

## comercio internacional

# **T**rade reforms and trade patterns in Latin America

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## Contents

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<b>Summary</b> .....	5
<b>I. Export composition and economic growth</b> .....	7
<b>II. Clasification of trade date and technological content</b> .....	11
<b>III. Indicators of trade patterns</b> .....	15
<b>IV. Results for Latin American countries and groups of countries</b> .....	19
<b>V. Concluding remarks</b> .....	25
<b>Bibliography</b> .....	27
<b>Statistical annex</b> .....	31

## Tables and figures

Table IV.1	Latin America: Indices of merchandise exports and imports, 1985-1988.....	33
Table IV.2	Latin America: Imports of industrial goods as a percentage of total imports by countries and groups of countries, 1965-1997.....	33
Table IV.3	Latin America: Imports of traditional goods as a percentage of industrial imports, by countries and groups of countries, 1965-1997.....	34
Table IV.4	Latin America: Imports of scale-intensive goods as a percentage of industrial imports, by countries and groups of countries, 1965-1997.....	35
Table IV.5	Latin America: Imports of durable goods as a percentage of industrial imports, by countries and groups of countries, 1965-1997.....	36

Table IV.6	Latin America: Imports of technical progress-diffusing products as a percentage of industrial imports, by countries and groups of countries, 1965-1997.....	37
Table IV.7	Latin America and the Caribbean structure of merchandise exports, by category of products, 1965-1997.....	38
Table IV.8	Latin America and the Caribbean merchandise exports, by category of products, 1965-1997.....	38
Table IV.9	Trade specialization pattern the countries of the Andean Community, 1978-1997.....	39
Table IV.10	Trade specialization pattern the countries of the Central American Common Market (MCCA), 1978-1997.....	39
Table IV.11	Trade specialization pattern the countries of the Southern Common Market (Mercosur), 1978-1997.....	40
Table IV.12	Trade specialization pattern of Argentina, 1978-1997.....	40
Table IV.13	Trade specialization pattern of Brazil, 1978-1997.....	41
Table IV.14	Trade specialization pattern of Chile, 1978-1997.....	41
Table IV.15	Trade specialization pattern of Mexico, 1978-1997.....	42
Figure IV.1	Trade specialization pattern of countries of the Andean Community 1978-1997.....	43
Figure IV.2	Trade specialization pattern of the countries of the Central American Common Market (MCCA), 1978-1995.....	44
Figure IV.3	Trade specialization pattern of the countries of the Southern Common Market (Mercosur), 1978-1997.....	45
Figure IV.4	Trade specialization pattern of Argentina, 1978-1997.....	46
Figure IV.5	Trade specialization pattern of Brasil, 1978-1997.....	47
Figure IV.6	Trade specialization pattern of Rep. of Korea, 1978-1997.....	48
Figure IV.7	Trade specialization pattern of Chile, 1978-1998.....	49
Figure IV.8	Trade specialization pattern of Mexico, 1978-1997.....	50
Figure IV.9	Trade specialization pattern of España, 1978-1997.....	51

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## Summary

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The relationship between trade and economic growth is nuclear to the literature of economic development. Due to the importance of the external sector to developing countries, most development models have trade regimes and the related system of incentives as central determinants of economic performance. Also, there exists an extensive empirical literature on exports and growth with mixed results. Many studies find evidence of association between exports or exports growth and economic growth although the direction of the causality has not yet been clearly established. Moreover, other studies qualified those results since linkages between exports and economic growth depended on threshold variables. In other words, economic growth tended to be affected by export performance after countries have achieved some minimum level of development.<sup>1</sup> On the other hand, recent empirical studies that have attempted to relate trade orientation and economic performance have been criticized for the misspecification of some variables and the ambiguity of the results, in spite of the sophistication of the empirical models employed (Rodríguez, 1999)

In this paper, following the ECLAC tradition, we consider the composition of exports as a crucial determinant of the relationship between exports and growth although our purpose is basically descriptive<sup>2</sup>

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<sup>1</sup> For a review of the literature, see Greenaway, Morgan and Wright (1999, pp. 41-51).

<sup>2</sup> This paper was presented at the IV Meeting of the Latin American and Caribbean Economic Association (LACEA), Santiago de Chile, 23 October 1999.

We examine the trade performance of 16 Latin American countries over the past 20 years using a modified Pavit-Guerrieri classification to group trade data according to the technological content of the production functions of individual goods. Simple indicators of revealed comparative advantage of net contribution to trade balance of those groups of products are used to describe changes in trade patterns that followed trade reforms in the most advanced economies in the region. We discuss some of the difficulties in classifying goods according to their production functions when production sharing prevails in international trade. Hence, the presence of a given product in the export list of a country does not mean that the country master the whole production process of that particular good. Only the labour-intensive segments may be domestically produced in the country.

The following section is a brief review of the literature on trade composition and growth. Section II discusses the classification employed in the empirical part and its limitations. Section III describes the indicators used to describe trade patterns in Latin American countries and Section IV presents the results for 16 Latin American countries, with special emphasis on major countries such as Argentina, Brazil, Chile and Mexico. Trade reforms seem to have affected trade patterns of those advanced developing countries by strengthening comparative advantages based on natural resources endowments, and also by replacing imported inputs for domestically produced inputs. Section V presents some concluding remarks and areas for further research.

## I. Export composition and economic growth

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The simple model of comparative advantage is neutral to the product composition of trade. Gains from trade result from a more efficient use of national resources regardless of the nature of the products in which productive factors are employed. Comparative advantage leads to the allocation of people and capital to the production of goods for which they are more productive. Hence, for Ricardo's theoretical conclusions, it was irrelevant that Portugal had comparative advantage in wine while England had comparative advantage in textiles. Most likely because in the middle 19th century, the two industries differed neither in their production functions nor in the characteristics of the international demand for their goods. In the post World War II period however, economists became increasingly concerned with the relative impact that exports in unprocessed and processed goods would have on domestic economic growth. The decreasing share of commodities in the volume of world exports and the associated reduction in market shares of exporting countries raised questions on the neutrality of the composition of exports to explain economic performance. Empirical evidence showed that the nature of trade specialization was a major factor to convert trade into an engine of growth, particularly since the transmission effects from the export sector to other producing sectors differ according to the characteristics of exporting industries.

The notion of transmission effects evokes the concept of backward and forward linkages developed by Albert Hirschman.

Largely influenced by the theory of growth poles developed by François Perroux and by the concept of external economies of Alfred Marshall, Hirschman (1958) introduced the notion of leading or “key” industries” into the theory and models of development. An industry could be ranked according to the direct and indirect repercussions of an increase in final demand requirements on other sectors of the economy. Leading industries influence investment decisions in other sectors through those interindustrial linkages.<sup>3</sup> Therefore, growth transmission effects of those leading industries would be more effective than those of industries with weaker interindustrial linkages. In particular, the agricultural sector in developing countries, defined as a subsistence sector, was characterized by Hirschman (1958:109) as scarce of linkage effects.

The whole discussion of the “export-led” model of economic growth, that in the 1970s became associated with the Asian model of development, started even earlier, and stemmed from the interpretation of the pattern of Canadian economic development by economic historians, as showed by Caves (1971). Baldwin (1954, 1963) had already suggested that the extent to which export development actually generates economic growth would depend on differing characteristics of the production functions of the export products, particularly as regards input requirements, the incidence of scale economies, and the like. Caves (1971: 433-437) listed some of the channels through which export activities are linked to sources of intensive growth (growth in per capita income): 1. skill requirements, including entrepreneurial skill: exports that require skilled labour generate more favorable linkages than those using unskilled labour; 2. economies of scale: substantial economies of scale in the production of the export good seemed to favour its contribution to intensive growth; 3. social overhead capital (activities associated with the construction of social overhead capital favoured intensive growth); and 4. some characteristics of the export commodity would favour local processing industries (perishable commodities, their relative bulk, i.e., the volume of shipping space required per unit of FOB value, in comparison with the volume required by an equivalent value unit of the goods for which it is typically traded).<sup>4</sup>

Contrasting to this supply-oriented literature, the Economic Commission for Latin America (ECLA) emphasizes the demand side of exports. From the beginning, Prebisch (1949/1962) denied that primary products exports could stimulate Latin American growth as they had done before the depression of the 1930s. His main concern was with chronic balance-of-payments problems. Exports were essential to provide foreign exchange to pay for critical imports of capital and intermediate goods, but insufficient international demand for commodity exports limited Latin American capacity to import and hence its economic growth. One ECLAC document of 1951 put together classical features of the demand for primary products that prevented their exports to be a dynamic source of growth: 1. technical progress led to more efficient use of raw materials; therefore, the demand for primary products would increase at lower rates than total production of final goods; 2. primary products had low income elasticity, as final consumption goods, and 3. agricultural protectionism in industrial countries prevented growth in competing exports from developing countries (ECLAC, 1951, chapter II, pp.28-45)

Since the 1980s, a new stream of international trade theory has emphasized economies of scale, product differentiation, and imperfect markets as additional determinants of trade patterns (Helpman, 1998; Grossman and Helpman 1991/1993). Other authors have also related technical change, trade and growth through empirical relationships between the volume, commodity composition and intercountry distribution of trade flows (Dosi et al., 1990). While more concerned

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<sup>3</sup> Another reference is the insightful article written by Allyn A. Young in 1928. Young gave emphasis to the increasing returns that result from the application of “roundabout” or indirect methods of production that depended upon the progressive division of labour. Those increasing returns should not be analysed at the firm level but “industrial operations must be seen as an interrelated whole”

<sup>4</sup> Caves (1971:433) found that the capital-intensity of a commodity’s production process did not in itself indicate any definite direction for predicting its linkages to intensive growth. High capital-output ratio combined with an absence of scale economies could favour a high rate of regional capital formation and saving by entrepreneurs and others.



with explaining trade among advanced economies, the new trade theories that link trade to growth through the positive linkages between trade (exports and imports) and endogenous innovation capability can also be applied to trade patterns of developing countries (Ocampo, 1986). In the case of developing countries emphasis was given to technological innovation through imitation, importation and adaptation of new technical methods from abroad as well as in the upgrading of those technologies over time (Lall, 1982; Lall, 1984; Dahman and Sercovitch, 1984):

An important characteristic of the process of technology creation and technology use is its self-reinforcing nature. The process of technological capacity-building offers increasing returns and feeds upon itself, providing further opportunities for technology use, growth and accumulation. The path-dependent character of the innovation process reflects the importance of acquired learning and experience for the building of further learning and experience, or in other words, the dependence of the innovation process on the historical process of technology creation and accumulation. Various authors used these characteristics of technical change to explain the dynamics of countries' competitiveness over time (Dosi et al., 1990). There is also a consensus on that industries differ on the opportunities to innovate that they offer. Hence, the pattern of sectoral specialization of a country will imply differences to accumulate technological capability.<sup>5</sup>

The rapid diffusion of new organizational methods and new technologies to old industries led to the re-examination of trade patterns in developing countries. At the end of the 1980s, ECLAC was stressing the need for (1) higher absorption of technical progress by productive activities in Latin America, which included the ability to imitate, adapt, and develop production processes, goods and services not previously existing in the economy, and (2) for higher levels of competitiveness.<sup>6</sup> The experience of successful resource-based countries such as the Scandinavian countries, the United States and Canada was contrasted with Latin American lack of significant technological links between export activities and other sectors of production. Nevertheless, inspired by the Chilean experience of modernization of agriculture that preceded an export boom, ECLAC indicated that exports based on natural resources could provide a gateway to the exportation of manufactures having a greater technological content. The development framework emphasized open competition in Latin American domestic markets to force local entrepreneurs to adopt technical innovations and improve the competitiveness of their products. Imports would provide embodied technology through new machines and equipment. In the short run, a liberal trade regime would reinforce the international specialization determined by static comparative advantages, this is to say based on natural resources endowments and unskilled labour. International competition in domestic markets was to be the major determinant to force enterprises to move from *spurious competitiveness* (based on low wages and overexploitation of natural resources) to *genuine competitiveness* (based on productivity growth through the absorption of technical change) (ECLAC, 1990, pp.75-78).

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<sup>5</sup> Sachs and Warner (1995) reviewed the contrasting experiences of resource-poor and resource-rich economies to investigate the determinants of slower growth of the latter vis-à-vis a more dynamic pattern of the former. Empirically, on average, countries with a high value of resource-based exports to GDP tend to have a lower growth rate. Although they dismissed the Prebisch thesis, they adopted the "linkages" approach by Hirschman. The authors documented a statistically significant, inverse and robust association between natural resource intensity and growth over a period of twenty years, although they do not accept that countries should subsidize or protect non-resource-based as a basic strategy for growth. They leave open the discussion on the appropriate growth-oriented policies for resource-abundant countries.

<sup>6</sup> Two complementary concepts of *competitiveness* were used: competitiveness applied to the economy, as a whole, and competitiveness applied to a given product or service. An economy is considered to be competitive if it has the capacity to increase (or at least maintain) its international market share while at the same time raising the standard of living of the population. A product or service is considered to be competitive if, as a minimum, it meets the standards of efficiency prevailing in the rest of the world as regards resource use and the quality of the product, or service (ECLAC, 1990, p. 68).

The concrete experience of the export-led model in Latin America, however, has opened many questions as to the significance of the transmission effects of the prevailing composition of its exports.

As mentioned, Chile is the showcase of an export-led model of development within an open economy. Chilean Administrations have designed and implemented a consistent set of policies and incentives throughout more than 25 years with the deliberate purpose of strengthening market signals and market institutions in the economy. These economic reforms and direct policies attempted *inter alia* to strengthen the comparative advantages of the country based on its natural resource endowments. Exports have grown steadily since 1974. However, as shown by Agosin (1997), it was not until the end of the 1980s that export growth was accompanied by a significant rise in the investment rate or a commensurate improvement in overall economic performance. Therefore, the process of export-oriented growth is still recent, and doubts already exist as to its long-term sustainability.<sup>7</sup> The major obstacle is how to move from the chosen pattern of trade specialization towards products of higher value-added. A recent evaluation of Chilean industries' capacity to compete with enterprises from major countries of the Southern Common Market (Mercosur) identified just three manufacturing industries – agro-industries (fruits and vegetables); chemistry (organic/ resource based) and publishing as highly competitive. Other traditional industries such as furniture, textile, apparel and shoes were considered to be only partially competitive (Meller, 1998).

The other successful exporters in the region (Mexico, Central American countries, and the Dominican Republic) have adopted a trade strategy predominantly oriented to the United States market and in which low-wage assembly-type operations prevail. Buitelaar, Padilha and Urrutia (1999) attempted to assess whether this export drive was based merely on “spurious” competitiveness (low-wages and lack of regulations) or whether the absorption of technical change could also be observed. Their conclusions were not optimistic. Maquila activities are above all intensive in the use of low-skilled labour, of abundant supply in Central American, Caribbean basin countries and Mexico. Therefore, the authors concluded that it would be unlikely that those activities would lead those countries to reach a sustainable growth path with social equity. Moreover, the diffusion of knowledge through maquila to other sectors is still limited, on the one hand because of the strong dualism between maquila and domestic production and, on the other hand, because of the limited absorption capacity in the domestic economies.<sup>8</sup>

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<sup>7</sup> The author pointed out that export-led growth requires continuous export diversification, since the sustainability of the model depends on the exporter remaining a “small” country (Agosin, 1997, p. 6, ft. 2).

<sup>8</sup> The authors also pointed out the preference of transnational corporations to transfer “technology ready for use”, without transferring activities of technological research and development; and TNCs do not stimulate procurement of local inputs

## II. Classification of trade data and technological content

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There are several problems associated with attempting to aggregate international trade data according to characteristics of the production process. Firstly, traditionally, empirical studies that involve the theoretical concept of *industry* will run into the same problem. The term industry, both in industrial and international trade analysis, implies an agglomeration of firms producing a perfectly homogenous commodity. Empirical data, however, rarely provide sets of homogeneous goods. Secondly, the Standard International Trade Classification (SITC) is a uniform way of describing data on foreign trade according to the nature of the component material. That classification was found inadequate for studies that attempted to associate industrial development and changes in export composition. Several efforts have already been addressed to reaggregate SITC categories into other categories more suitable to research on production and trade. Maizels (1963) distinguished between imports that are complementary to the industrialization process (such as capital goods and intermediate goods) from imports which may be competitive with domestic production. SITC categories were classified into capital, intermediate and finished goods (Maizels, 1963, pp. 517-518).

Hirsch (1974, 1977) and Hufbauer (1976) were influential in classifying industries as resource-based industries (sometimes called Ricardian goods), low and high skill intensive, low and high capital intensive with high or low rate of product innovation. Although that methodology had been accepted by international agencies such as the UNIDO and UNCTAD there remained unresolved tasks of how to measure physical capital, skills, and product innovation, among others.

In this paper, we followed a classification developed by ECLAC based on Guerrieri and Milana (1990) that used a taxonomy proposed by Keith Pavitt (1984). Pavitt formulated a taxonomy of the sources, uses and mechanisms of technology generation based on analysis of the nature of technology and technical change. Four main groups of firms/ industries were distinguished: supplier-dominated; scale-intensive; specialized suppliers, and science based. Supplier-dominated firms are mainly in traditional sectors of manufacturing, such as textiles, printing and publishing, in agriculture, and construction. In sectors of supplier-dominated firms, a relatively high proportion of the process innovations used in the sectors are produced by other sectors, even though most of the innovative activities in these sectors are directed to process innovations. Scale-intensive and specialized suppliers firms or production-intensive firms exploit latent economies of scale to reduce production costs. Process innovations are introduced to improve productivity. Finally, science-based firms can be found in chemical and electronic/electrical sectors, for instance. The main sources of technology are the Research and Development (R&D) activities of firms in the sectors.

Guerrieri used an alternative sectoral taxonomy, which is consistent with the theoretical literature on technological change and international competitiveness, to analyze the relationship between technological capability and international trade performance of individual countries. He identified five types of industries, primarily through a combination of technology sources, technology user requirements and means for technology appropriation: primary resource-intensive, supplier-dominated (or traditional), science based, scale-intensive and specialized suppliers (Guerrieri, 1994).

At ECLAC, five types of industries were defined. They were divided into two major groups: 1. Unprocessed goods (primary products: unprocessed agricultural, mining and petroleum products); 2. Manufactured goods: 2.1. traditional industries: comprise all resource-based industries that are not scale-intensive (textiles, apparel, food, tobacco, paper and publishing, leather and shoes, furniture, wood, and others); 2.2. industries with are resource-based but have significant economies of scale (bulk materials such steel, copper, glass); 2.3. durable goods (in their production significant economies of scale exist but they are not resource-based); 2.4. industries made of firms producing goods that diffuse technical progress (machinery, instruments, electronics, chemicals) (see Appendix A for the SITC composition of the different categories).<sup>9</sup>

Two important *caveats* are necessary. International production has been characterized by what was termed *production sharing*, vertical and horizontal integration, outsourcing, *slice up the value-added chain*, or *kaleidoscopic* advantages.<sup>10</sup> A good is produced in a number of stages in different of locations, in which a little bit of value is added at each stage. As indicated by Krugman, while in 1913, each consumer good would be exported just once, today it can be exported many times: “a good that is produced in one country may be assembled from components produced in other countries, and these in turn may be assembled from subcomponents produced in yet other countries” (Krugman, 1995, p.334). However, as pointed out by Yeats (1999), trade data does not allow to perfectly distinguish between components and assembled products. Hence, trade data may indicate products that are associated with R&D efforts, but only minor assembling operations may be performed in that country.

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<sup>9</sup> See ECLAC 1996, pp. 217-225 for more details of the categories employed. Also, ECLAC (1998),

<sup>10</sup> See Yeats, 1999; Krugman, 1995; Feenstra and Hanson, 1996.

A second *caveat* refers to all classification schemes of high-tech or knowledge-based industries. As suggested by Baldwin and Gellatly (1998), most of those taxonomies are unidimensional in scope. Industries are actually classified as high-tech or high-knowledge based primarily on the characteristics of large firms. Nevertheless, as correctly argued, low-tech industries include also high-tech firms, as much as high-tech industries are not comprised exclusively of high-tech firms.



### III. Indicators of trade patterns

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Analysis of trade patterns are commonly based on the observation of changes in the comparative advantage of a country over time. Theoretically, comparative advantage is based on price relationships that exist in autarky, this is to say in the absence of trade. Autarky prices however, cannot be observed and comparative advantage cannot be measured directly. Therefore, indirect measurement must be employed. The best known is an index based on the concept of revealed comparative advantage (RCA) that was diffused by Bela Balassa in various types of inter-country and inter-industry comparisons.<sup>11</sup> Most of the indicators of RCA compare the structure of exports or of net exports with reference zones.

A country's RCA in the trade of a particular industry has generally been measured by the share of that industry in the country's total exports relative to the industry's share in total world exports of manufactures. In other words, if  $x_{ij}$  is the value of country  $i$ 's exports of  $j$  and  $X_{ij}$  is the country's total exports of manufactures its RCA index is:

$$RCA_{ij} = (x_{ij}/ X_{ij}) / (x_{jw}/X_{jw})$$

where  $w$  refer to world trade totals.

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<sup>11</sup> Bela Balassa's attempts to quantify international differences in comparative advantage were prompted by the desire to assess the long-term effects on trade liberalization resulting from tariff liberalization

Each estimate merely distinguishes between a country having or not comparative advantage in a particular commodity.<sup>12</sup> An RCA greater than 1 implies that that particular industry has a larger share in world trade than in the country's total manufactures. Hence, it indicates that the country has an advantage in that particular industry. Conversely, an RCA lesser than 1 implies that the country has a larger share of world trade in all its manufactures than in that product, or that the country has a disadvantage in that industry.

The presence of simultaneous exports and imports of the same group of products may lead to the presence of a comparative advantage and a comparative disadvantage in the same product category or industry, depending on whether exports or imports are analysed. Consequently, the most common method of adjustment is to express a country's trade in net terms (exports minus imports).<sup>13</sup>

We used a basic indicator that has been disseminated by the CEPII (Centre d'Études Prospectives et d'Informations Internationales) as an structural indicator of a country's comparative advantage (disadvantage). It is based on net exports or trade balances by groups of commodities and it measures the relative contribution to the trade balance of the various product groups in consideration (Indicator of Contribution to Trade Balance – ICTB). If there were no comparative advantage or disadvantage for any industry  $j$  in a given country  $i$ , then total trade surplus or deficit should be distributed across all industries according to their share in total trade. Hence, the contribution of each industry  $j$  to country  $i$ 's trade balance is the difference between the observed and the theoretical balance. A positive ICTB for a product category shows the presence of a comparative advantage of country  $i$  in that particular product category.

$$ICTB = \left( \frac{\frac{X_{ij} - M_{ij}}{X_i + M_i}}{2} - \frac{\frac{X_i - M_i}{X_i + M_i}}{2} * \frac{X_{ij} + M_{ij}}{X_i + M_i} \right)$$

In which the first term measures the observed trade balance and the second term measures the theoretical trade balance.

$$\frac{\frac{X_{ij} - M_{ij}}{X_i + M_i}}{2} = \text{participation of trade balance of commodity } j \text{ in the averaged total trade of country } i$$

$$\frac{\frac{X_i - M_i}{X_i + M_i}}{2} = \text{participation of trade balance of country } i \text{ in the averaged total trade of } i$$

$ICTB_{ij} < 0$  implies that country  $i$  has a comparative disadvantage in commodity  $j$ .

The index is purely descriptive, and as mentioned before, does not take into consideration the nature of the intra-industry trade that is important in the new “maquila” manufacturing

<sup>12</sup> Yeats (1985) criticized the RCA for not yielding precise indicators of the absolute differences in the comparative advantage between countries (cardinal measure) and for lacking ordinal properties.

<sup>13</sup> As correctly pointed out by Donges and Riedel (1977:68), the RCA concept rests on the assumption that a country's imports indicate which of the domestic industries are uncompetitive whereas the country's exports indicates the industries that displays comparative competitiveness.



activities in Central America and Mexico. For our purposes, it describes graphically major changes in the pattern of trade specialization of Latin American countries or groups of countries over a selected period.

The next section presents some of the results for our sample of countries.



## **IV. Results for Latin American countries and groups of countries**

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This paper updates and generalizes some of the conclusions of Guerrieri (1994). Guerrieri analyzed the long-term trade performance of three major Latin American countries – Argentina, Brazil and Mexico – using Pavit-Guerrieri industrial sector taxonomy, and several indicators that included RCA and ICTB indices. The period studied covered twenty years, from 1970 to 1990. Over that period, there was a significant diversification of the exports of those three countries. According to Guerrieri's data, manufactures accounted for less than 26% of total exports of those countries in the early 1970s and to nearly 55% by the late 1980s. Similarly, their share in the world exports of manufactures also increased moderately during this period, from 1.1% to more than 1.6% between 1970 and 1990. Basically, it was in primary resource-intensive sectors that those Latin American countries showed the highest gains both in terms of market shares and trade balances. However, both Mexico and Brazil showed important gains in their market shares over the period 1979-1982, before the debt crisis, in sectors such as specialised supplier and science-based products (Guerrieri 1994: 181).

We considered the period from 1978 to 1997, since it was our intention to describe major changes in trade specialisation that followed trade liberalization reform.

A first comment refers to the heterogeneity of development situations that exists in the region that is not reflected in averaged data. Trade and investment flows are concentrated in a few countries. For instance, in 1997, total trade (exports and imports) of Argentina, Brazil, Chile and Mexico summed roughly 561 billion dollars and accounted for almost 77% of total Latin American trade.<sup>14</sup> Moreover, in 1997, the value of Mexican exports was equal to the exports of the four countries of Mercosur plus those of Chile, corresponding to 41% of the region's exports (ECLAC 1999, Statistical Annex). Hence, when Latin American averages are mentioned, it is important to define first which Latin America are we referring to.

To facilitate the analysis, the 16 countries were grouped according to their regional similarities in homogenous groups: the Andean Community (Bolivia, Colombia, Ecuador, Peru and Venezuela); the Central American Common Market (MCCA) (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua); the Southern Common Market (Mercosur) (Argentina, Brazil, Paraguay and Uruguay). Chile and Mexico were analyzed separately as well as Argentina and Brazil.

## A. Latin America in the 1990s: import-led growth

The end of the 1980s and beginning of the 1990s marked a turning point in the nature of trade policies and development strategies for all Latin American countries.<sup>15</sup> Partly because the liberalisation programmes in Latin America were implemented in the presence of sharp appreciation of the currency in real terms, there has been a dramatic increase in imports in the region (Agosin and Ffrench-Davis, 1993, pp. 41-62). Hence, Latin American trade has been characterized, in the 1990s, by imports growing at rates highly superior to those of exports. Furthermore, with the single exception of Venezuela, at the end of the decade all countries had accumulated large trade and current account deficits. According to ECLAC data, between 1990 and 1998 the volume of exports increased on average at 8% yearly whereas the volume of imports increased on average at more than 12% (see table IV.1 in the Statistical Annex). It should be recalled that imports had been drastically reduced in the wake of the debt crisis that followed the Mexican financial crisis of 1982.<sup>16</sup>

Imports have an important role to play in the modernization of production process since better industrial inputs and modern machines contribute to the technological upgrading of the industrial basis in the region.<sup>17</sup> Over the 1980s, the accumulation of trade surplus to service their debt by large exporting countries such as Argentina, Brazil, Argentina and Mexico, was totally exceptional in the development history of those countries. At the micro level, the uncertainties created by *ad-hoc* import restrictions combined with price instability led to desinvestment by large foreign companies, the expansion of domestic conglomerates, the verticalization of firm operations, imperfect competition in most markets, the development of *rent-seeking* activities by interest groups, and gross allocation inefficiencies. However, in countries with large markets such as Argentina and Brazil, domestic firms were able to fill up the spaces left by foreign enterprises and develop some technological capability in technology-intensive industries.

Various studies have suggested that trade liberalization and the associated system of incentives determined a wide restructuring process in Latin American industries. In most cases, through privatization, foreign capital de-regulation, mergers and acquisitions there has been

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<sup>14</sup> In 1997, Brazil and Mexico were recipients of 55% of total foreign direct investment flows to Latin America (ECLAC 1998, table I-2, p. 41).

<sup>15</sup> Chile is the only country which launched a continuous process of trade liberalization since the military coup of 1973.

<sup>16</sup> At the beginning of the 1990s, most of the trade reforms failed to translate in higher demand for imported goods due to the macroeconomic situation faced by large countries such as Brazil.

<sup>17</sup> Lassudrie-Duchême, Berthélémy and Bonnefoy (1987) shed light on the positive role played by imports in the transformation of the French productive structure

important changes in capital ownership patterns, particularly in those sectors in which domestic firms could not compete in equal foot with foreign firms. A recent paper on the market share of foreign-owned enterprises in net returns in Brazilian manufacturing industries showed that that share increased from 28% in 1980 to 43% in 1995. Moreover, the market-share of foreign-owned enterprises increased from 36% to 54% in capital and technology intensive industries whereas; in labour intensive (traditional industries), the expansion was from 7% to 19%; and in resource intensive industries, from 28% to 43%. (Moreira, 1998).

Another extensive research on production and trade data on Brazilian industries identified analogous structural changes. Moreira and Correa (1997:table 2) showed that in 1995 the average import coefficient for the Brazilian industrial apparent consumption was almost 15%. That coefficient had not been observed since the late 1960s and contrasted with less than 5% of import penetration in 1989. Furthermore, in some sectors, such as machines, parts and equipment, the import coefficient increased from 13% in 1989 to more than 40% in 1995-1996. Similarly, in electronic and communication equipment, the import coefficient increased from around 10% to more than 38% in the same period (Moreira and Correa, 1998).

Likewise, trade and capital liberalization in Argentina led to a dramatic transformation of production organization. A wide process of substitution of imported inputs for domestically produced goods led to the elimination of domestic producing firms or their mutation into service-based firms that distribute imported products through licenses.<sup>18</sup> Changes in the structure of industrial value-added indicated that the most successful industries are resource-based, mostly food-processing industries, in which large conglomerates induced important investments (Bisang, 1998).

The analysis of Latin American import composition reveal little changes over the past four decades in the aggregate, except for changes in oil prices that determined a greater share of those products up to middle 1980s, and an impressive reduction in the share of their products in the 1990s. If petroleum imports are factored out of the calculations for Latin America, it will be seen that its imports are preponderantly comprised of industrial products. The category of industrial goods constitute between 80 and 96 percent of total Latin American imports from 1965 to 1997, with very little dispersion around averages that varied between 88 and 94 percent in the same period (see table 2 in the Statistical Annex). Changes can be observed, however, in terms of the composition of those industrial exports, both across groups of countries and over time.

Using ECLAC classification, the category of traditional goods includes finished consumer goods produced by the food, beverage and tobacco industries and by makers of furniture, leather goods and other similar products, as well as the inputs used in these industries (e.g., fabrics, yarns and threads, leather, wood). Trends in Latin American imports of these products have varied over the course of the 1990s, but overall, they have increased as a percentage of total imports of industrial goods (see table IV.3 of the Statistical Annex).

In the group comprising the Mercosur countries and Chile, the share of traditional goods, which did not exceed 15% of imports in previous decades, has gradually increased in the 1990s, reaching nearly 20% in 1995.

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<sup>18</sup> Bisang, Buranchk and Katz (eds.), (1995), mentioned that some particular skills developed during the import substitution period, such as the capacity to adapt foreign technology do not seem relevant to the new model of industrial organization.

The highest coefficients for traditional goods are to be found in Chile, Paraguay and Uruguay, although the share of traditional goods in Brazilian imports of manufactures, which was formerly no more than 10% had risen to more than 18% by 1995.<sup>19</sup> The share of total industrial imports accounted for by traditional goods also grew steadily over the decade in the countries of the Andean Community.

In Mexico, the share of traditional goods has been more than 25% in the 1990s, with a peak level of 29% in 1994. These values contrast with the figures for previous decades, in which this ratio fluctuated between 11% and a little over 15%. Appreciable changes also occurred in the percentage of imports of traditional goods in the countries of Central America. Between 1965 and 1990, their share declined in all these countries: in Costa Rica, from 31% to 22%; in El Salvador, from 34% to 24%; in Guatemala, from 35% to 20%; in Honduras, from 41% to 24%; and in Nicaragua, from 32% to 28% (although the figure rose in El Salvador and Nicaragua in 1980). Nevertheless, these ratios have been rising again in the 1990s, reaching an average of nearly 30% in 1997. In the case of Mexico and Central American countries the increasing shares are linked to the increase in maquila activities in textile and apparel in their trade with the United States.

The category of scale-intensive goods includes goods whose production involves substantial economies of scale and an intensive use of natural resources and that are mainly intended for intermediate consumption. In practically all the countries studied, there was a steady, gradual decline in these goods' share of total imports on industrial products. The reduction was especially sharp in Mercosur countries (see table IV.4 of the Statistical Annex).

Finished consumer goods, such as household appliances, electronics and vehicles (but not their parts or engines) constitute the category of durable goods. Imports of these goods have generally increased since trade has been liberalized, chiefly because of the repressed demand that existed as a result of administrative control and high tariffs. Nevertheless, apart the exceptional years of 1992-1994 the average share of those goods in total import of industrial goods has remained constant around 12%-13% from 1965 to 1997.<sup>20</sup> The greatest relative increase occurred in Brazil, where the ratio generally fluctuated between 4% and 5.5% throughout the period 1965-1990, rose to nearly 8% in 1992 and then to 15% in 1995, and then slipped to 11% in 1996 and 12% in 1997 after the Government imposed high tariffs and other internal controls in an effort to reduce imports of motor vehicles. In the other countries, the ratio remained around 18% between 1965 and 1997. Mexico is the only country in which the ratio of imports of durable goods fell in the peak year for imports – 1994 – and again in 1995. The share of these goods in Mexican trade shrank from 17% in 1993 to 9% in 1994 and then levelled off at between 11% and 11.5% in 1996 and 1997 (see table IV.5 of the Statistical Annex).

Finally, the share of total imports of industrial goods accounted for by the types of goods that serve to diffuse technical progress (mainly capital goods, parts and components) has been remarkably stable during the period under consideration. In the region as a whole, the ratio fluctuated between 37% and 40% in the period 1990-1997. The highest coefficients were in the most industrially advanced countries, such as Argentina, Brazil, Chile and Mexico, and the lowest were in the countries of Central America (see table IV.6 in the Statistical Annex). Andean countries

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<sup>19</sup> Meller and Donoso (1998) estimated that between 1990 and 1995-1996 the ratio of imports and apparent consumption in Chile rose from 17% to 30% in the textile industry, from 10% to 35% in the clothing industry and from 2% to 19% in the footwear industry. A similar study carried out in Brazil indicates that for artificial and synthetic fibre yarns and fabrics, this ratio increased from 1.6% in 1990 to 17% in 1995 and then fell to 9.5% in 1996; in the case of natural fibre yarns and fabrics, the figure rose from 3.9% in 1990 to 15.9% in 1996; and in the footwear industry, it climbed from 0.7% to 6.7% between 1990 and 1996 (Moreira and Correia, 1997 table 2, p. 75).

<sup>20</sup> Rayment (1983: 4) estimated that the share of consumer durables (including vehicles parts) in total OECD imports of manufactures in 1969 was 19% .

presented unstable trends. In Mexico these goods increased their share between 1990 and 1997 and reached high values in 1995-1996.

## B. Trade Specialization Patterns in Latin America

The overall composition of Latin American exports was radically transformed in the past decades. While unprocessed products constituted more than 60% of those exports in 1965, that share was reduced to around 27% in 1995-1997. However, there is a significant variance in that average due to the heterogeneity of the region. For instance, when Mexico is excluded, the share of unprocessed products in 1997 increases from 27% to 36% (see tables IV.7 and IV.8 of the Statistical Annex). Conversely, the share of the category of products classified as “diffusers of technical progress” decreases from 18% to 7% when Mexico is excluded.

According to Busson and Villa (1994), the analysis of trade specialization of many Latin American countries shows the trap of excessive intersectoral specialisation. A country is defined as strongly specialised if its foreign trade can be divided into sectors in which the country can be clearly classified as exporter and others in which it can be classified clearly as importers while its overall trade is relatively balanced. Even though, the country may succeed in specialising in certain sectors for which world demand is strong and manage to keep up with the evolution of these sectors. In this case, one may say that a successful inter-sectoral specialisation may contribute to domestic economic growth.

Both the Andean and Central American countries are clearly countries strongly specialised, as shown in figures IV.1 and IV.2. A word of caution is required, since the way the index of contribution to trade deficit was defined, our two aggregates – commodities and industrial goods – will always be perfectly symmetrical curves.

Between 1978 and 1997 no significant changes were observed in the trade specialisation patterns of the countries of the Andean Community, which enjoyed comparative advantages in commodities, particularly in petroleum and petroleum products, and to a lesser extent, in agricultural and mining products. This reflects the influence of Ecuador and Venezuela on the group’s average. The group presented a strong disadvantage in industrial goods, however, in spite of some improvement in the indicator for traditional products, food, beverages and tobacco. During the 1990s the Andean countries decreased their disadvantage in scale-intensive products (see table IV.9 in the Statistical Annex).

Trade liberalization reforms in Colombia, Peru and Venezuela were introduced between 1989 and 1993, whereas they started earlier in Bolivia (1985). At this level of aggregation, there is no evidence of changes in trade specialisation due to those trade reforms except for an initially greater disadvantage in durable goods and in traditional industries.

The countries of Central America exhibited the greatest stability in their trade specialisation pattern up to the beginning of the 1990s. They presented significant surpluses in primary goods, chiefly as the result of advantages in agricultural products that could offset their disadvantage in energy goods. Moreover, from the late 1980s, Central American countries reduced their disadvantage in traditional manufactured goods. They had a comparative disadvantage in scale-intensive industrial goods, durables and technical progress-diffusing goods throughout the period studied, although this has lessened somewhat in the last few years (see figure IV.2 and table IV.10 in the Statistical Annex).

By contrast, the patterns of trade specialisation of the more advanced Latin American countries showed great changes over the 20 years. Figure IV.3 displays average trends in Mercosur that combine sharp transformations in Argentine trade with less pronounced Brazilian trends (see

also table IV.11 of the Statistical Annex). Overall, the average figures are strongly influenced by Brazilian trade performance.

Argentina could also be characterised as a highly specialised economy, with clear advantages in primary products and traditional industries (processed food). Until 1990, there was a reduction in the disadvantage in goods classified as “technical progress-diffusing products”. Thereafter, there was initially an increase in the disadvantage to level down afterwards. The reduction in imports of capital goods was also related with reduction in the overall level of economic activity in the country due to a chaotic macroeconomic situation. In the 1990s, there is also a turning point in terms of increasing the comparative advantages in primary products, mostly due to petroleum exports, since the comparative advantage in traditional industries decreased (see figure IV.4). These results are probably linked to intra-Mercosur trade in which there is an intensive intra-industrial trade in food industries (Machado and Markwald 1996, table 2.5, p.41).

In the Brazilian case, figure 6 shows that the positive trends in trade specialisation preceded the debt crisis period. There is a visible upward curve in technical progress-diffusing products and in durable goods up to 1984. The positive indicator in durable goods until 1992-1993 is the result of successful exports of auto parts. Nevertheless, greater disadvantage in those goods can be observed during the four years of monetary stabilisation, from 1994 to 1997. As mentioned before, just after the trade liberalisation of 1991, there was an increase in imports of consumer goods that were later controlled through tariff and non-tariff instruments. Figure 6 also shows an increase in Brazilian comparative advantage in agricultural products in recent years (see also table IV.13). Traditional goods and scale and natural-resource intensive goods (pulp and paper, steel and basic chemicals) are those in which Brazil displays some comparative advantage. The indicator, however, shows that there has been a downward trend in traditional goods until the beginning of the present decade.

It is interesting to contrast the Brazilian graph with that for the Republic of Korea, in which comparative disadvantage in unprocessed products including petroleum and petroleum products are offset by greater comparative advantage in durable goods and reduced disadvantages in technical progress-diffusing goods (see figure IV.6).

Figure IV.7 shows that Chile has well-defined comparative advantages in scale and natural resource intensive products, in mining, agricultural goods and in a lesser degree in traditional industries (food and beverage) (see also table IV.14).

Mexico is the only country in our sample that manifests comparative advantage in durable goods in the 1990s while also showing decreasing comparative advantage in petroleum and petroleum products (due to price effects from 1982 on). Moreover, figure IV.8 shows a continuously decreasing disadvantage in all other industrial goods, as a visible consequence of Mexican strategy of integration with the economy of the United States through the North American Free Trade Agreement (NAFTA) (see also table IV.15). Nevertheless, the discontinuities shown in figure in 1992 are misleading. Since 1992, Mexico has been recording the statistics for its *maquila* industry under the headings of merchandise exports and imports; prior to that time the net result (trade balance) had been recorded under services. It is curious that the convergence of positive and negative curves with Mexican trade data resembles the plotting of Spanish ICTB after the country joined what is now the European Union (see figure IV.9).



## V. Concluding remarks

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Guerrieri (1994) analysed three Latin American countries: Argentina, Brazil and Mexico using RCA index and ICTB for the period 1970-1990. We generalized his analysis for a larger sample of Latin American countries with two indicators: the composition of imports of industrial goods and a graphical representation of an indicator of the contribution of groups of industries to the trade balance (ICTB). We also included a modified Pavit-Guerrieri classification of trade data developed by ECLAC. The selected period was 1978 to 1997.

It seems that, with the exception of Mexico, the majority of Latin American economies are fully exploiting comparative advantage rooted in abundant natural resource endowments. Mexico, first, and Central American countries, more recently, have developed manufacturing activities oriented to the United States market based on a second source of comparative advantage, low-paid unskilled labour. Argentina, Brazil and Chile have developed competitive industries that can be classified as raw material processing (pulp and paper, non-metallic minerals) and scale-intensive industries (steel, basic chemicals).

As mentioned before, there are several examples of countries such as Canada, the Scandinavian countries and the United States that industrialised on the basis of natural resources endowments.

In most cases, the development of resource-intensive sectors contributed to the competitive position of industries producing the capital goods and inputs required by those sectors. Hence, through backward and forward linkages, a technological interdependence was established among firms and sectors within the country.

Operating under very unstable macroeconomic and political conditions, Latin American enterprises, in general, have not had the incentives for long-term investments in human and capital resources. A prolonged civil war in Central American countries and social disruptions in the Andean countries have not contributed to the creation of national rules and institutions without which markets cannot work properly (North, 1990). Recent evaluations of *maquila* activities have expressed reserves in terms of their transmission effects to the overall economy. Hence, those activities are not likely to generate endogenous sources of innovation and accumulation in the long term, primarily through innovative inter-sectoral linkages.

The analysis carried out in this document was basically descriptive. Furthermore, no attempt was made to analyse the composition of intra-industrial flows and to separate trade in assembled goods from trade in parts and components. More research is required on patterns of intra-industry specialisation; on the determinants of those trade patterns as well as on the linkages between those exports and economic growth. It is our understanding that the current international environment of highly integrated markets, production sharing among countries, high mobility of capital, neutrality of incentives, and international disciplines on public policies and instruments renders academic any comparison with past experiences of “export-led growth”. In other words, it is highly implausible that in a globalised world of contestable markets a country can move up the “ladder of comparative advantage” as advanced industrial countries have done in the past. Therefore, any policy recommendation for a more effective insertion of Latin American countries in the global economy has first to understand the full implications of global integration to the internal transformation of “undeveloped” economies, and second, to take into account the growing differences characterising the Latin American region.

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## **Statistical annex**

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**Table IV.1**  
**LATIN AMERICA: INDICES OF MERCHANDISE EXPORTS AND IMPORTS, 1985-1988**  
*(Indices 1995=100)*

Years	Exports			Imports		
	Value	Unit Value	Quantum	Value	Unit Value	Quantum
1985	42.5	94.6	44.9	28.0	77.8	36.0
1986	36.5	79.9	45.6	28.7	78.1	36.8
1987	41.9	85.3	49.1	32.6	84.4	38.6
1988	48.6	85.5	56.8	38.0	87.3	43.5
1989	53.9	87.2	61.8	41.2	91.5	45.1
1990	59.4	92.0	64.5	46.6	94.8	49.1
1991	59.8	88.2	67.8	54.8	90.4	60.6
1992	64.6	88.7	72.8	67.3	92.4	72.8
1993	70.9	86.6	81.9	75.1	90.7	82.9
1994	82.5	91.8	89.8	89.3	92.5	96.5
1995	100.0	100.0	100.0	100.0	100.0	100.0
1996	111.7	100.8	110.8	110.9	99.2	111.8
1997	124.3	98.3	126.5	131.9	94.7	139.2
1998	122.8	88.9	138.1	139.1	90.2	154.3

Source: ECLAC on the basis of official data.

**Table IV.2**  
**LATIN AMERICA: IMPORTS OF INDUSTRIAL GOODS AS A PERCENTAGE OF TOTAL  
IMPORTS BY COUNTRIES AND GROUPS OF COUNTRIES, 1965-1997,**  
*(Percentages)*

	1965	1970	1980	1990	1992	1993	1994	1995	1996	1997
<i>Mercosur<sup>b</sup> and Chile</i>	81.2	88.3	87.6	91.5	92.8	93.5	93.7	93.7	92.5	93.3
Argentina	85.8	90.3	94.0	90.1	96.2	96.5	96.9	95.8	95.9	95.3
Brazil	76.1	87.8	83.6	89.7	88.8	90.8	91.3	92.7	90.3	91.8
Chile	81.4	86.3	85.6	95.5	94.2	94.3	93.7	93.7	94.4	95.2
Paraguay	87.2	90.5	96.6	99.1	97.6	97.9	96.9	96.9	94.4	...
Uruguay	74.9	85.3	88.9	91.9	92.4	94.7	93.3	93.1	93.3	94.4
<i>Andean Community</i>	90.1	91.4	91.9	92.3	92.7	93.5	93.4	91.2	91.6	92.2
Bolivia	96.3	96.2	92.9	95.5	95.0	94.9	93.2	93.7	93.5	95.4
Colombia	87.3	92.7	91.0	92.8	89.3	94.1	93.8	88.7	91.3	90.8
Ecuador	92.3	94.8	94.7	93.4	97.3	95.0	96.1	94.6	93.1	94.4
Peru	88.3	86.3	87.6	90.0	89.2	90.7	91.7	92.7	92.1	92.9
Venezuela	91.0	91.7	92.7	92.0	94.5	93.5	92.6	91.8	90.9	...
<i>Mexico</i>	92.3	90.6	86.4	91.6	94.5	95.0	84.9	88.7	91.6	91.8
<i>CACM<sup>c</sup></i>	92.0	92.4	90.9	88.8	90.7	94.2	93.7	94.5	91.5	93.7
Costa Rica	95.8	91.0	88.6	80.2	83.1	92.8	92.9	92.4	86.6	...
El Salvador	88.1	91.1	88.0	92.4	93.0	95.7	93.2	95.1	93.1	93.0
Guatemala	91.8	92.6	93.8	95.4	96.0	95.4	95.1	95.7	93.3	94.9
Honduras	94.7	94.8	94.0	95.0	94.2	94.5	94.5	95.5	93.9	91.8
Nicaragua	91.0	92.9	89.7	90.0	92.7	91.6	92.8	94.3	93.6	95.5
<b>Total</b>	<b>87.7</b>	<b>90.0</b>	<b>88.7</b>	<b>91.5</b>	<b>93.4</b>	<b>94.2</b>	<b>89.9</b>	<b>91.6</b>	<b>92.0</b>	<b>92.6</b>

Source: ECLAC, on the basis of official figures.

<sup>a</sup> Excluding oil imports.

<sup>b</sup> Mercosur, Southern Common Market.

<sup>c</sup> CAM: Central American Market.

Table IV.3

**LATIN AMERICA: IMPORTS OF TRADITIONAL GOODS AS A PERCENTAGE OF INDUSTRIAL IMPORTS <sup>A</sup>, BY COUNTRIES AND GROUPS OF COUNTRIES, 1965-1997**  
(Percentages)

	1965	1970	1980	1990	1992	1993	1994	1995	1996	1997
<i>Mercosur<sup>b</sup> and Chile</i>	15.5	12.4	15.3	16.4	17.7	18.6	18.5	19.8	19.2	17.4
Argentina	14.0	13.2	19.0	11.0	19.8	19.5	18.5	18.8	17.8	17.7
Brazil	9.6	9.3	8.3	16.8	13.4	15.7	16.1	18.5	17.3	15.2
Chile	24.9	17.6	28.3	16.7	20.7	21.3	21.3	21.7	22.6	22.8
Paraguay	23.1	31.9	21.5	22.7	25.6	25.7	28.4	32.5	33.9	....
Uruguay	22.6	15.2	16.3	17.8	20.9	23.9	25.0	27.0	27.3	27.3
<i>Andean Community</i>	21.4	17.2	18.4	13.9	17.4	17.2	17.6	19.2	20.3	18.9
Bolivia	37.1	32.5	25.2	21.6	21.5	18.4	20.1	18.1	18.5	15.5
Colombia	9.1	11.4	12.3	8.3	13.2	13.1	14.1	16.1	17.3	17.6
Ecuador	22.7	14.2	12.2	11.1	16.7	14.9	15.3	15.5	18.6	18.5
Peru	22.2	20.9	17.9	23.8	23.5	23.6	22.8	21.1	24.2	22.4
Venezuela	23.1	17.8	22.0	15.0	17.7	19.1	20.0	23.3	22.7	....
<i>Mexico</i>	11.3	13.5	15.5	23.1	25.5	25.9	29.1	26.3	24.9	25.0
<i>CACM<sup>c</sup></i>	34.4	33.7	27.8	22.6	24.9	24.4	25.8	25.6	26.7	29.7
Costa Rica	31.1	30.8	24.9	22.1	23.7	23.5	24.3	23.5	23.7	....
El Salvador	34.0	35.4	39.2	24.1	25.1	25.6	26.7	27.5	28.8	29.6
Guatemala	35.2	34.6	22.0	19.6	21.5	21.4	24.7	23.3	23.8	26.0
Honduras	41.1	36.6	25.7	24.0	26.3	26.0	26.6	27.9	31.0	34.5
Nicaragua	32.1	32.0	35.4	28.0	36.6	33.4	31.4	30.8	30.9	31.3
<b>Tota</b>	<b>19.0</b>	<b>16.1</b>	<b>17.1</b>	<b>18.7</b>	<b>21.5</b>	<b>21.7</b>	<b>23.0</b>	<b>22.2</b>	<b>21.9</b>	<b>21.3</b>

**Source** : ECLAC, on the basis of official figures.

<sup>a</sup> Excluding oil imports

<sup>b</sup> Mercosur = Southern Common Market.

<sup>c</sup> CACM = Central American Market.

**Table IV.4**

**LATIN AMERICA: IMPORTS OF SCALE-INTENSIVE GOODS AS A PERCENTAGE OF INDUSTRIAL IMPORTS <sup>A</sup>, BY COUNTRIES AND GROUPS OF COUNTRIES, 1965-1997**  
(Percentages)

	1965	1970	1980	1990	1992	1993	1994	1995	1996	1997
<i>Mercosur<sup>b</sup> and Chile</i>	43.9	39.5	36.1	32.3	28.8	28.8	26.6	28.4	27.8	26.5
Argentina	49.2	46.5	27.8	44.0	24.2	21.9	21.4	28.0	27.4	24.8
Brazil	50.3	40.0	47.1	32.6	35.4	36.6	31.4	30.2	29.7	28.4
Chile	26.7	26.4	20.6	26.1	25.2	23.6	23.9	25.2	23.5	22.9
Paraguay	30.6	20.2	31.1	21.0	23.2	23.2	20.7	17.7	21.3	...
Uruguay	38.1	38.8	33.5	38.1	27.6	27.2	29.6	27.0	28.6	26.6
<i>Andean Community</i>	26.3	30.1	31.3	38.2	29.9	27.3	28.7	32.5	30.9	31.0
Bolivia	21.8	23.7	25.6	24.8	24.3	26.2	28.0	27.7	24.2	28.2
Colombia	34.6	33.6	41.8	45.6	44.3	32.4	30.5	35.6	33.9	32.1
Ecuador	30.1	39.5	31.0	41.9	30.9	26.7	28.7	35.0	34.2	35.2
Peru	27.0	33.2	32.2	33.5	28.9	29.8	28.1	28.7	26.9	27.1
Venezuela	23.5	26.3	27.1	34.0	23.3	22.1	26.3	30.7	29.5	...
<i>Mexico</i>	28.0	25.1	29.6	23.7	18.4	17.9	19.4	20.1	19.3	19.8
<i>CACM<sup>c</sup></i>	28.8	29.9	38.8	41.4	36.1	33.7	34.0	35.8	36.0	32.6
Costa Rica	33.6	32.1	39.9	42.1	38.3	34.7	36.5	39.6	38.1	...
El Salvador	27.7	31.6	33.2	43.7	34.9	30.8	30.5	31.7	33.7	33.1
Guatemala	27.5	30.6	46.5	44.5	38.0	34.1	34.7	36.9	37.0	34.4
Honduras	27.0	25.3	31.4	40.8	38.3	39.3	36.6	35.7	38.1	31.6
Nicaragua	27.4	28.9	36.9	26.2	23.0	24.2	27.2	31.0	28.0	28.3
<b>Total</b>	<b>32.6</b>	<b>33.1</b>	<b>33.3</b>	<b>31.1</b>	<b>24.8</b>	<b>24.2</b>	<b>24.5</b>	<b>26.8</b>	<b>25.5</b>	<b>24.4</b>

**Source :** ECLAC, on the basis of official figures.

<sup>a</sup> Excluding oil imports.

<sup>b</sup> Mercosur = Southern Common Market

<sup>c</sup> CACM = Central American Market.

Table IV.5

**LATIN AMERICA: IMPORTS OF DURABLE GOODS AS A PERCENTAGE OF INDUSTRIAL IMPORTS <sup>A</sup>, BY COUNTRIES AND GROUPS OF COUNTRIES, 1965-1997**  
(Percentages)

	1965	1970	1980	1990	1992	1993	1994	1995	1996	1997
<i>Mercosur <sup>b</sup> and Chile</i>	10.5	8.6	11.4	9.6	16.2	16.6	17.0	16.0	14.2	14.9
Argentina	12.8	5.4	15.2	9.9	20.8	20.6	20.3	14.4	16.5	18.5
Brazil	5.4	7.6	4.0	5.5	7.9	11.4	13.5	15.0	11.3	12.0
Chile	11.7	15.2	23.1	14.5	20.5	18.5	17.5	18.7	19.1	18.2
Paraguay	15.1	15.6	17.3	31.6	25.4	24.8	24.0	25.8	18.2	...
Uruguay	15.1	16.2	21.2	14.4	27.4	24.1	20.9	18.8	15.1	16.5
<i>Andean Community</i>	15.7	14.4	15.3	9.5	17.1	19.2	19.3	14.4	12.3	12.6
Bolivia	13.1	12.5	14.9	20.4	18.9	17.2	23.5	18.8	16.7	20.9
Colombia	11.6	15.0	13.6	8.5	8.3	20.0	18.5	10.9	10.2	11.2
Ecuador	15.0	13.0	17.5	9.8	18.4	21.0	28.3	19.5	15.7	13.7
Peru	16.9	10.6	13.0	8.3	19.8	14.5	18.3	17.6	13.0	12.5
Venezuela	16.7	15.8	16.1	9.4	20.2	19.9	16.3	14.0	12.6	...
<i>Mexico</i>	17.0	15.4	15.9	17.1	17.3	17.1	8.7	9.3	11.3	11.5
<i>CACM <sup>c</sup></i>	10.7	10.3	8.5	10.6	12.6	14.8	14.5	13.5	12.5	12.3
Costa Rica	9.1	11.0	9.2	9.1	12.3	13.6	13.7	10.7	12.6	...
El Salvador	10.4	9.2	4.5	9.7	13.8	15.7	15.9	15.8	11.9	11.2
Guatemala	11.5	9.5	9.7	9.2	13.3	18.0	17.5	17.7	15.0	13.8
Honduras	10.7	12.0	11.4	11.0	10.9	11.3	10.8	9.5	10.0	11.5
Nicaragua	11.6	9.6	5.7	21.3	11.3	11.7	9.8	9.7	11.5	12.3
<b>Total</b>	<b>13.7</b>	<b>11.7</b>	<b>13.4</b>	<b>12.4</b>	<b>16.6</b>	<b>17.2</b>	<b>13.9</b>	<b>13.3</b>	<b>12.7</b>	<b>13.1</b>

**Source** : ECLAC, on the basis of official figures.

<sup>a</sup> Excluding oil imports.

<sup>b</sup> Mercosur = Southern Common Market.

<sup>c</sup> CACM = Central American Market.

**Table IV.6**  
**LATIN AMERICA: IMPORTS OF TECHNICAL PROGRESS-DIFFUSING PRODUCTS AS A**  
**PERCENTAGE OF INDUSTRIAL IMPORTS <sup>A</sup>, BY COUNTRIES AND GROUPS OF COUNTRIES,**  
**1965-1997**  
*(Percentages)*

	1965	1970	1980	1990	1992	1993	1994	1995	1996	1997
<i>Mercosur <sup>b</sup> and Chile</i>	30.1	39.5	37.3	41.7	37.3	36.1	38.0	35.9	38.8	41.2
Argentina	24.0	34.9	38.0	35.1	35.3	38.0	39.8	38.8	38.2	39.1
Brazil	34.7	43.0	40.5	45.1	43.3	36.4	39.0	36.3	41.7	44.4
Chile	36.6	40.8	27.9	42.7	33.6	36.6	37.2	34.4	34.8	36.1
Paraguay	31.2	32.3	30.1	24.6	25.8	26.4	26.9	24.0	26.6	...
Uruguay	24.1	29.7	29.0	29.7	24.2	24.8	24.4	27.2	29.0	29.7
<i>Andean Community</i>	36.6	38.3	35.0	38.4	35.6	36.3	34.4	34.0	36.5	37.5
Bolivia	28.0	31.2	34.2	33.2	35.3	38.2	28.4	35.4	40.5	35.5
Colombia	44.8	40.0	32.3	37.5	34.2	34.6	36.8	37.4	38.6	39.0
Ecuador	32.2	33.3	39.3	37.3	34.0	37.4	27.7	30.1	31.5	32.7
Peru	34.0	35.3	36.9	34.4	27.8	32.1	30.7	32.7	35.9	37.9
Venezuela	36.6	40.1	34.9	41.6	38.9	38.9	37.4	31.9	35.2	...
<i>Mexico</i>	43.7	46.0	39.0	36.2	38.9	39.1	42.8	44.3	44.5	43.7
<i>CACM <sup>c</sup></i>	26.2	26.1	24.9	25.5	26.4	27.2	25.7	25.1	24.8	25.4
Costa Rica	26.2	26.1	26.1	26.7	25.7	28.2	25.6	26.2	25.6	...
El Salvador	27.9	23.8	23.1	22.6	26.2	27.9	26.8	25.0	25.6	26.1
Guatemala	25.8	25.3	21.8	26.7	27.1	26.5	23.0	22.1	24.2	25.8
Honduras	21.3	26.1	31.6	24.2	24.5	23.4	26.0	26.9	20.9	22.4
Nicaragua	28.9	29.5	22.0	24.5	29.0	30.8	31.6	28.5	29.6	28.1
<b>Total</b>	<b>34.8</b>	<b>39.1</b>	<b>36.2</b>	<b>37.8</b>	<b>37.1</b>	<b>36.9</b>	<b>38.7</b>	<b>37.7</b>	<b>39.9</b>	<b>41.2</b>

**Source :** ECLAC, on the basis of official figures.

<sup>a</sup> Excluding oil imports.

<sup>b</sup> Mercosur = Southern Common Market.

<sup>c</sup> CACM = Central American Market.

Table IV.7

**LATIN AMERICA AND THE CARIBBEAN<sup>A</sup> STRUCTURE OF MERCHANDISE EXPORTS,  
BY CATEGORY OF PRODUCTS, 1965-1997**

	<i>(percentages)</i>							
	1965	1970	1980	1990	1994	1995	1996	1997
<b>Exports</b>								
Commodities	60.1	51.9	52.6	43.0	27.9	26.7	27.9	26.9
Agriculture	34.3	29.7	18.1	15.0	13.7	12.9	11.9	12.6
Mining	7.0	7.9	5.3	4.7	3.4	3.5	2.9	2.8
Energy	18.8	14.3	29.2	23.3	10.8	10.4	13.1	11.5
<b>Manufactures</b>	<b>38.8</b>	<b>47.5</b>	<b>46.9</b>	<b>56.3</b>	<b>71.3</b>	<b>72.5</b>	<b>71.6</b>	<b>72.4</b>
Traditional	16.0	20.0	18.1	19.3	22.4	21.7	22.2	22.4
Food, beverages and tobacco	13.0	15.0	11.2	10.3	9.3	9.3	9.8	9.2
Other	3.1	5.1	6.9	8.9	13.1	12.4	12.4	13.2
Scale-intensive	21.7	24.4	22.6	24.7	21.7	23.7	20.4	19.0
Durables	0.2	0.6	2.3	5.0	10.9	11.0	12.0	12.8
Diffusors	0.9	2.4	3.9	7.4	16.2	16.0	16.9	18.3
<b>Other</b>	1.2	0.6	0.5	0.7	0.8	0.8	0.5	0.7
<b>Total (value)</b>	<b>10913</b>	<b>14847</b>	<b>90272</b>	<b>121112</b>	<b>177653</b>	<b>216416</b>	<b>241678</b>	<b>266641</b>

Source: ECLAC, 1999, Latin America and the Caribbean in the World Economy Edition 1998, Statistical Anenex.

<sup>a</sup> The total includes 25 LAC. It includes Mexico.

Table IV.8

**LATIN AMERICA AND THE CARIBBEAN<sup>A</sup> MERCHANDISE EXPORTS,  
BY CATEGORY OF PRODUCTS, 1965-1997**

	<i>(percentages)</i>							
	1965	1970	1980	1990	1994	1995	1996	1997
<b>Exports</b>								
Commodities	60.1	52.9	46.8	42.0	33.5	32.8	35.5	35.8
Agriculture	32.8	29.5	19.2	16.5	16.5	16.9	16.7	18.4
Mining	6.8	7.9	5.8	5.4	5.4	4.8	5.1	4.5
Energy	20.5	15.5	21.8	20.0	10.7	10.8	14.3	12.9
<b>Manufactures</b>	<b>38.6</b>	<b>46.4</b>	<b>52.6</b>	<b>57.3</b>	<b>65.4</b>	<b>66.1</b>	<b>63.8</b>	<b>63.1</b>
Traditional	15.6	19.4	20.6	22.2	25.6	25.1	25.6	24.6
Food, beverages and tobacco	13.0	14.8	13.1	12.4	13.1	13.5	14.8	14.1
Other	2.7	4.6	7.6	9.8	12.5	11.6	10.8	10.6
Scale-intensive	22.2	24.9	25.5	26.7	27.9	30.2	27.3	25.8
Durables	0.1	0.3	2.4	2.7	5.1	4.3	4.3	5.8
Diffusors	0.7	1.8	4.1	5.7	6.9	6.5	6.7	6.9
<b>Other</b>	1.3	0.7	0.6	0.7	1.1	1.1	0.7	1.1
<b>Total (value)</b>	<b>9907</b>	<b>13641</b>	<b>74830</b>	<b>94864</b>	<b>117117</b>	<b>137039</b>	<b>146276</b>	<b>156752</b>

Source: See Table

<sup>a</sup> The total does not include Mexico.

Table IV.9  
**TRADE SPECIALIZATION PATTERN THE COUNTRIES OF THE ANDEAN  
 COMMUNITY, 1978-1997**

	1978- 1981	1982- 1985	1986- 1989	1990- 1993	1994- 1997
<b>Commodities</b>	<b>14.4</b>	<b>12.0</b>	<b>12.2</b>	<b>12.4</b>	<b>11.3</b>
Agricultural products	1.9	1.1	3.0	2.0	2.3
Mining products	1.0	0.4	0.7	0.6	0.5
Energy	11.5	10.5	8.5	9.7	8.5
<b>Industrial goods</b>	<b>-14.3</b>	<b>-11.8</b>	<b>-12.0</b>	<b>-12.4</b>	<b>-11.2</b>
Traditional goods	-2.4	-2.5	-0.5	-0.4	-0.8
Food, beverages and tobacco	-0.8	-0.9	-0.2	-0.2	0.1
Other traditional goods	-1.6	-1.6	-0.4	-0.3	-0.9
Scale-intensive products	-0.4	0.7	-0.4	-1.0	0.2
Durable goods	-3.6	-2.8	-2.4	-3.0	-3.0
Technical progress-diffusing products	-7.9	-7.2	-8.6	-7.9	-7.5

**Source:** ECLAC, on the basis of official figures.

Table IV.10  
**TRADE SPECIALIZATION PATTERN THE COUNTRIES OF THE  
 CENTRALAMERICAN COMMON MARKET (MCCA), 1978-1997**

	1978- 1981	1982- 1985	1986- 1989	1990- 1993	1994- 1997
<b>Commodities</b>	<b>11.2</b>	<b>10.4</b>	<b>12.9</b>	<b>10.1</b>	<b>9.9</b>
Agricultural products	13.2	14.0	14.7	11.3	10.6
Mining products	0.2	0.2	-0.1	0.0	0.0
Energy	-2.2	-3.7	-1.7	-1.2	-0.8
<b>Industrial goods</b>	<b>-11.0</b>	<b>-10.3</b>	<b>-12.9</b>	<b>-9.8</b>	<b>-10.3</b>
Traditional goods	1.1	0.8	0.4	1.8	1.3
Food, beverages and Tobacco	2.0	1.5	0.9	2.0	1.5
Other traditional goods	-0.9	-0.7	-0.6	-0.1	-0.2
Scale-intensive products	-5.8	-6.3	-6.7	-5.5	-5.1
Durable goods	-1.9	-1.1	-2.1	-2.3	-2.5
Technical progress-diffusing products	-4.4	-3.7	-4.4	-3.9	-3.9

**Source:** ECLAC, on the basis of official figures.

Table IV.11

**TRADE SPECIALIZATION PATTERN THE COUNTRIES OF THE SOUTHERN  
COMMON MARKET (MERCOSUR), 1978-1997**

	1978- 1981	1982- 1985	1986- 1989	1990- 1993	1994- 1997
<b>Commodities</b>	<b>-1.5</b>	<b>-4.5</b>	<b>-1.7</b>	<b>0.2</b>	<b>2.6</b>
Agricultural products	5.0	4.2	2.7	2.6	2.7
Mining products	1.1	1.0	0.6	0.9	0.8
Energy	-7.6	-9.7	-5.1	-3.3	-0.8
<b>Industrial goods</b>	<b>1.3</b>	<b>4.3</b>	<b>1.6</b>	<b>-0.3</b>	<b>-2.8</b>
Traditional goods	7.3	6.1	5.5	4.5	4.1
Food, beverages and tobacco	5.5	4.5	3.6	3.2	3.3
Other traditional goods	1.8	1.7	1.9	1.3	0.7
Scale-intensive products	-2.1	1.0	0.1	0.8	0.2
Durable goods	0.0	0.3	0.4	-0.8	-1.3
Technical progress-diffusing products	-4.0	-3.2	-4.3	-4.8	-5.8

**Source:** ECLAC, on the basis of official figures.

Table IV.12

**TRADE SPECIALIZATION PATTERN OF ARGENTINA, 1978-1997**

	1978- 1981	1982- 1985	1986- 1989	1990- 1993	1994- 1997
<b>Commodities</b>	<b>6.7</b>	<b>6.5</b>	<b>3.3</b>	<b>5.4</b>	<b>7.0</b>
Agricultural products	9.5	9.4	5.5	5.9	5.4
Mining products	-0.4	-0.6	-0.7	-0.4	-0.2
Energy	-2.3	-2.3	-1.5	-0.1	1.9
<b>Industrial goods</b>	<b>-6.7</b>	<b>-6.5</b>	<b>-3.3</b>	<b>-5.3</b>	<b>-7.0</b>
Traditional goods	5.2	4.0	7.0	3.9	3.3
Food, beverages and tobacco	5.4	4.1	5.8	4.6	4.2
Other traditional goods	-0.2	-0.1	1.1	-0.7	-0.9
Scale-intensive products	-3.1	-2.8	-2.5	-0.2	-0.4
Durable goods	-2.0	-1.3	-1.2	-2.8	-2.2
Technical progress-diffusing products	-6.8	-6.4	-6.6	-6.2	-7.6

**Source:** ECLAC, on the basis of official figures.



Table IV.13  
TRADE SPECIALIZATION PATTERN OF BRAZIL, 1978-1997

	1978- 1981	1982- 1985	1986- 1989	1990- 1993	1994- 1997
<b>Commodities</b>	<b>-4.8</b>	<b>-8.2</b>	<b>-3.7</b>	<b>-2.5</b>	<b>0.3</b>
Agricultural products	3.0	2.2	1.6	0.8	1.2
Mining products	1.9	1.6	1.0	1.5	1.2
Energy	-9.7	-12.0	-6.3	-4.8	-2.1
<b>Industrial goods</b>	<b>4.6</b>	<b>8.0</b>	<b>3.5</b>	<b>2.3</b>	<b>-0.6</b>
Traditional goods	7.8	6.6	4.8	4.5	4.3
Food, beverages and tobacco	5.4	4.5	2.9	2.5	3.0
Other traditional goods	2.4	2.1	2.0	2.0	1.4
Scale-intensive products	-1.5	2.5	1.2	1.3	0.7
Durable goods	1.1	1.0	1.1	0.6	-0.6
Technical progress-diffusing products	-2.8	-2.1	-3.6	-4.1	-5.0

Source: ECLAC, on the basis of official figures.

Table IV.14  
TRADE SPECIALIZATION PATTERN OF CHILE, 1978-1997

	1978- 1981	1982- 1985	1986- 1989	1990- 1993	1994- 1997
<b>Commodities</b>	<b>-0.8</b>	<b>1.3</b>	<b>3.3</b>	<b>4.0</b>	<b>4.8</b>
Agricultural products	0.2	1.0	2.9	3.6	3.2
Mining products	2.9	3.8	3.0	3.2	3.6
Energy	-4.0	-3.5	-2.6	-2.8	-2.0
<b>Industrial goods</b>	<b>1.7</b>	<b>-1.0</b>	<b>-3.1</b>	<b>-4.0</b>	<b>-4.9</b>
Traditional goods	-1.6	-1.1	0.7	0.8	0.3
Food, beverages and tobacco	0.6	1.7	2.6	2.2	2.1
Other traditional goods	-2.2	-2.7	-1.8	-1.4	-1.8
Scale-intensive products	11.8	7.5	6.7	6.0	5.7
Durable goods	-3.6	-1.7	-3.0	-3.4	-3.6
Technical progress-diffusing products	-4.9	-5.7	-7.5	-7.4	-7.3

Source: ECLAC, on the basis of official figures.

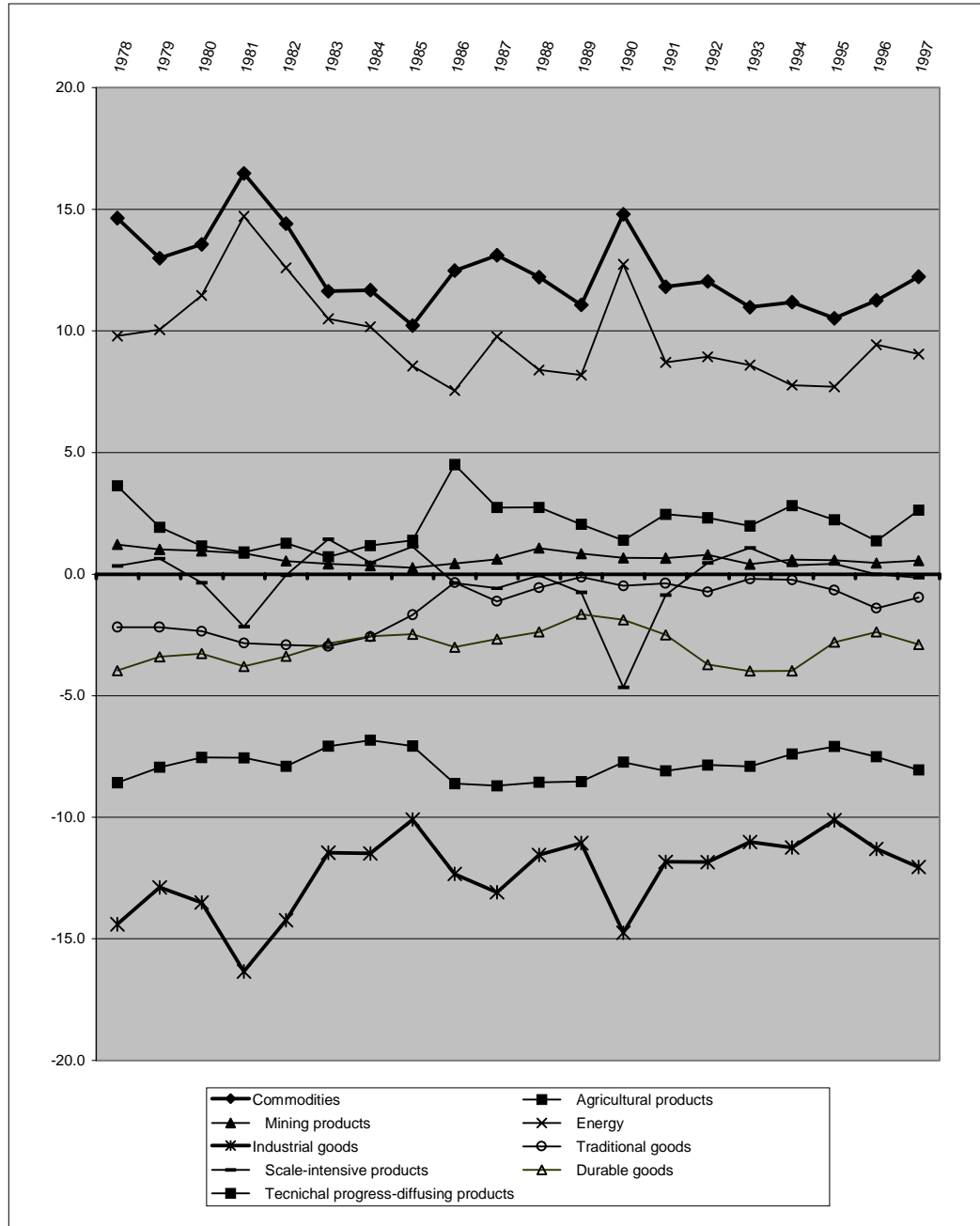
Table IV.15

**TRADE SPECIALIZATION PATTERN OF MEXICO, 1978-1997**

	1978- 1981	1982- 1985	1986- 1989	1990- 1993	1994- 1997
<b>Commodities</b>	<b>14.9</b>	<b>13.1</b>	<b>8.5</b>	<b>6.2</b>	<b>2.6</b>
Agricultural products	2.2	-1.1	0.6	0.6	0.2
Mining products	0.3	0.0	0.2	0.2	0.0
Energy	12.4	14.1	7.7	5.5	2.4
<b>Industrial goods</b>	<b>-14.6</b>	<b>-12.9</b>	<b>-8.0</b>	<b>-5.3</b>	<b>-1.2</b>
Traditional goods	-0.5	-2.0	-1.6	-2.3	-1.5
Food, beverages and tobacco	-0.1	-0.6	-0.5	-0.9	-0.3
Other traditional goods	-0.4	-1.3	-1.1	-1.4	-1.2
Scale-intensive products	-3.9	-2.9	-1.8	-1.3	-1.8
Durable goods	-2.8	-1.8	-0.1	1.0	3.4
Technical progress-diffusing products	-7.4	-6.2	-4.5	-2.8	-1.3

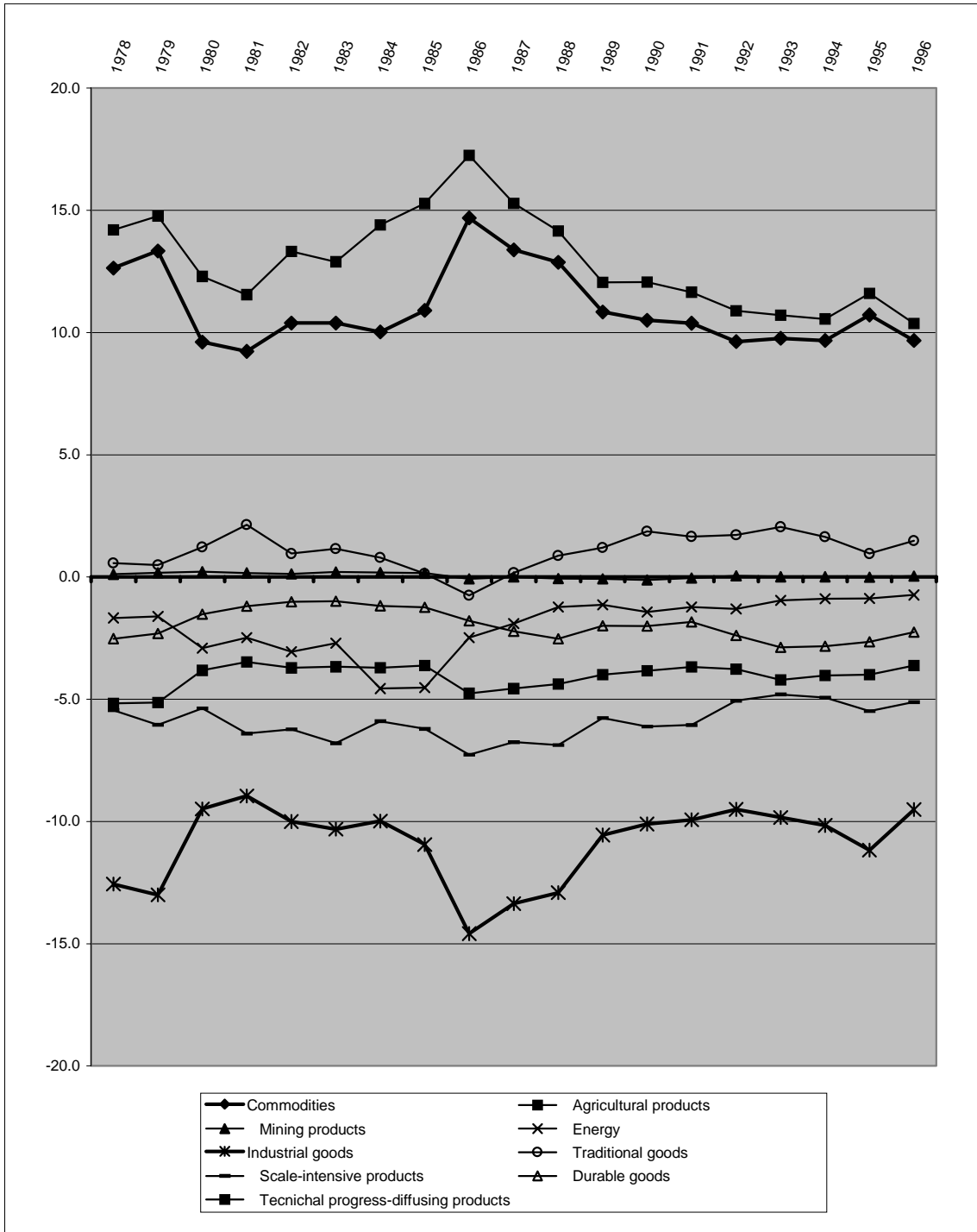
Source: ECLAC, on the basis of official figures.

**Figure IV.1**  
**TRADE SPECIALIZATION PATTERN OF THE COUNTRIES OF THE ANDEAN COMMUNITY**  
**1978-1997**



Source: ECLAC, on the basis of official figures.

Figure IV.2  
**TRADE SPECIALIZATION PATTERN OF THE COUNTRIES OF THE CENTRAL AMERICAN  
 COMMON MARKET (MCCA), 1978-1995**



Source: ECLAC, on the basis of official figures.

Figure IV.3  
**TRADE SPECIALIZATION PATTERN OF THE COUNTRIES OF THE SOUTHERN COMMON MARKET (MERCOSUR), 1978-1997**

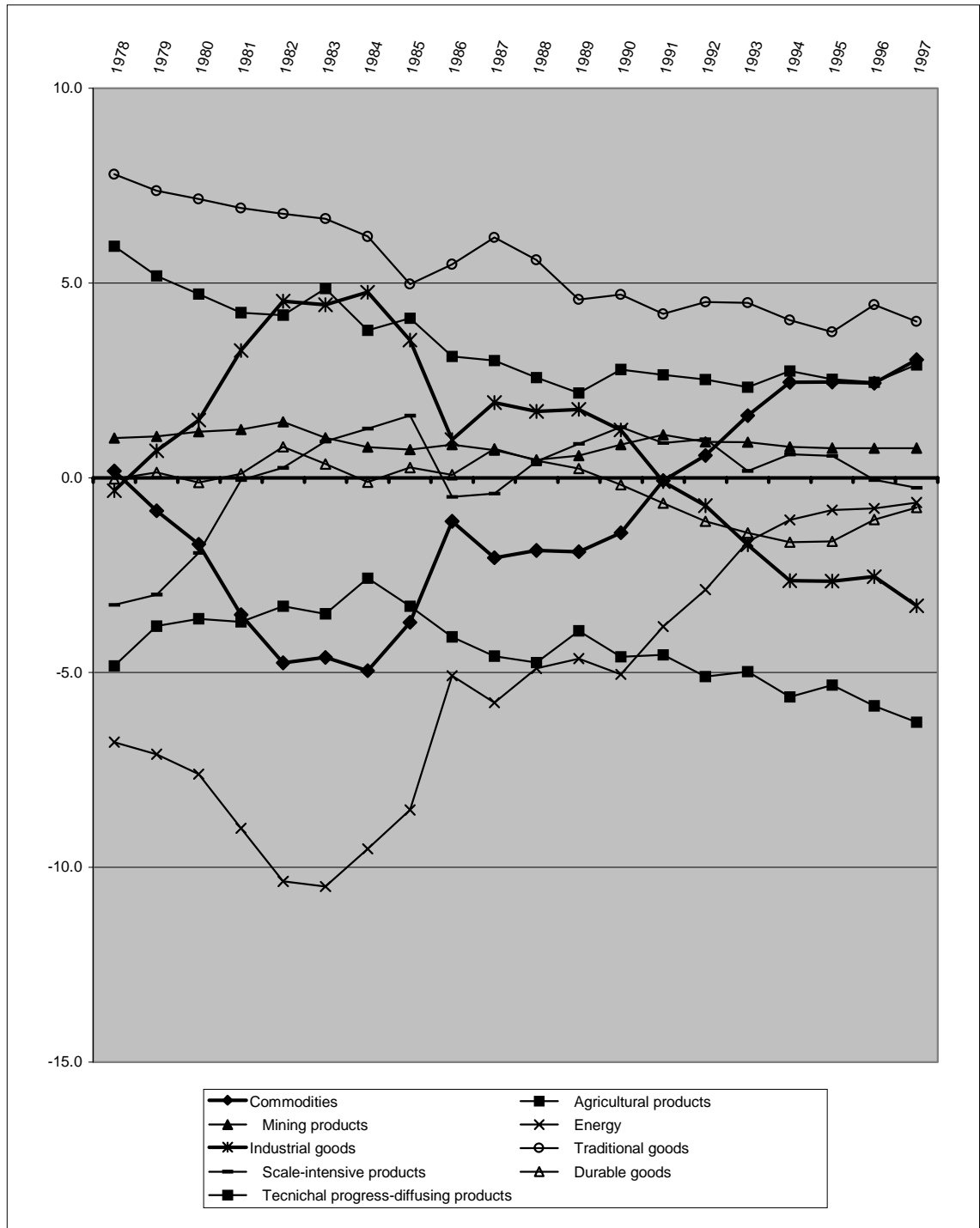
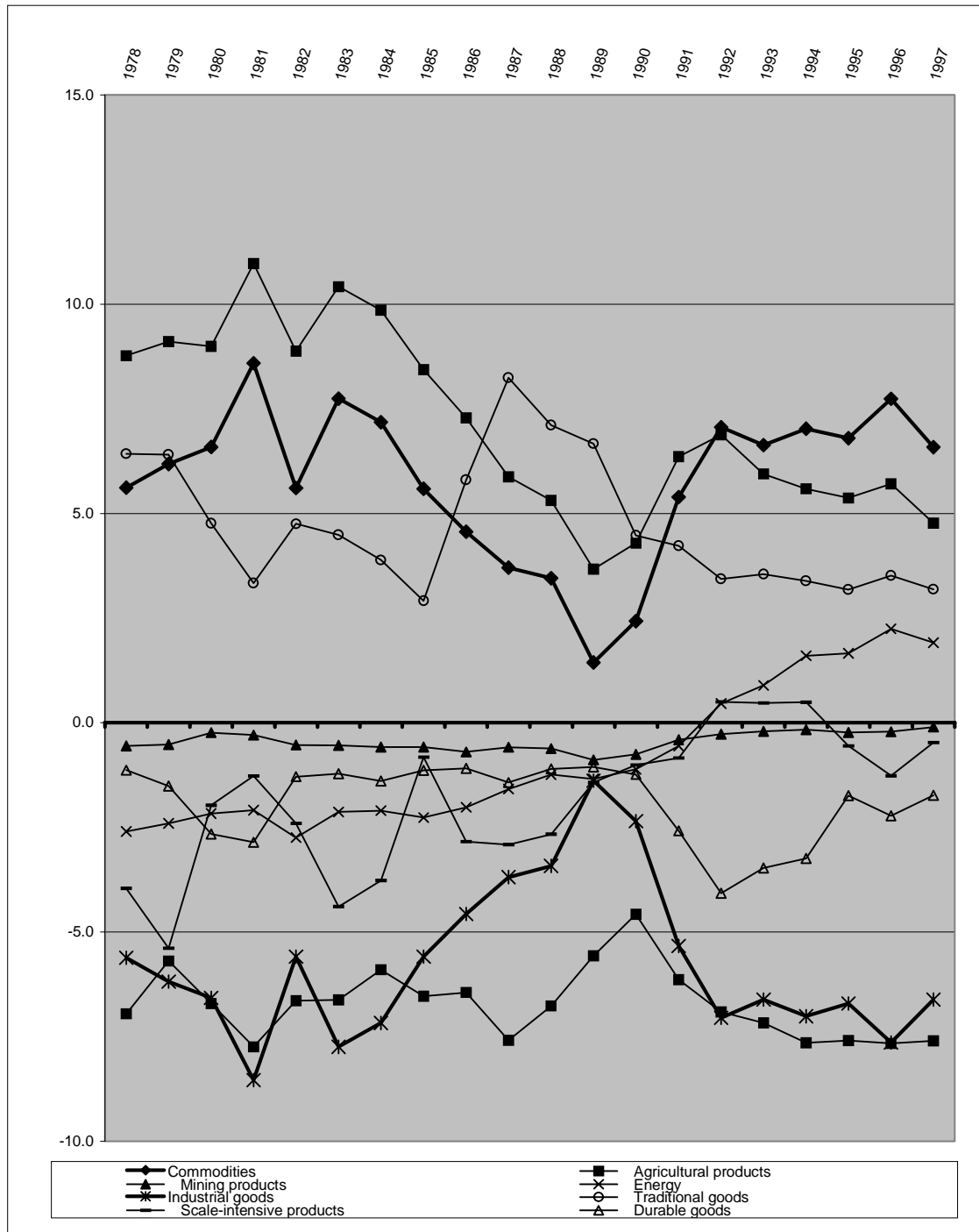
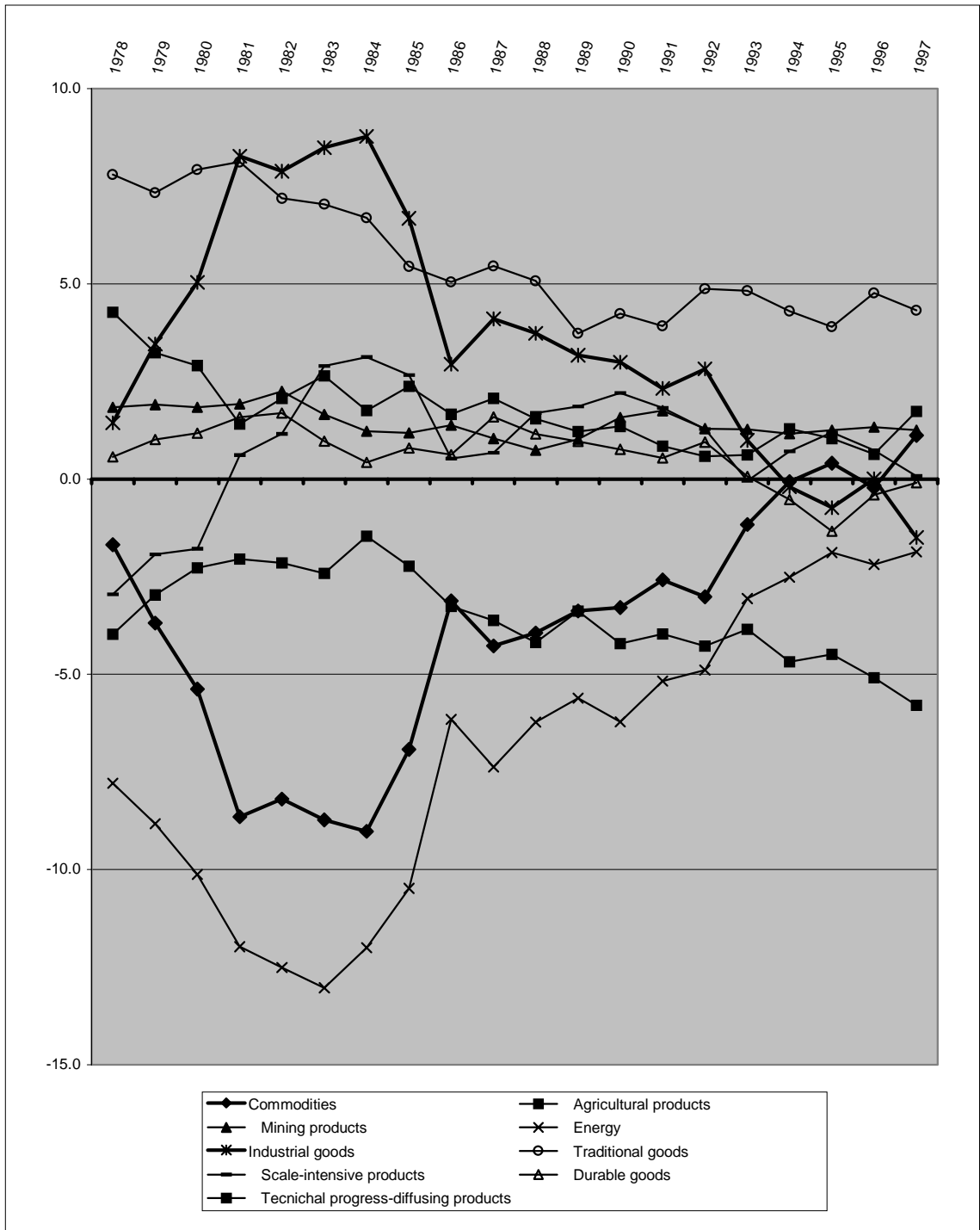


Figure IV.4  
TRADE SPECIALIZATION PATTERN OF ARGENTINA, 1978-1997



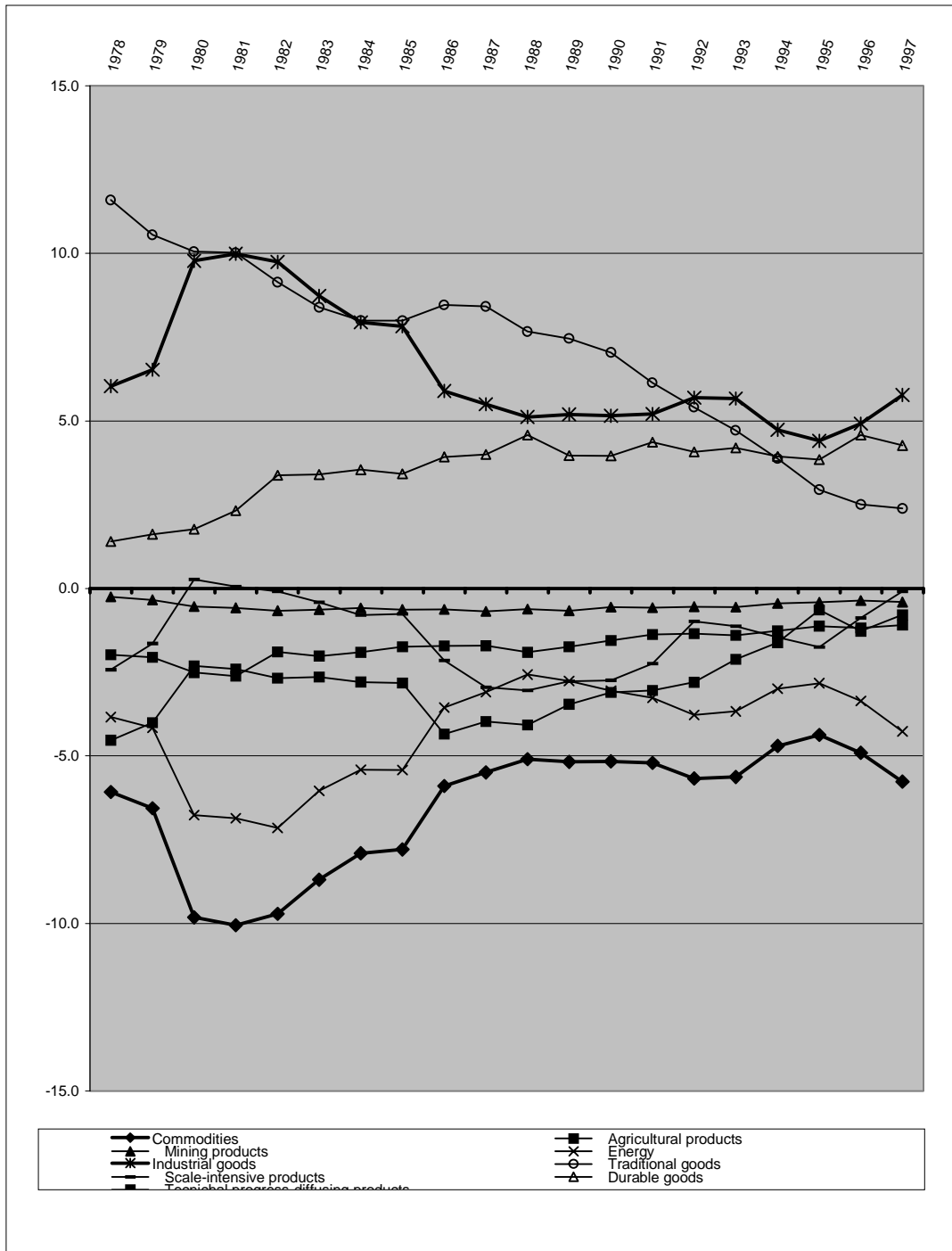
Source: ECLAC, on the basis of official figures.

Figure IV.5  
TRADE SPECIALIZATION PATTERN OF BRASIL, 1978-1997



Source: ECLAC, on the basis of official figures.

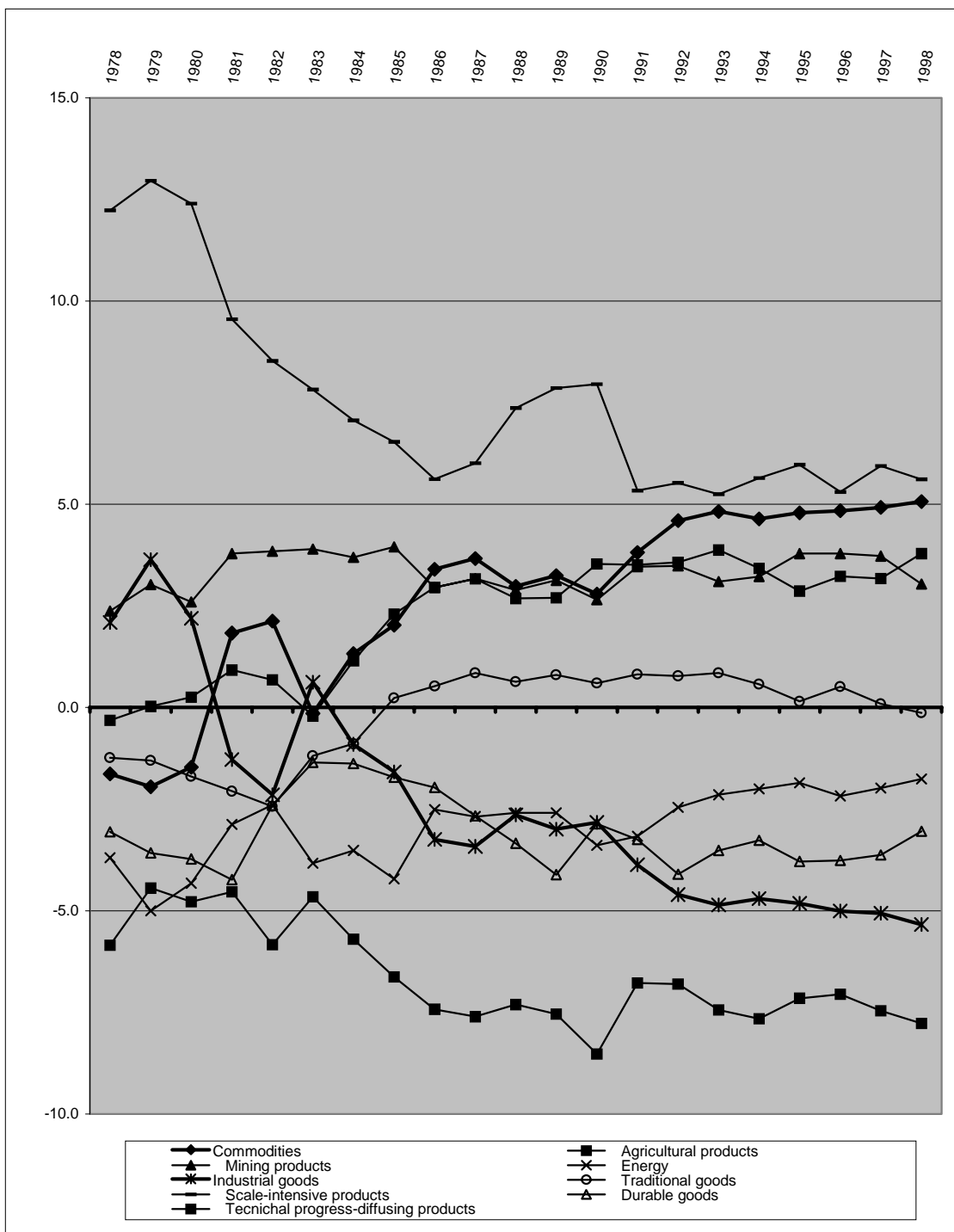
Figure IV.6  
**TRADE SPECIALIZATION PATTERN OF REP. OF KOREA, 1978-1997**



Source: ECLAC, on the basis of official figures.

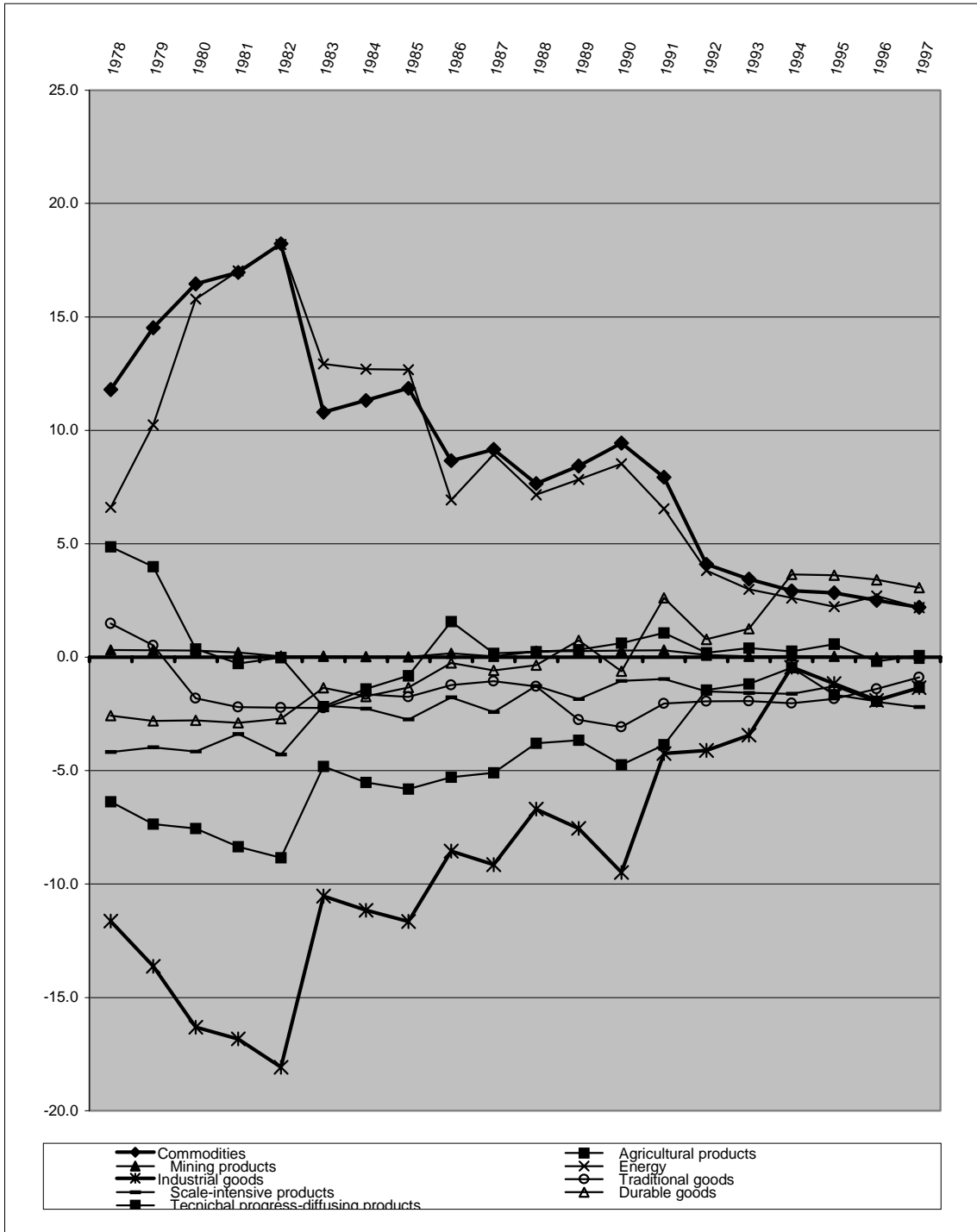


Figure IV.7  
**TRADE SPECIALIZATION PATTERN OF CHILE, 1978-1998**



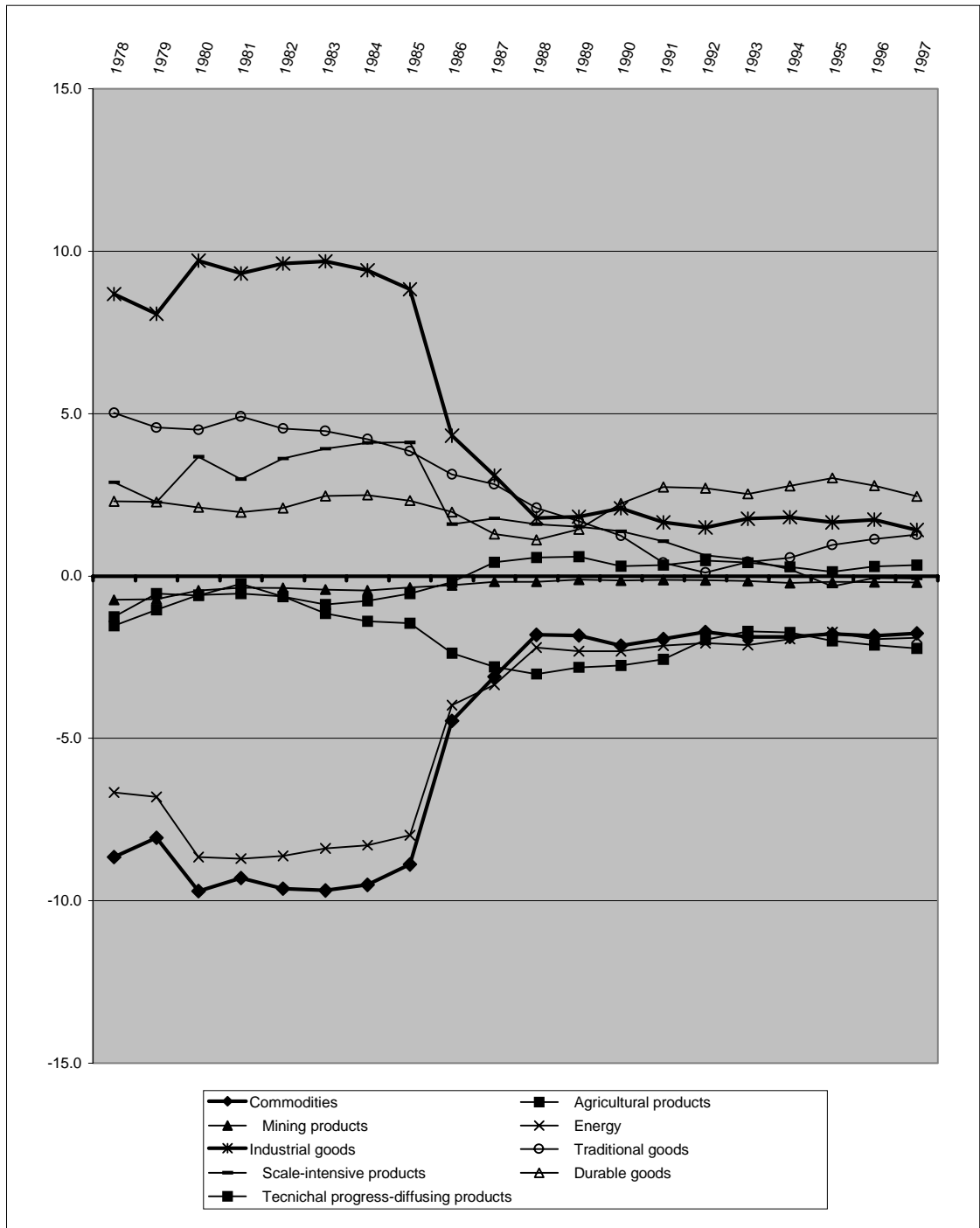
Source: ECLAC, on the basis of official figures.

Figure IV.8  
**TRADE SPECIALIZATION PATTERN OF MEXICO, 1978-1997**



Source: ECLAC, on the basis of official figures.

Figure IV.9  
 TRADE SPECIALIZATION PATTERN OF SPAIN 1978-1997







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