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Review

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UNITED NATIONS
ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN
SANTIAGO, CHILE, APRIL 1991

CEPAL

Review

Santiago, Chile

April 1991

Number 43

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The competitiveness of the small economies of the region

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This article explores the changes in sources of competitiveness in the exports of small countries to the industrialized market economies between 1978 and 1988.

The crisis of the 1980s hit the small countries of Latin America severely, and their development prospects became closely related to their pattern of insertion in international markets. Important transformations are taking place, reflected for example in the upsurge of non-traditional exports.

The analysis of the items that registered export growth to the OECD countries between 1978 and 1988 reveals that unprocessed natural resources and the use of unskilled and cheap labour account for most of this growth. Nevertheless, a considerable number of items where the increase in exports was based on more diversified sources of competitiveness, including the incorporation of science and technology, can be identified. These include products that make use of natural resources or cheap labour but fortify their competitive position through marketing strategies of product differentiation; in addition, some examples can be found of manufactured exports linked to available natural resources.

The purpose of this article is to contribute to the analysis of the specific conditions that small countries must face when transforming their insertion in world markets. Whereas in large and medium-sized countries of the region considerable consensus exists regarding the superiority of outward-oriented development strategies that emphasize competitiveness on the basis of technical progress and human resources development, the prospects for this type of development strategy in small countries seem to be a matter of debate and require further specific analysis. The article comes to the following conclusion: there are examples in the experience of the region which indicate that there are very sound reasons for seeking to promote the competitiveness and the sustainability of the development of small Latin American and Caribbean countries by taking advantage of their comparative advantages and applying science and technology in sectors whose competitiveness has hitherto been based on unprocessed natural resources or the use of cheap unskilled labour.

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Introduction

The widespread literature on the development of small nations usually identifies income, geographical area and population as the main determinants of whether they are considered small or not (Kuznets, 1960; Perkins and Syrquin, 1989). Size-related constraints on development are normally associated with small domestic markets and limited resources, identified with common patterns such as higher trade ratios and less diversification on the supply side. Econometric evidence points to population as a particularly significant determinant of trade structure and diversification patterns. Furthermore, size has also been considered to be an important limitation of developing countries' room to manoeuvre or to have policy options, which in turn tends to reinforce the constraints imposed by other variables such as ethnic divisions, location, limited natural resources, high consumer expectations and a narrow technological base (Seers, 1981). Ecological constraints resulting from a narrow resource base in highly populated small countries is also an issue of growing concern (Foy and Daly, 1989). However, size also seems to have operated as an important positive challenge leading to what has been called "democratic corporatism", allowing small Western European countries to combine political stability, social development and competitive open economies in order to adjust to a rapidly changing international economy (Katzenstein, 1985).

In the case of the small Latin American and Caribbean nations the crisis of the 1980s that shook Latin America in general seems to have induced significant processes of economic transformation involving increased exports of non-traditional products, in spite of its severe negative effects. A first objective of this paper is to identify some of the basic characteristics of this process. A second objective is to demonstrate that the competitiveness of increased exports has continued to be based mostly of these countries' relative endowments of unskilled labour and natural resources, subject to constraints of a technological or environmental nature. A third objective is to explore or analyze trends which may lead to identifying ways of favouring the development of new sources of competitiveness which, in accordance with ECLAC's recent proposal on "Changing Production Patterns with Social Equity" (ECLAC, 1990a), would involve not only traditional land

and labour factors of production but also a gradual absorption or use of technical progress, applied both to production and marketing.

Following Kuznets' seminal paper on small nations, an upper limit of 10 million (in 1988) was chosen as the determinant of those Latin American and Caribbean countries identified as small in this paper, while a lower limit of 1 million was established in order to exclude nations which are sometimes considered "microstates" and which have further specificities which differentiate them from slightly larger countries. After exclusion of the countries for which there are certain statistical data problems (Cuba and Panama), or where cases of increased exports are almost non-existent (Nicaragua), an analysis was undertaken of the evolution of the following twelve Latin American and Caribbean nations, consisting of four from the Caribbean: Trinidad and Tobago, Jamaica, Haiti and the Dominican Republic; four from Central America: Guatemala, El Salvador, Honduras and Costa Rica; and four from South America: Ecuador, Bolivia, Uruguay and Paraguay.

This paper analyses what appear to be the basic recent trends in small countries' participation in the international economy, taking the performance of their exports to OECD countries as an indicator of their competitiveness. To begin with, sources of competitiveness at the national level are considered (section I below), taking into account factor intensity of unskilled labour and natural resources. The next section (section II) then focuses on sources of competitiveness at the industry level, analyzing the growing complexity of new sources of competitiveness, including technological progress and industrial clustering.

The exercise uses import data registered in the OECD countries. This approach has the disadvantage that it does not necessarily provide a complete picture of the countries' competitiveness. However, these data, which are homogeneous and recent, give an uncompromising view of international competitiveness, unblurred by the effect of reciprocal Caribbean or Latin American trade preferences.¹ The analysis is based on the comparison between 1978 and 1988 import data of OECD countries.²

I

Sources of competitiveness at the national level

Considerable progress has been made in the conceptualization of sources of competitiveness. Dosi and Soete state that "revealed comparative advantages appear to be the *ex post* result of sector-specific and country-specific learning dynamics, and of the related international and intra-sectoral changes in competitiveness of firms and countries" (Dosi and Soete, 1988). According to Porter, the competitive advantage of nations would be determined by a "diamond" which involves the dynamic interaction of the factors of production, home demand, market structure and company strategy, and related and supporting industries (Porter, 1990).

In the case of small Latin American and Caribbean nations, the main and sometimes sole source of competitiveness of new exports would appear to be given by the relative availability of low-grade factors, including specifically unskil-

led labour and (constrained to a greater extent by limited geographical area) natural resources.³ Furthermore, the relative weakness of the other determinants of competitiveness, often affected negatively by the small size of these countries (particularly as regards competition, size of home

¹ This approach excludes any normative consideration of the effects of reciprocal trade preferences, as well as of the infant industry argument based on eventual exports to competitive markets after having access to preferential markets.

² These data are CIF and therefore not comparable with the FOB export data of the small countries themselves. Differences may also arise from timing of (export or import) registration and from treatment of free processing zones.

³ Including extremely fertile land, as on the Pacific coast of Central America, favourable climate and beaches as in the Caribbean, and minerals.

demand and the performance of supporting industries), has placed a heavy burden on the relative availability of traditional factors of production as the sole determinant of competitiveness. This, in turn, is linked to the relatively weak industrialization processes of the small Latin American and Caribbean nations in the past, which have limited their possibilities of advancing towards the constitution of a balanced "diamond".

In order to determine the relative factor intensities of those products with export growth in small Latin American and Caribbean countries during the 1978-1988 period, the total exports which increased during this period (XT) were broken down into exports of primary products based on unprocessed natural resources (NR), exports of labour-intensive industrial products (XIL), exports of industrial products intensive in processed natural resources (XINR) and exports of other industrial goods (XIO).⁴ First, the 3-digit SITC categories corresponding to total exports (XT) which grew during this period (what amounts to additional (marginal) exports) were added together.

The results are heterogeneous, as can be seen from table 1, with the highest relative increases taking place in the Dominican Republic (170.1%) and Costa Rica (110.0%), followed by Paraguay (105.8%) and Haiti (101.0%). Second, a distinction was made between industrial goods exports (manufactures and semimanufactures) and primary products (NR), while disaggregating industrial products into those which are relatively intensive in unskilled labour (XIL), those intensive in natural resources (XINR), and others (XIO), the latter presumably being intensive in capital or in technology.⁵

⁴ Arithmetically, $XT = NR + XIL + XINR + XIO$.

⁵ Primary products were defined as those corresponding to sections 0, 1, 2 and 3 of the SITC Rev. 2, and industrial products as those corresponding to sections 4 to 8. Exports of gold which corresponded to mining were included in the first group, but they were excluded if they were due to the sale of Central Bank reserves. Unskilled-labour-intensive chapters or groups were defined as those which had 10% lower wages than the average wage in the United States, using Hufbauer's information on wages per man. (See G.C. Hufbauer, "The Impact of National Characteristics and Technology on the Commodity Composition of Trade in Manufactured Goods", in R. Vernon, ed., *The Technology Factor in International Trade*, NBER, Columbia University Press,

Table 1
(MARGINAL) VALUE OF EXPORTS WHICH GREW
BETWEEN 1978 AND 1988^a
(Thousands of US\$ and %)

	Thous. US\$	% of 1978
Dominican Rep.	1 207.4	170.1
Costa Rica	784.8	110.0
Paraguay	320.5	105.8
Haiti	271.0	101.0
Ecuador	923.7	77.4
Uruguay	338.0	75.1
Honduras	418.4	68.2
Jamaica	337.6	44.9
Guatemala	264.4	31.2
El Salvador	86.9	18.7
Trinidad and Tobago	291.0	17.4
Bolivia	42.1	13.0

Source: Processed COMTRADE data (refer to OECD imports).

^a Value refers to difference between exports of 1978 and 1988. Percentage is this value as % of 1978 exports. Gold exports by Bolivia and Uruguay are excluded. Items in which exports increased were defined at the SITC Rev. 2 three-digit level.

The information presented in table 2 confirms that the expansion of exports in small Latin American and Caribbean nations relied predominantly on exports of labour-intensive industrial goods and on exports of natural-resource-based products with a limited degree of processing, with the important exception of Trinidad and Tobago. Given a small population, various patterns appear to emerge as a result of the different combinations of location, low labour costs, and natural resource availability, the latter being loosely connected with population density (excluding the cases of oil-producing Trinidad and Tobago and Ecuador).

The relation between the proportion of increased labour-intensive industrial exports (XIL

New York and London, 1970). Labour-intensive groups were considered to be 56, 61, 63, 65, 82, 83, 84, 85, and 89. After excluding labour-intensive groups, industrial products intensive in natural resources were those left in sections 4, 5 and 6, while "others" were those remaining in groups 7 and 8. Given the existence of footloose assembly operations in the machinery and electronic equipment sectors, groups 74 and 77 were also defined as labour-intensive.

Table 2
INCREASED (1978-88) EXPORTS: FACTOR INTENSITY^a
(Percentage of exported value)

	Primary Nat. Res.	Industrial Products Labour	Nat. Res.	Other
Paraguay	89.0	10.5	0.4	0.1
Bolivia	77.1	20.6	1.9	1.2
Ecuador	96.6	2.1	0.8	0.3
Jamaica	24.8	68.6	6.0	0.3
Dominican Rep.	34.2	62.3	3.3	0.2
El Salvador	34.7	57.6	6.8	0.9
Haiti	3.8	90.4	3.1	2.4
Guatemala	54.3	38.2	4.1	1.7
Honduras	80.0	17.5	1.9	1.0
Costa Rica	54.3	43.2	2.0	1.2
Uruguay	57.0	36.5	4.8	1.7
Trinidad and Tobago	23.1	11.3	65.1	0.5

Source: Processed on the basis of COMTRADE data.

^a See note ^a of table 3 below. See footnote 5 in text for classification method used.

as % of XT), population density and distance from the United States (Miami) of ten small Latin American and Caribbean countries can be seen in table 3. The results of a multiple regression, with an adequate and significant sign corresponding to the density coefficient and an adequate but statistically non-significant result corresponding to the distance variable, can be observed in the same table. These results imply that labour-intensive manufactured exports grew faster in those countries with higher population density, in accordance with what could be expected on the basis of the traditional theory of comparative advantage (Perkins and Syrquin, 1989).

In general, the small countries of South America which have a relatively larger area (Paraguay, Bolivia and Ecuador) relied to a greater extent on unprocessed natural resources. The smallest countries (Dominican Republic, Jamaica, Haiti and El Salvador), benefitting from their proximity to the United States market, exported a greater proportion of labour-intensive industrial products, largely as a result of the expansion of offshore assembly activities (see table 3). The relatively less developed small countries of Europe, such as Ireland and Portugal, exporting goods involving low-skill assembly jobs,

would appear to be in a similar position (Walsh, 1988).

Trinidad and Tobago, Costa Rica, Guatemala and Honduras would appear to be countries which share the advantages of favourable location and natural resource availability. The Central American countries still limit their industrial exports to OECD countries basically to unskilled-labour-intensive goods and to products involving limited processing of available natural resources, even though many are new exports. Only Trinidad and Tobago, taking advantage of its oil and capital, has developed industrial sectors based on greater local resource processing, which also tend to be capital-intensive.⁶ Uruguay, on the other hand, with an unfavourable location but with a relatively larger area, has advanced further in the integration of industries which are both labour and resource intensive (with important labour-intensive branches which are part of group 6 of the SITC). Both Trinidad and Tobago and Uruguay, and to a lesser extent Costa Rica, Guatemala and Honduras, would appear to face important non-tariff barriers in markets abroad,

⁶ For a critical analysis of natural-resource-based industrialization, see Rowner (1979).

Table 3
RELATIONS BETWEEN LABOUR-INTENSIVE EXPORTS, POPULATION
DENSITY AND DISTANCE^a

	% of exports making intensive use of labour ^b	Population density (inhabitants/km ²)	Distance from Miami (miles)
Paraguay	10.5	104	5 144
Bolivia	20.6	66	3 975
Uruguay	36.5	179	5 468
Guatemala	38.2	824	1 226
El Salvador	57.6	3 034	1 362
Costa Rica	43.2	566	1 400
Honduras	17.5	443	1 518
Jamaica	68	2 294	702
Haiti	90	2 653	856
Dominican Rep.	62.3	1 411	1 018

Source: Table 2, CELADE and airline travel annual reports.

^a The regression output results showing the dependence of labour-intensive exports on population density and distance are as follows:

Constant	29.4	
Std error of Y estimate	14.7	
R squared	0.74	
No. of observations	10	
Degrees of freedom	7	
X coefficient(s)	Std. err. of coeff.	t
0.016849	0.005879	(2.87)
-0.00196	0.003577	(0.55)

^b As a percentage of the total exports which registered an increase between 1978 and 1988 (see table 2, column 2).

particularly quotas on iron and steel or on textile and leather products. Moreover, as a result of greater reliance on exports of semimanufactures,

Trinidad and Tobago faces world markets which have grown at a considerably lower rate than manufactures.

II

Sources of competitiveness at the industry level

This section takes a closer look at sources of competitiveness at the industry level, in order to identify possibilities and options for small Latin American and Caribbean countries to advance towards higher-order sources of competitiveness. In the course of development, and particularly in its first stages, Porter suggests that the industries in which a nation is most likely to be successful are those where its home market is relatively large (Porter, 1990). Subject to further research, however, it appears that past attempts of small Latin American and Caribbean countries to expand home demand through regional integration as a basis for industrialization have re-

sulted in a rather limited number of competitive industries. The building of "finishing-touch" industries, heavily dependent on imports of the necessary raw materials, intermediate products and technology, appear to have been too dissociated from the factor conditions that shaped the competitiveness of those countries. It would appear that it is only when there has been a combination of relatively abundant local factor (labour and resource) use and reliance on a wider regional market that certain competitive industries have developed, such as textiles in Guatemala and El Salvador, and ceramics in Uruguay.

Moreover, when analyzing paths of competi-

tiveness at the industry level in the small Latin American and Caribbean countries, the overall impression is that most growing exports cannot be explained by competitiveness strengthened by the application of science and technology, and the industries that provide the lion's share of growing exports are not clearly related through vertical or horizontal links to other competitive industries or to technological services. However, some important exceptions may be noted, and the richness of sources of competitiveness at the industry level is greater than the overall picture might suggest (see table 4 and figure 1). Specifically, the degree of reliance on basic factor conditions as a source of competitiveness tends to vary widely, as does the extent to which technical progress has taken place.

a) *Labour-intensive manufacturing*

The most striking phenomenon as regards OECD imports from small Latin American countries is the rise in offshore assembly operations (table 5) which take advantage of United States tariff legislation allowing import duties to be levied only upon value added abroad and not upon U.S. inputs.

In answer to a USITC (U.S. International Trade Commission) questionnaire (USITC, 1988), officials of United States companies benefitting from offshore assembly provisions (formerly under U.S. Tariff Schedule items 807.00 and 806.3 and presently under harmonized tariff schedule subheadings 9802.00.60 and 9802.00.80) responded that the establishment of production operations outside the United States was mainly based on labour cost differentials, urged by pressure from imports. The influence of the tariff provisions was generally seen to be secondary, while the presence of free zones or in-bond treatment by foreign governments came in third place.

This result confirms the conclusion that most assembly operations in the small Latin American countries have been impelled by the availability of low-cost labour as their main source of competitiveness. The contribution of assembly-type activities to long-term competitiveness is still open to debate. However, the nature of this debate has changed over time. At first the question was whether assembly activities could contribute positively to a nation's development, and a num-

ber of well-known criticisms, associated with the enclave nature of these activities, were made. At present the discussion centers on the mechanisms that would allow the enhancement of the relationship between the domestic economy and assembly activities for export.

The main contribution of assembly activities to development lies in their generation of employment. From this point of view, there are only limited alternatives for countries with high unemployment, few natural resources and restricted home markets. Moreover, the diffusion of "industrial discipline" to a growing labour force may facilitate a future process of gradual upgrading of skills. Recent trends in some countries point to prospects for technology-intensive assembly operations that require a skilled labour force, although there are also possibilities of pollution-generating activities (Sánchez, 1990). The USITC report mentions possible technology transfer mechanisms, mainly through the acquisition of skills and discipline by the local work force and the mastering of process and product technology (USITC, 1988). There is also evidence of local sales to domestic exporting firms, of subcontracting networks and of a growing supply of services to Free Zones (UNIDO, 1988). The question is to what extent these linkages may be policy-induced.

Not all labour-intensive manufacturing exports in the countries considered involve offshore assembly operations (table 4). The latter tend to be of greater relative importance in the Caribbean, El Salvador and Costa Rica. In 1988 in the Dominican Republic, the Caribbean country with the most important offshore assembly activities, employment generated by this sector was greater than employment generated by the rest of the non-sugar manufacturing sector, and foreign exchange earnings were greater than those produced by all remaining non-traditional exports (PREALC, 1989). In other countries, including Honduras and Guatemala and, to a greater extent, Uruguay, labour-intensive manufacturing also tends to be intensive in the use of natural resources (wood, cotton, leather and wool products) and is integrated with the rest of the economy to a greater extent.

b) *Natural-resource-intensive activities*

Products based on the use of traditional and

Table 4
LATIN AMERICA: MAIN EXPORTS TO THE OECD COUNTRIES
(Millions of current US dollars, 1978 and 1988)

Item	1978	1988	Item	1978	1988	Item	1978	1988
<i>El Salvador</i>			<i>Costa Rica</i>			<i>Honduras</i>		
Coffee	408.5	411.8	Clothing	28.8	260.3	Fruit	206.9	433.8
Crustaceans	12.9	28.5	Fruit	252.5	531.3	Coffee	222.2	156.8
Clothing	36.7	37.3	Coffee	289.6	292.6	Seafood	17.0	102.9
Electrical			Meat	56.7	61.4	Meat	39.0	23.4
machinery parts	58.9	27.4	Flowers and plants	8.5	58.8	Clothing	3.3	63.6
Sugar	31.8	19.8	Seafood	5.4	49.0	Common minerals	30.0	18.8
Textile articles	10.0	24.5	Electrical mach. parts	6.3	39.0	Simply worked wood	24.8	18.8
Cotton	63.3	0.4	Jewellery	0.02	17.5	Cotton	14.3	0.2
Office machines	14.8	0.9	Vegetables	2.8	13.4	Wood manufactures	4.9	10.3
Other	39.2	41.0	Cocoa	27.9	6.5	Tobacco	12.1	14.5
			Other	35.0	141.3	Other	39.1	76.1
<i>Haiti</i>			<i>Jamaica</i>			<i>Dominican Republic</i>		
Clothing	49.5	174.8	Bauxite	577.5	391.3	Clothing	48.0	550.0
Miscellaneous	43.6	63.0	Sugar	69.4	78.1	Pig iron	76.6	235.4
manufactures			Clothing	8.3	224.9	Sugar	128.8	102.1
Electrical	21.1	67.3	Fruit	30.6	32.4	Leather manufactures	5.1	82.5
machinery parts	61.7	40.1	Alcoholic beverages	22.3	48.1	Jewellery	0.1	78.8
Coffee	3.8	15.4	Alcohols	0.05	15.9	Coffee	136.3	76.3
Textile articles	14.8	10.3	Vegetables	3.4	14.9	Cocoa	90.0	74.8
Essential oils	4.8	10.2	Coffee	4.8	12.0	Electrical mach. parts	13.2	73.1
Leather manufactures	8.9	5.2	Tobacco	6.8	9.7	Gold	5.1	95.5
Cocoa			Other	28.4	72.2	Tobacco	48.4	65.8
Common	16.2	—				Fruit and vegetables	31.1	64.3
minerals	43.9	76.5				Other	126.8	272.8
Other								
<i>Paraguay</i>			<i>Bolivia</i>			<i>Ecuador</i>		
Soybeans	61.8	317.9	Ores of base			Fruit	234.8	523.3
Coffee	53.7	63.5	metals	169.7	101.2	Seafood	44.4	513.1
Cotton	72.3	56.7	Gold	0.06	77.9	Crude oil	276.4	330.8
Leather	10.5	27.7	Tin	92.4	31.0	Coffee	290.2	160.6
Hides and			Coffee	6.4	19.2	Cocoa	142.8	114.4
skins	19.5	1.1	Ores of precious			Ref. petroleum products	65.4	88.0
Tobacco	13.2	7.6	metals	6.3	13.7	Animal feeding stuffs	12.0	40.4
Animal feeding stuffs	12.6	10.6	Wood manufactures	4.4	2.0	Chocolate	75.0	16.2
Simply worked			Crude oil	9.9	—	Simply worked wood	11.6	15.4
wood	1.8	10.9	Sugar	9.7	6.0	Textile fibres	6.8	11.2
Meat and			Leather manufactures	4.8	9.9	Crude veg. materials	1.4	9.1
conserves	26.3	6.4	Soybeans	—	5.4	Other	33.3	73.0
Clothing	0.02	8.8	Simply worked					
Other	31.1	29.9	wood	6.7	11.6			
			Other	29.1	20.3			
<i>Guatemala</i>			<i>Trinidad and Tobago</i>			<i>Uruguay</i>		
Coffee	494.6	350.8	Crude oil	779.7	415.5	Clothing	109.1	138.6
Cotton	122.9	28.9	Ref. pet. products	742.9	203.6	Tex. yarns and articles	52.7	92.0
Clothing	3.0	88.8	Inorganic chemical			Meat and conserves	38.0	100.8
Sugar	37.9	41.0	elements	33.9	117.8	Wool	58.0	62.1
Fruit	42.5	119.0	Sugar	39.9	30.4	Rice	32.5	58.4
Flowers	11.4	26.6	Fertilizers	6.3	36.0	Leather and its		
Vegetables	3.7	26.6	Alcoholic beverages	11.3	30.3	manufactures	56.1	71.3
Meat	29.1	19.1	Alcohols	0.1	60.1	Fresh fish	16.2	43.2
Oilseeds	13.2	15.5	Iron bars	—	43.7	Fruit	10.5	36.5
Molluscs	11.4	15.7	Common			Gold	—	104.0
Tobacco	10.3	15.6	minerals	2.2	17.8	Footwear	30.8	8.6
Crude oil	—	14.4	Cocoa	12.7	3.7	Animal feeding stuffs	12.5	12.0
Other	Other	39.6	68.0	Other	63.6	118.0

Source: United Nations, COMTRADE database, based on import figures of OECD member countries

Figure 1
COMPOSITION OF INCREASED EXPORTS TO OECD MEMBERS

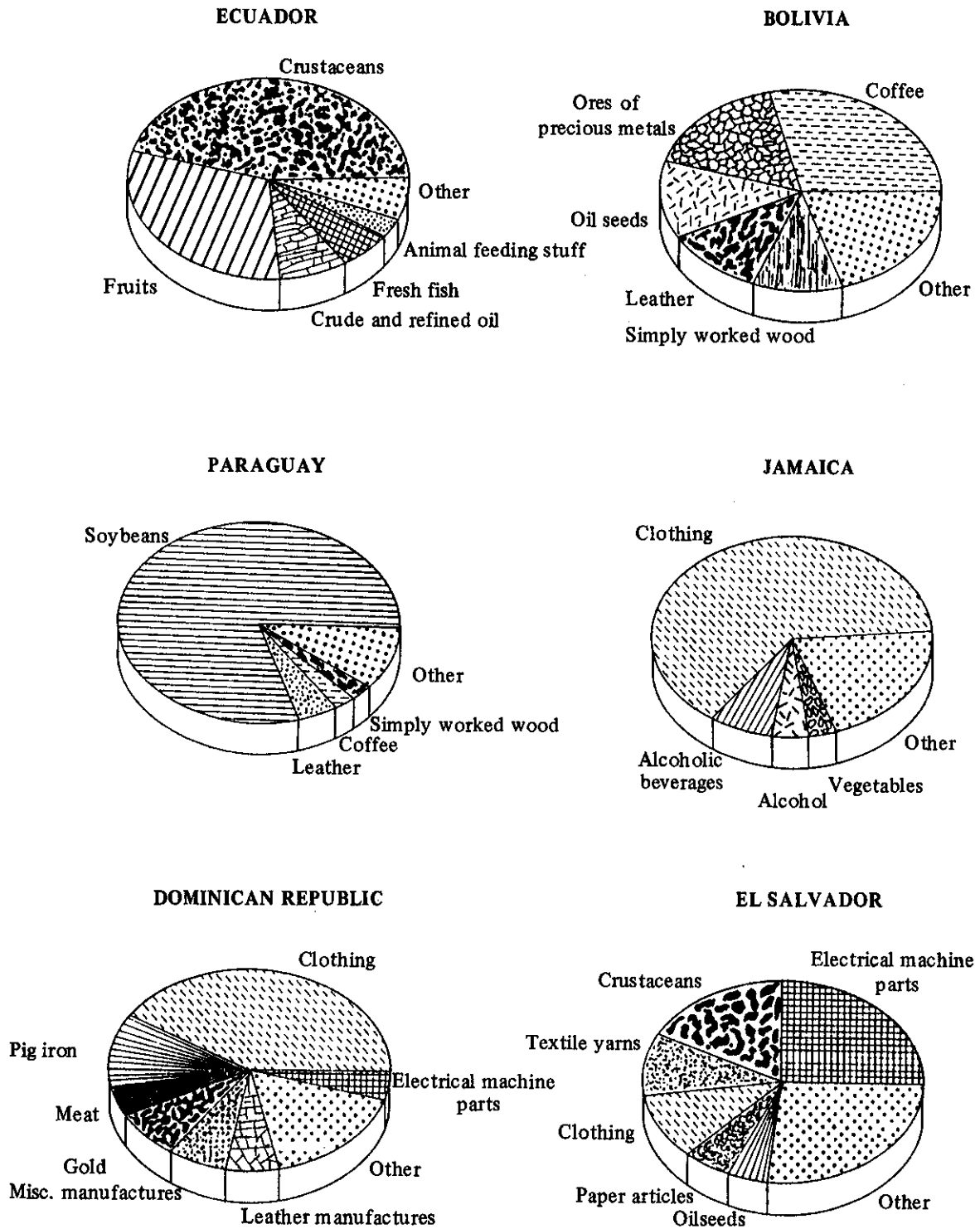
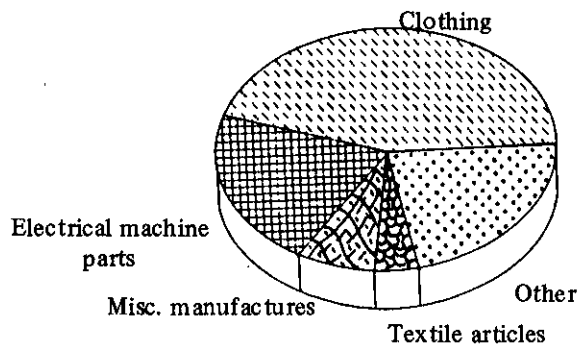
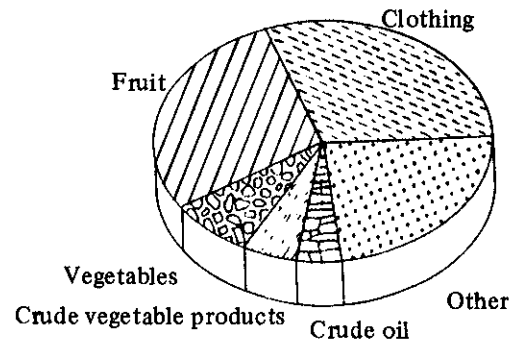


Figure 1 (continued)

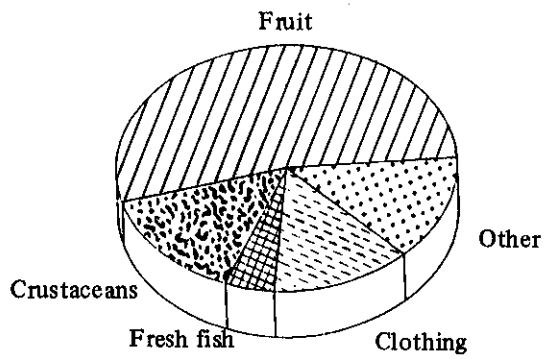
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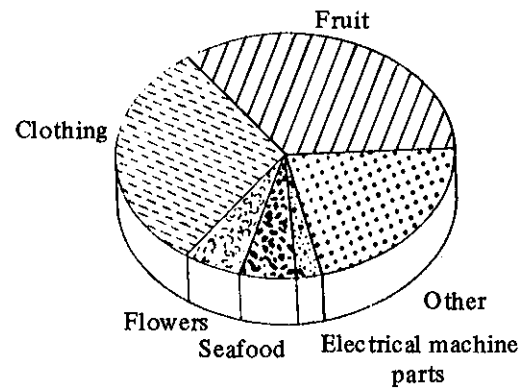
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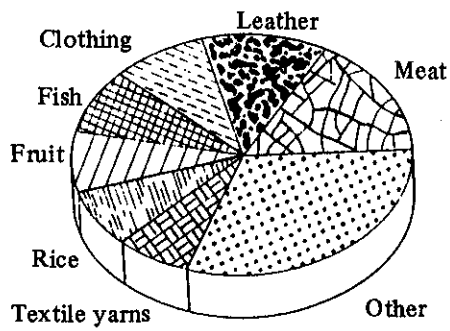
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COSTA RICA



URUGUAY



TRINIDAD AND TOBAGO

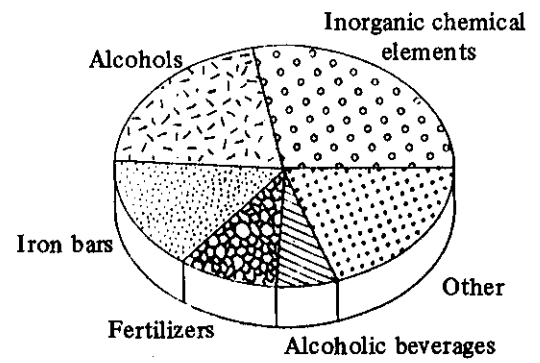


Table 5
OFFSHORE ASSEMBLY EXPORTS TO THE
UNITED STATES
(% of total exports to the U.S.)

Selected exporters	1983	1986
Dom. Rep.	13.8	22.4
Costa Rica	15.9	14.2
Haiti	41.3	38.6
Guatemala	0.2	1.5
Honduras	4.9	5.3
Jamaica	3.3	17.1

Source: USITC, *Annual Report on the Impact of the Caribbean Basin Economic Recovery Act on U.S. Industries and Consumers, Second Report, 1986*, Washington, D.C., September 1987 (Appendix A).

new resources with limited processing fared well in the 1978-1988 period. They include mostly fruit and seafood (see tables 4 and 5). Banana exports benefitted from relatively high prices in the latter part of the 1980s, and constitute an important source of foreign exchange and employment generation in Ecuador, Honduras, Costa Rica, Panama and Guatemala. These exports can be a source of competitiveness for downstream and upstream industries. During the banana boom in the late 1950s, Ecuador became a world-leading producer of plastic bags used to protect bananas in the growing process. The manufacture of baby food using banana compote is also a frequently studied though apparently less successful project. The development of the cardboard box industry in Costa Rica is basically due to demand derived from banana packaging requirements.

Other dynamic fruit exports (table 6) include pineapples and other tropical fruits with equal or greater upstream and downstream potential, such as tropical fruit juices.

Increased exports of vegetables have similar possibilities, whereas exports of ornamental plants, seeds and flowers face different technological and linkage requirements. Nevertheless, all of them involve the application of science and technology and the use of new production and marketing techniques, exemplified by the introduction of new varieties which compete successfully in developed country markets.

Seafood exports are examples of resource-constrained exports, as the success story of the

shrimp in Ecuador and several Central American countries demonstrates. As a result of the erosion of its natural resource base, an effort to master the technological complexities of shrimp larvae production in artificial circumstances is required to maintain the competitive edge of the industry. Mastering this technology could be a potential source of exports of related engineering services (ECLAC, 1990b).

c) Cases of "niche" products

The export data of certain small Latin American and Caribbean countries include a series of dynamic and competitive items whose weight in the total export figures is still relatively small. These are sometimes referred to as "niche" products (Katzenstein, 1985). The usual explanation of the upsurge of these "niche" products refers to the differentiation of products and markets, the globalization of industries and the related possibility of supplying items that have a relatively small world market, low price elasticity and high income elasticity. The search for niches has, in fact, become one of the basic pillars of the efforts of developed country enterprises to compete in international markets (Peters, 1988).

Nevertheless, large countries or enterprises may lack the flexibility needed to take advantage of very small market segments, while small enterprises or countries may benefit from specialization in these items. Furthermore, faced with the possibility of "injury" complaints in foreign markets, the ploy of remaining small within a given market so as not to threaten the larger supplier, and focusing on quality rather than on prices, would appear to be appropriate (Fundenberg and Tirole, 1984). Thus, "niche" products based on natural resources or specific country characteristics and including important design or product differentiation requirements may take advantage of both supply and demand-based sources of competitiveness. There are several examples of successful "niche" products in small Latin American and Caribbean countries:

A Uruguayan ceramic firm developed a technology adaptation based on locally available natural resources. The use of firewood allowed the firm to attain special colour characteristics, and access to the Argentine market through a regional integration scheme stimulated a learning process in commercialization in foreign markets.

Table 6
MAIN EXPORTS OF FRUITS AND VEGETABLES
TO THE USA
(US\$ million)

Country/SITC heading		1978	1988
ECUADOR			
0573	Bananas	124.2	232.3
05	Total	125.1	238.4
COSTA RICA			
0579	Fresh fruit (pineapple)	—	29.7
0573	Bananas	104.7	213.4
05	Total	111	262.9
GUATEMALA			
0545	Other fresh vegetables	3.1	10.9
0546	Vegetables, frozen	—	12.1
0579	Fresh fruit (pineapple)	0.1	9.9
0573	Bananas	25.4	83.4
05	Total	28.8	121.3
HONDURAS			
0579	Fresh fruit (pineapple)	6	17.1
0573	Bananas	119.9	239.4
05	Total	129.3	264.5
DOMINICAN REPUBLIC			
0548	Vegetable products (sugar cane)	0.4	6.4
0565	Prepared vegetables	4.5	12.7
0579	Fresh fruit (pineapple)	1.2	8.5
05	Total	29.1	54.3
HAITI			
0579	Fresh fruit (pineapple)	0.9	6.3
05	Total	1.2	6.7
JAMAICA			
0548	Vegetable products (sugar cane)	0.4	6.4
05	Total	1	10.7
PANAMA			
0579	Fresh fruit (pineapple)	0.2	7.6
0573	Bananas	39.6	66.3
05	Total	41.4	77.4

Source: COMTRADE.

high-quality towels showing colourful and typical Central American paintings.⁷

Blue Mountain Coffee from Jamaica, sold at a retail price double or even three times that of other arabica varieties, exemplifies the case of product differentiation which emphasizes the country of origin as well as the quality of a traditional commodity.

In Costa Rica, exports of jewels, doors and canes made from tropical hardwood have benefited from the availability of valuable hardwoods and from designs adopted as a result of close contact with buyers and knowledge of foreign markets.

Exports of tagua buttons from Ecuador are another case of a natural-resource-based niche. The tagua is a palmtree that produces a nut which dries so hard that it is called natural ivory. A private and hobby-like research effort taking several decades, including design of machines and market research, resulted in a now flourishing industry with dozens of firms employing thousands of workers that produce buttons for exclusive fashion houses in Italy and France.⁸

The upsurge of "niche" exports suggests the diversification of sources of competitiveness. Factor-based sources of competitiveness combined with product differentiation and special marketing efforts would appear to explain these developments.

d) *Searching for competitive commodity chains*

In view of the weakness of home demand as a single source of competitiveness, progress towards more sophisticated and diversified sources of competitiveness may rely upon supply-push rather than demand-pull mechanisms. Thus, building efficient commodity chains that take as a starting point existing competitive industries could be a promising step towards achieving growing and sustainable competitiveness, especially for small countries, whereas the positive influence of expanded home demand on com-

At present, the firm is competitive in a variety of products in the most demanding markets (ECLAC, 1990c and Hernández, 1989).

A Salvadorian producer of textile articles (towels) found a niche in foreign markets with

⁷ Information based on a visit to the enterprise by one of the authors.

⁸ Based on a visit to enterprises by one of the authors. The results of this study were published by UNIDO, *Hacia una política industrial ecuatoriana*, PIROR 24, Vienna, June 1989.

petitiveness may be more significant at higher levels of income.⁹

Competitive commodity chains have been analyzed by Hopkins and Wallenstein (1986), Gereffi and Korzeniewicz (1990) and Porter (1990) from different points of view. For Hopkins and Wallenstein a commodity chain is a concept required to analyze the historical evolution of capitalism. It refers to the system of production processes and labour which results in the finished product. Gereffi and Korzeniewicz extend this concept to include not only the production but also the marketing process, including financial and trade services.

For Porter, relations between industries in clusters can strengthen the sources of competitiveness of those industries which are part of the cluster. Industries are not only linked vertically (buyer/supplier relations) as in the Wallenstein/Gereffi version, but also horizontally if they share common customers, technologies and skills; they therefore share common learning processes in both the production and marketing stages.

In spite of the predominance of exports based on the use of unskilled labour or unprocessed natural resources, a number of closely linked export items illustrate the potential of an export strategy based on competitive chains in small Latin American and Caribbean countries. This concept, rather than Porter's clusters, is used in what follows since the analysis of horizontal linkages requires presently unavailable information on specific industries in these countries.

In Uruguay the most important competitive chain is the wool-based apparel chain. The country is a major wool exporter in the world market. Exports of wool and wool-based products include wool, tops, apparel and related articles. The sophistication of the clothing industry is such that more than a dozen firms in Uruguay have integrated computer-aided design and computer-aided manufacturing facilities. They employ their own designers who operate in the world's fashion capitals. The strength of the apparel in-

dustry can be illustrated by the rise in cotton apparel, which is an industry more or less loosely linked to the wool industry through common customers, even though the country has to import the raw material.

In contrast, a commodity chain that seems to be losing its competitive edge in the activities with higher value-added is the meat-leather-clothing-footwear chain in Uruguay. The loss of competitiveness in the higher-productivity parts of the chain seems to result from protection of home production involving leather import regulations. The quality of national leather is not always homogeneous and delivery interruptions result in leather-using industries losing customers.

It is interesting to observe the difference of complexity of the oil-chemicals chain between Ecuador and Trinidad and Tobago. Whereas the oil crisis has hit Trinidad relatively harder, its oil-based chemicals are doing well on international markets. In spite of the availability of oil in Ecuador, however, efforts to diversify into oil-related chemicals have not been successful. In contrast, the wood, semi-manufactured wood and furniture chain in Honduras would appear to be a further example of competitiveness strengthened by a commodity chain. The move towards higher value-added activities is clear, with the necessary caveat that further development urgently requires prudent management of the natural resource base.

A clearer success story involves exports of textile products (particularly towels) in Guatemala, based on the vertical integration of marketing, design, and textile and cotton production. This case exemplifies the integration of two originally different activities: one based on regional import substitution and another on traditional exports to developed country markets. The application of integrated pest control in cotton production in this case also demonstrates the possibility of dealing with environmental concerns through innovations which strengthen both competitiveness and sustainability.

In terms of Porter's "diamond", the development of competitive chains means that the diversification of the sources of competitiveness includes not only factor conditions but also efficient supporting industries.

⁹ Nevertheless, exports of "ethnic" products to, for instance, the hispanic population in the United States may be facilitated by existing markets in Latin American countries.

III

Conclusions

Data on OECD imports in 1978 and 1988 from a dozen small Latin American and Caribbean economies show that the primary and often sole source of competitiveness is the availability of low-cost unskilled labour and unprocessed natural resources. Declining prices of these countries' traditional commodity exports made them extremely vulnerable to the financial upheavals of the 1980s. Assembly operations and fruit and seafood exports were in many cases the only options left open to increase foreign exchange earnings.

Changing production patterns with social equity, as proposed by ECLAC, is a formidable and daunting task of the 1990s for the small Latin American and Caribbean economies. Evidence of continued reliance on low-grade factor availability, including unskilled labour and natural resources, implies that increasing competitiveness must build upon these already established sources of comparative advantage. The option of relying on assembly activities made uncompetitive in the United States by high labour costs is likely to be important mostly for its employment-generation effects. Its learning and skill-creating effects could probably be enhanced through specific programmes, while creating incentives for greater linkages with the rest of the economy.

Combining labour and resource-intensive activities, while ensuring continued access to foreign markets (possibly through free trade agreements with the United States in particular) will be an important though difficult challenge to be met by small Latin American and Caribbean countries. Ensuring the application of science and technology to these sectors or to solely resource-based activities, both to improve competitiveness and to ensure environmental sustainability, will also be required. The fascinating success of some "niche" products poses the question of how to foster this kind of development, which in addition to past imagination and creativity and to a thorough knowledge of market conditions in very specialized segments, will require increased innovation and adaptability.

Finally, strengthening of national clusters as a supply-push mechanism to upgrade the sources of competitiveness may be a more realistic approach to development in this stage than relying exclusively on demand-pull mechanisms through an expanded home market. The implications for integration schemes are manifold. Their main task seems to lie in the creation of outward-oriented regional technological, commercial and educational co-operation mechanisms to upgrade the factor-based sources of competitiveness that have shaped the countries' export structure and will continue to do so in the near future.

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