturing Poland (TMMP) (2002)	Poland	Gear Boxes			
Toyota Motor Industries Poland (TMIP) (2005)	Poland	Engines			
Toyota Peugeot Citroen Automobile Czech (TPCA) (2005)	Czech Republic	New small car 2005	Europe		
Subtotal East Asia				345 700	71 053
Assembly Services Sdn. Bhd/(1968)	Malaysia	Camry, Avenis, Corolla, Dyna, Hiace, Vios		28 000	
P.T. Toyota-Astra Motor (1970)	Indonesia	Camry, Corolla, TUV, Dyna	Brunei, etc.	84 864	22
Kuozui Motors Ltd. (1986)	Taiwan province of China	Camry, Corolla, TUV, Hiace, Dyna, Vios		89 000	
Toyota Motor Thailand (1964) (TMT) (1995)	Thailand	Camry, Corolla Hilux, Solana	Pakistan, Philippines, Singapore, Australia	140 246	11 800
Siam Toyota Manufacturing Co. (1989)	Thailand	Engines			
Toyota Philippines Corp. (1989)	Philippines	Camry, Corolla, TUV		21 269	
Toyota Motor Vietnam	Vietnam	Corolla, Hiace, Camry LandCruiser, TUV, Vios		7 138	
Sicuan Toyota Motor Co. (2000)	China	Coaster, Land Cruiser Prado		2 800	
Tianjin Toyota Motor Co. (2002)	China	Vios		2 147	
Subtotal Asia Meridional y Oceanía					65 100

(Box III.1 concluded)

Affiliate/year of initiation	Economy	Models	Export markets	Output 2002	Exports 2002
Aftab Automóviles Ltd. (1982)	Bangladesh	Land Cruiser		319	
Toyota Kirlokar Motor (1999)	India	Qualis		26 030	
Indus Motor Company (1993)	Pakistan	Corolla, Hilux		9 887	
Subtotal Oceania				86 558	59 231
Toyota Motor Corp. Australia Ltd. (1963) TMCA (1997)	Australia	Camry, Corolla, Avalon	New Zealand, Thailand, Oceania, Middle East	86 558	59 231
Subtotal Latin America				28 100	16 899
Toyota do Brasil Ltda. (1959)	Brazil	Corolla	Argentina	16 074	1 350
Toyota de Venezuela (1963)	Venezuela	Corolla, Land Cruiser	Colombia, Ecuador	7 333	738
SOFASA (1992)	Colombia	Hilux, Land Cruiser Prado	Ecuador, Venezuela	7 823	8 159
Toyota Argentina S.A. (1997)	Argentina	Hilux	Brazil, Uruguay	11 173	7 904
Subtotal Africa				82 222	2 224
Toyota South Africa Motors (1962)	South Africa	Corolla, Dyna, Hilux, TUV, Hiace		81 555	2 224
Outside of Japan				2 157 780	473 565
In/from Japan				4 138 873	1 749 041
Total				6 296 653	2 222 606

Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on Toyota (<http://www.toyota.com>); United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2002. Transnational Corporation and Export Competitiveness* (UNCTAD/WIR/2002), New York/Geneva, 2002. Publication of the United Nations, sale no. E.02.II.D.4; Michael Mortimore and Sebastián Vergara, "Targeting winners: can FDI policy help developing countries industrialize?", *European Journal of Development Research*, forthcoming.

Note: The companies listed are those in which Toyota Motor Corporation holds direct equity interest.

The Toyota system was soon adopted by other Japanese companies and then by firms in the Republic of Korea, and it has allowed them to reduce costs and adapt their production processes to the varying demands of consumers more readily. For four decades, Japanese automakers have increased their market share at the expense of the United States and Western European firms that had dominated this market. Between 1970 and 1990, this increase was fuelled by exports, which rose from 1.1 million units in 1970 to 5.8 million in 1990, although they subsequently fell to 4.2 million in 2002. Later on, thanks to investment in new plants in those markets, annual output outside of Japan rose from 3.3 to 6.3 million units between 1990 and 2002 (Iwami, 2002). Today, Toyota and Honda are global players, since about half their production takes place outside of their country of origin, and more than half of their total sales are made

abroad. Meanwhile, the large United States (General Motors, Ford and DaimlerChrysler) and European (Volkswagen, Groupe PSA, Fiat, BMW and Renault) automakers have become important players but at the regional level, as attested to by the fact that their sales abroad, as well their production outside their regions of origin, do not amount to half the total in either case.

Heightened competition led to a strong concentration in this industry. The number of independent vehicle manufacturers has declined from more than 50 to about 10 during the last 30 years, and more than half of global sales are now made by the five largest firms. United States and European manufacturers have tended to purchase existing plants, whereas the leading Japanese automakers (Toyota and Honda) have preferred to expand internationally through investments in new plants, since their production system were superior.¹ The production

¹ When, starting in the 1990s, domestic demand in the Japanese market suffered the negative effects of the financial bubble, several of its automakers were destabilized, and some of their European and American competitors seized the opportunity to acquire ownership or increase their holdings of these companies' capital stock. This was the case of Renault (Nissan), Chrysler (Mitsubishi), Ford (Mazda), and GM (Isuzu, Suzuki and FHI-Subaru), among others. This did not affect the leading companies, Toyota and Honda, which managed the Japanese market crisis more successfully.

system implemented by Toyota and copied by other assembly plants was the main reason for Japanese success (Mortimore, 1997).

Outside Japan, this system has had major repercussions, especially in the United States automotive industry. The United States market is the world's largest, with annual sales of some 17 million vehicles. From 1965 to 2002, the market share of the big three domestic automakers –GM, Ford and Chrysler (now DaimlerChrysler)– declined from 95% to 61%, while the share held by Japanese manufacturers increased from near zero to 28%. Two-thirds (2.6 million vehicles) of the Japanese automakers' sales originate in their North American plants (United States Department of Commerce, 2003b). Indeed, Toyota (and Honda) has penetrated deeply into that market.²

b) Modular assembly

United States and European transnational automakers have attempted to meet the Japanese challenge in a variety of ways, such as by copying the efficient methods of United States electronics TNCs, i.e., by using modular networks and stepping up specialization and outsourcing. These companies sought to raise the profitability of vehicle design and manufacture by using common platforms that allow for greater coordination and the multiple use of parts, while maintaining the ability to adapt specific vehicle models to local tastes and driving conditions. This strategy –just as in the electronics sector– required supplier networks with a global presence and greater coordination of design efforts worldwide. Although modular assembly is still a new trend and is not yet widespread, it has yielded highly positive results in some of the companies that have incorporated it into their production systems.

The assembly lines of United States and European automakers' modular plants now have far fewer functions than they did in the past (see diagram III.1). The production lines are thus better coordinated and more efficient. In these new plants, workers handle modules that have been pre-assembled by outside suppliers; the modules are delivered completely assembled to the receiving area of the final assembly plants, ready to be mounted onto vehicles as they move down the assembly line. Diagram III.3 depicts the path followed by the basic

parts as they move through the modules and are then integrated into the systems.

As vehicle manufacturers carry out fewer tasks in the new assembly plants, suppliers must do increasingly more (Fourcade and Midler, 2003). Some estimates suggest that 75% of a vehicle's value corresponds to just 15 modules, including the suspension; doors; headliners (which may come with grip handles, lights, electrical connections, a sunroof, sun visors and trims already assembled); heating, ventilation and air conditioning units; seats; dashboards; and the drivetrain (that is, the engine, transmission and axles). The tendency to use modules translates into working with systems or groups of modules. At the most advanced modular plants, the leading suppliers are responsible for the part of the vehicle-assembly process at which their respective systems are installed.

The trend toward modularization is linked to the consolidation of supplier networks, as the companies that sell raw materials directly to assembly plants buy up the firms that provide the raw materials to them. Because the largest modules are the most difficult and expensive to move, the adoption of the modular assembly process is linked to the establishment of assembly plants next to suppliers' plants. Hence, parts delivery is synchronized with demand, with modules being delivered according to the sequence of vehicles moving down the assembly line. This creates natural "breakpoints" in the value chain and makes the outsourcing and relocation of module design and production more feasible.³ The current trend to create global platforms therefore involves the formation of global supplier bases.

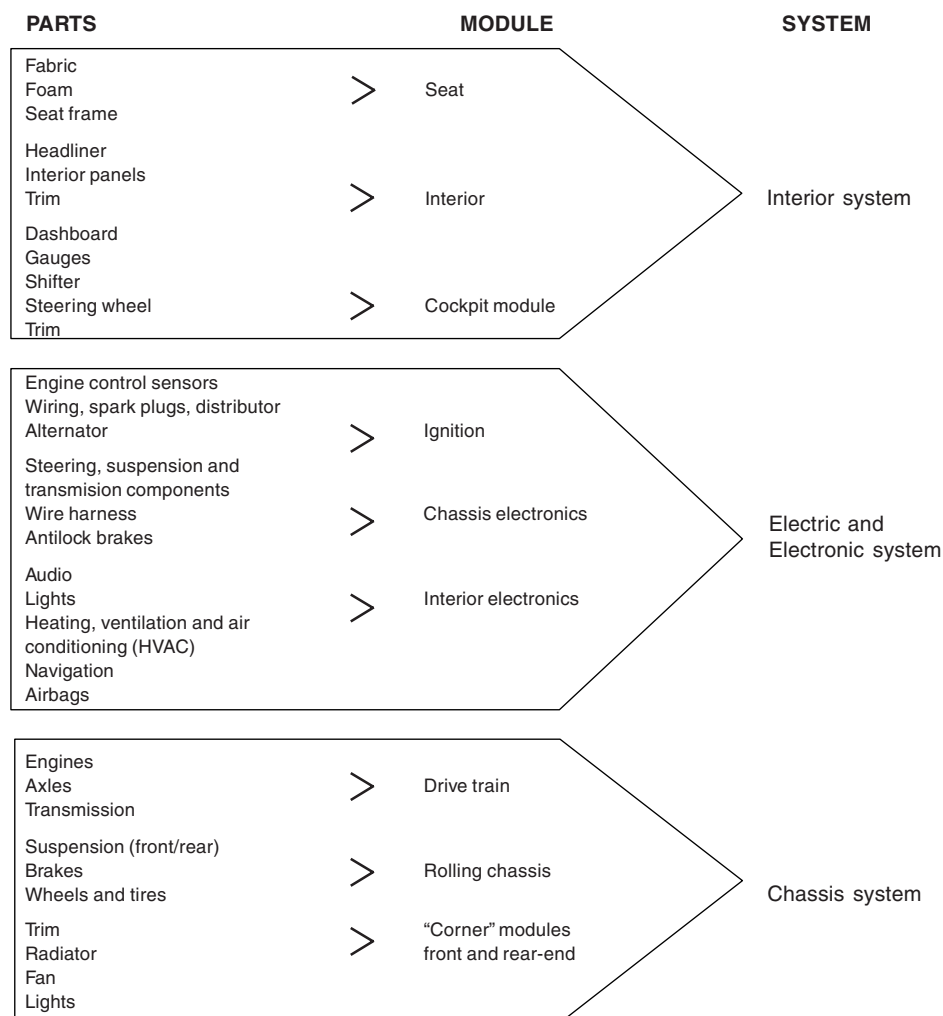
Although outsourcing is common throughout the sector, there are significant differences among automakers in terms of the speed, extent, and nature of the shift being made from a vertical structure to a more horizontal one (PricewaterhouseCoopers, 2002). GM and Ford, which were displayed a high degree of vertical integration, have sharply increased their use of outsourcing to reduce costs, and their use of external suppliers by converting their internal subsidiaries into independent companies (Delphi and Visteon, respectively).

The recent trend towards globalization in the motor vehicle industry has led to a change in the stratified relationship between producers and their largest suppliers

² In recent decades, the Toyota Camry, Honda Accord and Ford Taurus have become the best-selling passenger vehicles in the United States. In February 2003, a top Ford executive explained the success of the Camry by saying, "Frankly, the Camry is currently a better product than the Taurus" (CNNMoney, 2003).

³ Modularization can also be an in-house strategy, however. For example, at Volkswagen, internal subsidiaries have gone from the manufacture of parts to the assembly of modules and systems, which streamlines the assembly line and makes it more efficient.

Diagram III.3
FROM PART TO SYSTEM



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on Timothy Sturgeon and Richard Lester, "Upgrading East Asian Industries: New Challenges for Local Suppliers", Cambridge, Massachusetts, Industrial Performance Center, Massachusetts Institute of Technology (MIT), 18 January 2002, unpublished.

(Graziadio and Zilboricius, 2003). First-tier suppliers are focusing on modular integration; second-tier suppliers, on their production; and third-tier suppliers, on the manufacture of components and the provision of local content in emerging markets (see box III.2). Modular assembly obliges suppliers to play a much more important role. Assembly plants require their suppliers to invest in and develop products, acquire specialized tools, improve their logistics and the modules and

systems they produce, and even to provide guarantees to consumers and supervise the second-tier suppliers (Auto Business, 2002; Just-auto.com, 2004a).

Most leading suppliers of modular systems and modules are of United States origin. Many first-tier suppliers have responded with a wave of vertical integration (through mergers, acquisitions and joint operations)⁴ and geographic expansion in an effort to increase their ability to deliver modular systems and

⁴ The increased competition between suppliers will likely lead to a strong trend towards their rationalization, concentration and consolidation, as has occurred in the vehicle assembly industry. It is estimated that, of the 600 to 800 lead suppliers and more than 10,000 secondary suppliers that existed in 2001, from 25 to 100 lead suppliers and from 2,000 to 4,000 secondary suppliers will remain by 2010 (OESA, 2003a).

Box III.2

NEW CONCEPTS FOR UNDERSTANDING CHANGES IN
AUTOPARTS MANUFACTURING

Assembly plants' new procurement policies, which imply not only more outsourcing but also the transfer of activities to vehicle parts manufacturers, are transforming the sector so quickly that some basic concepts are losing their meaning. For example, the definition of lead or secondary suppliers, or the stratification of suppliers into tiers depending on whom they sell their products to, are concepts that are evolving as people attempt to interpret the new state of affairs. A 0.5 tier of suppliers, corresponding to suppliers that assemble the systems, has recently been added to the traditional classification of suppliers into first-tier (direct sales to assembly plants) and tiers two through four (more indirect sales and sales of progressively less sophisticated inputs). Indeed, a new stratification of suppliers, covering the following categories, is emerging:

(1) *Suppliers of integrated systems*: those that offer assembly plants a broad range of services. They produce modular systems, such as interiors and electric and electronic systems. Their

success depends on their experience and capacity for physical and functional integration, the degree of efficiency of their principal modules and components, sound management of the supplier chain, extensive knowledge of consumers and a solid understanding of the vehicle as a unit.

(2) *Module suppliers*: those that offer experience in the design and manufacture of modules consisting of multiple components with a common functionality, including seats, "corners" and ignition, brakes and shut-off systems. Their success hinges on their ability to develop the functional integration of these modules and increase the competitiveness of the systems of the most important components, on their full understanding of the consumer's requirements, on their proper handling of their own suppliers and on an adequate understanding of the vehicle as a whole.

(3) *Component suppliers*: those that handle parts that perform key functions and components with a high density of technical know-how and engineering capacity. They produce, among others

components, instruments, wire harnesses for the electrical system, shock absorbers, auxiliary motors, crankshafts, radiators and compressors. Their success depends on their operational efficiency, economies of scale, the low cost of their inputs, their ability to optimize costs in design, their management of operational complexity and technological innovations and their identification of value for consumers.

(4) *Suppliers of standardized products*: these are traditional firms that produce standardized part, metal parts and connectors. The maturity of the product leaves little room for differentiation. Their success depends on their operational efficiency, economies of scale, and the cost of the factors of production.

In this new model, the competitiveness of the companies in the last group depends primarily on production costs, while those in the first category are more dependent on innovation and R&D. Some autoparts manufacturers are thus playing an increasingly important role in vehicle assembly.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on Original Equipment Suppliers Association (OESA)/McKinsey & Co., "Profitable growth strategies in the automotive supply industry", pp. 14 and 15, 1999; F. Bouvard, M. Cesari and J. Luciat-Labry, *Retooling the Way to Profitable Growth*, McKinsey Research, 2002.

modules on a global scale (ATKearney, 2003; Booz-Allen & Hamilton, 1999). The entry of GM's and Ford's parts divisions into the vehicle-parts market as Delphi and Visteon created the largest, most diversified and geographically farthest-flung suppliers of the automotive industry in one fell swoop. Together with Johnson Controls, Lear, Magna, TRW, Bosch and Siemens Automotives, among others, they have become the preferred suppliers of automakers outside Japan.

Hence, the growing need to supply automakers with modules on a global scale is generating a wave of consolidations and geographic expansion among first-tier suppliers. In the future, suppliers, rather than producers, may undertake most of the flows of FDI in the sector.

c) An evaluation

This appears to be a case in which the similarity in the changes in the electronics and automotive industries is more apparent than real. The Toyota system has maintained its technological leadership in the automotive sector, despite the changes introduced by United States and European TNCs. Neither United States initiatives in modular assembly nor those of European companies have derailed the Japanese supplier networks, unlike what occurred in the electronics industry, especially in information and communications technologies. We need to ask why this is.

Toyota representatives have indicated that the company's strength stems from the strength of its

suppliers (EIU/McKinsey & Co., 1999) and that Toyota is so clearly the leader of the sector that it has become the frame of reference for best practices (OESA, 2003b). Toyota currently has a world-class supplier network both in the United States and in Japan. The Toyota system depends on its human resources management policy, which stimulates employee creativity and loyalty, but also, and very importantly, on the high efficiency of the components-and-parts supplier network (*Financial Times*, 2002).

Moreover, modular assembly in the automotive industry does not appear to have the same effects as it has in the electronics industry. Traditional sourcing methods are still common at companies such as GM and Ford, which have globally centralized organizations and short-term relationships with their suppliers that have caused conflicts. There has been some experimentation with the use of short lists of suppliers and with their participation prior to project authorization, which consists in asking suppliers to bid on the modules and parts that they would like to design and produce. However, the tendency to focus exclusively on cutting costs, including procurement costs, is still very strong. Some United States assembly plants are, then, endangering the future quality and the long-term commitment of their supplier networks by requiring disproportionate short-term cost reductions (*Auto Business*, 2002). This leads to tension within the assembly plant itself between its purchasing division, which pushes for lower prices, and the manufacturing division, which attempts to favour modularization, local content and physical proximity between the company's plants and those of its suppliers.

The performance of J.I. López as Vice President of the Purchasing Division of General Motors opened up a wide rift between the United States assembly plants and their suppliers in the midst of a crisis situation (Leuliette,

2003).⁵ The shortcomings of the United States "purchase price" model were seen in excess production capacity, meagre profits, the additional, non-remunerated responsibilities that were transferred to suppliers, United States assembly plants' strong dependence on suppliers in that country, and limited cooperation between the two groups of companies (OESA, 2003b).⁶ Moreover, United States plants have been unable to overcome the problem posed by their more limited flexibility vis-à-vis their Japanese competitors (Just-auto.com, 2003c, 2003d). Complaints of harsh treatment have also come from Europe, where Ford has been accused by its suppliers of being interested only in short-term cost-cutting without respecting their intellectual property rights or rewarding their efforts to improve quality, innovate or suggest ways to lower costs, which increases their risks. Ford is also criticized for unnecessary confrontations and for resorting to unacceptable tactics (Just-auto.com, 2004d). From this perspective, it is clear that United States (and European) companies have not matched the advantages of the Toyota system, despite their efforts to introduce modular assembly processes and other practices (Sako, 2003). United States automakers have only succeeded in partially and superficially replicating the benefits of Toyota's system, as evidenced by their financial statements and market capitalization.⁷

To understand the nature of this chain of events, the fundamental differences between Japanese and United States supplier networks must be taken into account. The starkest differences have to do with their function, structure and the incentives system. The supplier network is more important for Japanese automakers, which produce less than 40% of their parts, than it is for United States firms, where this proportion is 60% or more (Tsuji, 2003). In addition, Japanese supplier networks have a broader structure, which includes four or more tiers of

⁵ In April 1992, J.I. López took over as General Motors Vice President for Purchasing worldwide and became famous for his harsh treatment of suppliers in his drive to establish a new system for defining vehicle-part prices based on the vehicle's total expected value. He opened up existing contracts to bids, ceased to give preference to GM-owned suppliers and demanded a 50% productivity increase. His emphasis on cutting short-term costs damaged the long-term relationship with suppliers (Moffett and Youngdahl, 1998; *Fortune*, 1997). J.I. López, during his time with Volkswagen, also played a decisive role as the person responsible for the installation of the first modular plant in Resende, Brazil, in 1996.

⁶ The largest vehicle parts manufacturer, Delphi, has expressed its preference for doing business with Japanese assembly plants because of the treatment it receives from United States automakers (Just-auto.com, 2003c). Delphi gauges its progress in terms of the increasing share of its business not carried out with its former parent company, General Motors (PPT, "Delphi", 10-11 November 2003). Delphi's revenues from activities unrelated to General Motors rose from 18% to 39% between 1997 and September 2003. Furthermore, over half these sales were to customers outside North America (Delphi, 2003). Delphi is now the largest foreign autoparts supplier in China (Just-auto.com, 2004b).

⁷ For example, GM's and Ford's market capitalization, taken together, is equivalent to half of Toyota's. Moreover, in 2003, Ford came close to bankruptcy (*The Economist*, 2003a and 2003b; *America Economy*, 2003c) and General Motors posted uncovered financial liabilities in connection with the pensions of former workers on the order of US\$ 20 billion, which approached its value on the stock exchange at the end of that year (Yahoo.finance, 2003).

suppliers, and are less vertically integrated, as they are composed of a smaller number of large suppliers possessing more specialized engineering capacity. Hence, the small number of direct suppliers simplifies procurement, at both the firm level and the plant level, for Japanese assembly plants. The interdependence among the elements of the supplier base is predicated on the idea that some of the same directors sit on the various boards or the existence of minority shareholdings in these companies, is linked to significant intrafirm trade within their group or *keiretsu*, and is not based exclusively on market relations. This promotes cooperation, especially with regard to the sharing of technical information, in the context of the automaker's integral support for the parts manufacturer.⁸

These relations influence the incentives system, given that belonging to a group with long-term contracts and relatively certain profit margins has translated into exemplary performance by the overall organization. Guaranteed profit margins were reduced over time to encourage improvements in productivity and quality, as well as safety. Toyota encourages its lead suppliers to invest in specialized equipment and to train its human resources, which in the long run benefits both companies. The first-tier supplier, in turn, has similar relations with the second-tier suppliers, and so on, and this is positively reflected in design, productivity and price, all along the chain. By contrast, the traditional system in the United States for parts purchasing is based on short-term contracts with multiple suppliers, which compete to maintain their position. This is a rather conflictive relationship, based on continual demands for price cuts and the use of competitive bidding. Hence, the automaker reaps the benefits of productivity improvements, while the supplier assumes the cost. This asymmetry diminishes the supplier's incentives to raise its productivity and strains the relationship between both firms (EIU/McKinsey & Co., 1999). The differences between the Toyota system and the system used by United States automakers is also reflected in the financial positions of their principal suppliers (e.g., Denso, in the case of Toyota, and Visteon, in the case of Ford) (Just-auto.com, 2004d and 2004c).

Toyota's gains in the United States market demonstrate not only this firm's strength but also the significance of the challenge it poses for its competitors. In North America, Toyota has constructed a base of 500 suppliers to support its local production operations (1.2

million vehicles in 2002) in assembly plants in Alabama, Kentucky, West Virginia and California, in the United States, and in Ontario, in Canada. Annual purchases of inputs exceed US\$ 20 billion. Moreover, Toyota has succeeded in raising its competitiveness by using common parts in numerous models, upgrading and integrating the design process, increasing output and simplifying logistics. As a result, Toyota has lowered the cost of its vehicles by 16% since 1997, winning many awards for quality, delivery time and initiatives to support its suppliers. Teruyuki Minoura, Senior Managing Director and Chief Officer of the Business Development Group and of the Purchasing Group (and former Managing Director of Global Purchasing), captures the essence of Toyota's guiding principles in the advice he gives his suppliers:

"You are going to have to start analyzing the needs and wants of the end user. You're going to be finding out what end users want and working to develop suitable components. Then you're going to be offering what you've developed to carmakers like us, who are going to incorporate these components into our designs. That's the kind of shape that the industry is going to take. When that happens, terms like carmakers and suppliers will become inappropriate. The two will have come together as partners, and together develop high-quality, low-cost products that meet the needs of the end users. To survive, you are going to need to use knowledge you gain on the shop floor to trim costs, and to funnel the funds from those cost savings into development. You need to put extra effort into knowing yourselves and knowing your competitors. You need to build structures that allow you to know your own strengths and benchmark them against those of your competitors." (Toyota, 2003, p. 4)

The modular assembly initiative in the automotive industry has not had the same effects as it has had in the electronics industry. United States automakers are attempting to use this initiative to obtain advantages similar to those afforded by the Toyota system; however, a core element of Toyota's success is still missing: the construction of long-lasting relationships with the component companies in their system as a means of achieving stable, long-term, mutually beneficial growth (Gritton, 2003). This conclusion is important for Latin America's automotive industry.

⁸ Like other vehicle producers, Toyota has asked its parts suppliers for large cost reductions (of 30%, according to its competitiveness-and-cost-reduction program for 2001). The difference is that, to the extent possible, Toyota selects and cooperates actively with its *keiretsu* suppliers to increase their competitiveness as tier-0.5 and first-tier systems suppliers (Ikeda and Nakagawa, 2001).

C. COMPETITIVENESS IN BRAZIL'S AND MEXICO'S AUTOMOTIVE SECTORS

Latin America's automotive industry has gone through three stages of development, dictated, in varying degrees, by firms' strategies and the national development policies promoted by each national Government (ECLAC, 1998 chapter IV). In the first stage, which lasted through the 1950s, automotive plants assembled inputs imported from developed countries and produced vehicles with little differentiation from those made in the firms' home countries. At the same time, the affiliates in the region had few links with the local economies, since practically all inputs were imported.

The impetus given to many productive activities under the import-substitution industrialization (ISI) model allowed the automotive industry to enter a second phase of development, which lasted until the early 1980s (ECLAC, 1987). Market-seeking FDI by TNCs in the sector was essential for industrial development. This stage was characterized by trade and industrial policies designed to encourage the establishment of automotive plants in the region and to ensure that vehicles, which were intended primarily for the domestic market, had a high degree of local content. The sector went from assembly plants that functioned as isolated enclaves to plants having strong linkages with the local economy, thanks to the –at times onerous– local content requirements and barriers to automobile and autoparts imports. Although this arrangement allowed for a significant degree of industrialization in several countries of the region, it eventually led to a clear technological gap vis-à-vis the modern automotive plants in developed countries and to diminishing international competitiveness.

This context of deterioration of the region's industry marked the beginning of the third stage in the evolution of the automotive sector in Latin America, which is still underway. This period has witnessed an important opening of regional economies, with FDI once again playing an essential role. In MERCOSUR, and specifically in Brazil, the search for local markets gave way to a search for regional ones, whereas in Mexico, it led to a search for efficiency through the establishment of export platforms. In the remaining countries the industry was reduced to a minimum or even disappeared. As a result of their different approaches, Mexico's and Brazil's industries evolved differently, as seen in the international competitiveness of the two countries.

Latin America's automotive industry is moderately important, accounting for 7.6% of world output in 2001.

This sector accounted for 32.9%, 29.9% and 10.5%, respectively, of the sales of the 100 largest subsidiaries of TNCs, of the 100 largest manufacturing firms and of the 500 largest companies of the region in 2002, and for 21.8% of the exports by the region's 200 largest exporters. Nonetheless, competitiveness in Mexico and Brazil –where the bulk of the industry in the region is located– differs significantly.

In addition, Mexico's share of the sales of the 100 largest subsidiaries of TNCs, of the 100 largest manufacturing firms and of the 500 largest firms in Latin America has increased from 18.9%, 21% and 7%, respectively, in 1999 to 26.5%, 25% and 8.5% in 2002, and Brazil's share has declined from 7.7%, 7% and 2.3% in 1999 to 5.6%, 5% and 1.7% in 2002, whereas in both countries the share of the exports of the region's 200 largest exporters fell –from 23% to 19.5% in Mexico, and from 2.3% to 1.8% in Brazil.

In other words, Latin America's automotive industry has changed drastically. These changes have been promoted –as part of new domestic policies– primarily by the revised business strategies of transnational automakers that privilege the search for efficiency over the search for markets in order to establish, using FDI, international or regional production systems.

From 1985 to 2001, Mexico's share of total world imports increased from 1.58% to 2.81%, and its goods exports, once mainly natural resources and manufactures based on those resources (63.7% in 1985), were dominated by non-resource-based manufactures (78.3% in 2001), mainly medium-technology exports (17.9% in 1985 and 38.1% in 2001), with automotive-industry products being particularly prominent (see table III.1). The leading ten products in 2001 –representing half the value of goods exports– include passenger vehicles (11.2%), vehicles for the transport of goods (3.8%) and autoparts (3.4%), which, in 2001, accounted for 18.4% of the value of Mexico's exports. In 1985, these three items' share of total exports was merely 3.9%, slightly more than one-fifth the 2001 level, with the most important item being autoparts (2.5%). The country's share of total world imports of passenger vehicles increased from close to zero in 1985 to more than 6% in 2001, and autoparts imports rose from less than 2% to 4%, while in the United States market Mexico's share of vehicles increased from nearly zero to close to 14%, and autoparts grew from 3% to more than 11% the same period. The automotive industry was, therefore, one of

Table III.1
MEXICO: SHARE OF WORLD IMPORTS AND EXPORT STRUCTURE, 1985-2001
(Percentages)

	1985	1990	1995	1999	2001
I. Market share	1.58	1.30	1.75	2.56	2.81
II. Export structure	100.0	100.0	100.0	100.0	100.0
Natural resources ^a	54.8	30.7	16.9	12.2	12.6
Natural-resource-based manufactures ^b	8.9	8.1	6.6	5.4	5.1
Non-resource-based manufactures ^c	33.6	57.1	72.7	78.4	78.3
- Low technology ^d	5.8	10.5	13.6	15.1	14.0
- Medium technology ^e	17.9	31.7	39.8	38.4	38.1
- High technology ^f	9.9	14.9	19.4	24.9	26.2
Others ^g	2.6	3.9	3.6	3.9	3.9
III. 10 Leading exports by relative shares	55.6	47.1	45.5	48.1	51.8
781 Passenger automobiles	* + 0.8	5.8	9.6	10.2	11.2
333 Crude petroleum oils	- 41.8	19.3	9.2	7.2	8.2
764 Telecom equipment and parts and accessories	* + 3.3	3.0	3.7	5.3	6.5
752 Automatic data-processing machines and units thereof	* + 0.2	1.7	2.4	4.5	5.5
782 Motor vehicles for the transport of goods	+ 0.6	0.6	2.8	3.3	3.8
931 Special transactions and unclassified commodities	* + 2.1	3.4	3.2	3.6	3.7
773 Equipment for distributing electricity	* + 2.3	4.3	4.8	4.3	3.7
784 Motor vehicle parts and accessories	* + 2.5	4.1	3.8	3.5	3.4
761 Television receivers	* + 0.5	2.4	3.5	3.7	3.3
772 Electrical apparatus for switching or protecting electrical circuits	* + 1.5	2.5	2.5	2.5	2.5

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the TradeCAN software, 2002 Edition. Product groups based on the Standard International Trade Classification (SITC), Rev. 2.

^a Contains 45 simply processed commodities, including concentrates.

^b Contains 65 elements: 35 agricultural/forestry groups and 30 others (mainly metals—except iron and steel—petroleum products, cement, glass, etc.).

^c Contains 120 groups representing the sum of d + e + f.

^d Contains 44 elements: 20 groups from the textiles and clothing division plus 24 others classified as paper products, glass and steel, jewellery.

^e Contains 58 elements: 5 from the automotive industry, 22 from the processing industry and 31 from the engineering industry.

^f Contains 18 elements: 11 groups from the electronics division plus 7 from pharmaceutical products, turbines, aircraft, instruments.

^g Contains 9 groups of items not elsewhere classified (mostly from section 9).

^h Corresponds (*) to the 50 fastest-growing groups in world imports from 1985 to 2001.

ⁱ Groups in which Mexico gained (+) or lost (-) market share of world imports from 1985 to 2001.

the main determinants of the Mexican economy's improved international competitiveness from 1985 to 2001.

By contrast, Brazil's share of world imports fell from 1.38% to 0.98% during the same period. The make-up of export goods from that country changed only slightly, as the share corresponding to natural resources and natural-resource-based manufactures (63.3% in 1985) decreased, and that of non-resource-based manufactures rose (45.2% in 2001) (see table III.2). The ten most important products—accounting for more than one-third of the value of goods exports—include passenger vehicles (3.2%), whose share has more than doubled since 1985, when this item represented 1.3% of Brazil's total exports. Nonetheless, most exports were natural resources or natural-resource-based manufactures. The share of world imports of passenger vehicles from Brazil increased from close to 0.37% in 1985 to 0.62% in 2001, and that of autoparts, from 0.96% to 1.03%. In the Latin American market—where Brazil placed

most of its automotive exports—its share of vehicle imports fell from 15.90% to 10.91%, and that of autoparts, from 6.57% to 4.03% during the same period. Moreover, total exports of the different categories of vehicles in the automotive sector (passenger vehicles, autoparts, trucks, engines and road vehicles), which represented 14.4% of Brazil's total exports to Latin America in 1985, rose to 21.1% in 2001. Nevertheless, the market share of exports from Brazil to Latin America decreased from 4.31% in 1985 to a 3.6% in 2001 (see table III.3). This shows that the automotive industry was not one the main determinants of the international competitiveness of the Brazilian economy, neither globally nor in the Latin American market.

a) Performance of the automotive industry in Brazil and Mexico

Mexico's and Brazil's automotive industries followed a similar pattern until the 1980s. Under the

Table III.2
BRAZIL: SHARE OF WORLD IMPORTS AND EXPORT STRUCTURE, 1985-2001
(Percentages)

			1985	1990	1995	1999	2001
I. Market share			1.38	1.10	1.01	0.95	0.98
II. Export structure			100.0	100.0	100.0	100.0	100.0
Natural resources ^a			31.7	26.1	25.3	22.8	23.1
Natural-resource-based manufactures ^b			31.6	29.3	30.4	29.8	29.2
Non-resource-based manufactures ^c			35.8	43.6	42.6	45.1	45.2
- Low technology ^d			13.5	15.0	14.1	11.7	11.7
- Medium technology ^e			19.3	24.8	25.1	25.3	23.3
- High technology ^f			2.9	3.8	3.3	8.1	10.1
Others ^g			0.9	1.0	1.5	2.1	2.4
III. 10 Leading exports by relative shares	h	i	43.0	38.1	33.9	36.9	37.2
281 Iron ore and concentrates		+	8.5	9.0	7.5	7.2	6.9
222 Oil-seeds and oleaginous fruits, whole or broken, soft		+	2.2	2.9	2.7	3.9	4.8
792 Aircraft and associated equipment and parts thereof	*	+	0.2	1.3	0.4	3.5	4.4
081 Feeding stuff for animals (not including unmilled cereals)		-	6.1	5.5	5.5	3.4	3.7
781 Passenger automobiles	*	+	1.3	1.6	1.1	2.7	3.2
251 Pulp and waste paper		+	1.5	2.0	2.8	3.0	3.1
851 Footwear		-	4.4	4.3	3.5	3.0	3.0
071 Coffee and coffee substitutes		-	12.3	5.5	5.0	4.4	2.9
011 Meat and edible meat offal, fresh, chilled or frozen		+	1.8	1.8	2.2	2.5	2.6
058 Fruit, preserved, and fruit preparations		-	4.7	4.2	3.2	3.3	2.6

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the TradeCAN software, 2002 Edition. Product groups based on the Standard International Trade Classification (SITC), Rev. 2.

^a Contains 45 simply processed commodities, including concentrates.

^b Contains 65 elements: 35 agricultural/forestry groups and 30 others (mainly metals –except iron and steel– petroleum products, cement, glass, etc.).

^c Contains 120 groups representing the sum of d + e + f.

^d Contains 44 elements: 20 groups from the textiles and clothing division plus 24 others classified as paper products, glass and steel, jewellery.

^e Contains 58 elements: 5 from the automotive industry, 22 from the processing industry and 31 from the engineering industry.

^f Contains 18 elements: 11 groups from the electronics division plus 7 from pharmaceutical products, turbines, aircraft, instruments.

^g Contains 9 groups of items not elsewhere classified (mostly from section 9).

^h Correspond (*) to the 50 fastest growing groups in world imports from 1985 to 2001.

ⁱ Groups in which Brazil gained (+) or lost (-) market share of world imports from 1985 to 2001.

import-substitution industrialization model, the sector was strongly regulated by State policies that provided incentives for local production, as part of a protection system, both tariff- and non-tariff-based, that also covered important performance and other requirements, including minimum local-content requirements. Production was principally intended for the domestic market. This began to change in the 1980s in Mexico and in 1990 in Brazil, when the new public policies focused on bringing about greater integration with the international economy.

In Mexico, attracting FDI was made a priority, in keeping with the automakers' strategy. In this context, the implementation of the North American Free Trade Agreement (NAFTA) proved pivotal; this was an "investment-driven" integration model, with the gradual elimination, during a transition period, of existing restrictions and the adoption of rules of regional origin. Thus, Mexico went from an actively interventionist policy in the automotive industry to a much more passive one,

in which the business strategy of seeking efficiency to establish an export platform has had a decisive impact. The country's production structure was profoundly transformed, and the country became an important export platform, especially to its NAFTA partners, the United States and Canada (see box III.3).

Brazil's evolution has contrasted strongly with Mexico's, since both countries rescinded their import-substitution policies (see box III.4). Brazil privileged its automotive industry through MERCOSUR, a "policy-driven" integration model, and through national incentive policies to promote "popular" (economy) automobiles and FDI. At the MERCOSUR level, the main policy tools were tariff protection and foreign-trade compensation or equilibrium among MERCOSUR members. This facilitated the integration of operations of companies established in Brazil and Argentina. The most important domestic tools were the incentives programmes for FDI, at the federal and state levels (see box III.5). Despite the

Table III.3
**BRAZIL: SHARE OF LATIN AMERICAN IMPORTS AND
 EXPORT STRUCTURE, 1985-2001**
(Percentages)

		1985	1990	1995	1999	2001
I. Market share		4.31	3.90	4.32	3.77	3.60
II. Export structure		100.0	100.0	100.0	100.0	100.0
Natural resources ^a		9.2	5.9	6.7	7.3	8.3
Natural-resource-based manufactures ^b		26.2	23.2	21.4	19.8	19.7
Non-resource-based manufactures ^c		64.3	69.7	70.5	72.3	71.3
- Low technology ^d		11.1	14.1	17.1	15.8	16.1
- Medium technology ^e		45.3	47.8	47.2	46.0	43.9
- High technology ^f		7.9	7.8	6.2	10.6	11.3
Others ^g		0.2	1.1	1.2	0.4	0.4
III. 10 Leading exports by relative shares		27.5	29.6	30.7	35.2	35.0
781 Passenger automobiles	h i	7.0	4.8	3.8	7.4	8.8
784 Motor vehicle parts and accessories	*	3.1	4.2	7.0	5.3	4.7
641 Paper and cardboard	+	2.8	3.4	3.8	3.7	3.7
764 Telecom equipment and parts and accessories	*	1.2	1.2	0.3	2.8	3.6
782 Motor vehicles for the transport of goods	*	1.6	3.2	3.5	4.6	3.3
583 Polymerization and copolymerization products	*	3.9	3.2	3.0	2.7	2.8
713 Internal combustion piston engines, and parts thereof	*	1.2	1.6	2.6	2.4	2.4
625 Rubber tyres, inner tubes, etc	*	1.2	1.8	1.7	1.7	1.9
783 Road vehicles	+	1.4	2.4	2.8	2.4	1.9
281 Iron ore and concentrates	+	4.1	3.8	2.2	2.2	1.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of the TradeCAN software, 2002 Edition. Product groups based on the Standard International Trade Classification (SITC), Rev. 2.

^a Contains 45 simply processed commodities, including concentrates.

^b Contains 65 elements: 35 agricultural/forestry groups and 30 others (mainly metals –except iron and steel– petroleum products, cement, glass, etc.).

^c Contains 120 groups representing the sum of d + e + f.

^d Contains 44 elements: 20 groups from the textiles and clothing division plus 24 others classified as paper products, glass and steel, jewellery.

^e Contains 58 elements: 5 from the automotive industry, 22 from the processing industry and 31 from the engineering industry.

^f Contains 18 elements: 11 groups from the electronics division plus 7 from pharmaceutical products, turbines, aircraft, instruments.

^g Contains 9 groups of items not elsewhere classified (mostly from section 9).

^h Correspond (*) to the 50 fastest growing groups in Latin American imports from 1985 to 2001.

ⁱ Groups in which Brazil has won (+) or lost (-) market share of Latin American imports from 1985 to 2001.

attempt to raise the international competitiveness of Brazilian industry through regional-market- and, to a lesser extent, efficiency-seeking strategies, the economic difficulties of MERCOSUR's principal members made it necessary to redefine policies so as to rekindle domestic demand, which, in turn, affected these countries' external accounts.

The differences between Mexico's and Brazil's automotive sectors are well known. Investment in the automotive and autoparts industry in Mexico focused on the search for efficiency, to cater to the demanding North American market. In Brazil, although investment flowed into the country principally in search of regional markets, it has been saddled by crises, both domestic and in the other MERCOSUR countries, reflected in successive policy changes; nonetheless, part of the investment in some assembly plants also sought efficiency (Mortimore, 1998a and 1998b).

In the 1990s, FDI gave a strong impetus to Mexico's and Brazil's automotive industries. From 1997 to 2000, FDI in Mexico totalled US \$11.3 billion, as the country became an important link for the ISIP of transnational automakers from the United States. Mexico's vehicle-parts industry had already been transnationalized, principally through of the purchase of Mexican companies by North America ones; hence, in this period, new FDI in this sector mostly targeted new plants. By contrast, in Brazil, FDI rose to US\$ 31.2 billion (US\$ 18.3 billion in assembly plants and the rest in parts manufacturing) between 1990 and 2001. Similarly, from 1994 to 2002, the vehicle-parts industry became transnationalized: foreign companies' share of capital stock, sales and investment in the sector's domestic industry rose from 48.1%, 47.6% and 48% to 78.4%, 75.6% and 85.9%, respectively (SINDIPEÇAS, 2003).

Box III.3

THE DIFFERENT STAGES IN THE DEVELOPMENT OF MEXICO'S AUTOMOTIVE INDUSTRY

Two stages can be distinguished in the evolution of Mexico's automotive industry. In the first, the principal policies regarding the sector took the form of decrees, which gave way to transition instruments of free-trade agreements in second stage. During the period in which the decrees remained in force, from 1962 to 1994, the country went from active, interventionist policies –that is, the promotion of industrial-import substitution, basically with regard to vehicle parts– to more liberal policies, which promoted vehicle exports. The first decrees (1962, 1972 and 1977) were characterized by high tariff and non-tariff protection and strict performance requirements, namely, obligatory domestic production of certain parts, a limitation on the number of assembled lines and brands, a minimum level of domestic content (60%), a balanced foreign-exchange budget for each firm, vehicle assembly plants' obligation to export vehicle parts, and a maximum level of foreign equity (49%) in autoparts firms (de María y Campos, 1991).

In response to the industry's ongoing trade-deficit problem, an attempt was made to implement more appropriate policies. The 1983 and 1989 decrees were reoriented towards the promotion of vehicle exports, and performance requirements were reduced (for example, requirements on

parts exports and vehicle-production quotas were eliminated). Export models were required to have only 30% domestic content, and the progressive incorporation of inputs from maquiladora firms into these models was facilitated; this policy was later extended to vehicles for the domestic market. Lastly, rules on the balanced foreign-exchange budget and restrictions on foreign equity in autoparts firms were made more flexible. In other words, import substitution, as defined by the authorities, ceased to be the main goal, and more attention was paid to the corporate strategies of the auto manufacturers established in Mexico that were interested in selling in external markets.

The second stage in the evolution of the automotive industry privileged to the utmost the priorities set forth in vehicle assemblers' strategies, through free-trade agreements, especially NAFTA and the accord signed with the European Union, which entered into force in 1994 and 2000, respectively. Under NAFTA, tariff protection fell from 9.9% in 1994 to zero in 2004 (although certain quotas were maintained), and the level of obligatory domestic content declined from 34% in 1994 to zero in 2004 for vehicles and from 20% to zero for parts. Foreign-exchange compensation, by firm, decreased from 80% to zero. The share of parts

assembled by maquiladora firms allowed to be sold in the domestic market increased from 55% to 100%. At the same time, the *regional* content (for the treaty members) rose from 50% in 1994 to 62.5% in 2004, and remained at this level. Thus, North America's automotive industry was consolidated. The situation under the Free Trade Agreement between Mexico and the European Union is similar, although its coverage and scope are substantially lower. Approximately 4% of vehicle exports in 2003 (49,164 vehicles) went to Europe (AMIA, 2003). The MERCOSUR-Mexico Economic Complementation Agreement on the automotive sector, although not a free-trade agreement, offers certain access to this subregional market and allows for the specialization of vehicle assemblers and parts manufacturers with affiliates in both markets. Only 0.1% of vehicle exports in 2003 (1,733 vehicles) went to Brazil (AMIA, 2003). Since 2004, almost the only policy tool of the Mexican automotive industry –regarding its access to other markets– has been the regional rules of origin in each treaty. Through the transition from a first stage of active policies in the framework of a closed economy to a second stage of increasingly passive policies in an open economy, Mexico succeeded in becoming an important automotive-export platform.

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

The policies implemented to promote the industry in Mexico and Brazil permitted explosive growth in the sector starting in the 1990s, even though completely different approaches were used in each country. Between 1990 and 2003, automotive production in both countries grew at an average yearly rate above 5%, translating into the near doubling of output in this period (see table III.4).

The difference in the focus of the policies is reflected in the two countries' automotive-sector trade structures. In Mexico, which became an export platform under NAFTA, exports increased nearly fivefold between 1990 and 2002, with annual growth averaging 13.9%. In the same period, the sector's export

orientation was strengthened, since, in addition to the increase in exports, the propensity to export more than doubled, from 34.4% to 74.7%, surging especially in 1995, when the crisis besetting the country led to declining output and an increase in production for export.⁹ Moreover, imports also saw sharp growth in the same period: in 1990 only 1% of sales in Mexico were imported vehicles, compared with 55% in 2002. This increase stems from the distinctly export-oriented nature of Mexico's automotive industry, whose plants have been designed for this purpose and which are less and less important for domestic consumption (see table III.4).

⁹ The propensity to export is equal to the share of domestic output sold abroad.

Box III.4

CHANGING POLICIES IN BRAZIL'S AUTOMOTIVE INDUSTRY

Since the 1950s, the automotive industry has been a priority of Brazilian public policy. Government actions were initially aimed at limiting imports and adopting domestic-content requirements. Domestic production, intended primarily for the domestic market, grew quickly and steadily. Between 1959 and 1974, annual output multiplied nearly tenfold, accounting for over 50% of Latin American production. In these years, transnational automakers saw Brazil as a market with a great deal of potential that absorbed most of the local production and required new investments.

In the mid-1970s, initiatives aimed at improving the automotive industry's integration into world markets were introduced. To guarantee that part of production would be exported, a policy known as Tax Benefits to Special Export Programmes (Benefícios Fiscais a Programas Especiais de Exportação, BEFIEEX) was created. At the same time, integration of production with Argentina began to be valued. Companies with operations in both countries began to trade finished products, especially parts and components. In the second half of the 1980s, a series of steps was taken to strengthen economic integration between Argentina and Brazil. In the automotive sector, Protocol N° 21 was established, intended to achieve greater integration between the two countries' automotive industries. This initiative was well received by final-assembly companies, particularly Ford and Volkswagen, which formed a joint venture (Autolatina), thereby implementing a strategy of productive complementarity between their subsidiaries in Argentina and Brazil.

In the early 1990s, regional integration was seen as a tool for trade and financial opening and for fostering domestic economic stability more than for promoting development. This new orientation was ratified with the creation of MERCOSUR. As part of this regional initiative, agreement was

reached on a common external tariff and a zero tariff among member countries for automotive trade, and incentives on investments in the sector were prohibited, starting 1 January 2000. These policy agreements moved up the deadlines for TNCs to restructure their production, with a view to competing under the new economic opening. However, Argentina's and Brazil's economic difficulties changed priorities and exacerbated problems between the two countries in the automotive sector.

Brazil once again focused its priorities on the domestic market. Tax breaks for export programmes were eliminated, and in 1995 a programme providing incentives for the production of low-cost vehicles was established to rekindle domestic demand. This programme reduced tax rates on industrialized products for automobiles with engines up to 1,000 cc as well as on the importation of vehicle parts for that category. Vehicle import quotas were established; the corresponding tariffs were increased to 70%; and import quotas were reduced to 2.8% for parts and components and to 2.0% for machines and equipment. The automotive industry was the only industrial sector to have a broad set of incentive policies after the economic opening (IPEA, 1998b). Although these measures did rekindle domestic demand, they began to generate serious trade-balance problems.

In late 1996, the Federal Government established special rules creating additional incentives for final-assembly companies that set up operations in the north, northeast and west-central regions of the country. To receive the benefits of this temporary programme, automakers were required to establish operations before 31 May 1997; however, in early July 1999, the Senate extended the deadline to the end of that year. This step was taken to allow Ford Motor Co. to set up a new plant in the State of Bahia. Incentives could be extended until 31 December 2010 (IPEA, 1997, and IPEA, 1999).

With the adoption of these special rules, the tug of war among Brazilian States to attract foreign investments ceased to be a domestic issue and created a new conflict within MERCOSUR. In late April 1997, a new agreement on the number of vehicles that could be imported by Brazil was established. Hence, final-assembly companies established in Argentina and not benefiting from these rules because they did not have manufacturing operations in Brazil were incorporated into the quota system.

As the deadline for establishing common rules for the automotive industry in MERCOSUR approached, the discrepancies in member countries' objectives became clear. In late 1998 negotiations resumed, and an agreement was reached on the implementation of a MERCOSUR automotive policy, setting forth a transition period for free trade within the group, a common external tariff (35% for vehicles, buses and trucks) and 60% minimum regional content. In mid-2000, Argentina and Brazil approved this policy, which regulates trade in the sector between the two countries during the transition period, from 2000 to 2005. The new rules attempt to maintain a regulated-trade mechanism –based on the productive specialization of assembly plants and the assignment of models to each country, to increase the scale of production and raise competitiveness– to define a minimum domestic content and to avoid letting new Brazilian subsidies distort investment flows. Nonetheless, the agreement was significantly modified two years later, in July 2002, amid Argentina's acute financial crisis. Regional content was set at 60%, the common external tariff at 35% and the trade-balance policy was made more flexible. Moreover, it was decided that all domestic-content requirements must be eliminated by 1 January 2006, with which the free-trade area will fully enter into force. This new stage should favour Brazil, in light of its large market and the greater efficiency of its manufacturing plants.

Box III.5

UNSUSTAINABLE INCENTIVES IN BRAZIL'S AUTOMOTIVE INDUSTRY

Tax incentives have always been used by governments—at the municipal, state and federal levels—to encourage industrialization. The mechanisms range from loans and infrastructure to tax cuts, exemptions and deferments. These incentives have been used in Brazil since the 1970s, but in the 1990s they became common, causing an authentic “tax war” in the country, with widespread disputes to attract new investments. The Federal Government lost control of the process and the respective negotiations, which came to be handled by the State governments.

Exemptions from and deferments on payment of the main State-level tax—the sales tax on merchandise and transportation services (*imposto sobre operações relativas à circulação de mercadorias e sobre prestações de serviços de transporte, ICMS*)—have been the principal weapons of the tax war. Far from having positive results, this practice probably had a negative effect on cash-strapped State budgets, local economies and, in the end, the country (De Silva Alves, 2001).

Starting in the mid-1990s, the automotive sector was one of the focal points of the tax war among Brazilian States seeking to attract investments—needed for the restructuring and modernization of the industry. All final assemblers received basic incentives, including land, infrastructure, and loans for equipment purchases. Thanks to the postponement of ICMS collections, State governments ended up granting working capital to new companies, which, as a rule, benefited these firms, because companies already established in the country faced a heavy tax burden and high interest rates.

Recent research shows that subsidies given by State governments to three vehicle assemblers to woo plants to their States were almost equivalent to the initial investments made by the companies (De Silva Alves, 2001). The 29-year subsidies

given to General Motors to build a factory in Gravataí, Rio Grande do Sul, worth 759.6 million reais, outstripped the capital invested by the firm, 600 million reais. In the case of Mercedes Benz's facilities in Juiz de Fora, Minas Gerais, the incentives, granted for 22 years, total 690.7 million reais, and the investments, 695 million reais. Only at Renault's factory in São José dos Pinhais, Paraná, is the amount of the subsidies (353.7 million reais), to be given over 10 years, less than the initial capital (one billion reais).

The majority of these benefits corresponds to long-term deferments on ICMS payments, along with special conditions at the time the accumulated debt is paid. The incentives include, in addition, disbursements of State-budget resources to give land to vehicle assemblers and the creation of infrastructure for the factories.

The land subsidies, whose value was calculated based on the land's market value, were disbursed by each State. In the case of General Motors, the State of Rio Grande do Sul purchased a plot of land for 12 million reais and sold it to the firm for one million reais, thereby granting a subsidy of 11 million reais. Infrastructure value was calculated on the basis of an estimate. Nonetheless, it should be noted that an analysis of the loans and tax exemptions should also consider the firms' future payments, estimating their present value.

In the final analysis, the investment that GM, Mercedes Benz and Renault made over a four-year period amounted to less than 2.3 billion reais, whereas the total subsidies obtained by these firms will probably amount to 1.8 billion reais, in values of 1996, the year when the contracts were signed.

This calculation was based on available information regarding the agreements signed between the governments of Rio Grande do Sul, Minas Gerais and Paraná and the respective vehicle-assembly

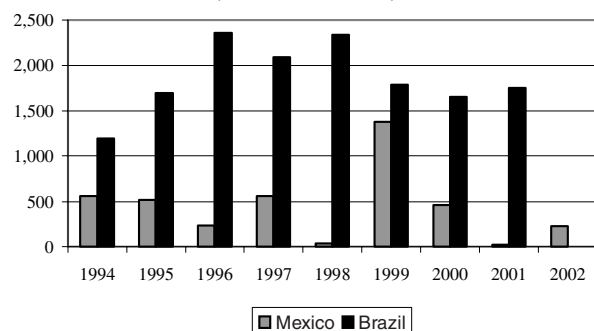
companies. The selection of the three projects was also influenced by the fact that they corresponded to 45% of the nearly 6.0 billion reais that the automotive sector planned to invest in Brazil between 1995 and 2002.

The fiscal benefits require an immediate disbursement by the government, whereas the tax benefits do not necessarily mean payouts; rather, the government will cease to collect revenue that did not exist before the new investment was made. At the end of the subsidy period, the firms will begin to pay normal taxes, and State revenues will increase.

From the standpoint of State governments, the tax war may be understood as a rational policy, since the benefits they have granted will allow them to receive revenue that they would not have received without the arrival of these companies. However, for the country as a whole, the results have been less than satisfactory. The automotive-sector investments would likely have taken place even without the tax inducements, since investment decisions are predicated on additional factors, including parent companies' global strategies. Hence, the amount of the subsidies—more than 1.8 billion reais—represented a waste of resources. Moreover, the State governments offered these resources to companies able to obtain financing in international markets, while many domestic companies in other sectors faced serious financing difficulties and accounted for a much larger number of jobs than did the automotive industry. Nor was the tax war very profitable for employment. The three factories studied created a total of 4,500 to 5,500 direct jobs, at a cost of between 328,000 and 400,000 reais each.

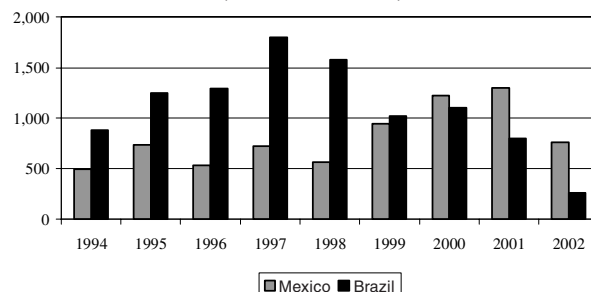
The results were very costly for the country financially, as well. Nevertheless, the location of new automotive investments in less advanced regions did encourage those regions' development.

Figure III.1
**MEXICO AND BRAZIL: FOREIGN DIRECT INVESTMENT
 IN THE ASSEMBLY INDUSTRY**
 (Millions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of information from Secretaría de Economía de México, and Associação Nacional dos Fabricantes de Veículos Automotores (ANFAVEA), *Anuário Estatístico da Indústria Automobilística Brasileira 2003* (<http://www.anfavea.com.br>); Sindicato Nacional da Indústria de Componentes para Veículos Automotores (SINDIPEÇAS), *Performance of Autoparts' Sector, 2003*.

Figure III.2
**MEXICO AND BRAZIL: FOREIGN DIRECT INVESTMENT
 IN THE AUTOPARTS INDUSTRY**
 (Millions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of information from Secretaría de Economía de México, and Associação Nacional dos Fabricantes de Veículos Automotores (ANFAVEA), *Anuário Estatístico da Indústria Automobilística Brasileira 2003* (<http://www.anfavea.com.br>); Sindicato Nacional da Indústria de Componentes para Veículos Automotores (SINDIPEÇAS), *Performance of Autoparts' Sector, 2003*.

Table III.4
**MEXICO AND BRAZIL: DOMESTIC OUTPUT, DOMESTIC SALES OF DOMESTIC OUTPUT,
 IMPORTS AND EXPORTS**
 (Thousands of units)

	Mexico				Brazil			
	Output	Domestic sales		Exports	Output	Domestic sales		Exports
		Domestic output	Imports			Domestic output	Imports	
1990	803.7	527.5	5.4	276.9	914.5	712.6	0.1	187.3
1991	960.9	605.5	9.4	350.7	960.2	770.9	19.8	193.1
1992	1 051.2	667.4	8.8	388.7	1 073.9	740.3	23.7	341.9
1993	1 055.2	567.2	8.5	471.5	1 391.4	1 061.5	69.7	331.5
1994	1 097.4	523.1	74.0	567.1	1 581.4	1 206.8	188.6	377.6
1995	931.2	191.8	34.3	781.1	1 629.0	1 359.3	369.0	263.0
1996	1 211.3	244.9	80.2	975.4	1 804.3	1 506.8	224.0	296.3
1997	1 338.0	346.5	135.1	983.0	2 069.7	1 640.2	303.2	416.9
1998	1 427.6	447.9	196.2	972.0	1 586.3	1 187.7	347.2	400.2
1999	1 493.7	421.6	245.7	1 073.5	1 356.7	1 078.2	178.7	274.8
2000	1 889.5	451.1	402.7	1 434.1	1 691.2	1 315.3	174.2	371.3
2001	1 817.8	445.9	473	1 403.7	1 817.1	1 423.0	178.3	390.9
2002	1 774.4	439.4	538.1	1 325.8	1 792.7	1 383.3	104.4	414.8
2003	1 540.6	370.4	607.5	1 170.1	1 827.7	1 354.3	74.3	535.4

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of information from Mexican Automotive Manufacturers Association (AMIA) (<http://www.amia.com.mx>), and Associação Nacional dos Fabricantes de Veículos Automotores (ANFAVEA), *Anuário Estatístico da Indústria Automobilística Brasileira 2003* (<http://www.anfavea.com.br>).

In Brazil, although exports nearly tripled between 1990 and 2003, the propensity to export has remained at much lower levels than in Mexico and varied little in this period—around 20% of total output. The growth of exports in recent years is explained by the search for external markets to sell the industry's output, in light of decreased domestic demand. The decision to export stems more from macroeconomic

crises than from a predefined strategy, as in the Mexican case. The inward orientation of Brazilian industry can clearly be seen by examining domestic sales, which easily account for more than three-fourths of domestic output. In 2002, domestic production accounted for 93% of the industry's total sales, and sales of imported vehicles fell to their lowest level since 1993 (see table III.4).

The main effect of the entry of important flows of FDI into Brazil's and Mexico's automotive sectors is the increase in production capacity. In both countries, this increase was led by United States companies such as General Motors, Ford and Chrysler (before it was purchased by Daimler Benz) and European firms, such as Volkswagen, Fiat, PSA and Renault/Nissan. Neither Japanese industry, through Toyota and Honda, nor Korean industry (with Hyundai), both characterized by high competitiveness, played important roles in the establishment of new production capacities.

Two important differences exist between Brazilian and Mexican industries: installed capacity and utilization of that capacity. In 2003, installed capacity in Brazil was above 3.1 million units, while Mexico's stood at some 2.1 million units. However, Mexico's utilization of its installed capacity was above 80% from 1995 to 2003, while Brazil's contracted from close to 90% in the mid-1990s to 55% at the beginning of this decade (see tables III.5 and III.6 and figure III.3). The difference lies in each country's ability to define its production and trade strategies. The clear export orientation of Mexico's industry allows it to maintain a low level of idle installed capacity, whereas Brazil's industry is much less outward looking and has a high level of surplus capacity, as a result of the crisis in the local and subregional markets.

Each country's propensity to export is, naturally, reflected at the company level. The propensity to export of the principal firms that operate in Mexico, led by Chrysler, Ford, General Motors and Volkswagen, has shown a common cyclical pattern, while Nissan's

propensity to export has steadily declined, currently standing at about 40% (see figure III.4).

Brazilian companies also showed a common cyclical pattern and a propensity to export of approximately 30% in 2002. By contrast, exports by Fiat, whose parent company is weathering a major crisis, have steadily declined since 1993, despite its implementation of an export strategy; at present it is the least important exporter of the large automotive TNCs in the country (see figure III.5).

Once again, the difference between firms in Mexico and those in Brazil is a reflection of the export orientation of each country's industry at the aggregate level. Firms in Mexico focus on producing for export to the countries of North America, while Brazilian firms traditionally sell in the domestic market and export according to prevailing macroeconomic conditions in that market.

Differences between Mexican and Brazilian industries are also found in their type of specialization. Mexican industry focuses on producing models that are more expensive and more suitable for the needs of consumers in the countries to which it exports –passenger vehicles, sport-utility vehicles and trucks, with an average wholesale value above US\$ 16,000 (Scheinman, 2004). Brazil's automotive industry has specialized in small, low-cost vehicles with high fuel economy, which are affordable for consumers with lower purchasing power. The average wholesale value of this type of vehicles is not more than US\$ 6,500.

In light of devaluations and MERCOSUR's automotive policy, Brazil's automotive industry, like

Table III.5
MEXICO: INSTALLED CAPACITY FOR VEHICLE PRODUCTION, BY FIRM, 2003

Firm	Plant	Assembled models	Capacity (units)
General Motors (GM)	Ramos Arizpe	Monza, Joy/Swing, Cavalier/Sunfire	240 000
	Silao	Suburban, Escalade, Avalanche	250 000
	Toluca	Silverado, Kodiak	10 000
			500 000
Nissan/Renault	Aguascalientes	Sentra, Tsuru y Platina y Clio de Renault	260 000
	Cuernavaca	Sentra, Tsuru y Scenic de Renault	170 000
			430 000
DaimlerChrysler (DCX)	Toluca	PT Cruiser	260 000
	Saltillo	Ram	170 000
			430 000
Volkswagen (VW)	Puebla	New Beetle y Jetta	425 000
Ford Motor Co.	Hermosillo	Focus	180 000
	Cuautitlan	Ikon y serie-F	110 000
			290 000
Honda	Guadalajara	Accord	30 000
BMW	Toluca	Serie 3	5 000
Total			2 120 000

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of information provided by the companies.

Table III.6
BRAZIL: INSTALLED CAPACITY FOR VEHICLE PRODUCTION, BY FIRM, 2003

Firm	Plant	Assembled models	Capacity (units)
General Motors (GM)	São Caetano do Sul, São Paulo	Astra, Vectra and Corsa Wind	180 000
	São José dos Campos, São Paulo	Corsa, Meriva, S10 pickup, Blazer	350 000
	Gravataí, Rio Grande do Sul	Celta	200 000
			730 000
Ford	São Bernardo do Campo, São Paulo	Ka, Courier, F-250 pick-up and trucks	200 000
	Camaçari, Bahia	Fiesta, EcoSport and Courier	250 000
			450 000
Volkswagen (VW)	Anchieta, São Bernardo do Campo, São Paulo	Gol, Santana, Kombi, Saveiro, Nuevo Polo	524 000
	Taubate, São Paulo	Gol, Parati	305 000
	Resende, Rio de Janeiro	trucks	30 000
	São José dos Pinhais, Curitiba, Paraná	Golf A4, Audi A3	160 000
			1 019 000
Renault-Nissan ^a	Ayrton Senna, São José dos Pinhais, Curitiba, Paraná	Clio, Scenic (Renault) Frontier pickup and the Xterra sport-utility vehicle (Nissan)	120 000
Fiat	Betim, Minas Gerais	Uno, Palio, Siena, Doblo, Marea, Strada	610 000
	Sete Lagoas, Minas Gerais ^b	Iveco Daily and Fiat Ducato	60 000
			672 000
DaimlerChrysler (DCX)	São Bernardo do Campo, São Paulo	Trucks and buses	60 000
	Campo Largo, Paraná	Dodge Dakota (pickup)	12 000
	Juiz do Fora, Minas Gerais	Class A and Class C	70 000
			142 000
Peugeot-Citröen (PSA)	Porto Real, Rio de Janeiro	Citröen Xsara and Peugeot 206	100 000
Volvo	Curitiba, Paraná	Trucks	...
Honda	Sumaré, São Paulo	Civic	45 000
Toyota	Indaiatuba, São Paulo	Corolla	15 000
Mitsubishi	Catalão Goiás ^c	L200 pickup	3 000
Total			3 296 000
Automobiles			3 106 000

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of information provided by the companies. Note: Modular plants are indicated in bold.

^a In 1998, Renault opened its first factory in the Ayrton Senna Complex, in São José dos Pinhais, in the metropolitan area of Curitiba, Paraná (PR). A year later, a second industrial unit of the complex, an engine factory, began operating. In late 2001, the sport-utility vehicle factory was completed. These new investments in Brazil also marked the beginning of a new chapter in Renault's history, its alliance with Nissan. In December 2001, the sport-utility vehicle factory opened, as did the first factory in the world of the Renault-Nissan alliance to produce Nissan vehicles. With the opening of this factory, Nissan effectively became a domestic producer, a key element in the firm's strategy to enhance its presence in MERCOSUR.

^b Fiat and Iveco formed a 50/50 joint venture, with an overall investment of US\$ 240 million. The State of Minas Gerais contributed US\$ 15 million for the development of infrastructure for water, road paving and electricity.

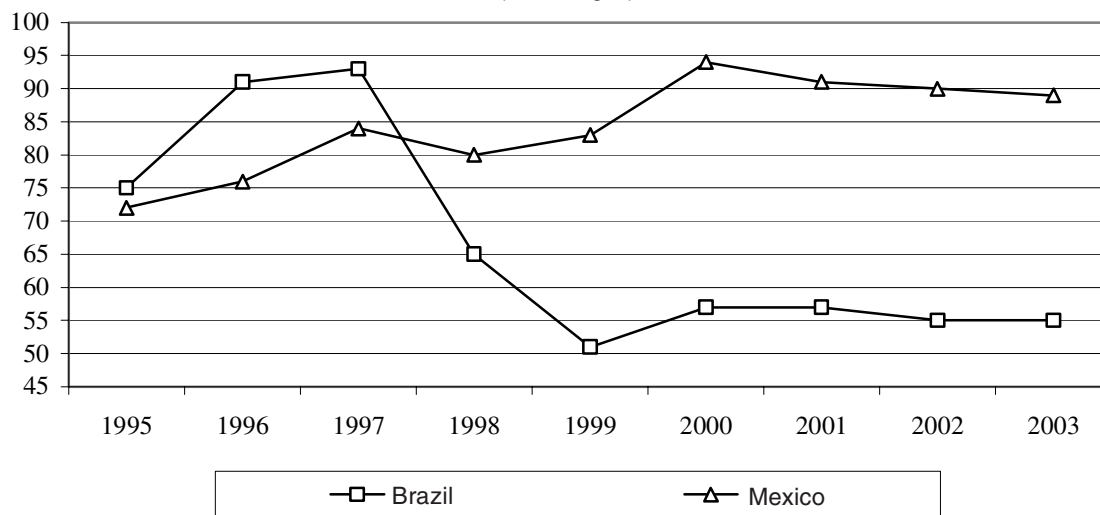
^c MMC Automotores do Brasil is owned by Brazilian businessman Eduardo Souza Ramos and is the brand's official importer. The Japanese parent company contributes the production license, the unit plan and the manufacturing technique. Mitsubishi assembles L200 trucks in Brazil, with diesel engines and double cabins. Initial production will consist of 3,000 vehicles per year, all for the domestic market.

Argentina's, understood that the only way to remain viable was to expand its export markets beyond MERCOSUR. In Mexico, local production was insufficient to meet increased demand for compact

automobiles, which made the country an attractive market for the low-cost vehicles produced by Brazil's industry; consequently, the difficulties translated into options for growth and earnings for the different actors involved.¹⁰

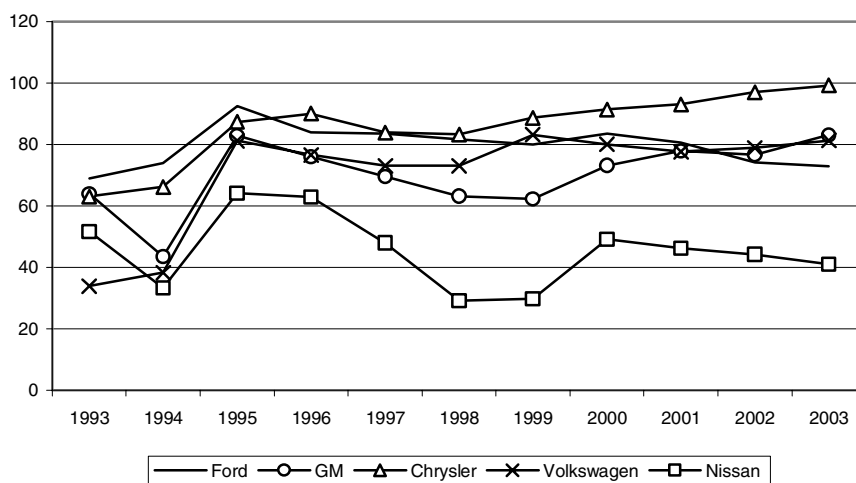
¹⁰ In negotiating automotive agreements, Mexico, Brazil and Argentina have sought to form a three-way free trade area. The value of Brazilian exports to Mexico more than doubled over a period of three years, from 1999 to 2001. Shipments from Mexico to Brazil were less successful, because Mexico's industry produces larger, more expensive and less appealing cars given the depressed domestic demand in Brazil. The next accord was signed in 2002, when Brazil's and Argentina's economic situations had improved. This new agreement calls for the creation of a free-trade area in 2006 as well as successive tariff reductions and higher import quotas.

Figure III.3
**BRAZIL AND MEXICO: UTILIZATION OF PRODUCTIVE CAPACITY
 TO MANUFACTURE VEHICLES, 1995-2003**
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of information from Mexican Automotive Manufacturers Association (AMIA) (<http://www.amia.com.mx>), and Associação Nacional dos Fabricantes de Veículos Automotores (ANFAVEA), *Anuário Estatístico da Indústria Automobilística Brasileira 2003* (<http://www.anfavea.com.br>).

Figure III.4
MEXICO: PROPENSITY TO EXPORT, BY FIRM, 1993-2003^a
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of information from Mexican Automotive Manufacturers Association (AMIA) (<http://www.amia.com.mx>).

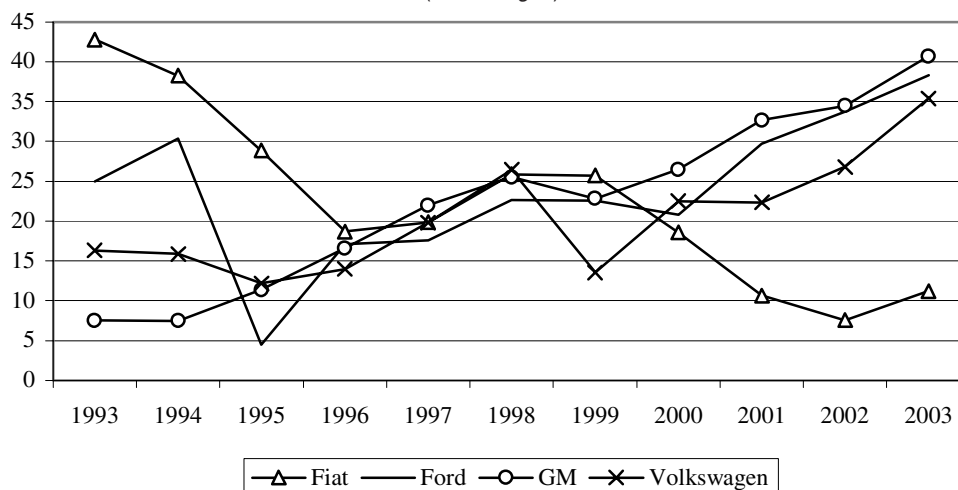
^a The propensity to export is equal to the ratio of exports to total vehicle output in a year.

This has favoured TNCs with affiliates in both Mexico and Brazil, especially Volkswagen and Ford. In 2002, Mexico replaced Argentina as the leading destination of Brazilian automotive exports.

In the late 1990s, modular plants were established in Brazil –and, strangely enough, not in Mexico–

constituting one of the core elements of the restructuring of the world automotive industry. Brazil now has four modular industrial complexes: Ford’s, in Camaçari (Bahia), which produces the Fiesta; General Motors’, in Gravataí (Río Grande do Sul), for the Celta; PSA-Peugeot Citroën’s, in Porto Real (Rio de Janeiro), for the 206

Figure III.5
BRAZIL: PROPENSITY TO EXPORT, BY FIRM, 1993-2003^a
 (Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Associação Nacional dos Fabricantes de Veículos Automotores (ANFAVEA), *Anuário Estatístico da Indústria Automobilística Brasileira 2003* (<http://www.anfavea.com.br>).

^a The propensity to export is equal to the ratio of exports to total vehicle output in a year.

model; and Volkswagen's, in Resende (Rio de Janeiro), which makes trucks (see box III.6). In addition, to attract FDI, Brazilian States offered generous tax and financial incentives, on the order of US\$ 3.3 billion (see box III.5). However, these modern plants—which currently account for 20% of the country's productive capacity—have not succeeded in conquering external markets with their new products; that is, they have not proven to be sufficiently competitive. The firm that has taken the greatest advantage of the automotive agreement with Mexico is Volkswagen, with its traditional Gol (Pointer) model, produced in its old plants on the outskirts of São Paulo. In Mexico, where important links have been established with ISIP, Ford recently decided to build its first modular plant. This ratifies the conclusion that the new modular plants have been unable to surpass the advantages of the Toyota Production System.

b) Recent changes in supplier networks in Brazil and Mexico

Supplier networks in Mexico and Brazil have had to cope with economic opening and transnationalization, with very different results in each case. Originally, Mexico had two vehicle-parts industries: a domestic sector, promoted by the first automotive-industry decrees, which limited FDI in the sector to 40% of manufacturers' capital stock and required vehicle assembly plants to incorporate certain domestic parts in their vehicles as well as to export parts, and a foreign-owned sector, which

assembled parts with imported inputs, within in the context of Mexico's maquiladora industry and the access mechanism to the United States market known as shared production—HTS 9802, explained in chapter II (de María y Campos, 1991). Until the entry into force of NAFTA, Mexico's autoparts industry had a larger market share of United States imports than did the country's automotive industry.

NAFTA ushered in two major changes in Mexican industry: it consolidated the transnationalization of the domestic autoparts industry and it allowed the use of an increasingly large share of parts produced by the maquiladora industry (from 55% in 1994 to 100% in 2001) in vehicles assembled in Mexico. The autoparts industry currently accounts for 6.9% of manufacturing GDP, employs 15% of the labour force and generates 10% of the country's manufacturing exports. There are 875 registered suppliers—60 first-tier and 815 second- or third-tier companies (BANCOMEXT, 2002). United States companies such as Delphi and Visteon dominate the industry (CEESP, 2001). As a result, Mexico's autoparts industry specialized in labour-intensive products, and the value of the industry's output rose from some US\$ 10 billion in 1993-1995 to nearly US\$ 17 billion in 2000-2002. The 1993-1995 trade surplus nevertheless turned into a deficit of some US\$ 7 billion in 2000-2002 (INA, 2003). The greater international competitiveness of Mexico's autoparts industry was, therefore, based on static advantages such as lower wages, geographic proximity and special access to the United

Box III.6

NEW MODULAR PLANTS IN BRAZIL: AN EXPERIMENT WITH INCOMPLETE RESULTS

In recent years, Brazil's automotive industry has seen important changes in the relationships among the firms that make up the production chain, in the geographic location of production, in product engineering and development and in the organization of the production processes. Amid these changes, automakers sharply curtailed the use of vertical integration, by intensifying outsourcing and establishing longer-term relationships with their suppliers. The establishment of new modular plants by some leading vehicle manufacturers (Ford, in Camaçari; General Motors, in Gravataí; PSA-Peugeot Citroën, in Porto Real; and Volkswagen, in Resende) has been one of the clearest signs of these changes.

In the second half of the 1990s, the advent of the modular system profoundly changed relationships between automakers and suppliers. At the global level, this new production model began to be used by TNCs seeking efficiency to capture export markets. Brazil pioneered the construction of new modular plants, thereby becoming a privileged laboratory for testing the global automotive industry (Lung, Chanaron, Fujimoto and Raff, 1999). With this new form of organizing production, the automakers reduced the number of direct suppliers from nearly 500 to about 150 and created a new level of hierarchy for the chain: a modular supplier, characterized by the delivery of modules, subsets or systems (Zilbovicius, Marx and Salerno, 2002).

In this new setting, most automakers use similar criteria for selecting their suppliers: quality certification; financing capacity –to reduce the risk of interruptions in delivery and attempt to ensure technological updates; rating potential suppliers' production processes; and engineering and product-development capacity. The last criterion is the decisive factor for models whose design was defined locally by the Brazilian subsidiary (Salerno, Marx and Zilbovicius, 2003). Hence, once the automakers define a new model's characteristics and verify potential

suppliers' suitability, a bid is conducted for the contracts.

The new Brazilian modular plants underscore a strong similarity among the companies in the industrial condominiums. These companies include those that provide the systems containing panels, seats, wheels and tires, suspension, brakes, doors, lighting, heating and air conditioning, among other components. In general, companies that have set up in these industrial condominiums are module suppliers that have logistical problems (transportation costs, fragility) or that favour the diversification of models and greater flexibility for the manufacturing firm. Still, evidence shows that only final manufacturing and partial subassembly operations are carried out at the industrial condominiums (Graziadio and Zilbovicius, 2003).

The added value incorporated at industrial condominiums is quite low. For example, in General Motors' Gravataí plant, engines and transmissions come from the firm's plant in São José dos Campos in São Paulo. Similarly, a significant portion of the parts assembled or stored by modular suppliers in the condominiums are manufactured at these suppliers' plants near São Paulo and, on a much smaller scale, in southern Minas Gerais. The remaining parts are imported or, in the case the least expensive components, come from companies in Rio Grande do Sul.

Therefore, the strategy of the companies that took part in the modular system within the industrial condominiums is quite clear: minimize the risk of capital devoted to a single customer and reduce redundant capacity to a minimum, to optimize capacities already installed in their central units, basically in the São Paulo area. This, together with a higher content of imported parts, makes the new assembly units very different from the supplier network that existed prior to the investment boom in the second half of the 1990s, which had a higher degree of vertical integration.

Therefore, the original expectations behind the establishment of suppliers in the industrial condominiums where

modular plants are located have not been completely realized. Only 5% of all suppliers of modular plants are located within condominiums or similar complexes. Moreover, 76% of the autoparts plants more than 50 km from the assembly complexes (EPUSP/PRO/TTO, 2003). In addition, these units operate more according to a logic of just-in-time supplying to the assembly line rather than producing the modules, systems and components necessary for the final assembly of vehicles at a single location.

Modular plants' lacklustre performance in strengthening the production chains stems from two core factors: the incentives war and macroeconomic instability. Moreover, considering the difficulties these plants have faced in placing their production in international markets, the second factor has been compounded by Brazil's policy favouring low-cost vehicles, which encourages productive specialization in vehicles with low profit levels and that are harder to export.

The incentives war encouraged the establishment of new industrial complexes in relatively less-developed regions within the country, far from large industrial centres. São Paulo gradually lost its position as the host of new plants in the automotive chain — 72% of all new plants between 1970 and 1979 were established there, compared with 60.5% between 1980 and 1989. Since 1995, the decline has been even sharper, as São Paulo has hosted only 35.4% of all new plants. These changes are more dramatic when measured in investments. Between 1997 and 2001, 92% of investments in new vehicle plants took place outside São Paulo, in States such as Paraná (33%), Minas Gerais (19%) and Bahia (18%) (Burity and Medeiros, 2002).

Lastly, the macroeconomic instability that has beset Brazil in recent years has substantially altered the expectations that automakers once harboured regarding the performance of the local market. Economic decline meant a sharp fall in domestic demand, leaving a significant portion of productive

capacity idle. Given the high degree of specialization in vehicles intended for domestic consumption, the firms' strategies and public policy have focused on stimulating domestic demand, although with

unencouraging results. Moreover, these special characteristics of Brazilian production have greatly constrained the country's capacity to export, especially since this new type of plant was originally conceived to

increase efficiency in the conquest of third markets. Nonetheless, this experience has not yet produced the expected benefits; but with better domestic economic conditions the results might improve.

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of Priscilla Burity and Angela M. Medeiros M. Santos, "O complexo automotivo", *BNDES 50 Anos - Histórias Setoriais*, Banco Nacional de Desenvolvimento Econômico e Social (BNDES), Brasília, December, 2002; Grupo de Estudos em Trabalho, Tecnologia e Organização (EPUSP/PRP/TTO), *A nova configuração da cadeia automotiva brasileira*, Escola Politécnica da Universidade de São Paulo, Departamento de Engenharia de Produção, São Paulo, 2003; Thaise Graziadio and Mauro Zilbovicius, "Exploring the Reasons for Different Roles of Module Suppliers in a Car Assembly Plant", Eleventh Gerpisa International Colloquium, Ministère de la Recherche (Paris, 11-13 June 2003); Yannick Lung, Jean-Jacques Chanaron, Takahiro Fujimoto and Daniel Raff (eds.), *Coping with variety: flexible productive systems for product variety in the auto industry*, Aldershot, Ashgate, 1999; Mario Sergio Salerno, Roberto Marx and Mauro Zilbovicius, *Strategies of Product Design, Production and Suppliers Selection in the Auto Industry: Final Findings of a Broad Research in the Major Brazilian Assemblers' Subsidiaries, Headquarters and Suppliers*, Eleventh Gerpisa International Colloquium, Ministère de la Recherche (Paris, 11-13 June 2003); Mauro Zilbovicius, Roberto Marx and Mario Sergio Salerno, "A Comprehensive Study of The Transformation of The Brazilian Automotive Industry: Preliminary Findings", *International Journal of Automotive Technology and Management*, vol. 1, No. 3, pp. 10-23, 2002.

States market. As Mexico's autoparts industry became tightly integrated with the United States supplier network, it came to reproduce the same conflictive relationships without reaping the corresponding benefits (the new role of systems suppliers for modular plants). Industrial and technological advancement was limited, most notably to human-resources training and some productive linkages, since there was little transfer and assimilation of technology or entrepreneurial development (Mortimore and Barron, 2004). The autoparts industry's heightened international competitiveness was accompanied by the drastic curtailment of its domestic content, which in turn brought about a vicious circle between foreign autoparts manufacturers wishing to set up in Mexico but facing difficulties in finding local suppliers that met their input requirements and local suppliers interested in selling to foreign firms but lacking the required capability to do so (see box III.7).

In Brazil, the automotive chain has seen major transformations in the last decade (Salerno, Marx and Zilbovicius, 2003; Posthuma, 2001). Especially following the trade opening, automakers sought a significant reduction in the number of suppliers, and encouraged these suppliers to begin their transformation into manufacturers of modules or systems. The largest suppliers were acquired by foreign companies. Domestic companies currently account for little more than 20% of the capital stock in the subsector.

The transnationalization of the sector in Brazil has brought about significant changes. First, the automakers have reduced the number of direct suppliers from some 500 to about 150, significantly increasing the importance of first-tier suppliers in the production chain (see diagram III.4). Second, the new module suppliers develop parts and components for new models outside Brazil, in close

collaboration with vehicle assemblers. This has meant a significant loss in the local capacity for technological development that many Brazilian autoparts companies once possessed. The models in which Brazil specializes make it very difficult for a local supplier to compete in the international market. Lastly, the proportion of imported components used in the modules produced by leading (first-tier) Brazilian suppliers has increased substantially.

These structural changes are reflected in the subsector's performance in Brazil. In 2002, because of strong concentration and the disappearance of many companies, the subsector recorded a sales volume similar to that of 1992 (US\$ 10 billion), down from a high of US\$ 17.458 billion in 1997, and employment declined from 231,000 to 168,000 jobs (from 1992 to 2002). These transformations have not greatly altered the target market of Brazil's autoparts production, with the leading clients continuing to be vehicle assemblers (nearly 60% of sales). Although parts exports have, in fact, increased—from US\$ 2.312 billion to US\$ 3.882 billion between 1992 and 2002—imports have grown at a faster pace, from US\$ 1.252 billion to US\$ 3.980 billion. Since 1997, this has translated into a rising trade deficit, while total idle capacity stands at nearly 40% (SINDIPEÇAS, 2003).

Changes in the hierarchical levels of the production chain have not clearly corresponded to the new strategies of automakers and their modular plants. Autoparts firms have attempted to minimize the risk of betting their capital on a single customer and have avoided expanding their productive capacity and optimized existing capacity, normally at their central units, located principally in the São Paulo area; therefore, it would appear unrealistic to expect these new modular plants to be highly verticalized suppliers

Box III.7

THE VICIOUS CIRCLE AFFECTING MEXICO'S SUPPLIER NETWORK

A vicious circle of sorts affects the Mexican automotive industry's supplier network. Foreign companies, especially autoparts manufacturers, want to extend and consolidate their network to take advantage of the opportunities afforded by free-trade agreements other than NAFTA. They are, however, hard-pressed to find local input suppliers that meet their requirements. Suppliers, particularly Mexican suppliers, express much interest in selling to foreign companies but lack the required capability to do so, among other reasons because they do not receive the national-policy support they need to close the gap between their current performance and the requirements of purchasers. To better understand the nature of this vicious circle, ECLAC applied a questionnaire to 41 autoparts companies and 5 vehicle-assembly plants that operate in Mexico.

Companies that purchase autoparts and inputs thereof made in Mexico are normally very demanding and careful in certifying the quality and verifying the efficiency in their suppliers' operational performance. For a firm to qualify and apply to be a supplier, it normally must meet a series of conditions in minimum quality-qualification levels (ISO 9000, ISO 14000, QS9000, etc.), in addition to minimum levels of sales volume, degree of specialization and technological capabilities, among other requirements. Nearly all purchasers rigorously evaluate the quality, service and prices of their local suppliers' products; many audit the supplier firm's quality system, and some take detailed measurements in parts per million using methods such as Six Sigma. This demonstrates that suppliers' performance-assessment culture is increasingly far-reaching. Consequently, only if local suppliers meet purchasers' quality, service and price requirements can the coverage be extended and can the quality of the supplier network in Mexico be

improved. Many suppliers are, however, far from meeting these requirements.

According to the companies interviewed, the most important opportunities to improve their operational performance, in the case of Mexican-owned companies, are in quality (23%), service (21%) –understood principally as complying with delivery times and flexibility of supply– financial capacity and business culture (10%), and technological development (9%). Although the numbers indisputably indicate that quality and service are the most significant factors –especially for first-tier suppliers, given the opening to global competition– the most urgent issue to address for the second and third tiers can be viewed as that of a modern business culture. Nearly all other problems stem from this issue, which also offers an important platform to solve them. "Business culture" is understood as the combination of know-how, attitude and skills possessed by companies' top executives, which encourages them to seek ongoing improvement – incrementally, progressively and steadily– in every area of the organization and to attempt to bring it ever closer to the highest business-performance standards currently seen in the world. This is the main difficulty faced by tiers two and three, but it is also the same difficulty faced by the entire automotive chain, to the extent that it seeks to rely on domestic suppliers for its operations.

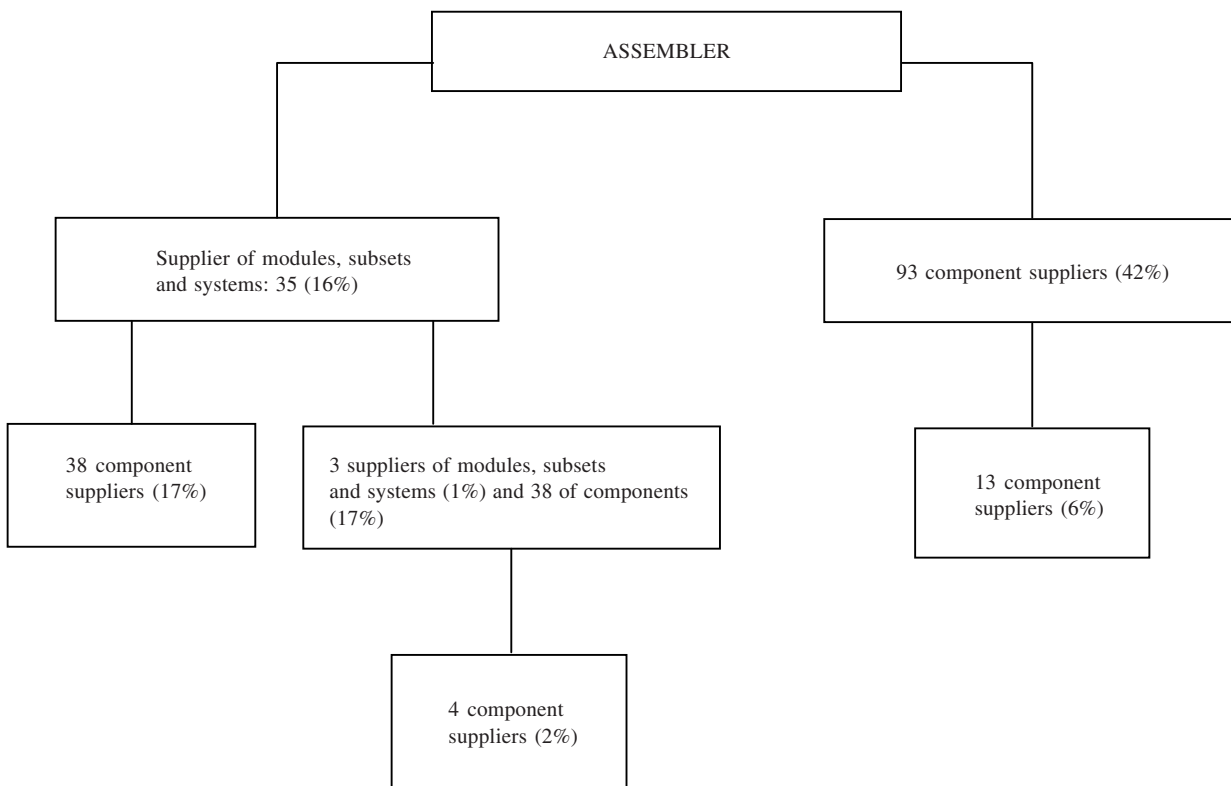
A comparison of inputs supplied with the level of the participating supplier confirms the hypothesis that tiers two and three are far from providing inputs and services with high added value. They have not, on their own, succeeded in fully inserting themselves into the Mexican automotive industry's supplier network. To a large extent, several of the inputs most frequently imported for manufacturing autoparts by companies

in the sector established in the country are concentrated, in their contribution to the industry's total value, in some of the same categories: smelting, forging, stamping, machining and welding (35%), and rubber, plastics and fibres (23%). This suggests that there is, roughly speaking, a strong demand that might –under the right conditions– be met locally. The decision to purchase locally or to import depends principally on the strategic acquisition policies of the large TNCs' head offices. Most of them are, apparently, not yet convinced that they should distance themselves from their supplier networks in the United States with the support of their Mexican affiliates and rely more on domestic companies. Clearly, there is a much room for national policy.

Programmes to develop suppliers and production chains are implemented by various government agencies (Ministry of the Economy, BANCOMEXT, NAFIN, State-government development ministries, among others) and the domestic private sector (Centros de Desarrollo de Proveedores-CEDEP, ITESM) as well as the foreign private sector (Japanese External Trade Organization, JETRO). The main question regarding the Mexican automotive industry is whether current policies for productive development related to extending, integrating and consolidating the supplier network –principally tiers two and three– into the automotive chain are sufficient to contribute to the incorporation of Mexican suppliers into an internationally competitive supplier network. Thus far, neither Mexico's policy for strengthening the Mexican supplier network nor the efforts of foreign companies in Mexico to transfer and assimilate technology and establish and deepen productive linkages and entrepreneurial development have been sufficient to break this vicious circle.

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of Michael Mortimore and F. Barron, "Informe sobre la industria automotriz mexicana", Comisión Económica para América Latina y el Caribe (CEPAL)/Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), January 2004.

Diagram III.4
**BRAZIL: STRUCTURE OF THE PRODUCTION CHAIN FOR A
 GENERIC ASSEMBLER**



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Escola politécnica da Universidade de São Paulo, Departamento de Engenharia de Produção, Grupo de estudos em Trabalho, Tecnologia e Organização (EPUSP-PRO/TTO), *Mapeamento da nova configuração da cadeia automotiva brasileira*, São Paulo, 2001.

integrated into the assembly line (EPUSP/PRP/TTO, 2003). Only Ford and GM have incorporated producers of most of the modules they need into their assembly lines, but they have done so without incorporating much added value into the modular plants.

In other words, Brazil's autoparts industry has lost local-development capacity and domestic added value as a result of automaker requirements. Sharp contraction in domestic demand, improved product quality and good relations with the assembly plants and their parent companies allowed the industry to raise its international competitiveness, albeit by using imported inputs and reducing domestic content. Although new technologies have been incorporated, productive linkages have been reduced, and the industry thus appears to be following a path increasingly similar to that of Mexico.

c) Challenges for Brazil's and Mexico's automotive industries

Mexico and Brazil face a common challenge but different domestic problems. The common challenge is to see that the genuinely most advanced firms in the automotive industry –Toyota and Honda– set up major operations in their countries, so as to take advantage of all the benefits these firms might offer in international production systems, organizational practices and supplier networks (Mortimore, 2003a). To have world-class automotive industries, they need the presence of cutting-edge companies.

They also face different domestic challenges. To continue expanding its automotive industry, Mexico needs to take advantage of free-trade agreements that it

has signed other than NAFTA and to increase local content, in compliance with these agreements' rules of origin. Brazil must use more of its existing capacity by seeking access to new markets. Along with revitalizing the domestic market, it must make better use of modern modular plants with an appropriate, world-class supplier network, to offer quality products to global markets.

Mexico's automotive industry: made in Mexico?

Mexico currently depends excessively on autoparts imports from the United States and lacks a suitable supplier network allowing it to benefit from its free-trade

agreements with other countries –including the agreement it is negotiating with Japan– and to comply with rules of origin set out in these agreements. To take advantage of its access to these markets, Mexico needs to significantly increase the Mexican content of its vehicles and autoparts intended for export (see diagram III.5).

In this, the Mexican automotive industry has been only partially successful. The main problem is the significant imbalance between vehicle assemblers and parts manufacturers. Between 1990 and 2000, vehicle assemblers raised their labour productivity by 57%, their added value by 59% and their employment by only 5%.

Diagram III.5
MEXICO: PREFERENTIAL ACCESS TO LEADING MARKETS THROUGH FREE TRADE AGREEMENTS



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

^a Regional content required by each agreement.

In the same period, autoparts firms operating outside the maquiladora structure increased their labour productivity by 11%, their added value by 39% and their employment by 33%, whereas the firms within the system of parts-manufacturing maquiladoras raised their labour productivity by only 8%, added value by 52% and employment by 52% (McKinsey & Co., 2003).¹¹ This opened an increasingly wide gap in Mexico's automotive industry, insofar as the competitiveness of the vehicle-assembly industry improved much more than did that of companies manufacturing parts and components.

Vehicle assemblers better utilized Mexico's advantages to augment output, raise labour productivity and increase added value, without excessively expanding their labour force. To a certain extent, they were able to do so because their Mexican suppliers specialized in labour-intensive activities. The supplier network of United States vehicle assemblers continued to have a strong effect on assembly operations in Mexico, whereas suppliers in Mexico maintained a subsidiary or complementary role, basically limited to lowering production costs. Consequently, the progress by vehicle assemblers was different from that of manufacturers of parts and components in Mexico. That is, the problems between vehicle assemblers and parts suppliers that characterize the United States automotive industry were replicated in Mexico.

The key issue is the difficulty in establishing in Mexico an autoparts supplier network sufficiently integrated, competitive and sophisticated to support efforts to position Mexico's automotive industry in the global market as well as in the North American market (Carillo, 2001; Dussel, 1997; Romo, 2003). The current network of parts and components suppliers is dominated by subsidiaries of TNCs, especially from the United States, that import a high proportion of their inputs from that country (USITC, 2002; United States Department of Commerce, 2003a). This particular characteristic greatly weakens the multiplier effect of the value added by the Mexican automotive industry, in contrast with the remarkable increase in the country's foreign trade (UNCTAD, 2003a). This reflects the weakness of the network of Mexican autoparts suppliers, which continue to specialize in reducing costs for the United States automotive industry, rather than aiming to consolidate a

world-class base in which factors related to the capacity for innovation (research and development, organizational practices, etc.), the management of complex technologies and the establishment of ISIP predominate (Ordorica, 2003).

Transnational vehicle producers with plants in Mexico have limited their efficiency seeking to reducing production costs through savings in wages –without establishing a supplier network in the country– unlike the cutting-edge firms in the industry, which have gained market share on the basis of competitive advantages created, among other means, through innovation in advanced manufacturing-production systems, the establishment of supplier networks, technological capabilities, organizational practices, design capacity and training of skilled human resources.

To successfully compete in other markets, the Mexican automotive industry must design and implement appropriate policies allowing it to move forward from an export platform –based on low wages and privileged access and geographic proximity to a single market– towards an integrated manufacturing centre that will compete on the basis of skilled human resources, technological capabilities and an integrated chain of world-class suppliers.

In recent years there has been some indication that these changes have begun to take place. The Mexican Automotive Manufacturers Association (AMIA) and the Ministry of the Economy proposed doubling Mexico's automotive-production capacity by 2010, to four million units per year.¹² Some firms have, moreover, announced new investments for production in Mexico of special models for the world market. Ford expects to invest US\$ 1.6 billion to build an industrial park of suppliers –along the lines of Brazil's modular plants– and to modernize its Hermosillo plant for the production of its new Futura model, to be sold in the United States market starting in 2005 (*América Economía*, 2003). Volkswagen announced that it would invest some US\$ 2.0 billion over the next five years, to begin production of trucks for the Mexican market and of three passenger automobiles: the Golf and the Jetta for the United States market, and the Bora for the world market (Just-auto.com, 2003d).

Another element that could instil confidence in the country's situation and its future possibilities is that many plants in Mexico already surpass those in the United States

¹¹ Maquiladoras had special rules allowing for the temporary importation of machinery, equipment, materials and components to be assembled in Mexico and subsequently exported. During the NAFTA transition phase a progressively higher percentage of maquiladora products was permitted in the assembly of vehicles in Mexico.

¹² This would mean increasing export production from 1.5 to 3 million vehicles and output capacity for the domestic market from five hundred thousand to one million units. The programme has not yet been officially approved, however.

and Canada in labour productivity (United States, USITC, 2002). This is the case of the General Motors plant in Silao and DaimlerChrysler's factories in Saltillo and Toluca (J.D. Power & Associates, 2003). Therefore, since 40 assembly plants in the world might have to be shut down, including 12 in North America, Mexico would appear to be poised to take advantage of the restructuring of the United States and global automotive industry (United States, USITC, 2002).

Nonetheless, the challenge currently faced by Mexico's automotive industry is more complex than it appears on the surface. In a context of worldwide idle capacity on the order of 25% to 33% and in light of the decrease in domestic output in recent years, expecting Mexico to double its productive capacity would seem extremely optimistic.¹³ That is, the problem would appear to be the quality of the production process rather than the number of vehicles produced. Another important problem is that the supplier network specializing in labour-intensive products is beginning to lose its competitive edge. Delphi –with extensive operations in Mexico– has stated that the country has become less attractive for establishing links in the firm's ISIP vis-à-vis competitors such as China (Just-auto.com, 2003e; Expansión, 2003; Lara and Carrillo, 2003).

In sum, in its current stage of development, Mexico's automotive chain lacks two of the decisive driving forces behind the worldwide restructuring of the automotive industry. First, it has a very minor stake in the ISIP of the most technologically advanced firms in the industry, most notably Toyota, and, second, it does not have the supplier network needed to comply with the regional rules of origin set out in its free-trade agreements with countries other than the United States (Automotive Intelligence News, 2003).

Brazil's automotive industry: exporting to survive

In Brazil, the introduction of production at modern modular plants coincided with the contraction of domestic demand, leading to enormous idle capacity. The strategies of the vehicle assemblers, the national policies

for the sector, and the specific characteristics of specialization by Brazil's automotive industry have greatly limited the possibilities for placing part of the excess output in international markets.

Specialization in compact automobiles has allowed Brazilian industry to gain economies of scale, protect its domestic market vis-à-vis the trade opening and take advantage of new trade agreements, inasmuch as Brazil's potential trading partners do not specialize in this category of vehicles. This specialization and, especially, the programme to promote the production of low-cost vehicles are, nonetheless, the main obstacle to Brazilian industry significantly increasing its exportable supply. The main challenge for Brazil is, then, to adapt its production to global, regional and national needs, so as to increase the scale of production and promote linkages with the international economy.

It appears inevitable, then, that Brazil will consolidate a model of specialization in larger compact (platform "B") vehicles, to maintain and enhance the competitiveness of the domestic production chain. Brazilian industry should move beyond the low profit levels of economy models and the stagnant domestic market and focus on more sophisticated, powerful and expensive vehicles that will be more accepted in international markets, using the same platform as its compact cars. Brazil could gradually specialize in fully-equipped compact vehicles, or simply small vehicles, but not economy models. Noteworthy examples are the new Volkswagen Polo and General Motors Corsa, and, particularly, several recently launched models –the Ford EcoSport, General Motors Meriva, Citroën C3 and Honda Fit.¹⁴ These upscale compact vehicles compete with midsize models such as the Volkswagen Golf and the General Motors Astra, and they target younger, more active consumers. These new models have been quite well received in the Brazilian market and have had good results in other Latin American markets, as well. Automotive executives say these upscale vehicles should close the strategic equation and translate into a locally and internationally integrated production chain.

¹³ Consequently, some analysts doubt that this objective of Mexican automotive policy can be met. Among developing countries expected to have an output above one million units in 2010, Mexico will likely not show a very significant increase. Indeed, these analysts expect Mexico to increase output by 14.8% between 2003 and 2010, while they put forth more encouraging estimates for other developing countries, such as China (85.7%), Thailand (61.2%), Iran (47.2%) and Brazil (44.9%) (PricewaterhouseCoopers, 2004).

¹⁴ The EcoSport is a good example of how production platforms can be shared. This model has much of the same equipment as the new Fiesta, but on the outside it is another vehicle. It established a new segment that used to consist of only imported vehicles. The same is true of the General Motors Meriva, which uses the Corsa's platform, engine and gearbox. Still, it is a very different vehicle, with a 1.8 engine, and it has introduced the segment of compact sport-utility vehicles. Another example is the Citroën C3, made by PSA Peugeot Citroën since 2003 at the Porto Real plant. These models are joined by the Honda Fit, produced on the platform recently inaugurated by this Japanese firm.

In Brazil's domestic market, the automakers' strategy has been to attract consumers to this new segment of midsize vehicles and thereby raise their profit margins. To this end, the automakers have proposed changes in the tax structure that would set a uniform Tax on Industrialized Products (*imposto sobre produtos industrializados*, IPI) for all types of vehicles, regardless of their cylinder capacity.¹⁵ Some of these changes began in mid-2002.

This policy is a tentative solution that will allow automakers to improve operational profitability, although it does not sustainably and permanently solve the underlying problem of the competitiveness of the automotive industry's production chain. To date, the most important market-expansion efforts have been made through MERCOSUR and, more recently, through agreements with Mexico.

Increasing exports to new markets is not a simple process. Given the fact that Brazil's currency has been depreciating since 1999, which has resulted in lower local costs measured in foreign currency and, therefore, increased competitiveness, exports have remained relatively constant and concentrated in a few markets. A sharply undervalued exchange rate has not been an efficient export-promotion instrument, amid heightened competition in external markets and the depreciation of the currencies of some of the country's competitors. Moreover, the financial costs of recent investments and

operational costs linked to higher imported content diminish the profitability and competitiveness of Brazilian products (Sarti, 2003).

Devaluation hurt the interests of the affiliates of foreign companies in Brazil. The orientation towards the domestic market produced a strong imbalance between the country's dollar-denominated debt and its income from sales in local currency. Companies have attempted to improve their economic and financial indicators by increasing their exports. Brazilian authorities, in turn, have sought to improve and expand incentives to export, so as to encourage the generation of a surplus in the sector's trade balance. In the recent process of restructuring production in Brazil's automotive industry, investments by TNCs were largely matched by contributions of government resources and tax breaks at the federal, state and municipal levels. In addition, IPI rates were recently cut to stimulate domestic demand and encourage lines of financing for exports.

Hence, government and firms should join forces to raise Brazilian industry's propensity to export. Policymakers and economic authorities could seek alternatives to expand and diversify the external markets for the different products made by this industry, while affiliates could promote better intrafirm trade relationships, basically in engines and parts, and between TNCs and autoparts companies in Brazil or within MERCOSUR.

D. CONCLUSIONS

The automotive industry is being transformed on the basis of large investments by the leading TNCs seeking efficiency in their ISIP. To an important degree, the sector's new competitiveness comes from the supplier networks. A small group of developing countries has tried to seize this opportunity.

An analysis of the automotive industry in Mexico and Brazil provides some lessons to better understand this phenomenon. As noted in the conclusions to chapter I, the host country seeks to attract TNCs to benefit from their presence in the domestic economy. Clearly, the benefits are not automatic but come from an appropriate combination of quality FDI with sound national policies. Table I.6 in chapter I pointed to the kind of problems that have emerged in Latin America when the underlying goals of FDI and national policy did not match.

Mexico and Brazil have been favoured, to a certain extent, by this opportunity. Mexico has improved its international competitiveness based on FDI by United States TNCs seeking efficiency for their regional integrated production systems. Brazil, in turn, had a solid automotive industry based on United States and European FDI, which supplied, above all, the domestic market, enjoyed significant productive linkages and later came to establish new modular plants.

The TNCs have tended, however, to utilize the host country's static advantages, for which reason the positive effects are not long-lasting. For example, the evolution of Mexico's and Brazil's automotive industries points to a sort of inverse correlation between international competitiveness and productive linkages, which limits the role of each country's supplier network. The meteoric

¹⁵ The Tax on Industrialized Products is a federal tax levied on manufactured products at the factory gate, in the case of Brazilian goods, or when they are shipped, in the case of imported goods.

rise in Mexico's competitiveness was achieved, to a certain extent, at the expense of an integrated supplier base. Consequently, Mexico is not currently in a position to properly take advantage of its free-trade agreements, since it does not have a supplier network allowing it to comply with the respective rules of regional origin. In Brazil, specialization in compact cars limited its possibilities to export; the opening of the automotive industry weakened the existing supplier network; and the new modular plants have not proven sufficiently competitive in external markets. In both cases, the supplier network has lacked the competitiveness to allow for the industry's sustained growth.

In addition to issues linked to the development of competitive supplier bases related to transnational automakers from the United States and Europe, it is noteworthy that the industry's most technologically advanced firm –Toyota– which has the most competitive and least conflictive supplier network,

has such a limited presence in Latin America. Clearly, this region did not represent a priority for Toyota's ISIP. Toyota's emphasis on establishing a broad supplier network in North America during the last 10 years suggests that Mexico could have played a significant role if the country's authorities had made an effort to attract the firm (Mortimore and Vergara, 2004).

The weakness of the supplier bases and the absence of cutting-edge companies are some of the problems faced by Latin America's automotive industry. The industry's opening to FDI, consistent with the transnational automakers' new efficiency-seeking strategy, led to a sharp scaling back of the industry's reach in the region and its concentration in two countries: Mexico and Brazil. If a proper combination of quality FDI with sound national policies is not achieved, the industry's current international competitiveness could prove short-lived.

BIBLIOGRAPHY

- A.T. Kearney (2003), "North American automakers, parts suppliers intend to move key business processes to offshore locations", 24 September.
- AAFA (American Apparel & Footwear Association) (2003), "Trends Annual 2002", Arlington.
- Aitken, B. y A. Harrison (1999), "Do domestic firms benefit from foreign direct investment? Evidence from Venezuela", *American Economic Review*, vol. 89.
- Altomonte, Hugo (2001), "Políticas públicas para el desarrollo sustentable del sector energético", Quinta Conferencia Interparlamentaria de Minería y Energía (Santiago, Chile, 18 - 20 July).
- Amazon Watch (2003), "Timeline. The case against Chevron Texaco" [on line] (http://www.amazonwatch.org/amazon/EC/toxico/index.php?page_number=5).
- América Economía* (2003a), 10 January.
- (2003b), 29 January.
- (2003c), "Ford busca rueda de auxilio", 20 November.
- AMIA (Mexican Automotive Manufacturers Association) (2003), *Boletín. Órgano informativo mensual*.
- ANFAVEA (Associação Nacional dos Fabricantes de Veículos Automotores) (2003), "Anuário estatístico da indústria automobilística brasileira 2003" [on line] (<http://www.anfavea.com.br/Index.html>).
- Arze, Carlos (2003), "El problema del gas: desarrollo económico vs. intereses de las transnacionales", *Informe de Coyuntura*, No. 1, Centro de Estudios para el Desarrollo Laboral y Agrario (CEDLA), September.
- Auto Business (2002), "OEM sourcing strategies" [on line], DRI-WEFA (<http://www.globalinsight.com/MultiClientStudy/MultiClientStudyDetail159.htm>) [24 October].
- Automotive Intelligence News* (2003), "Toyota announces second expansion of Baja California plant", 20 August.
- Bancomext (2002), *Automotive Sector Investment Opportunities in Mexico*, Mexico City.
- Barrios, S., H. Gorg and E. Strobl (2001), "Explaining firms' export behavior: the role of R&D and spillovers", *GEP Research Paper*, No. 01/27, University of Nottingham.
- Barry, F., H. Gorg and E. Strobl (2001), "Foreign direct investment and wages in domestic firms: productivity spillovers vs. labor market crowding out", University College Dublin/University of Nottingham.
- BCCR (Banco Central de Costa Rica) (2003), "X Informe trimestral sobre los flujos de inversión extranjera directa en Costa Rica, 1997-2003", San José, Grupo Interinstitucional de Inversión Extranjera Directa, Banco Central de Costa Rica, September.
- Blomstrom, M. and E. Wolff (1994), "Multinationals corporations and productive convergence in Mexico", *Convergence of productivity: cross national studies and historical evidence*, William Jr. Baumol, Richard R. Nelson and Edward Wolff (eds.), Oxford, Oxford University Press.
- Booz, Allen & Hamilton (1999), "Challenges facing the global automotive industry", *Insights*, vol. 1, No. 1, September.
- Bouvard, F., M. Cesari and J. Luciat-Labry (2002), *Retooling the Way to Profitable Growth*, McKinsey Research.
- Branstetter, L. (2000), "Is foreign direct investment a channel of knowledge spillovers? Evidence from Japan's FDI in the United States", *NBER Working Paper*, No. 8015, November.
- Brookhart, Larry and Ralph Watkins (2000), "Production sharing update: developments in 1999", *Industry Trade and Technology Review*, Office of Industries, United States International Trade Comisión (USITC), July.
- Buitelaar, Rudolf (2000), "América Central y República Dominicana: modernización y ajuste en la maquila de confección", *Integración y Comercio*, No. 11, Buenos Aires, Instituto para la Integración de América Latina y el Caribe (INTAL), May.

- Buitelaar, Rudolf and R. Padilla (2000), "Maquila, economic reform and corporate strategies", *World Development*, vol. 28, No. 9, September.
- Campodónico, Humberto (2000), "Privatización y conflictos regulatorios: el caso de los mercados de electricidad y combustibles en el Perú", *Recursos naturales e infraestructura series*, No. 8 (LC/L.1362-P/E), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), March. United Nations publication, Sales No. S.00.II.G.35.
- Cárdenas, Christian (2003), *Diagnóstico del sector eléctrico: 1990-2002*, La Paz, Unidad de Análisis de Políticas Económicas (UDAPE).
- Carrillo, J. (2001), "Autopartes de las empresas transnacionales en México y el desarrollo de empresas locales", Ninth GERPISA International Colloquium (Paris, 7 - 9 de June), Permanent Group for the Study of the Automobile Industry and its Employees (GERPISA).
- CEESP (Centro de Estudios Económicos del Sector Privado) (2001), "La industria nacional de autopartes", *Actividad económica*, No. 233, July.
- Cheng, T. and Y. Ku (2000), "The effect of foreign direct investment on firm growth: the case of Taiwan's manufacturers", *Japan and the World Economy*, No. 12.
- Chuang, Yih-Chyi and Lin Chi-Mei (1999), "Foreign direct investment, R&D and spillovers efficiency: evidence from Taiwan's manufacturing firms", *Journal of Development Studies*, vol. 35.
- Clarín (2003a), "Juicio del siglo en Ecuador: los indígenas contra Texaco", Buenos Aires, 23 October.
- (2003b), "Negocian con los EE.UU. un freno a los juicios de las privatizadas", Buenos Aires, 2 November.
- (2003c), "Un grupo nacional les compró a los franceses su parte en Telecom", Buenos Aires, 10 September.
- CNN Money (2003), "Ford Exec: Camry better than Taurus", February.
- CNZFE (Consejo Nacional de Zonas Francas de Exportación) (2003), *Informe estadístico 2002*, Santo Domingo.
- Comercio Exterior (2004), "Nueva reglamentación para la industria maquiladora", *Apuntes de coyuntura*, vol. 4, No. 1, Mexico City, January.
- Country Monitor (2000), "Costa Rica: streamlining operations", 13 November.
- Da Silva Alves, María Abadía (2001), *Guerra fiscal e finanças federativas no Brasil: o caso do setor automotivo*, Campinas, Universidade Estadual de Campinas, Instituto de Economía.
- Damijan, J. and others (2001), "The role of FDI, absorptive capacity and trade in transferring technology to transition countries: evidence from firm panel data for eight transition countries", Geneva, Economic Commission for Europe (ECE).
- de Araujo, Hermes J.L. (2001), "Investment in the Brazilian ESI - What went wrong? What should be done", Rio de Janeiro, Instituto de Economia da Universidade Federal de Rio de Janeiro.
- de María y Campos, Mauricio and Gerardo López Valadez (1991), "Reestructuración y desarrollo de la industria automotriz mexicana en los años ochenta: evolución y perspectivas", *Estudios e informes series*, No. 83 (LC/G.1672-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), August. United Nations publication, Sales No. S.92.II.G.11.
- Delphi (2003), 10-11 November.
- Djankov, S. and S. Hoekman (2000), "Foreign direct investment and productivity growth in Czech enterprises", *World Bank Economic Review*, vol. 14.
- Dunning, John H. (1988), "The eclectic paradigm of international production: a restatement and some possible extensions", *Journal of International Business Studies*, vol. 19, No. 1.
- (1980), "Toward an eclectic theory of international production: some empirical test", *Journal of International Business Studies*, vol. 11, No. 1.
- Dussel, E. (1997), *La economía de la polarización. Teoría y evolución del cambio estructural de las manufacturas mexicanas (1988-1996)*, Mexico City, Universidad Nacional Autónoma Mexicana (UNAM)/Editorial Jus.
- ECLAC (Economic Commission for Latin America and the Caribbean) (2003a), *Preliminary Overview of the Economies of Latin America and the Caribbean 2003* (LC/G.2223-P/I), Santiago, Chile, December. United Nations publication, Sales No. S.03.II.G.186.
- (2003b), *Foreign investment in Latin America and the Caribbean. 2002 Report* (LC/G.2198-P/I), Santiago, Chile, April. United Nations publication, Sales No. S.03.II.G.11.
- (2002a), *Preliminary Overview of the Economies of Latin America and the Caribbean 2002* (LC/G.2196-P/I), Santiago, Chile, December. United Nations publication, Sales No. S.02.II.G.126.

- ____ (2002b), *Foreign investment in Latin America and the Caribbean. 2001 Report* (LC/G.2178-P/I), Santiago, Chile. United Nations publication, Sales No. S.02.II.G.47.
- ____ (2001), *Foreign investment in Latin America and the Caribbean. 2000* (LC/G.2125-P/I), Santiago, Chile. United Nations publication, Sales No. S.01.II.G.12.
- ____ (2000), *Foreign investment in Latin America and the Caribbean. 1999* (LC/G.2061-P/I), Santiago, Chile. United Nations publication, Sales No. S.00.II.G.4.
- ____ (1998), *Foreign investment in Latin America and the Caribbean. 1998* (LC/G.2042-P), Santiago, Chile. United Nations publication, Sales No. S.98.II.G.14.
- ____ (1987), “Reestructuración de la industria automotriz mundial y perspectivas para América Latina”, *Estudios e informes de la CEPAL series*, No. 67 (LC/G.1484-P), December. United Nations publication, Sales No. 87.II.G.15.
- EIU (The Economist Intelligence Unit) (2003a), “Industry forecast: coming credit revival”, *Business Latin America*, No. 23, 16 June.
- ____ (2003b), “Industry forecast: foraging for business”, *Business Latin America*, No. 42, 27 October.
- ____ (2003c), “Industry forecast: gaining back”, *Business Latin America*, No. 40, 13 October.
- ____ (2003d), “What’s new in your industry”, *Business Latin America*, No. 16, 28 April.
- EIU (The Economist Intelligence Unit)/McKinsey & Co. (1999), “Succeeding in the next automotive century: a reprint of articles from the EIU Motor Business series”, London.
- El Cronista Comercial (2003), Buenos Aires [on line] (<http://www.cronista.com.ar>).
- El Mercurio* (2003), “Por qué Carrefour optó por abandonar Chile”, Santiago, Chile, 30 December.
- El Universal* (2003), Caracas, 30 November.
- EPUSP/PRP/TTTO (Escola Politécnica da Universidade de São Paulo, Departamento de Engenharia de Produção, Grupo de Estudos em Trabalho, Tecnologia e Organização) (2002), “A nova configuração da cadeia automotiva brasileira”, São Paulo, Research carried out in association with the National Bank for Economic and Social Development (BNDES) (<http://www.poli.usp.br/prp/cadeia-automotiva>) [November].
- ESCAP (Economic and Social Commission for Asia and the Pacific) (2004), *Transnational Corporations and Technology Transfer in Export Processing Zones and Science Parks*, New York/Geneva.
- Estrategia* (2004), “D&S realiza aumento de capital por US\$ 287 millones y firma compra de Carrefour Chile”, Santiago, Chile, 8 January.
- ____ (2003), “Inversiones por unos US\$ 3.000 mills. vendrían con ley corta eléctrica”, Santiago, Chile, 29 October.
- Expansión* (2003), “Fiebre automotriz: China estacione la bicicleta”, Mexico City, October.
- Fernández, Miguel and Enrique Birhuet (2002), “Resultados de la reestructuración energética en Bolivia”, *Recursos naturales e infraestructura series*, No. 42 (LC/L.1728-P/E), Santiago, Chile. United Nations publication, Sales No. S.02.II.G.38.
- Financial Times (2002), “Creating sustainable competitive advantage: the Toyota philosophy and its effects”, *Mastering Management Series* [on line] (<http://www.ftmastering.com/mmo/index07.htm>) [5 September].
- Fisher, Ronald, Rodrigo Gutiérrez and Pablo Serra (2003), “The effects of privatization on firms and on social welfare: The Chilean case”, Inter-American Development Bank (IDB)/Red de Centros de Investigación, May.
- Fortune* (1997), “Blood feud”, 14 April.
- Fourcade, F. and C. Midler (2003), “Vehicle Modularization: Challenges Facing Level-1 Suppliers and Prerequisites for Its Implementation”, Ninth GERPISA International Colloquium (Paris, 11-13 de June), Permanent Group for the Study of the Automobile Industry and its Employees (GERPISA).
- Fundación Terram (2002), “Megaproyecto Alumysa: de reserva de vida a basurero industria”, *serie Análisis de Políticas Públicas, APP*, No. 8, April.
- Gereffi, Gary (2001), “Global Sourcing in the U.S. Apparel Industry”, *Journal of Textile and Apparel, Technology and Management*, vol. 2, No. 1.
- ____ (2000), “El tratado de libre comercio de América del Norte en la transformación de la industria del vestido: ¿bendición o castigo”, *Desarrollo productivo series*, No. 84 (LC/L.1420-P/I), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), October. United Nations publication, Sales No. E.00.II.G.103.
- Gereffi, Gary and Jennifer Bair (2002), “NAFTA and the apparel commodity chain: corporate strategies, Interfirm networks, and industrial upgrading”, *Interfirm Trade and Uneven Development, the North American Apparel Industry after NAFTA*, Gary Gereffi, David Spener and Jennifer Bair (eds.), Philadelphia, Temple University Press.

- Gereffi, Gary and Olga Memedovic (2003), "The global apparel value chain: what prospects for upgrading by developing countries", *serie de Estudios sectoriales*, Viena, United Nations Industrial Development Organization (UNIDO).
- Gereffi, Gary, David Spener and Jennifer Bair (2002), "NAFTA and uneven development in the North American apparel industry", *Interfirm Trade and Uneven Development, the North American Apparel Industry after NAFTA*, David Spener, Jennifer Bair and Gary Gereffi (eds.), Philadelphia, Temple University Press.
- Girma, S. and K. Wakelin (2001), "Who benefits from foreign direct investment in the UK?" *Scottish Journal of Political Economy*, vol. 48.
- Global Reporter (2003), "El precio del oro negro" [on line] (<http://www.global-reporter.net/spanisch/index.html>).
- Gorg, Holger and David Greenaway (2001), "Foreign direct investment and intra-industry spillovers", European Bank for Reconstruction and Development (EBRD) expert meeting on financing for development: enhancing the benefits of FDI and improving the flow of corporate finance in the transition economies (Geneva, December), Economic Commission for Europe (ECE).
- Graziadio, T. and M. Zilbovicius (2003), "Exploring the reasons for different roles of module suppliers in a car assembly plant", Ninth GERPISA International Colloquium (Paris, 11 - 13 June), Permanent Group for the Study of the Automobile Industry and its Employees (GERPISA).
- Gritton, P. (2003), "Toyota: surviving and thriving through supplier partnerships", Global Automotive Conference (Bowling Green, Kentucky, 8 April), Western Kentucky University.
- Haddad, M. and A. Harrison (1993), "Are there positive spillovers from foreign direct investment: evidence from panel data for Morocco", *Journal of Development Economics*, vol. 42.
- Hodges, Mark (2003), "Not your father's outsourcing deal", *Optimize Magazine*, June.
- Hughes, Gary (2002), *Canadian industrial giant prepares invasion of Patagonia*, Native Forest Network.
- Ikeda, M. and Y. Nakagawa (2001), "Two ways of modularization strategy in Japan: Toyota - Honda vs. Nissan - Mazda", Ninth GERPISA International Colloquium (Paris, 7 - 9 June), Permanent Group for the Study of the Automobile Industry and its Employees (GERPISA).
- ILO (International Labour Organization) (1999), "La gestión de la privatización y reestructuración de los servicios públicos", Geneva, April.
- IMF (International Monetary Fund) (2003), "Balance of payments statistics" [CD ROM] [December].
- ____ (2002), "Directory of Trade Statistics 2002", *Yearbook 2002*, Washington, D.C.
- INA (Industria Nacional de Autopartes) (2003), *Industria automotriz y de autopartes en México*, Mexico City
- IPEA (Institute for Applied Economic Research) (1999), *Boletim de política industrial*, No. 8, Rio de Janeiro, August.
- ____ (1998), *Boletim de política industrial*, No. 5, Rio de Janeiro, August.
- ____ (1997), *Boletim de política industrial*, No. 1, Rio de Janeiro, April.
- Iwami, M. (2002), "Japanese automobile industry", *JOI Bulletin*, No. 2.
- J.D. Power & Associates (2003), "Mexico automotive plants outperform U.S. assembly plants in initial vehicle quality", Press Release, 8 May.
- Just-auto.com* (2004a), "UK: Carmakers and suppliers must involve Tier 2 and 3 suppliers in product development", 5 March.
- ____ (2004b), "USA: Delphi expands Chinese factory capacity", 5 March.
- ____ (2004c), "USA: revised Ford deals clobber Visteon in fourth quarter - report", 23 January.
- ____ (2004d), "Japan: Denso hikes profit forecast", 3 February.
- ____ (2004e), "Suppliers claim new Ford terms flout European law", 9 de February.
- ____ (2003a), "Mexico: high costs may force some Delphi operations out - report", 29 August.
- ____ (2003b), "NAFTA plants are failing to get flexible", 19 June.
- ____ (2003c), "USA: General Motors and Ford get union approval to axe eight plants", 22 September.
- ____ (2003d), "General Motors' way doesn't work for GM's former components group", 10 December.
- ____ (2003e), "Mexico: Volkswagen to invest US\$ 2 billion by 2008 - report", 12 December.
- Kathuria, V. (2000), "Productivity spillovers from technology transfer to Indian manufacturing firms", *Journal of International Development*, vol. 12.
- Keller, W. and S. Yeaple (2002), *Multinational Enterprises, International Trade and Productivity Growth: Firm Level Evidence from the United States*, Rhode Island, Brown University.
- Kimerling, Judith (2002), "Impacto ambiental y acciones legales".
- Kokko, A. (1996), "Productivity spillovers from competition between local firms and foreign affiliates", *Journal of International Development*, vol. 8.

- ____ (2001), "Trade regimes and spillovers effects of FDI: evidence from Uruguay", *Weltwirtschaftliches Archiv*, vol. 137.
- Kokko, Ari, Mario Zejan and Rubén Tansini (1996), "Local technological capability and productivity spillovers from FDI in the Uruguayan manufacturing sector", *Journal of Development Studies*, vol. 32, No. 4, April.
- Konnings, J. (2001), "The effects of foreign direct investment on domestic firms: evidence from firm level panel data in emerging economies", *CEPR Discussion Paper*, No. 2586.
- Kugler, M. (2001), "The diffusion of externalities from foreign direct investment: the sectoral pattern of technological spillovers", *Discussion Paper in Economics and Econometrics*, University of Southampton.
- La Tercera* (2004), "Endesa España invierte este año US\$ 480 millones en A. Latina", Santiago, Chile, 5 February.
- Lall, Sanjaya (2002), "Asian success stories: Improving industrial competitiveness with & without FDI", Regional Seminar on Foreign Investment in Latin America (Santiago, Chile, 7 - 9 January), United Nations Conference on Trade and Development (UNCTAD)/Economic Commission for Latin America and the Caribbean (ECLAC).
- ____ (2000), "Export performance technological upgrading and foreign direct investment strategies in the Asian newly industrializing economies. With special reference to Singapur", *Desarrollo productivo series*, N° 88 (LC/L.1421-P/I), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), October. United Nations publication, Sales No. S.00.II.G.108.
- Lall, Sanjaya, Manuel Albaladejo and Jinkang Zhang (2004), *Mapping fragmentation: electronics and automobiles in East Asia and Latin America*, Queen Elizabeth House, Oxford University.
- Lara, A. y J. Carrillo (2003), "Globalización tecnológica y coordinación intraempresarial en el sector automovilístico: el caso de Delphi-México", *Comercio Exterior*, vol. 53, No. 7, July.
- Larraín, Felipe, F. López-Calva and A. Rodríguez-Clare (2001), "Intel: a case study of foreign direct investment in Central America", *Economic Development in Central America. Volume 1: Growth and Internationalization*, Felipe Larraín (ed.), Cambridge, Harvard University Press.
- Latin America Energy Report* (2003a), 11 July.
- ____ (2003b), 11 September.
- ____ (2003c), 25 September.
- Leuliette, T. (2003), "Building a new business model for the substantial and sustainable value creation", Global Automotive Conference (Bowling Green, Kentucky, 8 de April), Western Kentucky University.
- Lipsey, Robert (2002), "Home and host country effects of FDI", *NBER Working Paper*, N° 9293, National Bureau of Economic Research (NBER), October.
- Liu, X. and others (2000), "Productivity spillovers from foreign direct investment: evidence from UK industry level panel data", *Journal of International Business Studies*, vol. 31.
- Liu, Z. (2002), "Foreign direct investment and technology spillovers: evidence from China", *Journal of Comparative Economics*, vol. 30.
- Loewendahl, Henry (2002a), "The FDI Policy Experience of Western Europe: Lessons for Emerging Markets", Regional Seminar on Foreign Direct Investment in Latin America (Santiago, Chile, 7 - 9 January), United Nations Conference on Trade and Development (UNCTAD)/Economic Commission for Latin America and the Caribbean (ECLAC).
- ____ (2002b), "Targeting As a Means to Increase the Impact of National FDI Policy", Seminario Regional "Políticas de IED en América Latina" (Santiago, Chile, 7 - 9 January), United Nations Conference on Trade and Development (UNCTAD)/Economic Commission for Latin America and the Caribbean (ECLAC).
- Lora, Miguel (2003), "Es cuestión de tiempo, Chile dependerá del gas boliviano" [on line] (<http://www.pulsobolivia.com/>).
- Luxner, Larry (2000), "Costa Rica in P&G's future", *The Cincinnati Post*, 23 November.
- McKinsey & Co. (2003), *New Horizons: Multinational Company Investment in Developing Economies*, San Francisco.
- Moffett, M. and W. Youngdahl (1998), "José Ignacio López de Arriortúa", *Thunderbird case study*, Glendale, Arizona, Thunderbird.
- Mortimore, Michael and F. Barron (2004), "Informe sobre la industria automotriz mexicana", Economic Commission for Latin America and the Caribbean (ECLAC)/Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), January.
- Mortimore, Michael (2004), "The impact of TNC strategies on development in Latin America and the Caribbean", *Foreign Direct Investment and Development: Selected Experiences and Policy Implications*, D.W. Te Velde (ed.), London, Overseas Development Institute, in press.
- ____ (2003a), "Cómo desarrollar estrategias sectoriales de atracción de inversión extranjera hacia América Latina", Programa de Actualización para la Promoción de Inversión Extranjera, Mexico City, Bancomext, April.

- (2003b), “Competitividad ilusoria: el modelo de ensamblaje de prendas de vestir en la Cuenca del Caribe”, *Comercio Exterior*, vol. 53, No. 4, Mexico City, April.
- (2002), “When does apparel become a peril? On the nature of industrialization in the Caribbean Basin”. *Interfirm Trade and Uneven Development, the North American Apparel Industry after NAFTA*, Gary Gereffi, David Spener and Jennifer Bair (eds.), Philadelphia, Temple University Press.
- (1998a), “Corporate strategies and regional integration schemes involving developing countries: the NAFTA and Mercosur automobile industries”, *Science, Technology and Development*, vol. 16, No. 2, Glasgow, University of Strathclyde, August.
- (1998b), “Getting a lift: modernizing industry by way of Latin American integration schemes. The example of automobiles”, *Transnational Corporations*, vol. 7, No. 2, Geneva, August.
- (1997), “The Asian challenge to the world automobile industry”, *Revista de Economía Contemporânea*, No. 2, Universidade Federal do Rio de Janeiro (UFRJ), July.
- Mortimore, Michael and Wilson Peres (1997), “Policy Competition for Foreign Direct Investment in the Caribbean Basin: Costa Rica, the Dominican Republic and Jamaica”, OECD Development Center Research Project on Policy Competition and FDI, Paris, Organisation for Economic Co-Operation and Development (OECD), February.
- Mortimore, Michael and Sebastián Vergara (2004), “Targeting winners: can FDI policy help developing countries industrialize?” *European Journal of Development Research*, in press.
- Mortimore, Michael, Sebastián Vergara and Jorge Katz (2001), “La competitividad internacional y el desarrollo nacional: implicancias para la política de IED en América Latina”, *Desarrollo productivo series*, No. 107 (LC/L.1586-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), July.
- OECD (Organisation for Economic Co-Operation and Development) (2002), *International Direct Investment Statistics Yearbook*, Paris.
- (1999), “Report on the survey of implementation of methodological standards for direct investment”, Directorate for Financial, Fiscal and Enterprise Affairs, Committee on International Investment and Multinational Enterprises.
- OESA (Original Equipment Suppliers Association) (2003a), “The global automotive industry: strategies for competing”, Troy, Michigan, 27 June.
- (2003b), “OEM - Supplier relations from the supplier perspective”, Global Automotive Conference (Bowling Green, Kentucky, 8 April), Western Kentucky University.
- OESA (Original Equipment Suppliers Association)/McKinsey & Co. (1999), *Profitable Growth Strategies in the Automotive Supply Industry*, Troy, Michigan.
- Oil & Gas Journal Latinoamérica* (2003), vol. 9, No. 5, September.
- Oman, Charles (2000), “Policy competition for foreign direct investment: a study of competition among governments to attract FDI”, Paris, OECD (Organisation for Economic Co-Operation and Development).
- Ordorica, P. (2003), “To be or not to be: the dilemma of Mexican auto parts manufacturers in a globalized world”, *Eyes on the Road: industry observations from McKinsey’s Automotive Experts*, McKinsey & Co.
- Paliza, Rosendo (1999), “Impacto de las privatizaciones en el Perú”, *Revista de Estudios Económicos*, Lima, July.
- Pérez, Arnaldo (2003), “¿Se retira Alumysa?” *La Insignia*, Madrid, September.
- Portal minero (2003), [on line] (www.portalminero.com) [April].
- Posthuma, A. (2001), “Industrial renewal and inter-firm relations in the supply chain of the Brazilian automotive industry”, Ninth GERPISA International Colloquium (Paris, 7 - 9 June), Permanent Group for the Study of the Automobile Industry and its Employees (GERPISA).
- PricewaterhouseCoopers (2004), “Executive Perspectives. Quarterly Forecast Update”, *Autofacts* [on line] (<http://www.autofacts.com/index.html>) [January].
- (2003), “Quarterly forecast update”, *Autofacts*, January.
- (2002), “Supplier Survival: survival in the modern automotive chain” [on line] (<http://www.pwcglobal.com/Extweb/industry.nsf/docid/6977E84565DCF36685256D810076CBEB>).
- Procter & Gamble* (1999), “Changes will lead to greater stretch, innovation and speed”, 9 June.
- Robles, E. (2000), “Política de atracción de inversión extranjera directa en Costa Rica”, June.
- Rodriguez-Clare, A. (2001), “Costa Rica’s development strategy based on human capital and Technology: how it got there, the impact of Intel, and lessons for other countries”, *Human Development Report of 2001*, United Nations Development Programme (UNDP).

- Romo, D. (2003), "Derrames tecnológicos de la inversión extranjera en la industria mexicana", *Comercio Exterior*, vol. 53, No. 3, Mexico City, Bancomext, March.
- Saggi, Kamal (2001), *Trade, foreign direct investment and international technology transfer: a survey*, Dallas, Department of Economics, Southern Methodist University.
- Sako, M. (2003), "Modularity and outsourcing: the nature of co-evolution of product architecture and organisation architecture in the global automotive industry", Ninth GERPISA International Colloquium (Paris, 11 - 13 June), Permanent Group for the Study of the Automobile Industry and its Employees (GERPISA).
- Salazar, José Manuel (1998), "La estrategia nacional de atracción de inversiones", San José, Ministerio de Comercio Exterior, February.
- Salerno, M., R. Marx and M. Zilbovicius (2003), "Strategies of product design, production and suppliers selection in the auto industry: final findings of a broad research in the major Brazilian assemblers' subsidiaries, headquarters and suppliers", Ninth GERPISA International Colloquium (Paris, 11 - 13 June), Permanent Group for the Study of the Automobile Industry and its Employees (GERPISA).
- Sarti, Fernando (2002), "Cadeia: automobilísticas. Estudo da competitividade de cadeias integradas no Brasil: impactos das zonas de livre comércio", Campinas, Instituto de Economia da Universidade Estadual de Campinas, Ministério do Desenvolvimento, da Indústria e do Comércio Exterior (MDIC), December.
- Scheinman, M. (2004), "Corporate winners and losers in the automobile industry: lessons gleaned from Mexico, Brazil and Argentina", Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), unpublished.
- Schrank, A. (2003), "Luring, learning and lobbying: the limits to capital mobility in the Dominican Republic", *Studies in Comparative International Development*, vol. 37, No. 4.
- Secretaría de Economía, Dirección General de Inversión Extranjera (2003), "Inversión Extranjera en México", Programa de Actualización para la Promoción de Inversión Extranjera, Mexico City, Bancomext, April.
- Sgard, J. (2001), "Direct foreign investment and productivity growth in Hungarian firms, 1992-1999", *William Davidson Working Paper*, No. 425, November.
- Shiels, D. (2000), "Site selection for Intel's assembly and test plant #6", South America Investment Promotion Strategy for Heads of Investment Promotion Agencies, Rio de Janeiro, May.
- SINDIPEÇAS (Sindicato Nacional da Indústria de Componentes para Veículos Automotores) (2003), *Desempenho do setor de autopeças*, May.
- Sjoholm, Fredrik (1999), "Productivity growth in Indonesia: the role of regional characteristics and FDI", *Economic Development and Cultural Change*, vol. 47.
- Spar, Debora (1998), "Attracting high technology investment: Intel's Costa Rica plant", *FIAS Occasional Paper*, No. 11, Washington, D.C.
- Sturgeon, Timothy and R. Lester (2002), *Upgrading East Asian industries: new challenges for local suppliers*, World Bank's Project on East Asia's Economic Future, Industrial Performance Center, Cambridge, Massachusetts, 18 January, Massachusetts Institute of Technology, unpublished.
- Sturgeon, Timothy (2002), "Modular production networks: a new American model of industrial organization", *Industrial and Corporate Change*, vol. 11, No. 3, February.
- Switkes, Glenn (1994), "Folket i Ecuador mot Texaco", *Tidskriften Kommentar*, April.
- The Economist* (2003a), "Extinction of the car giants: why America's car industry is an endangered species", 12 June.
- ____ (2003b), "Junkyard Blues: fresh talk that Ford might go bust", 19 March.
- Toyota (2003), "The 'thinking' production system: TPS as a winning strategy for developing people in the global manufacturing environment", *Special Report* [on line] (<http://www.toyota.com>).
- Tsuji, M. (2003), "The relationship between Toyota and its parts suppliers in the age of information and globalization: concentration vs. dispersion", *Industrial Agglomeration: facts and lessons for developing countries*, M. Kagami and M. Tsuji (eds.), Tokyo, Institute of Developing Countries (IDE)/Japan External Trade Organization (JETRO).
- UNCTAD (United Nations Conference on Trade and Development) (2004), "Global FDI decline bottoms out in 2003", Press Release, 12 January.
- ____ (2003a), *Trade and Development Report 2003* (UNCTAD/TDR/2003), Geneva. United Nations publication, Sales No. E.03.II.D.7.
- ____ (2003b), *World Investment Report 2003. FDI Policies for Development: National and International Perspectives* (UNCTAD/WIR/2003), New York/Geneva. United Nations publication, Sales No. E.03.II.D.8.

- (2002), *World Investment Report 2002. Transnational Corporations and Export Competitiveness* (UNCTAD/WIR/2002), New York/Geneva. United Nations publication, Sales No. E.02.II.D.4.
- (2001), *World Investment Report 2001. Promoting Linkages* (UNCTAD/WIR/2001), Geneva. United Nations publication, Sales No. E.01.II.D.12.
- United States, Department of Commerce (2003a), “Auto parts Industry-Mexico” [on line], Washington, D.C., US Commercial Service (<http://www.buyusainfo.net>).
- (2003b), “The Road Ahead for the U.S. Auto Industry”, Washington, D.C., International Trade Administration, April.
- United States, US International Trade Commission (USITC) (2002), “Motor Vehicles”, *Industry & Trade Summary*, N° 3545, September.
- Vergara, Sebastián (2004), “La inversión extranjera directa en República Dominicana”, *Desarrollo productivo series*, No. 151 (LC/L.2120-P/E), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No. S.04.II.G.47.
- Watkins, Ralph (2002), “Production-sharing update: developments in 2001”, *Industry Trade and Technology Review*, Office of Industries, United States International Trade Comisión (USITC), July.
- Womack, James, Daniel T. Jones and Daniel Roos (1990), *Machine that Changed the World*, New York, McGraw-Hill.
- Yahoo Finance (2003), “Auto manufacturing industry profile” [on line] (http://biz.yahoo.com/ic/profile/carmfg_1019.html) [16 February, 2004].