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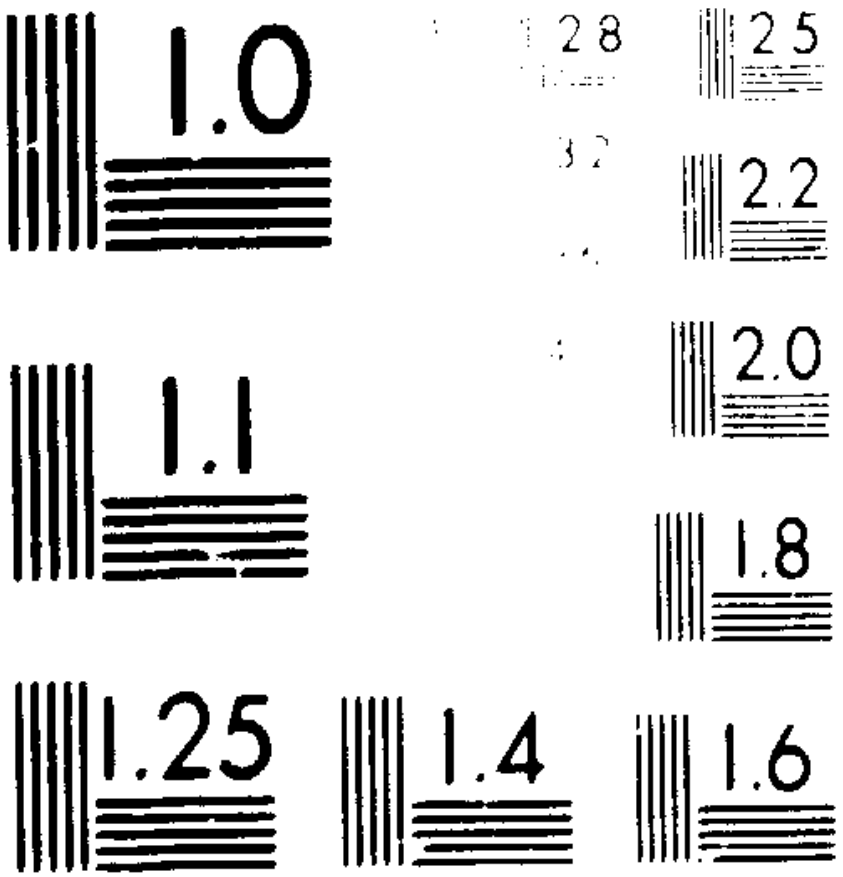
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INDUSTRIALIZATION IN LATIN AMERICA: CHARACTERISTICS AND RECENT TRENDS

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Any analysis of the process of industrialization in Latin American written in the last decade has been compelled to face a context and to tackle topics which were not usual in former studies of the sector. It is not only a question of the transformations associated to the evolution of any economy throughout time, or of those related to Latin American problems or the complexity of the international crisis; new phenomena and debates have introduced changes in some tendencies and conceptions widely accepted in the past.

In this paper, whose purpose is to present a general view of the recent industrial development in Latin America, and particularly of the manufacturing activities, attempts will be made to consider such elements as they are thought to be relevant for a coherent analysis of the information -mainly quantitative- available. A study of the numerous and varied aspects of the industrialization of the countries in the area would require a much more extended treatment than that included in these pages. Attention will therefore be given to the most significant characteristics and facts for the outlining of a summarized frame of the recent evolution of Latin American manufacturing and the problems faced nowadays.

Moreover, an additional fact, whose recognition has almost become a commonplace, has to be taken into account: the multiplicity of situations and particularities present in the different national realities in Latin America. In spite of certain similarities as regards characteristics, phenomena and specially difficulties, a global examination, although useful and necessary,

implies limitations and requires the formulation of reserves and nuances if a more specific knowledge of certain aspects is wanted. Accordingly, a method of approach is here used which allows not only to outline perspectives relatively valid for Latin America as a whole, or at least for most of its countries, but also to carry out the study of less general but also interesting topics. With that aim, the document focuses fundamentally on six countries -Argentina, Brazil, Chile, Colombia, Mexico and Venezuela- which can be regarded as representative of the main modalities and cases of the regional industrialization. Brazil and México, the most advanced experiences of industrial development; Argentina and Chile, where the traditional import substitution pattern of industrialization has been openly queried; Colombia, a country with a more or less old industrial tradition and an intermediate development in this field; finally Venezuela, one of the countries where the process initiates more recently and under different circumstances. Besides, Argentina, Brazil and Mexico together -the economies with greater dimensions, as will be seen later- have contributed with approximately three quarters of the Latin Americans industrial products, while the six countries chosen represent over 85%.

It must also be noted that the need for homogeneity in the data of the industrial evolution has led to adopt as statistical source the information issued by the United Nations Organization for Industrial Development (UNIDO), complemented by that of the Economic Comission for Latin America (ECLA). As it is know, the first source follows the C.I.I.U. classification, Rev. 2, and although it offers less aggregated information, it has not been trought up to date since its last statistics correspond to 1979, and in some cases, to 1978. ECLA works in some fields with United Nations definitions, but as it refers to Latin American economies -the most important in our case- it often uses

official data, which is not always homogeneous.

Despite all these inconveniences, the quantitative base available permits to draw conclusions and settle a view of the main tendencies and phenomena.

I. RECENT EVOLUTION OF THE MANUFACTURING SECTOR.

After analyzing the characteristics and trends of the regional industrialization in the recent past, particularly in the seventies, one can observe the persistance of many of the features and disequilibria which have accompanied this process long time ago, both in the domestic domain and in the international relationship. At the same time, new problems and trends emerge which increasingly demand the attention of those connected with the Latin American development, either from a theoretical perspective or in the field of economic policy proposals.

1. Importance and Dynamic Behavior of Manufactures Looking back at the global industrial development of Latin America, one is immediately aware of its meaningful and dynamic behaviour, specially since the second war. The manufacturing activity grew faster than the other sectors, increased substantially its share in the gross domestic product of the region -over 26% at the end of the last decade-, and became progressively a larger and more diversified productive aparatus. Moreover, this sector set up as the key factor and true "engine" of the general economic expansion of the countries of the area.

Table 1 shows the degree of industrialization of the six selected countries,

and the charges between 1960 and 1981. With the only exception of Colombia and in spite of the relative decrease observed in the last years, the manufacturing industry continues to be the main source of total production of goods and services.

At the beginning of the last decade, the share of this sector was the highest in Argentina, Brazil and Chile: about one third in the first case; between 28% and 30% in the second; and more than 25% in the third. The path taken thereafter by each country was different, as it is shown in these and other figures, due to various factors -external and domestic- amongst which the applied policies should be underlined, as will be seen afterwards.(1)

Thus, comparing the situation between 1971 and 1981, it can be seen that only Venezuela achieved a considerable progress in the process of industrialization: the share of manufactures in the GDP increased four points, whatever the information used. Argentina and Chile show an evident decline in the degree of industrialization: from 27.6% to 22.1% in the first country, and from 26.8% to 21.8% in the second. The rest of the chosen cases presents a certain stability in this variable: Brazil, around 29%; Colombia, about 18%; and Mexico, almost 24%.(2)

In any case, Brazil and Mexico keep degrees of industrialization comparable with those of the developed economies. For instance, in 1979 the share of manufactures in the GDP of the United States was 24.58%, both variables taken

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(1) The necessity of using different sources -UNIDO and ECLA- to build up the series, poses the difficulty of continuity which is so evident when looking at the tables. However, a general idea is given of the trends, and when complemented with additional information it is possible to reach quite accurate conclusions

(2) Information from Economic Studies of Latin America, published yearly by ECLA for each of the countries.

at constant prices of 1972.[3]

However -and this is becoming a usual warning- a careless reading of the above figures might lead to false conclusions about Latin America industrialization. The average of the 19 countries considered has been strongly influenced by the three of greater relative size: Argentina, Brazil and Mexico. If these three are excluded, the Latin American coefficient drops to 19.6%, and nine of the economies of this group show a degree of industrialization below this figure.

It would also be convenient to have in mind that the relative price of the Latin American manufactured product is, generally speaking, higher than that of the industrialized countries in around 20% and 30%, at the beginning of the seventies.[4] Once this distortion is solved, the average degree of industrialization would drop from 25% to about 19%, at that time.

A better measurement of the industrial process is found in the capability of the sector to satisfy the needs of the different types of goods demanded by the community and to meet the general requirements of the developing process. The Latin American experience singles out, precisely, that due to the insufficiencies and disequilibria, the dynamism of the manufacturing activities and their possibilities of sustained growth, has been affected to a greater or lesser extent, having also repercussions on the global economic development of the different countries.

The regional industrial growth in the long run (1950 to 1977) might be

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(3) Statistical Abstract of the U.S., Bureau of the Census, 1980.

(4) Max Nolff, Desarrollo Latinoamericano, Lecturas No. 12, Fondo de Cultura Económica, México, 1974, page 11.

regarded as high, as it reached an annual average rate of 6.7%, as opossed to 5.9%, for the entire world, 3.6% of North America -United States and Canada- and 5.2% of Western Europe, in the same period. Between 1965 and 1973, the cumulative annual rate was 8.2%, only to drop later to 4.5% between 1973 and 1978. The loss of dynamism of the manufacturing expansion deepens in the last few years: 7.8% (1979); 5.3% (1980); -2.0% (1981).(5)

This fall in the rithm of expansion which begins to be perceptible since 1973 is used by ECLA to settle the beginning of the third phase within the process of development of the sector in Latin America. The first "oil shock", seen as a milestone of this phase, together with the inflationary pressures, the monetary disturbances and other alterations that were in embryo in the central economies, they all ended in the crisis of the mid-seventies. The reduction of the rate of growth, the unemployment, the deterioration of the competitiveness in certain branches of industry, and the proteccionist measures taken by the developed countries, would explain to a great extent the less vigorous path of the industrialization, according to that international institution. But whitout leaving out the impact of those facts, the intervention of domestic factors should also be mentioned, such as the global economic policies and those specifically related to the industry that were put into practice by some governments, together with the aggravation of certain bottlenecks typical of the forms of industrialization in the region.

The adverse tendencies that have affected Latin America as a whole, are representative of the manufacturing behaviour of the six economies under study. The information can be found in Table 2.

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(5) ECLA, "La industrialización de América Latina y la Cooperación Internacional", Santiago de Chile, 1981, Table 4. Also, "Estudio Económico de América Latina", 1981, Table 16.

Brazil stand out, from the end of the sixties, as one of the Latin American nations with a more dynamic economic behaviour. The annual rate of growth of the GDP rose, between 1970 and 1974, to 11.5%, whereas the average of the region -19 countries- was 7.2%, the highest from 1970 up to now.(6) And though it fell in 1975 and rose again to 9% the following year, the increasing path in the generation of final goods and services in Brazil remained above that of Latin America as a whole. From this date on, with the exception 1980, the figures for that country were very close to those of the region, or below them.

This general performance has been strorgly influenced by the evolution of the manufacturing industry, whose leadership is undoubted. After a rather modest annual rate of 3.7% in the first half of the sixties, the Brazilian manufacturing product speeded up substantially to reach an annual rate of 10.3% in the rest of the decade. In 1971, the figure was 11.3% and 14.1% in 1972. Those were the years which made people talk about the "economic miracle".

During this period, as shown in Table 3, the domestic demand for manufactures increased rapidly: 10% annual average (1965-1973). Particularly noticeable were the cases of non electric machinery (22.04%) and transportation equipment (19.64%) -specially automobiles-. Whereas the demand for manufactured goods linked to non durable consumption, such as textiles (4.12%), and food, beverages and tobacco (7.45%) was less dynamic in average.

As it refers to production, the branches that expanded at a higher rate was those of recent appearance in the Brazilian industrial scene, correlated

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(6) Certainly, the regional average rate is quite influenced by the Brazilian although, within its limits, the accelerated growth of Ecuador (11.5%) and the Dominican Republic (10.1%) also contributed to this result.

with the expansion of demand -non electric machinery and transportation material-, which reached rates of about 20% duringthe period. Others predominantly linked to the production of intermediate inputs and of durable consumption goods -petrochemicals, some chemicals, basic metals- , also grew rapidly. The more traditional branches showed rates below the average: textiles (4.5%), food, beverages and tobacco (8%). The activities connected to the production of paper and printing had a expansive behaviour (8.9%), if compared with the rest.

During the period (1965-1973), the exports of manufactures experienced an equally positive evolution. Outstanding were the annual rates of increase of branches like petrochemicals (100%), electric machinery (31%), transportation equipment (26%) and metal products (almost 24%).

The following phase -1973 onwards- present a less spectacular growth of the Brazilian transformation industry, though its rates are considerabily high -average of 6.5% between that year and 1978- above those reached in Latin America and the developed market economies. Still in 1979 the rithm of growth was similar (6.7%) to the regional average, as can be seen in Table 2, only to rise to 7.6% the following year. In 1981, the sector suffered from a deep slump -the product fell almost 10%- of which it was able to recover only the last year, when the manufacturing industry grew again at a rate close to 2%.

However, the disequilibria present since the time of the "economic miracle", associated to the intense growth of the production of durable consumer goods -over 90% between 1970 and 1973- not accompanied by a similar behaviour of intermediate and capital goods, poses serious doubts about the

perspectives of returning to the growing tendency in the short run. Branches such as transportation equipment and non electric machinery, which were at the head of the expansion, grew between 1973 and 1978 at rates that represent only one third and one forth, respectively, of those achieved during the boom. Something similar happened to the growth of the demand for the some sort of products, which even fell below that of the so called "vegetative" industies (food, beverages an tobacco).

The rapid increase of industrial exports that took place in the expansive phase also declined globaly to only an annual average of 6.6%, though with different intensity from branch to branch. Basic metals, transportation equipment and non-electric machinery increased faster their sales in the foreign markets, which meant complementary stimuli to the production. At the same time, there was a fall in the exports of furniture and wood, as well as in textiles, together with the virtual stagnation of the sales of food, beverages and tobacco.

In 1981, the deepening of the world crisis, means a reduction of the foreign purchases of Brazilian industrial products, particularly in the markets of importance in Latin America (Argentina and Chile), the government measures of restrictive fiscal expenditure, the increasing unemployment and the fall of real wages; they all contributed to determine a severe contraction in the economic activity as a whole, and specially in the industry. Amongst the most affected branches, transportation equipment showed a rate of -21%, due fundamentally to the decline in the production of automobiles (-33%). Even though exports were 36% above those of 1980, the firms accumulated additional stocks because of a 41% fall in the domestic sales.

The role structurally attributed to the foreign sector of compensating productive disproportions -supply of capital goods and food- has turned the economy specially vulnerable to the fluctuations of the commercial and financial links with the rest of the world, situation specially evident since the end of the last decade.

Mexico is another of the outstanding cases of the region, not only because of its size, but also as a result of the progress achieved in the import substitution pattern. Although it may not be as spectacular as other countries, its process of economic growth stands out for having sustained a significant track during the last four decades, with an annual average rate over 6%. The industrial sector has had a determinant participation in promoting the global economic expansion; as it refers specifically to the manufacturing activities, they had an annual rate of growth of 7.3% between 1950 and 1978, which in turn rose their share in the total product from 19% to 26% in same period.

That does not mean that the ups and downs have been unknown, since the process of growth has been characterized by more or less intense phases of expansion, interrupted by periods of slow growth. Each boom has led to the emergence of new manufacturing branches which have modified the composition of the sector.

Graph 1 is useful to see the level and evolution in the process of import substitution of the six countries under study. At the beginning of the sixties the rates of imports to domestic demand had fallen to almost 12%, from a value of 16% in the fifties.

After the achievements in certain branchs of intermediate and durable goods, there was a three or four years period of industrial stagnation with depresive consequence upon the rest of the economy. It only from 1965 and until the first years of the seventies when the industrial structure shows a definitive reactivation, though with different characteristics.

From the point of view of the domestic demand for manufactures, the most favoured branches were the petrochemicals, rollowed by electric machinery, transportation equipment -amongst the classified as heavy industries-, and also those regarded as supporters of the former such as non metalic minerals and basic metals.

Also exports grew at an annual rate of 16%, a very high figure if it is to be kept in mind that the mexican industry, as in the rest of the Continent, has concentrated fundamentally in the domestic demand. Those activities,considered the most modern,showed the greater growth as regards exports: transportation equipment and electric machinery, which increased their foreign sales at unprecedented rates of 45%. To the extent that the rise pace of imports in all the manufacturing industries was bellow that of production, it can be said that the process of substitution did not stop during these years, as it is shown by the graphed trend of the imports - domestic demand ratio.

The domestic manufacturing supply expanded at an annual average rate of about 8%, similar to that of Latin America. No particular branch was substantially above the others, as in the Brazilian case. Several of them -chemicals, petrochemicals, electric and non-electric machinery, transportation equipment- showed a sustained growth of 10% per annum.

However the level of aggregation of the statistics makes it difficult to perceive interesting phenomena. In the mexican case too, the production of automobiles has been a factor of special importance in determining the pace, orientation, characteristics and impacts of the industrial development. Beyond the qualitative information, its forward and backward liks, its demand for imported inputs, the financial and fiscal implications, the infrastructure requirements and, in short, all the associated factors, have confered to this branch a main role in the general development of the economies of the area.

It would also be convenient, as a means of having a better understanding of the prevailing industrial trends, to known the structure of manufacturing production according to the use of the goods. Some analysis will be done when this information is available. For the time being, it should be added that between 1965 and 1973 the most dynamic branches were those dedicated to the production of intermediate and durable consumer goods, together with some progress in capital goods. Those goods aimed for current consumption such as food, beverages, tobacco, wooden furniture, paper, printing, grew at a slower pace.

From 1973 to 1978 the growth of the sector declines (annual rate of 5% according to the information used, or 6% if ECLA is taken as source). The domestic demand continued to expand only at a lower rate (4.5%) than before; particular attention deserves tye case of petrochemicals which had a negative rate (-3.5%). Something similar happened to the demand for chemicals, machinery and transportation equipment. The growth of the domestic demand for goods belonging to traditional industries declined less sharply as can be seen in table 3 in relation with the food and textile branches.

As it refers to exports, they sufferef from an annual average fall during the period 1973-1978, related to the reduction on the foreign sales of all manufacturing branches, excluding non-metalic minerals which grew at the some rate as before (10% per annum). A negative behaviour was shown by the exports of non-electric machinery (-19% per annum), petrochemicals (-14%), basic metals, metal products and textiles. The sales of transportation equipment, which together with electric machinery had formerly been so significant, dropped considerably.

Even though it is difficult to give a detailed explanation of the obstacles found by the industrial exports, it is necessary to mention the following factors: lesser availability of goods susceptible of selling abroad; decline of the competitive capacity derived from the peso's overvaluation; narrowing of the foreign markets and increase the degree of proteccionism. With regard to the reduction in the so called exportable balances, a preliminary interpretation would be that it derives less from the retention of goods in the domestic markets than from the decline in production, as shown by the information in the Tables. In any case, the presence of the mentioned factors and the degree of its influence would differ from branch to branch.

The evolution of the industry since 1979 is summarized in the following Table:

M E X I C O

Annual Rates of Growth of the Product and of Manufactures

(Percentages)

	1978	1979	1980	1981	1977-1981
Gross Domestic Product	8.3	9.2	8.3	8.1	8.1
Oil Sector	16.9	18.2	23.6	17.6	19.1
Non-Oil Sector	8.0	8.9	7.9	7.8	8.2
Manufactures	9.0	10.1	7.0	7.7	8.4
Non durable consumer goods	5.0	8.4	5.5	5.9	6.2
Durable consumer goods	18.4	15.2	9.0	13.5	14.0
Investment goods	22.6	14.8	10.4	15.1	15.6

Source: "Evolución reciente y perspectivas de la Economía Mexicana", Revista de "Economía Mexicana", No. 4, CIDE, México, 1982. Table 2.

In fact, during the period the economic rate of growth was quite high, specially if compared to the evolution of the rest of Latin America or the developed countries. However, this process is distinguished by the gap between the rate of expansion of the oil sector and the rest of the economy. This was particularly noticeable during the last two years. The rate of growth of the non-oil activities fell mainly as a consequence of the slow expansion in manufacturing whose rates, though still significant, were below that of the total product.

A considerable increase in the production of capital and durable consumer goods remained as a dominant feature during the last years. In the case of the latter, it is above all the production of automobiles (14%).

A large number of phenomena of different nature -structural and arising from the situation; external and domestic- have caused the loss of dynamic behaviour in the mexican manufacturing sector. It should be emphasized at this point that the composition of the industrial structure has determined that growth is not even in the different phases of the cycle, so that during prosperity, great adittional pressure is generated upon the foreign sector as the expanding branches are important consumers of imported goods; such is the case of the durable consumer and capital goods branches. There is a simultaneous stimulus to modernize and enlarge the traditional industries with the corresponding requirements of capital goods that are not produced internally. Some symptoms of bottlenecks typical of the implemented sort of industrialization showed up at the mid-seventies, but the strong expansion in the oil sales generated the resources to alleviate its more pressing effects.

The shift in the frame of the foreign economic relations, particularly due to the international crisis and the restrictions imposed by the foreign debt, agravated by the recent fall in the oil prices, renders more difficult the conditions within which the mexican economy has to envolve, as indicated by the unfavourable results of 1982 and the perspectives for the coming future.

Even less encouraging, and due to causes to a great extent different, is the overall view of the recent industrial development in Argentina. This is one of the biggest Latin American nations, whose process of industrialization had its origins before the crisis of the thirties and where considerable progress was achieved. In 1970 it was the economy with the gretest degree of industrialization (35%) in the region, and in spite of being smaller than the Brazilian, it made the larger contribution to the regional manufacturing product (27%).

Despite the discrepancies between data from the different sources, it is clear that the Argintenean manufactures lost importance later on, so that in 1981 their share in the GDP dropped to 22%, and in 1978 they only contributed with 16% of the industrial product in Latin America.

If the previously used periods of time are used in this case, similar results are obtained: 1965-1973, a phase of sustained industrial growth, though at a rate below that of the other countries (5%). The domestic demand for manufactures expanded likewise, whereas the foreign sales grew at a rate of 22% per annum. The period 1973-1978 shows a slowness similar to that of the economic already analysed, only much deeper in this case as a persistent contraction of about 1% per annum was registered.

Nonetheless, while studying the industrial evolution in Argentina, comparisons throughout time generate much more difficult problems than these normally faced in this kind of analysis. In fact, the measures put into practice since 1976 meant a radical change in the orientation of the global process of development and, particularly, in that of the industry. Therefore, it would be wrong to analyse the 1973-1978 as an homogeneous period and to compare it with the precedent track, as many qualitative charges would be left out. That is why special attention is paid to the phenomena occuring since 1976.

The economic policy since then is based on a radical criticism of the import substitution development model, which is thought to be responsible for the inefficiencies that have affected the productive structure and for the disequilibria of the economic process as a whole. With the purpose of rebuilding an efficient productive structure, tariffs and other proteccionist barrers were substantially reduced, apart from defining new forms and

instruments employed by the State in the orientation and regulation of the economic activity. The government endeavoured in turning state companies into private corporations, but new forms of intervention have been introduced which influence not only the economy but many other aspects of the social life.

It is well known that Argentina and Chile are examples of the attempts to radically transform the bases of the economic and social organization prevalent in these countries for decades. Such experiences are supported on a common theoretical foundation which relies on the opening to foreign markets and the restoration of the market's sovereignty upon the regulation of the economic process, as the only means to consolidate a high level of acumulation and an accelerated economic growth in the long run. However, the different economic and social conditions in each case have determined a much deeper application of the pattern in Chile.

After achieving an early and considerable level of industrialization and relative development in Latin America, Argentina lagged behind particularly during the recent decades. The modest performance of the economy and the insufficient economic growth have been present long ago and are linked to the previously dominant pattern of industrialization and to the logic of its functioning. To the information already given, it should be added that between 1950 and 1978, while the Latin American manufactures expanded at a rate of 6.5% per annum, the Argentineans' grew at only 4.1%. Some efforts of reactivation in the recent past were followed by the "true renewal project" of April 2, 1976. It must be stated that this program has also considered a stabilizing policy of the conventional monetarist type.

The evolution of the gross domestic product and the manufacturing sector

is shown in the following table:

A R G E N T I N A

Gross Domestic Product and Manufacturing Product

	Manufacturing GDP Value (millions of 1970 pesos)	Annual Rates of Growth (Percentages)		
		Manufacturing GDP		Total
1970	20,986		1975	
1976	24,099	- 3.0%		0.4
1977	25,982	7.8	1978	
1978	23.248	- 10.5		
1979	25,616	10.2		7.1
1980	24,644	- 3.8		1.4
1981	20,703	- 16.0		- 6.1
			1982	- 5.0

Source: FIDE, Anexo Estadístico 11, April 1982.

It is to be noted that the rates of growth of the economic activity as a whole were below the historical, but above of those of the manufacturing industry, which is a clear indication of a modified relationship between them.

The industrial product at constant prices had in 1980 the same value that in 1976, and at the end of 1981 it fell below the level of 1970. It is then safe to say that Argentina has been passing through a period of real "counter-industrialization", or seen from another perspective, of "counter-import substitution".

The domestic demand for manufactures declined (-1.6% per annum) at the

beginning due to a great extent to the anti-inflationary measures, which provoked the global narrowing of the market between 1973 and 1978. Most industrial branches were affected by this decline in demand, being specially serious in several traditional productions -wooden furniture, food, beverages and tobacco, and textiles- as well as in basic metals and metals products.

According to the calculations during the following years (1978-1980) showed an average annual rate of growth of the domestic demand at a rate of 14%, which means that for the entire period (1976-1980) the annual rate was 6%, well above the 0.6% increase in production. Thus, the imports domestic demand rates rose from 0.08 to 0.25 during this period.(7)

The industrial exports grew rapidly during the first years (almost 24% per annum), but imponts expanded even faster (almost 44% per annum). Immediately afterwards -1978-1980- the foreign sales declined (-21% per annum), whereas imports continued to grow considerably (38%).

The severe fall in the purchasing power of the majority of the population at the beginning of the stabilizing program -1976- and the stimulus of the consecutive devaluations of the national currency, together with the financial pressure derived from the rise in the interest rates, forced to look for selling possibilities in the foreign markets.

On the other hand, already by November 1976, all tariffs have been reduced by a weighted average of about 50%.

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(7) Mööri Koening, V. and Weinstein, J., "Liberalismo Económico y Sector Industrial: Experiencias recientes de Argentina y Chile", in Economía de América Latina, No. 9, 2nd Semester 1982, CIDE, México.

Later on (1978 and 1979), the manufactures recovered partially due to a positive change in the domestic demand. However, this did not have full activating effects upon the rest activities because of the increasing importance of manufacturing imports. Even though the imports domestic product ratio did not rise substantially, there must have been at least a change in the structure of foreign purchases as, except for 1978, industrial imports grew considerably.(8) The figures have been estimated at current prices, but it is to be noted that their increase is considerably higher than inflation in the developed economies.

A R G E N T I N A

Manufacturing Commercial Account

(millions of dollars)

Year	Industrial Exports (FOB)	Industrial Imports (CIF)	Rate of Growth Imports (%)	Industrial Balance
1976	1,944	2,259		- 315
1977	2,922	3,167	40.2	- 245
1978	3,326	3,079	- 2.8	- 247
1979	3,810	5,093	65.4	- 1,283
1980	4,125	8,857	73.9	- 4,732

Source: FIDE.

The scape of the reorganization project in Argentina, the changes and shifts of direction in the short run policies -it is possible to distinguish five phases between 1976 and 1979-, the quick succession of different

(8) Aldo Ferrer estimates that until 1979 the imports-product ratio had not been over than 10%, "La Economía Argentina 1976-1979", in Economía de América Latina, No. 5, 2nd semester, 1980, CIDE, Mexico.

governments in the last year, the alternatives of the world crisis and, finally, an event of such importance as the Malvinas war, all these factors wake it extremely difficult to analyse any economic phenomenon or to try to isolate the determinants of the industrial development. That is why only aspects regarded as relevant to give a general image, and specially those related to the most recent facts, have been mentioned.

In any case, it should be underlined that the previously favourable behaviour of manufacturing exports suffered from a severa setback, due to a great extent to the overvaluation of the peso started in 1979. This measure, together with the reduction of tariffs, stressed the opening of the domestic market, with the objectives of modifying the relative price system, reallocating the productive resources, and as an instrument to fight against inflation.

The quantitative evidence confirms the statement according to which the reduction of the level of protection leads to a double effect: the first, direct, which means a step backwards in the substitution of imports; the second, indirect, reflected by a lower elasticity in the growth of the product with respect to changes in the domestic demand, as a result of its different composition which favours imported goods.(9)

Between 1976 and 1980, the manufacturing product stagnated or declined in several branches, despite the relatively expansive behaviour of the domestic demand (except for the cases of textiles, clothing and leather goods). The most affected branches were: textiles, clothing and leather (-4.3% p.a.); paper, printing and publishing (0.5% p.a.); machinery and equipment (-1.8% p.a.), which includes several durable consumer goods. Transportation equipment grew at

(19) According to the analysis of H. Chevery, "Patterns of Industrial Growth", in American Economic Review, Vol. 50, september 1960.

an annual rate of 6.4%, followed by wood and furniture (2.8%), and basic metal and metal products (2.1%).

The sharp fall of the manufacturing production in 1981, derived from the decline of domestic demand and many other internal and external factors, did not leave out any of the industrial branches, all of which showed two digit negative rates (except por food, -3.3%, and chemicals, -6.3%). Machinery and equipment (-29.3%) and textiles (-21.4%) were the most severely affected. Even some significant manufactures suffered from important declines; such was the case of automobiles (-39%) and tractors (-56.7%). Well known are the effects that these branches have upon a broad range of complementary activities. In 1982, the Argentinean manufactures fell for the third consecutive year, thus poses serious doubts about the measures capable of bringing more favourable perspectives for the future.

Chile, which is a country classified as of middle size in the region and whose industrializing experience dates back to the thirties, has also gone through difficulties in the last decade as regards its manufacturing sector. The Chilean degree of industrialization was only behind that of Argentina in 1950, and until 1973 only Brazil reached a higher stage. Until that date that ratio remained above the Latin America average (see table 1).

Since 1973, the manufacturing industry's share in the GDP has dropped from 26.3% to 21.8%. Measured at constant prices, the manufacturing GDP was, in 1979, 5.5% below the level of 1972, and throughout this period its rate of growth has been below the historical trend and, unlike the traditional behaviour, below the growth of the total product.

In fact, since the mid-sixties the industry of transformation had been showing indications of weakness in its expansive capacity, as it had been suffering from diverse domestic and external bottlenecks; nevertheless, the average rate of growth during the decade was between 5.3% and 5.9%, depending of the statistical source.(10) Between 1974 and 1981, the rate of growth of the sector fell to 1.4% per annum. This behaviour also meant that the share of the Chilean manufactures within the Latin American total fell from 6% in 1960 to 3.6% in 1981.

The Chilean experience has certain peculiar features in the context of the region, and with respect to the three cases previously described. Some manufacturing branches had developed before the Great Depression and industrialization continues with such strength that Chile soon becomes one of the most outstanding countries of the region. However, this process took place under more restrictive conditions than those prevailing in Argentina, Brasil or Mexico. Some factors such as a poorer resource endowment, and smaller territory, population and average level of income, acted as obstacles against the possibilities of a sustained rate of development while progressing towards phases of increasing complexity.

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(10) It is necessary to draw the attention on the difficulty of working with the economic statistics in the Chilean case. The continuity of the data from The National Account System was interrupted by new definitions introduced in 1977, and are therefore not comparable. On the other hand, the statistics elaborated by the Sociedad de Fomento Fabril (SOFOFA) and the Instituto Nacional de Estadísticas (INE), based on periodical surveys of the industrial physical output, supply with information whose discrepancies reach levels of 5%. Besides, those surveys are based on the industrial structure of the end of the sixties which has suffered from substantial transformations. Finally, it has been proved that the figures of the product have been overestimated as a result of considering imported goods which have been subject to minor transformation or even only to packaging within the country. For more details about this problems see, por example, Hernán Durán, "Comentarios Acerca de la Industria Manufacturera Chilena en 1980", preliminary version, December 1980. Also, "Indices de Producción Industrial", CIEPLAN, Santiago, 1979.

The expansion of the Chilean manufactures was basically linked to the domestic market and exports did not reach level of importance. This is one of the clearest examples of export specialization, since copper provided with more than 80% of the total income in foreign currency. Other traditional exports were iron, saltpetre, as well as some sea, agricultural and forestry products of little added value. The active participation in the efforts of economic integration through the Cartagena Agreement, and the agrarian Reform, amongst other measures, were promoted with the purpose of finding ways to overcome the domestic and external bottlenecks which limited the pattern of development. The attempt to introduce radical transformations in the social organization between 1970-1973 was accompanied by a new effort in the process of import substitution and by a project of a big step forward in the industrial development.

However, results were not successful, as between 1965 and 1973 the manufacturing sector grew at a modest annual rate of 2.8% or 3.4%, depending on the source, while the figure for Latin America was 8.2%. Nonetheless, it must be noted that this average is not representative of the expansion that took place in 1972 and particularly in 1971 (12%).

A great number of tensions appear during the phase starting in late 1973, not only in the field of the economy. However, this latter became a nodal point in the performance of the new regime. The programme put into practice -specially since March 1975- has aimed at a radical reorganization of the economic system and other aspects of social life through the rectification of the pattern of development which prevailed during four decades. Like in the case of Argentina -though with greater intensity and scape, and during a larger period- there has been a reduction in the level of protection of the domestic market, public companies have become private and the intervention of the

government in the economic affairs has been limited, and anti-inflationary policies of monetarist inspiration have been applied. The policy makers have stated that the opening of the commercial borders and the free action of the market forces represent the only possible way to achieve an efficient allocation of resources based on the "comparative advantage". Only in that manner -they say- can the inveterate problems of backwardness, slow growth and poverty be solved.

In the centre of such arguments lies a severe judgement of the perspectives of survival of the manufacturing structure. The new policies have attempted to introduce the adjustment that, according to this approach, are necessary for its reorganization and for a substantial rise in productivity. The effects upon the Chilean manufacturing industry have been really profound. The index of the global physical output in the industry dropped 23.7% in 1975, mainly due to the sharp fall in domestic demand derived from the policy of "shock".

In the second half of 1976, and specially in the following years, there was a continuous reactivation of aggregate demand, though within a tightly controlled course and under the limitations of high levels of open unemployment -between 10% and 12% of the working population-, as well as a policy to lag wages behind inflation. The fact is that from 1973 to 1978, the domestic demand for manufactures fell at an annual average rate of 4%. However, taken into account the period 1974-1981 as a whole, it is estimated that demand grew at rate of 3.2% per annum.(11)

Export showed a much faster growth, specially in certain non-traditional branches which expanded considerabily in 1975 and partly in 1976, despite of

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(11) Mööri-Koening, V. and Weinstein, J., op.cit.

adverses circunstances in the international market. A more careful analysis of such behaviour requires to bear in mind that even before 1974 the foreign sales of non traditional products had grown at significant rates, through from small amounts. Between 1970 and 1973, the growth of the domestic market affected the sales abroad, which were able to recover since 1974.(12)

It is to be noted that since 1976 most non traditional exports, except from certain agricultural products, showed a decrease in their pace of growth, which led to speak of the ending of a phase of "easy expansion" of these exports. Some factors such as the recovery of the domestic demand, the revaluations of the exchange rate, the very low rate of domestic investment and the withdrowal of Chile from the Cartagena Agreement, help to explain this phenomenon.

Industrial exports are basically composed by goods derived from the natural resources of the country and with low level of transformation, except from the cases of paper and cellulose, whose process of elaboration is somehow more complex. The rest of the exports are fish flour, semi-elaborated copper, molybdenum oxide, uncut wood, many of which correspond to what has been internationally classified as semi-manufactures or basic products. In any case, the international demand for products presented by the Central Bank as industrial, grew at a rate of 9.4% per annum between 1974 and 1981, despite a fall in the last years. In 1981, manufacturing exports virtually collapsed (-19.5%) as a consequence of the worsening of the domestic and international crises, and the situation created by the overvaluation of the exchange rate.

When analyzing the composition of the Chilean foreign sales, it can be observed that the share of the traditional goods within the total has dropped;

(12) Ffrench-Davis, R., "Exportaciones e industrialización en un modelo ortodoxo: Chile, 1973-1978", CIEPLAN, Santiago, Chile.

however, they still represent more than 70%, depending on the price variations, particularly of copper, which represents by itself more than 50% of the total exports. Those goods classified as industrial,rose their share significantly by the end of the seventies, only to fall again in the last two years to about 20%. This drop was specially noticeable in the case of non traditional manufacturing exports.

It seems clear that at least in the most relevant cases, the country has been able to compete only in those branches where exists an absolute advantage derived from a favourable endowment of natural resources. A detailed analysis of the industrial branches also shows that their export potential is highly influenced by the official promotion policies and, in a considerable number of cases, by the expansion of the domestic market, which, while inducing a fast growth of the national output strengthens their competitive position. Particularly negative in this respect have been the effects of the withdrawal from the Andean Agreement. The Chilean experience shows, in short, that during the past six years, the growth of the sectors producing internationally traded goods -agriculture, fishing, mining and industry- has been below that of those sectors with non traded goods and services, such as banking, building, and others.(13)

The sharp reduction of tariffs between 1975 and 1979 had important direct effects upon the productive structure; the 10% uniform tax for all imports -excepts for automobile parts- is considered extremely low even in developed countries. Besides, the lags of the exchange rate were so frequent that the

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(13) Various papers; see specially, Ffrench-Davis, R., op.cit.; Durán, H. "La Industria en Chile: 1-70-1979", ECLA-UNIDO, November 1980; ECLA, "Estudio Económico de América Latina. Chile, 1981"

overvaluation of the peso become one of the most important instruments in the government"s struggle against inflation; the rate was kept fixed since 1979. This logically stressed the low of imported goods. It is estimated that the imports-domestic demand ratio increased from 0.36 to 0.48 between 1974 and 1981.

During that period -1977 to 1981, the Chilean manufacturing sector grew at an annual rate of 1.4%. Some years showed high rates of about 8% and 9% -1978 and 1979- , but as a result of a recovery after the serious depression of 1975. In 1979, the manufacturing product per capita -at constant prices- was 234 dollars, 19% below the level reached in 1972 and 5% below that of 1970. Only in 1980 was the level of the beginning of the last decade reached again.

During 1981 the manufacturing activities were almost totally stagnated, according to the indices of SOFOFA and INE. The recessive tendency continued violently in 1982, when the rate for GDP was about -14%, and that of the manufacturing product -21%.

The Chilean economy has been going through a process of profound transformations during this recent period. In the domain of the industry, it was possible to observe not only the phenomena of concentration and centralization of capital, as well as levels of unused capacity, but also the dismantling of entire productive branches -in electronics, for instance-, the reduction of others and the growth of some activities, whose promotion has not stopped the decline of the total share of the sector. This has resulted from a combination of factors -redistribution of income in favour of privileged groups of the society, the shrinkage of the domestic demand and the opening to foreign purchases-, whose effects and intensity have been different.

The fluctuations in branches like food and beverages were less violent, given its importance in current consumption. Those where the effects have been more adverse are textiles, clothing and shoes, whose amount of production remained stagnated at levels similar to those of the 1975 recession. It has been estimated that nearly one third of their market was lost as a result of import's penetration. Transportation equipment showed an index of physical output below that of 1969, while leather and rubber goods, metal products and non electric machinery had not recovered in 1981 the level reached in 1974.

The branches with rates of growth above the average are those traditionally linked with the export activity. Such is the case of basic metals -including the processing of copper-, cellulose and paper, and some food products which depend on the situation in the world market. Others -food, beverages, tobacco, furniture, wood, non metalic minerals, printing and publishing, some chemicals and electronics- seemed mainly connected to the domestic demand and to activities like building, which after a spectacular boom dropped again sharply.

Several studies have been undertaken to estimate the impact of these productive reorganization policies in Argentina and Chile, by comparing the difference between the real manufacturing output and that which could have potentially been generated if the pattern of import substitution had been preserved. The results show a real product 16 to 30% below the potential, depending on the assumptions. The question arises with respects to the possibilities of activating the process of industrialization in the future. The answer depends on the degree of disarticulation suffered by the productive plant, on the permanence within the country and conditions of operation of the existing machinery, on the previous purchase of new equipment, amongst other

factors.[14]

The much greater initial size, which makes dismantling more difficult, together with the indication of some imports of capital goods, suggest the hypothesis of a greater capacity of reaction on the part of the Argentinean industrial sector to changes in the economic strategies. The situation nowadays in Chile is more restrictive. The more and more frequent claims from the corporations and the government's reaction of rising tariffs 10%, apart from the credit and industrial promotion measures, even if announced to be temporary -until October 1974-, seemed to search relief for a situation of extreme seriousness. However, this does not mean that an activation of the manufacturing development is being planned.

Colombia is one of the countries which found in the crisis of the thirties a determinant stimulus to its process of industrialization, since the previous development was rather more incipient than in the cases already mentioned. After a period of accelerated growth of the sector as a whole followed a phase of a relative fall in the pace of expansion, during the fifties. The 13% degree of industrialization in 1950 rose to 18% or 20%, depending on the source, at the beginning of the sixties, and remained at that level throughout the decade. The manufacturing GDP per capita was 119 dollars -measured at 1970 prices- in 1978, less than the regional average (233 dollars), and even lower than the corresponding to countries of medium or small size (the case of Costa Rica). The Colombian economy also singles out because the share of the manufacturing sector in the total product is under that of agriculture, hunting, forestry and fishing combined (26% in 1981).

(14) In the Chilean case, for instance, there is evidence that some machinery has been sold to Bolivian firms.

The industrial development in Colombia has not been exempt from fluctuations, like in the rest of the experiences. The period 1965-1973 was one of high rates of growth (7.7%), similar to those of Mexico and only behind Brazil, amongst the six countries considered. Such behaviour corresponded to an increase in the domestic demand for traditional-manufactures and non durable consumer goods: food, beverages and tobacco (almost 10% per annum); textiles (about 7%); and paper and printing (about 11%). Those some branches showed the highest rates as production is concerned (between 8% and 11%), which suggest that there were unexploited possibilities of industrial expansion based on branches linked to current consumption.

Nevertheless, more complex industries like chemicals, petrochemicals, electric and non electric machinery, transportation equipment, also showed high rates of growth, above 7% per annum. Industrial exports increased faster than in all the rest of the countries analyzed.

Between 1973 and 1978 there is a relative loss of speed in the expansion of the manufacturing production, even though the average annual rate of 5.5% was again only behind the Brazilian, as can be seen in table 2a. The fall in the domestic demand for manufactures was of little importance if compared with that of industrial exports, which suffered from a greater deterioration; in that respect the most effected branches were wooden products and furniture, chemicals and basic metals, with negative rates, and the rest with rates lower than in the previous period.

The manufacturing sector in Colombia has faced ups and downs like in the rest of the Latin American countries, explained both by external factors and

restrictive domestic policies. However, as it has been showed, the effects have not been as contractive as in other cases. A similar conclusion is drawn after observing the evolution of GDP whose decline is less dramatic; Colombia was one of the few countries with a positive rate of growth (1.5%) in 1982. At all events, the fluctuations of the industry have remained around the track of the total product, which is turn explains why the degree of industrialization has suffered from little change. Thus, for instance, elasticity of the manufacturing industry with respect to the total product evolves as following: 1.6 in 1976; 0.88 in 1977; 0.95 in 1978; 1.02 in 1979. In 1980, GDP grew at a rate of 4.2% versus 2.3% of the manufacturing industry; in 1981 the corresponding figure were 2.5% and -1.0%.

It must be added that between 1968 and 1973, those branches producing intermediate inputs and metal-mechanics, including durable consumer goods and capital goods, were amongst the growing ones with an average annual rate of 9%. Starting in 1980, some important branches fell considerably; such was the case of transportation equipment and automobiles, whose rate of -12% worsened in 1981 (-17%). During this last year only a few branches registered positive rates: clothing; textiles, leather and shoes, between 2 and 3%; wood and electric products, between 6% and 7%; non ferrous materials (28%).

It must be noted that the Colombian manufactures were able to keep their share within the regional added value (4%), whereas those of Argentina and Chile descended.

Venezuela represents the case of an economy fundamentally based on the exploitation of oil. As foundation member of OPEC, Venezuela has benefited from the achievements of this organization during the last ten years. It has

traditionally been a very open economy, if compared to the prevailing patterns in Latin America, highly dependant from abroad as regards supply of different goods for comsumption and investment. Suffice is to say that half of the agricultural products demanded have to be purchased abroad.(15)

Within the region, Venezuela is one of the countries whose process of industrialization started belatedly, though there is no agreement amongst the analysts. In any case, it was during the fifties when a firm industrial policy was adopted. It is however impressive that in 1950 and with the lowest degree of industrialization of all big and medium size countries, its average manufacturing output per capita was higher than that of Brazil, Colombia and Peru.(16) The value of the total gross product of the industry of transformation was of course lower than in those economies.

The growth of the sector was fact, since in terms of value the Venezuelan industrial output was above those of Peru and Colombia in 1970. In 1981, it was a bit lower than the Colombian, but higher than those of Peru and Chile.(17)(18)

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(15) In the case of Mexico, the oil boom appeared when a high industrial development had already been reached.

(16) ECLA, "La industrialización en América Latina", op.cit., tables 13 and 14.

(17) Gross Domestic Product of the Manufacturing Industry

(Millions of 1970 dollars)

Country	1950	1970	1975	1978	1981*
Chile	898	2,401	1,888	2,439	2,383
Colombia	585	1,964	2,812	3,388	3,587
Perú	454	1,863	2,455	2,397	
Venezuela	422	2,091	2,701	3,271	2,853

Source: ECLA, "La industrialización...", op.cit,. table 13.
* Preliminary data, ECLA "Estudio Económico de América Latina" on each country, 1981, table 3.

(18) See, amongst others, Flores Max: "El capitalismo en la Venezuela Actual", Review "Economía de América Latina", CIDE, Mexico, No. 6, First Semester 1981. Bitar, Sergio and E. Troncoso. "La industrialización de Venezuela en el contexto Latinoamericano", review "Economía de América Latina", No. 8, First Semester 1982.

The contribution of the manufacturing industry to the total product rose up to 17% by the mid-seventies, and has remained at that level since then.[19] Whitout any doubt, the degree of industrialization is relatively low and only similar to that of Colombia, amongst the cases considered. The share in the regional industrial product is also low, around 4.5% in the last years.

The expansion of the industrial sector in Venezuela is rather peculiar. It is well known that most Latin American experiences the role of the foreign sector has been crucial, since its moments of crisis and difficulty have acted as powerful stimuli to the industrial activities. Such difficulties tend to be overcome throught time, as to allow industrial progress. The Venezuelan manufacturing development on the other hand, has been basically associated to phases of favourable evolution of the foreign sector, and has aldo been exempt from problems of external financing.

The highest rates of industrial growth were achieved during 1950-1965 and 1973-1978, precisely when the country's income from oil exports increased considerably. The strategy of imports substitution seems to have mainly derived from a desire to reduce dependency on oil and to diversify the productive system, as a means to ensure the stability of the process of development. But industrial expansion has been a function of external and not domestic factors.

When looking carefully at the growth of the sector, discrepancies can be perceived between different sources; such is the case of UNIDO -table 2a- and ECLA. The latter will be preferably used in what follows.

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(19) Other sources indicate a share of 15% (ECLA, Estudio Económico de América Latina. Venezuela, 1981", and "Anuario Estadístico de América Latina, 1980").

The annual average rate of growth declined from 9.5% (1950-1965) to a more modest 5% between 1966 and 1973. Domestic demand for manufactures expanded at a rate of 2.8%, less than in the rest of the countries included in table 3. Similarly, exports grew at the lowest rate (table 4).

It is necessary to insist upon some aspects of the foreign sector. Apart from certain percentages, the volume of Venezuelan industrial exports has been traditionally low -1% of the Latin American total in 1975-. At the same time, the value of imports exceeded that of the gross industrial output by more than 100% in 1975, whereas such rates was 44% for the entire region.

During the 1973-1978 period the domestic demand for industrial goods grew at a rate of 10.4% per annum. Even a faster growth was registered in traditional branches -food, beverages, tobacco, textiles, wood, furniture and chemicals-, though without reaching very high rates, as it usually happens in these cases. The foreign sales of products from those branches fell sharply, together with exports of petrochemicals (-15% per annum). A view of the economic dependency previously analyzed, that situation affected imports and contributed to the increase of the foreign debt, despite the enormous exports of oil. This, in fact, favoured the flow of foreign credits.

The big jump of domestic demand, specially since 1974, was accompanied by intensified efforts to promote import substitution as a strategic decision to take advantage of the oil income and create a productive domestic structure in a long run perspective. This explains why in a process of industrialization of this sort, not affected by foreign currency shortage or fiscal problems, high and undifferentiated proteccionist barriers were introduced as well as special

promotion of consumer goods substitution, instead of giving priority to the proccesing of the abundant natural resources. It is then thought that the little pressure of industry upon the balance of payments and the fiscal sector would have eased the decision to promote and protect it.(20)

During the years of expansion (1973-1978) the rate of growth of the manufacturing product was 7.6%. As it refers to specific branches, the outstanding cases are: petrochemicals (69% per annum); and those in the metal-mechanical area, linked to durable consumption and investment. The response from the domestic supply concentrated on traditional consumer goods, raw materials and equipment of simple manufacturing.

In 1979, within a context of international deterioration and domestic disequilibria, fiscal and monetary policies of a restrictive nature were put into practice, causing stagnation in the economic activity as a whole, and a slight fall in 1980. The manufacturing sector grew 1.3% in 1981, as a result of the expansion of the government's enterprises -specially linked to basic industries such as steel and aluminium-, since the industrial private sector made no progress at all.

Amongst the traditional industries, there were increases in beverages, tobacco, wood and cork; more in food and footwear. Others declined: clothing (-3%) and furniture (-20%). The production of raw materials and intermediate goods did not have a unique trend: paper and cellulose increased (14%), as well as rubber, non metalic minerals and basic metals; chemicals and plastics declined considerably. All mechanical manufactures grew at a 4% rate.

It is to be underlined that the production of automobiles has declined

(20) Bitar, S. and Troncoso E., op.cit.

for three consecutive years: -13.7% (1979); -1.9% (1980); -0.6 (1981).

The manufacturing industry in Venezuela suffers to a greater extent from deficiences, bottlenecks and problems of insufficient integration, present everywhere in the region. However, since industry is relatively younger, the equipment is technologically modern and the scales of production appropiate, though heterogeneous.

The government's action is directed preferably to seek for solutions to the most profound disequilibria and to take advantage of the wide possibilities still open to import substitution. With that pourpose, policies are adopted to promote technological development and a capital goods sector, as well as agencies of coordination, promotion and financial support; skilled workers training programmes; tariffs and other measures. It is a special desire to streghten a capital goods sector based on the demands by oil producing activities, petrochemicals, steel, aluminium, electricity, transport and building.

An attempt is also being made to rationalize the production of automobiles, and to give impulse to the agro-industry project, which has been running for a number of years. However, the inflationary pressures, the external debt, the fall in the prices of oil, are some of the factors that, within a domestic and international context of extreme difficulties, represent obstacles to the expansion of industry in the near future.

The ideas discussed up to now are meant to give a shallow view of the recent trends and characteristics of a extremely complex and varied reality, such as the Latin American. The information on the rates of growth could lead to

werorg conclusions if it is not properly complemented. Thus, for instance, the growth of manufacturing would be considered satisfactory when compared to other cases, even those of industrialized countries; it is, however, poor with respect to the population rate of growth in the region. Besides, the low absolute level of the industrial base determines that, despite the high rates of expansion, the gap between Latin America and the developed countries does not tend to narrow. It is illustrative that the contribution of the region to the world manufacturing added value remains fluctuating around a level of 6% since the mid-seventies.(21)

It would be convenient to introduce many other aspects to the analysis, such as the problems of employment, geographical distribution of manufacturing, technology, inflation, agents -public, private and multinational corporations-, and many others. But the objetives and length of this paper impose unavoidable limitations. Attention will therefore be concentrated in the following pages on those topics regarded as essential, like the changes in the industrial structure and the dissimilarities present in the process of regional development.

2. Structure of the manufacturing production.

The main features of the industrial evolution of Latin America in the last years are expressed not only by changes in growth or relative weight, but can also be found in the productive structure of the sector. It is also convenient to analyse such characteristics from the broader point of view of the changes of the production system as a whole, even in a very brief way.

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(21) The Latin American share is substantially higher than that of other underdeveloped regions: Africa (0.92%); Western Asia (0.70%); East and South Asia (2.74%).

Once again, the discrepancies between the different sources of information do not allow a clear view of some interesting variables. But since complementary information is used, it is possible to have a close idea of the main trends.

It is possible to observe at the beginning of the seventies a high contribution of the services and, according to ECLA, the share corresponding to the production of goods was less of 50% of the gross domestic product (tables 7a and 7b). Such values are similar to those of the advanced countries, though in fact, given the desproportions and disequilibria of the Latin American economies, it is rather a case of premature tendency towards the predominance of the services sector. In Chile and Venezuela there is also a decline of the contribution of the goods producing activities to GDP; the some happens in Argentina and Colombia, though to a lesser extent.

The data in Table 8 shows, on the other hand, that there is, during the sixties, an increase in the contribution of the manufacturing industry to the total production of goods. Later on, during the last decade, there were different behaviours. Though with a slight decline, manufactures kept their predominant position only in Brazil and Mexico, whereas in Venezuela they continued to rise their contribution without reaching an outstanding position. Those are the economies where industrializing policies were preserved. In this respect, the strategy of "counter-substitution of imports" had also effects in Argentina and Chile: the contribution of the manufacturing sector decreased considerably.

The increasing complexity of the regional industry is revealed by the higher relative weight of the so called heavy industries, specially linked to the production of inputs and investment goods. The bias derived from the level of

aggregation of the information tends to overestimate the quantitative contribution of this sort of activities and the qualitative value of their goods. However, there is no doubt that progress has been made by capital intensive and technologically complex industries, even they may not be compared to those of the developed countries. Except from Colombia, heavy manufactures have reached a dominant participation within the output of the industrial sector.

Table 9 helps to notice that the growth of such industries faced some obstacles during the seventies. Their importance in Argentina was in 1979 little higher than in 1973, after a drop in 1976. In Chile there is also a certain stagration between 1973 and 1976, with a recovery later on. The proportion of this kind of goods within the total product in Venezuela drops to the level it had eighteen years ago. Finally, in Colombia there is a slight increase throughout two decades, with a stabilized percentage in between. Thus, only in Mexico and Brazil does the contribution of heavy induutries increase steadily. In any case, the Latin American share to the world production of the heavy industries is not above 4%, whereas the contribution to the heavy branches is about 6%.

Table 10 allows a better understanding of the peculiar characteristics of the regional industry. In fact, only a few branches and concentrated in some countries explain the relative weight of such manufacturing branches of high strategic importance. Thus, for instance, oil refining alone represents in Venezuela more than 22% of the total output of the transformation industry, and more than one third of the contribution of the heavy branches. In the Chilean case, the branch of non ferrous metals -within which the processing of copper is so evidently relevant- contribute with 18.6%

of the manufacturing added value, and if oil refining and iron and steel production are included, then the proportion rises to one half of the corresponding to heavy industries.[22] It is already been shown that this kind of manufactures has not reached in Colombia the degree of development of some light industries; amongst the heavy ones no specific branch is particularly significant despite the relative importance of chemicals, oil refining and transportation equipment. The contribution of heavy metals is rather low in relation with the other five countries.

Transportation equipment is the most important branch amongst the heavy ones (about 11%) in Argentina and Brazil. Non electric machinery follows in the case of Brazil, whereas this place is occupied by chemicals (branch 352) in Argentina. The contribution of basic metals is alike in the three biggest countries of the region, and similar to that observed in the industrialized market economies. Also in Mexico chemicals and transportation equipment are important, though in the case of the latter, less than in Argentina and Brazil. On the other hand, oil refining has in Mexico a much more relevant position.

The comparison with the last column of Table 10 confirms the idea that the Latin America industry has a less equilibrated composition than in the developed economies. It is interesting to observe that complex industries like oil refining have in Argentina, Brasil and Mexico a percentage two or three times higher than in the advanced economies. Not to forget the Venezuela case where it is the most

(22) This information refers to 1975, and is little representative of the Chilean situation because, as was noted before, the economic activity in general, and particularly the industry, suffered from a severe contraction, whose effects were different from branch to branch. That is why additional information has been taken from the Handbook of Industrial Statistics, by UNIDO, for 1978. Then, for instance, transportation equipment recovered a share larger than that of the basic iron and steel industries within the structure of the manufacturing sector.

important of all activities. The same happens in the case of iron and steel -except for Colombia-. On the other hand, the contribution of metals products, and electric and non electric machinery is still behind the observed in industrialized countries.

If an analysis is made of the manufacturing sector according to the usage of the goods produced, it is possible to confirm the well known tendency of the non durable consumer goods to loose ground in the last twenty years. (Table 11). The scape of this process is different. On the one hand, the decline is very sharp in Argentina and Brazil, and less but also important in Mexico and Chile. On the other, with its traditional external opening and large imports of final goods, follows a declining trend, until the early seventies, only for non durables to recover later on. In Colombia the drop is very slight and keep a clearly important position in industry.

The intermediate manufacturing products have increased their relative weight in Chile, and to a lesser extent in Argentina and Brazil. In Mexico, after a certain increase, intermediate goods tended to stabilize their importance during the last decade, being the most relevant category within manufacturing. An opposite evolution was observed in Colombia and Venezuela, since intermediate manufactures fell proportionately, despite of the fact that in the second country they are still at the top.

The importance of metal-mechanical products rose in five of the six cases considered here. Chile was the notorious exemption. It is well known fact that Brazil has made the greatest progress in the field, and whose structure is more balanced. The information shows that after several achievements in Argentina,

these branches stagrated in their contribution to the manufacturing output, and even declined. Colombia and Venezuela are also examples of less important progress in this respect. In the first case the contribution of the metal-mechanical branches rose considerably, but absolute levels are not yet significant. In Venezuela achievements have been even less important, at least during the seventies.

The changes in the composition of industry in the chosen countries seem to be due to various factors. Amongst them, differences in size and the derived possibilities of development should be mentioned. The opportunities of Brazil and Chile are clearly different as regards the integration of an industrial structure. Others factors are also of great influence: which is the sector that commands the process of capital accumulation?, which are the domestic market protection policies?; which the differences in factor endowment?

It is possible to understand the decline of the Chilean metal-mechanical industry as a consequence of commercial liberalization and the reduction in price of transportation equipment and metal products imports.(23) It is little probable that the decline in the share of non durable consumer goods in Argentina and Chile derives from the diversification of the industrial structure. The adopted strategy represents an obstacle and the added value of the manufacturing sector only recovers real levels reached in the past. That is why an exploration cannot rule out the effects of the market opering and the contraction of the domestic market as a consequence of the fall of real wages.(24)

The clear predominance of intermediate goods can be explained in the cases of Chile, Venezuela and Mexico because they correspond to activities highly linked

(23) The increase of imports of durable consumer goods explains 62% of the total increase of imports, measured at constant prices - between 1974 and 1979.
(24) Argentina: the real average wage represented in 1980 60% of the 1975 level. Chile: The real wage index was in 1979 63% of the index in 1972.

to natural resources abundant in such countries. Actually, those industries connected with copper and other minerals are of great importance in Chile, and something similar happens with oil and other mineral resources in Venezuela. They are in a good position to face foreign competence.

Argentina possesses a food industry of high weight (19.2%) within the manufacturing sector. There is little doubt of the importance of agricultural and livestock inputs for such activities. This explains why non durable consumer goods keep their contribution to industry.

If at a regional level the non durable consumer goods and the intermediate and metal-mechanical products loose importance, it is convenient to note that there are important national differences as regards the intensity and direction of the changes.

If the international patterns are considering when analyzing such change, a conclusion can be drawn that the regional process of industrialization suffers from severe backwardness and disequilibria. Traditional branches -food and textiles in particular- represent a high proportion of the manufacturing output of those economies. Moreover, under certain situations -Chile and Argentina in 1980- branches like textiles loose importance, this is not the result of a better integration of industry, but a consequence of the substitution of domestic output by imports.[25] It must be remembered that textiles is amongst the branche most seriously affected by imports. In Venezuela the supply of food and textiles has traditionally come from abroad.

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(25) As it was noted before, table 10 corresponds to 1975, a year before a programme of productive reorganization was put into practice in Argentina.

Manufactures for current consumption, and food un particular, take the largest share of the sector's output the poorer and more recently industrialized a country is. It is a fact that those branches are of a low potential of growth and play a less important role in industrial development.

The structural weakness of the Latin America industry is perceived in all its real extent if the analysis is taken, beyond the achievements of the modern and diversified branches, to the composition of the main types of goods.

The statistics employed do not allow a most accurate distinction than that of non durable, durable, intermediate and capital goods. But there is a quantitative basis soled enough to state that in Latin America the predominant role corresponds to durable consumer manufactures and that, within the metal-mechanical branches, the contribution of capital goods is low and very elementary.

It is true that the relative weight of the intermediate goods industries is high, even greater than in other regions, but this because the endowment of natural resources of the region favours certain products like steel, paper, semi-processed copper, some chemicals. Besides, the governments usually promote such activities, given their strategic value of supplying "external economics" to the private sector; this last group of entrepreneurs does not participate because of the high requirements of funds, technology, and long maturity of the investment.

Furthermore, the smallest and poorest countries in Latin America suffer from the back of development of intermediate manufactures, explained by the shortage of natural resources, narrowness of the market, financial problems and

other factors. The achievements in the process of import substitution are therefore less significant.

There are countries that could have made real progress in industry, and where the productive structures is more balanced than in the rest of the cases. However, the most relevant of the heavy industries -except from those of recent creation- are in open decline -iron and steele, for instance-, or consist of large amounts of investments in areas which have lagged behind the modern predominant technology. There is no doubt of the incapability of creating a machinery building industry, or promoting activities of research and development. Even Brazil, with the most powerful industrial system of the region and an important production of capital goods, is not exempt from serious disproportions and increasing problems derived from the pattern of industrialization.

Moreover, the estimates used to evaluate the degree of industrialization and the structural equilibrium achieved, are often based on added values that do not take into account the distorsions in relative prices associated to the higher cost of intermediate and capital goods produced in Latin America. If appropiate data is taken, structural disequilibria result to be even greater.

The insufficient backward and forward integration of the Latin American economies has not yet been overcome, and therefore their quality of "semi-industrialized" persists.

3. The trade of manufactures.

One of the topics of industrialization that has been subject to debate

for a long time is that of the commercial excharge of manufactures with foreign countries. Part of the interest derives from the fact that the regional industrial development concentrated mainly on the domestic market without giving attention the relations with the rest of the world, to the extent that the Latin American share in the global trade of manufactures has been marginal.(26) Besides, though the import substitution process brought changes in the structure of imports, these continue to represent a high proportion of the industrial product. Moreover, the capability of making purchases abroad strargly determines. The development of manufacturing and of the economy as a whole. Consequently, industrial goods exports gain increasing importance as a means of enlarging the import capacity and therefore alleviate the tensions of the Latin American foreign sector.

A considerable number of studies has been written about the evolution of the foreign trade in Latin America and the underdeveloped countries; only a few of the important elements are mentioned here.

First of all, it is to be noted that the proportion between basic good and manufactures within total exports has changed in favour of the latter since the mid-sixties.(27) In 1965, basic goods represented 90% of all foreign sales and manufactures were only one tenth of the total. In 1977, the proportion of manufactures rose to 23% (28% if oil exporting Venezuela is excluded). The ratio of foreign sales of manufactures to the industrial gross product increased from 2% in 1962 to 8% in 1973-1975. Thus, an increasing diversification of Latin American exports has taken place. However, a more detailed analysis seems necessary.

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(26) See, amongst others, Fajnzylber, F., "Elementos para la formulación de estrategias de exportación de manufacturas", in Nolff, Max, Desarrollo Industrial Latinoamericano, F.C.E., México, 1974.

(27) Rimez, Marc, "Exportaciones de manufacturas y formación de un espacio económico regional: la experiencia de la ALALC", in review Economía de América Latina, CIDE, México, No. 8, First Semester, 1982.

It is obvious that for such estimates, the definition of what is to be called a manufactured product is essential. If a careful study of the composition of the Latin American exports is made, it is possible to realize that many of those classified as manufactures are really semi-manufactures. These latter represented 60% of the total foreign sales in 1965, only to decline to a 40% in 1977. Besides averages tend to hide important differences from country to country.

A good indication of the sort of goods sold abroad is given by the following classification by usage:

MANUFACTURING EXPORTS BY TYPE OF GOOD

(Percentages)

	Non Durable Consumer Goods		Intermediate Goods		Transportation Machinery and Equipment	
	1965	1977	1965	1977	1965	1977
Argentina	57.8	42.1	32.2	30.6	9.8	27.3
Brazil	26.7	50.1	61.3	18.8	12.0	31.1
Chile	6.4	12.0	88.9	82.6	4.6	5.4
Colombia	47.5	56.5	47.5	30.2	4.9	13.3
Mexico	41.9	40.1	51.0	42.0	7.0	17.9
Venezuela	10.9	14.3	79.2	74.0	9.9	11.6

Source: Rimez, Marc. op.cit. Table 14, based on information by LAFTA.

Intermediate goods show a substantial decline in the cases of Brazil, Colombia and Mexico. In the rest of the countries their decrease is less important and under different conditions. In Argentina such exports represent about one third of the total; on the other hand, the proportion of intermediate manufactures within total exports is much higher in Chile and Venezuela.[28]

(28) In Chile, non ferrous metals, paper, cellulose, and cut woods. Petrochemicals and steele dominate in the Venezuelan case.

Nevertheless , stat-stics from the Central Bank of Chile indicated, without any further distinction, a share of 28% for manufactures.

In fact, only in Brazil did exports of intermediate manufactures decline proportionately, whereas in Colombia and Mexico they are still important. Those goods are closely linked to the endowment of resources in each country and include raw materials or good whose degree of processing is just enough to make their transportation possible, though in some cases they go under sophisticated processing.

It should also be borne in mind that a great deal of Latin American exports are non durable consumer goods, in proportions that fluctuate between 40% and 50%. For the region as a whole they represented the main group: 45% in 1977. A similar figure appears for that year in Argentina, Brazil and Colombia. The goods included in this category are foodstuffs,associated to agricultural or fishing activities -meat in Argentina; fruits and frozen or canned seafood in Chile-, and others produced in light, labour intensive industries, such as wooden goods, footwear and clothing. Exports of these last two branches showed the highest rates of growth in the region, between 1965 and 1977: footwear, 50% per annum; clothing 46% per annum.

Despite of their different pace of growth, exports of consumer and intermediate goods represented the builk of Latin American exports; the group of transportation equipment and machinery increased its contribution considerably, from 10% in 1965 to 23% in 1977. Important rises were registered in transportation equipment (40%), household appliances (30.5%) and non electric machinery (26.7%). It was precisely the category of goods whose growth was the highest during the

period.[29][30]

All that evidence confirms the tendency to the diversification of exports and the generation of increasing amounts of added value in the exporting countries, though without changing substantially their basic goods exporting nature. Under the classification of manufactures a great number of goods with a low degree of processing are included. The rest of the exports come from traditional branches, including "light industries", usually labour intensive, and also products which have reached a stage of maturity within their cycle. Thus, the Latin American industry has not been capable of competing successfully in the world market with technologically advanced products, or those belonging to activities which are leading the world manufacturing development.

Not even Brazil, where great achievements have been made as regards foreign trade, scapes from these limitations, despite of the success in the arms field: in ten years, starting from a very poor basis, the production of arms and military equipment -including airplanes was developed; the income for this sort of exports was about 2,000 millions dollars in 1982.

Accordingly, when analyzing Latin American exports it is usually necessary to employ a broader definition of manufactures, since more restrictive notions

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(29) Includes electric and non electric machinery; electronics equipment; scientific aplliances and transportation equipment.

(30) It must be noted that sales of those activities known as "maquiladoras" were not included. These industries have expanded substantially in the last years in some countries of the region. The reason for not including them derives from the fact that they correspond to a process of production which is not integrated to the economy of the country. It might be appropiate to talk about exports of labour, without leaving aside the income and other effects, which are not however linked to a normal factory task.

would lead to statistically poorer results.[31]

The second relevant aspect refers to the fluctuations and differences in the evolution of manufacturing exports between the countries of the region, as well as the geographical concentration of the capacities of international competitiveness.

In general terms, Latin America exports are frequently unstable. A large number of factors determines this behaviour. Amongst those of external nature are the following: the proteccionist measures in the international markets; the role of multinational corporations, whose foreign sales depend on the strategy and profitability of the firm as a whole; technological steps forward such as the use of robots, which induces the return to the advanced countries of certain industrial activities that had been displaced to the underdeveloped countries in the search of cheaper labour; the sharp fluctuations in the international prices of the basic products which still compose the main regional exports make the share of manufactures within total foreign sales to vary widely. This has happened lately with the discovery and exploitation of a product with a high exporting capacity, causing a radical change within the structure of exports, as it occurred in Mexico. This country had a large variety of exporting goods (it was necessary to add up to four products to reach 50% of total exports), and manufactures represented 42% of the sales in 1975; this proportion fell to 17.5% in 1981, due to the increase of oil exports.

Furthermore, the behaviour of this sort of exports is highly sensitive

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(31) UNIDO "World Industry in 1980", op.cit. page 68.

to the changes of the economic policies which promoted their growth. That is the case of the increases derived from the radical contraction of domestic consumption, like in Chile, which decline when the reactivation of the domestic demand holds the goods that had been sold abroad. The same happens with the exports increases that are achieved through fiscal incentives and subsidies not possible to maintain because of financial reasons or external retaliation, like in the cases of Peru and Uruguay.

Another of the distinguising features is the concentration of manufacturing exports in a few countries of the region. In 1977, 43% of the total sales of this sort corresponded to Brazil, while the shares of Venezuela, Chile and even Mexico declined. (32)

In spite of this, the three major economies -Argentina, Brazil and Mexico- have contributed with something less than 77% of the total of manufacturing exports, 71% of non durable consumer goods, and 90% of machinery and transportation equipment. Their share is less significant in intermediate goods -not even 50%-, controlled by medium size countries (Colombia, Chile, Peru, Uruguay and Venezuela).

The diversity of exports of the three biggest countries, their increasing participation in the manufacturing production and the high rates of growth achieved during the last decade, explain their classification as NIC's or newly industrialized countries, though in the case of Argentina there is no general agreement, specially after the recent performance. In any case, those are the economies with more important achievements in the process of industrialization,

(32) Venezuela, from 7.5% to 6.4%, between 1965 and 1977; Chile, from 9.5% to 5.2%; and Mexico, from 20.2% to 14.5%, in the same period.

including complex activities of the branches of metalics products, and machinery and equipment, whose foreign sales are clearly dominant.

However, it should be borne in mind about the internationally competitive branches: highly dependent from natural resources, labour intensive and corresponding to standarized goods. In fact. Hong-Kong and Corea stand out amongst the newly industrialized since manufacturing exports have the largest share within the total.

In Latin America, the contribution of Brazil is not only outstanding in the total sales of manufactures, but also in the three types of goods: non durable consumer goods, 48.5% intermediate, 25%; machinery and transportation equipment, 58.7%. It is also dominant as regards geographical zones: LAFTA, 34.1%; other developing countries, 38.8%; developed countries, 49.2%.(33)

The proportion of manufacturing within total exports also rose in the medium size countries, though without reaching the levels and variety of the bigger ones. Little progress was made as regards metal-mechanical branches, and therefore the increases correspond to light industries or those linked to natural resources: wood, and paper and cellulose represented about 50% of all Chilean exports in 1977, and petroleum chemicals were dominant in the case of Venezuela.

There was an accelerated growth of the exports coming from the small economies of the Central American Common Market during the sixties (25.2% per annum), so that they contributed with 29% of the total in 1970. This derived basically from reciprocal trade, and 70% of the sales came from light non durable

(33) The figures shown here differ from those presented by other sources like ECLA, particularly with respect to the relative contribution of the countries, because the universe is composed by the 11 LAFTA countries.

consumer goods industries -mainly clothing- and some chemicals, like medicines and perfumes.[34] Later on, and as a consequence of the regional conflicts, the growth of exports declined considerably and the share within the total was only above 21% in 1977.

In any case, the regional industry, including that of the relatively bigger countries, showed low exporting coefficients, specially in those branches regarded as "modern".

The third observed tendency is a diversification of the geographical destination of manufacturing exports. The market of the developed countries has lost ground with respect to that of Latin America. When observing the evolution of the LAFTA countries, it can be see that in 1965, 73% of their total exports went to the industrialized countries, and only 9% to Latin America. In 1977, the developed countries received 66.3% of the exports from LAFTA, while intraregional trade rose to 14%. As its refers specifically to manufactures, the advanced economies represent the most important market, though their share has decreased 8 points since 1965, reaching 55.5% in 1977. Besides, those countries are much more important as purchases of basic goods, about 70% of the exports from LAFTA. If an analysis is made according to the type of goods sold to the industrialized world by LAFTA countries, the conclusion is that manufactures have increased their share in 1977 (19%), whereas that of basic products has fallen (81%).

The countries of the region have increased more rapidly their purchases of manufactures, as shown below:

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(34) ECLA, "La industrialización...", op.cit. page 99.

LAFTA: DESTINATION OF MANUFACTURING EXPORTS (1965 - 1977)

(Percentages)

	LAFTA	UNDERDEVELOPED COUNTRIES	INDUSTRIALIZED COUNTRIES	OTHERS
1965	26.9	8.4	63.8	1.0
1970	31.4	6.7	60.4	1.6
1975	34.5	12.0	51.7	2.3
1977	30.6	11.1	55.5	2.9

Source: Rimez, M., op.cit. Table 5, based on data from LAFTA.

The level reached in 1975 by the region itself may be explained by the contraction in the industrialized countries. But reciprocal trade of manufacturing goods was above that of basic goods in 1970, becoming the growing factor of intra Latin American trade. All this, of course, within the mentioned limitations with respect to the still modest volumes and the nature of the goods involved.

On the other hand, not all countries benefited equayly. Again, the bigger ones, specially Brazil, took advantage to sell their more diversified manufactures, including metalic products, machinery and equipment. Those goods precisely have in Latin America and other developing regions a much better possibility of selling. Well known are the efforts political and economic strategy that have allowed Brazil to gain ground in the markets of Africa and other regions.

DESTINATION OF MANUFACTURING EXPORTS

(Percentages)

	Developing America				Developed Market Economies				Eastern Europe and Chine	Other developing Countries			
	Total	LAFTA	CACM	Others	Total	United States	EEC	Others		Total	Asia	Mid East	Africa
gentina	60.4	48.7	0.2	11.5	31.7	7.1	18.8	5.8	4.6	3.2	0.4	1.5	1.3
azil	32.1	29.9	0.5	1.7	57.7	23.1	21.5	13.1	4.0	6.3	1.1	1.0	4.2
ile	85.2	85.2			14.2	3.4	7.4	3.4	0.6				
lombia	57.6	41.0	4.7	11.9	41.3	21.1	14.6	5.6	0.5	0.6	0.3		0.3
xico	25.2	16.3	5.6	3.3	72.7	51.2	12.8	8.7	0.5	1.7	1.4	0.2	0.1
ntral America mmon Market ACM)	90.0	4.2	78.8	7.0	9.5	7.2	1.6	0.7		0.5	0.5		

ource: ECLA, "La industrialización ..." op.cit. Table 33.

A detailed analysis by geographical destination shows that the importance of the developed countries as purchases of manufactures varies according to the different Latin America countries. They are important to Brazil, and specially Mexico, which are the countries well ahead as regards regional industrial development, and whose volumes have a determinant influence upon the Latin American average.

As regards the importance of the intra-regional market, it should be noted that the previous information refers to the first half of the seventies, when Argentina had not put into practice policies which would damage the industrial structure, and Chile had not with drawn from the Cartagena Agreement. Some data indicate that the significance of both countries fell, without meaning a radical change.

The regional market reveals specially important to the Central American countries, and specially their reciprocal trade,to the extent that sales to other markets are marginal.

The information brought together up to raw leads to a couple of ideas. Firstly, there is a tendency to reproduce in the Latin America context what has been characteristics of the relationship between developed and underdeveloped countries, in at least one sense: those relatively bigger countries find an important market for their manufactures in smaller and less developed countries. There is not enough evidence to state that this type of relationship deepers the inequalities , but there is not either to prove that it contributes to their reduction.

Furthermore, the increasing importance of the intra-Latin American market for the growth of the trade of manufactures derives from various factors. Amongst them , the integration agreements such as the Latin America Free Trade Association, the Andean Pact and the Central American Common Market. Beyond the insufficiences and obstacles faced by these agreements, they had important effects in the promotion of reciprocal trade. The information corresponding to the Central American Common Market are significant and yet nowadays , when the integration process is practically stagrated as a consequence of political disagreements, the Market is still important for the trade of industrial goods.

Of similar consequences have been the increasingly critical situation of the industrialized countries and the world economy as a whole, as well as the proteccionist policies and other obstacles opposed to imports from developing

countries. This reaction of the industrialized world delay the possibility of the emergence of a new international division of labour. Though the decline of some industrial branches has been considerable and the possibilities of reactivation seem low, the severity of the crisis and some impacts as unemployment indicates that, at least in the short run, those activities are not going to be reglected. The measures taken by members of the European Economic Community in the case of the steele industry are an example of what is being done about those problems.

Besides, experience shows that although the light industries have a relatively small share within the industrial structure of the developed countries, some of those branches keep a permanent or even increasing contribution. As it happens with agriculture where governments have not allowed an excesive contraction and adopt proteccionism measures to isolate it from the effects of the market, it is possible that they promote activities which process agricultural goods, or other traditional branches such as tobacco and textiles.

This kind of phenomena has forced the developing countries to search in the regional market a compensation to the decline of the exports to the advanced economies. Apart from integration agreements, other specific initiatives support directly or indirectly this modality of trade, like the compensation and payments agreements between central banks, the creation of joint entreprises and the investment projects in common.

However, all this has been insufficient and is not enough to talk about an econonomically integrated regional space; they may not even be strong enough foundations for its later construction. But it can be said that those attempts

point to the best perspectives of Latin America and the third World towards achieving more manufacturing exports and solving problems of a broader scape.

The fourth aspect tc be underlined refers to an interesting feauture: the active role of multinational corporations in some Latin American industrial exports.(35)

The available empirical evidence shows that between 30% and 40% of the manufacturing exports from the main countries of the region -Argentina, Brazil and Mexico- correspond to multinational corporation's subsidiaries. In the Argentinean case, this proportion rose to 42% in 1973, except for the frozen meat industry's exports.

In Brazil, the percentage varies from 18.8% (1976) to 37% (1978). In this case, the proportion was very high in some branches: pharmaceutical products (100%), transportation materials (94.7%); electrical materials (71%); rubber (67%).

In Mexico there are greater differences: whereas one of the estimates shows 23.3% in 1973, some others state a multinational share within total manufacturing exports of 33.8% and 34% in 1974. Some of the branches under almost absolute control have been tobacco, transportation equipment and rubber.

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(35) Numerous studies have been made of this subject contributing to a better understanding, but leaving important gaps. Well known are the difficulties in the research of the activity of these firms, starting from the obstacles to obtain accurate and recent statistical information. Another significant problem is that a large proportion of the flows of goods carried out by multinational corporations remain as intra-firm or "captive-trade", and cannot therefore be included amongst the normal foreign trade operations.

This behaviour means a change with respect to the traditional attitude of multinational corporations, whose main objetive has been to take advantage of the domestic market, specially those of bigger size, exports being a relatively marginal activity. (36)

This new conduct observed in the seventies has probably derived from the efforts of some countries to promote manufacturing exports as a prior objetive, the favourable tariff conditions for reciprocal trade, the exemptions given by an unprotected domestic market, and the own strategy of the corporations.

In fact, the greater contributions of multinationals to the trade of manufactures result as a consequence of the mutual facilities to promote reciprocal trade, thus becoming the first beneficiaries of policies whose original purpose was different. Those experiences have been taken into account in the integration agreements of Latin America, such as the Andean Pact, to prevent that the major benefits are absorbed basically by foreign firms. In some other cases, the increase of trade of industrial goods has been associated to systems of division of labour designed by the firm at a regional scale: different products are traded amongst subsidiaries, or parts and components are produced in one country to be filted together in another. It is possible that trade takes place only within the firm.

Setting exporting obligations to foreing corporations has not always led to the desired results. For instance, in the case of automobiles, some firms have fulfiled their commitments not by selling goods of their own field of production, but handcrafts, clothing or foodstaffs.

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(36) "Maquiladoras" have been the exception, but with the characteristics already described.

In any case, even though exports from multinationals have grown, they are still marginal with respect to total sales. In 1976, about 94% of the manufactures sold by American subsidiaries in Latin America went to the domestic markets.(37)

Due to many factors, the countries of the region have not shown capacity to become platforms of industrial export of the multinational corporations. Some of them have tried to do so by prorrating foreing investment; cheap labour under government's control has been the main incentive, but results are rather poor.

However, to evaluate the effects of the presence of multinationals it is necessary to consider the impacts upon the foreing sector as a whole, and it is known that they are frequently located in importing branches. Besides, their import propersity is much higher than that of nationa. firms operating in the same branch. This determines that the foreign balance of the multinationals be rather negative, with the consequent effects upon the manufacturing deficit. If other expenses are added -over and under invoicing, royalties, profits-, the global result is usually negative and to significant extent.

The information brought together allows another thought. It refers to the positive correlation between Latin American manufacturing exports and the growth of the industrial sector in each country, as well as of each of the specific branches. The higher the rate of growth of manufactures, the higher the rate of this kind of exports. This explains why a greater speed of the productive expansion leads to increases in productivity through economies of scale of static and

(37) Studies on the growing branches in Brazil and Mexico, where multinationals have a relevant position, show that the proportion of exports was in no case above 8.2% (Marinho, Luis. "Las empresas transnacionales y la modalidad actual de Crecimiento económico en America Latina", CECADE, Mexico, 1980.)

dynamic nature, which mean increasing competitiveness. This is a general long run tendency which can be modified -and in fact it is- by other elements, such as the commercial policies and the performance of multinational corporations.

As it refers to manufacturing imports one should refer to the extensive existing bibliography. It is to be noted that as part of the most recent trends, there are two basic orientations according to the different pattern of industrialization.

In the cases of external opering and reversion of the manufacturing development, there seems to be a situation that, despite of the important historical differences, resembles a modality of trade charasteristic of the Latin American expansion linked to foreign market: relatively greater specialization in exports of basic or unprocessed goods, and dependency from abroad with respect to the needs of processed goods. There is a spectacular increased of manufacturing imports which were formerly supplied by domestic industries, and the share of consumer goods, specially durables, rises considerably. This increase in the foreign purchases cannot be financed by increases of exports, no matter how big they are: imports have grown systematically much more. All this had been possible thanks to the availability of external credit during the seventies, and is reflected in the radical rise of the foreign debt of many countries: Chile is the best example.

Those economies where the industrializing strategy has been kept are not exempt from this asymmetry: the value of industrial imports has increased while that of exports lags behind considerably. The contribution of manufactures within total exports has risen and this eases the commercial disequilibrium, though in

absolute terms the deficit has increased oersistently.

For all 19 Latin American countries, the adverse industrial balance increased from 5 thousand million dollars in 1955 to about 30 thousand million dollars in 1975. The ratio of manufacturing exports to the gross output of the sector was 8% and that of imports declined to 44% in the mid-seventies.

This evolution is the consequence of the dominant pattern of industrialization charasterized by the lags in the branches of capital goods, certain intermediate inputs of advanced technology and more complex durable goods. Those insufficiencies make the Latin American manufacturing sector highly dependent from the supply of the industrialized countries.

In any case, the biggest and most advanced countries benefit from a degree of diversification which makes the import coefficient much lower. On the other hand, this coefficient is higher in smaller and less advanced countries.

4. Dissimilarities of the regional industry.

Although this caharacteristic has been repeatedly analyzed, special enphasis seems necessary.

First , the modalities of the process of industrialization have been strongly influenced by the size of the national economic spaces. The degree of industrial integration and productive diversification has been much lower in small countries.

Thus, the non durable consumer goods industries are located and have reached a good level of development in most countries of the region. Intermediate goods industries, though considerably spreaded, are not always found in small economies. Only the production of cement and the refinery of oil are present in the majority of the cases while the rest of the basic industries are more concentrated. Wood and paper industries are also common. The basic metals branches are preferably located in large and medium size countries, due to the existance of mineral resources and to the size of the market.

The metal-mechanical activities are concentrated mainly in the largest countries, and to a lesser extent in medium and small countries. It is possible to observe important differences with respect to the contribution of those industries to the manufacturing output: between 24% and 31% in large economies; between 15% and 20% in medium size economies; and between 7% and 15% in small ones. Besides, the locally processed segment and the proportion of national components vary according to the size of the country; in some of the small ones those are just fitting together operations, as in the case of the automobile industry.

Capital goods industries are basically located in Argentina, Brazil and Mexico whose contribution is about 90% of the total. These countries also produce 60% of their own requirements of capital goods, though with very little progress in the more complex and specialized fields. The proportion of self supply is substantially lower in medium size economies (25%) and insignificant in small countries.(38)

The performance of the three groups of countries as regards exports and

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(38) ECLA, op.cit. pages 54,55, 57.

imports was analyzed before.

All this has contributed to the idea that nor only has the process of industrialization reached different quantitative levels according to the size and potential of each country, but also those factors have led to qualitative dissimilarities and different patterns of manufacturing development. There have been distinguishing feautures in each group of countries that cannot be considered as simple stages within a common trajectory. It seems more likely that they correspond to specific and differentiated forms of industrialization of each national case.

There also dissimilarities within manufacturing associated to the levels of productivity, capital endowment, type of technology and scale of operations. In the case of the tradicional industries such as food, textiles, clothing and furniture, large modern plants coexist with small factories of low technical level and productivity, whose contribution to employment is considerably higher than that of output. This aspect deserves a more detailed treatment which is beyond the possibilities of this paper.

II. INDUSTRIALIZATION AT THE CROSSROADS.

The outstanding position the industrial problems have had in the analysis of the Latin American economy derives from the important role of this sector in the regional development. However, there has been a change of approach in the most recent studies, as a consequence of the experiences drawn from the efforts to continue the industrializing process.

Schematically, the evaluations on the running of the manufacturing industry written in the sixties intended to revial the main disequilibria and obstacles that was necessary to overcome in order to continue its development and to derive the results that had been estimated. There was a general confidence in the capacity of industry to promote and lead the growth of the economy as a whole.

During the past decade, there was a change of attitude towards the industrializing projects in Latin America. The general agreement on the necessity of promoting industrialization as a means of accelerating economic and social growth vanished. In the debate, both academical and political, arguments have been raised which put in doubt, though from radically different theoretical and political perspectives, if not industry itself, at least the conditions under which it was established or the patterns followed, depending on the current of opinion.

The true fact is that the industrializing experience of the region poses disturbing questions. At a global level, manufactures have shown important rates of growth, even higher than those of the advanced economies as it happened between 1950 and 1977 when the regional gross product increased at a cummulative annual rate of 6.7%, whereas in North America (United States and Canada) the figure was 3.6% and 5.2% in Western Europe.

Such tendencies were specially vigorous in certain countries where the manufacturing sector has had a growing behaviour and a capacity to pull the rest of the economic activities. This has been the case of the largest countries, particularly Brazil and Mexico, but even the relatively small ones have also experienced phases of industrial expansion. Without losing sight of the obvious

differences as regards size and starting points, it should be remembered that though the manufacturing product in Brazil grew at a rate of 8.5% per annum, between 1950 and 1978, and that of Mexico at 7.3%, the corresponding figures are 8.3% for Costa Rica, 7.9% for Venezuela and 7.4% for Honduras.

On the other hand, industrial development led to an important rise of productivity, diversified and made the products structure more complex, increased the leves of income, promoted the skills of labour force and finally, extended its influence on different aspects of the social organization. But it is has been uncapable of inducing the modernization of the economy and society as a whole and of generating a vigorous and sustained process of development which could solve the problems of backwardness, poverty and dependency from abroad that effect a large proportion of the Latin American population. On the country, the industrializing projects have been accompanied by a series of disadjustments and extremely difficult problems, and all countries remain in a situation of chronic underdevelopment to which solutions is hard to imagine.

This has been used as a basis by a current of neoclassical inspiration to spread the idea that the fundamental cause of the regional difficulties lies on the policy of protection of the domestic market and in the excessive government intervention, which would have caused the emergence of an inefficient and illegitimate industry, since it would not be in accordance with the corporative advantage of the countries. From this sources would also derive the lack of international competitiveness, its unefficient exporty behaviour and other evils associated to the inadequate resource allocation. The solutions that the approach suggest to solve such problems are well known and have been refered to in a previous pages.

In fact, those are conceptions that have never been away from the Latin American context, but which remained isolated in certain academic and publical institutions because of the predominance of the industrialist formulations. In the past decade, in face of the increasing difficulties to sustain the manufacturing growth, and particularly as a consequence of the political and social tensions which affected some countries of the region, these neoliberal postulates were adopted as official doctrine by certain governments and have inspired their economic policies, though without the aproval of majority of the public opinion in such countries. Moreover, after a long period of putting into practice those polices, a severe criticism of the results obtained has been formulated by different social groups.

It is not the intention of these lines to reproduce the debate about this project, both in the field of theory as in practice. It should be nonetheless remembered that industrialization in the developed countries of today was achieved thanks to no lower customs barriers, and that England became the center of irradiation of the free-trade though only after she had conquered an unquestionable dominance in industry. The existance of free-trade has rarely been absolute in reality, and even Adam Smith made an important exception when accepting the priority of national protection over the "opulence", which later on became the defense of the "rising industry" in other authors.

The explicit neo-liberal arguments are not strictly anti-industrial, as they criticize activities of any nature whose development has been losed on customs barriers and other incentives which distort the laws of the market. Experience reveals that when put into practice, they have also affected adversely certain agricultural activities. However, if theis proposals are carefully

analyzed and contrasted with the characteristics and resources present in most Latin American economies, it can be inferred that their application will usually lead to the dismantling of many of the manufacturing activities. Or, in any case, it will be possible to preserve traditional industries, highly dependent from the availability of natural resources, or protected by being far from alternative sources of inputs, or other reasons.

There is, however, a diferent perspective for evaluating negatively the characteristics and orientation of the Latin American development. It also makes a profound criticism of the bases of the process of industrialization and proposes a revision of the structures, but starting from the recognition of the importance of the sector as engine of economic expansion and development.This current of thought whishes to promote a different pattern of industrial accumulation, exempt from the distortions and insufficiences of the former and capable of achieving a more equitable distribution of the benefits obtained.

There are also other opinions associated to the models of industrialization prevailing nowadays, but these have also faced the necessity of introducing changes and adopt measures which allow the recovery of manufactures, as well as solving the disequilibria of the pattern of growth deepened by the international crisis.

In fact, the conviction spreads that the pattern of industrial development is reaching limits which will hardly be overcome, and that partial corrections are not encugh to ensure its continuity. This does not mean that it is inevitably condemned to breakdown, but that the preservation of the same pattern would be achieved at the expense of deep disequilibria and strong discontinuities in the

cycle of expansion, and the acceptance of the adverse impacts upon the general process of development.

As it has insistently been repeated, there are important differences with respect to the problems that affect each national industry. The large countries, regarded as NIC's "are reaching limits which lead to historical alternatives whose dramatic nature produces intelectual and ideological reactions which vary from impotence to goodwill".(38) Medium size countries face difficulties when they intend to carry out more complex activities, with more requirements of scale, while the small ones must face the challenge of going beyond the phase of incipient industrialization.

Although important, size is not the only factor, since the obstacles and perspectives of the developing world depend on a large variety of domestic and external determinants: the modality of participation in the world economy and the degree of commercial, technological an financial internationalization; the activity of multinational corporations; the socio-economic borders and their influence upon both the markets of goods and factors; the capacity to adapt technology; the existance of an enterprising capitalist sector; the export potential. All this is of course closely linked to the global strategy of development, the objetives set, the agents and the means chosen, amongst which it is to be found the role given to the industrial sector and their particular goods.

Bearing in mind the reservations already mentioned, an attempt will be made

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(38) Tavares, María C., "Problemas de Industrialización Avanzada en Capitalismos Tardíos y Periféricos" in Economía de América Latina, No. 6, First Semester 1981, CIDE, México.

to describe some of the main subjects of the present debate on the process of industrialization in Latin America.

1. Structual disequilibria.

To a certain extent, the achievements in the recent process of industrialization are explained mainly by the durable consumer goods branches, such as transportation equipment and electrical products. In smaller economies, as it was stated, these are only fitting together activities, whereas in the largest ones there is considerable progress in metal-mechanical and even some capital goods branches.

Those sectors do not have a high quantitative share whitin the industrial structure, but have led the process of capital accumulation. As expressed by María C. Tavares, the concept of leadership is much more profound that the mere reflect on rates of growth of investment and production in some branches.

Public, foreign and private investment act together to promote industrial expansion. Investment in roads, energy, liquid fuels and steele supports the growth of the automobile and electrical material industries, which then integrate with the metal, mechanical and building materials industries.

All the refers, however, to the transplant of technologically advanced products and processes from industrialized countries to the much narrower structure of the Latin American region. On the one hand, those are activities with little link within the natural resources and productive potential of those countries. On the other, they require intermediate inputs and capital goods which.

despite the domestic efforts, cannot be supplied internally.

The result is an insufficiently integrated industrial structure which -quoting to same author- lacks of an "endogenous dynamic nucleus". This pretends to stand out that because of the absolute and relative small size of the capital goods sector, as well as its lack of integration with the technical base of the leading sectors of the economy, the intra-industrial effects of the expansive cycle are of a limited reach.(39)

Even when a capital goods sector exists, and in some cases it is significant, it is not sufficiently integrated and is uncapable of facing the demand for such products. That is why the investment of the boom do not extent their accelerating effects within the national economic space, since part of them go abroad as imports of equipment and machinery. The volume of these "filtrations" depends on the degree of development and diversification of the industrial structure, but have been in any case important, affecting negatively the foreign accounts. In small countries, dependency on foreign capital goods is almost direct; in the most advanced ones, the increase of demand that results from investment acts primarily upon the industrial sector to then bring about a demand for imports of more complex or specialized capital goods. The endogenous cycle of expansion, where the feedback effects operate within industry and the problems of selling depend less on the final demand of consumer goods, cannot be completed.

Meanwhile, the non durable consumer goods industries, despite of their relative decline, represent still a high proportion -close to 50%- of the total output, even in the most advanced countries of the region, if inputs sold for final consumption are taken into account.

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(39) ECLA, "Esbozos de los principales problemas de la industrialización Latinoamericana", in Max Nolff "El desarrollo industrial latinoamericano, op.cit.

However, as opposed to the metal-mechanical branches, consumer goods industries do not produce for themselves and depend on final demand, whose expansion is closely linked to the rise in the levels of wage and employment, and to other factors which determine the growth of the domestic market. Those branches can expand as long as demand does, and accompany the growth of industry but are not capable of leading it.

In the last few years, government policies, except from those already analyzed - have attempted to achieve a better integration of the manufacturing structure, in accordance with specific circumstances and goods. Thus, the largest countries have adopted measures with respect to the lags in the intermediate and capital goods branches of higher technological level through special projects, such as the purchase of domestic goods by government agencies. There have been some goods results but they are still far from completing the process of industrialization with an adequately integrated sector of capital goods and heavy intermediate inputs. Technological factors and structural limitations have been an obstacle to the objetives of the import substitution process.

The goods of the medium size countries cannot be equally ambitions, but they seek a more diversified and integrated industrial structure. The small economies are also trying to build a better industrial system, though under conditions of small somestic markets, reduced availability of resources and raw materials and little possibility of obtaining the required financial support.

2. The size of the market.

One permanent subject in the analysis of Latin American industry is that

of the obstacles derived from the insufficient size of the domestic markets as compared to the dimensions required for an efficient operation of the plants. The low level of average income and the inequity in the distribution -specially the exclusion of large social groups from the market of manufactures- have limited the expansion of industry.

It would be necessary to recall some well known facts about the industrial development of the region. Firstly, the existence of a number of options as regards the scale of production of the industrial plants in many sectors, although the smaller the scale the higher the costs per unit.

Besides, there has been an inefficient use of capital through plants whose scale is under the economic minimum, and even under the size the domestic market would allow. That is, there has been a waste of the opportunities offered by local markets to achieve economies of investment and cost of larger scales. Some example in Latin America are the industries of aluminium, steele, and chemicals.(40)

It should also be remembered that there is a possibility of partially using existing capacity without affecting its competitiveness in the domestic market, since excessive protection allows to transfer the higher cost to the price. Moreover, in branches such as transportation equipment and electrical products, where differentiated- concentrated aligopoly structures prevail, and multinational subsidiaries are dominant, production goes ahead of demand, and a planned level of unused capacity is kept to face competition.(41)

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(40) ECLA, "Esbozos...", op.cit. pages 158-160.

(41) Tavares, M.C., op.cit.

A paradoxical situation is to be noted. There is a larger number of subsidiaries operating in the small markets of the region than in those of their country of origin. For instance, European or American firms compete with the Japonesse in the international market but they face lots of obstacles when they try to operate in Japan. Barries to entry have a different significance in Latin America when talking about multinationals or nationals firms.

This situation is frequently observed in sectors where oligopolistic competition takes the form of product diferentiation and not of increases in the scale of production of the existing goods. The growth of those industries is based fundamentally on a more intense demand from traditional consumers. In some countries, measures have been adopted -foirer income distribution, agrarian reform- to incorporate new consumers to the market of manufactures and thus induce an expansion through the increase of the scales of production, and not to introduction of new products. The results differ considerably from those originally expected. Instead of concentrating in basic consumer goods, the demand went to durable consumer goods. But the most relevant fact is that if things had happened as originally planned, the basic mechanism of growth of key sectors would have been damaged, as it requires the concentration of income to increase the consumption of privileged groups and to incorporate to the market the middle classes which can reach this consumption through indebtness. Besides, it would have damaged the system of competition which allows the coexistance of a large number of firms in the sectors. In this manner, a lot of small plants operate inefficiently or under the appropiate scales.[42]

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(42) Martínez Tarragó, T. and F. Fajnzylber, "Las Empresas transnacionales. Expansión a nivel mundial y proyección en la industria mexicana", F.C.E. México, 1976, page 191.

It can be seen that the problems of the markets is for more complex than it was thought. There are powerful factors of a structural nature associated to the fundamental axis of modern capitalist expansion.

But it should also be considered that those industries leading manufacturing expansion correspond to forms of consumption which are an aspiration of all peoples of the world. These desires cannot only be explained by the so called "demonstration effect", since those patterns of consumption are closely associated to the leading activities of the Latin American industrial expansion in the last decade. The radical elimination of the possibility of satisfying those ambitions goes against extremely significant social alues and leaves out the fact that industry is nothing but a means to procure higher standards of living to the population. Besides, it is difficult to make those aspirations compatible with the scarcity of resources in the region and with the urgent needs of large groups of population which lack of the most elementary means for living. One of the policies used has been the control and standarization of the production of non-indispensable consumer goods, but within an exceptional socio-political context. In fact, it is not easy to think of a change in the dominant trends of the process of regional industrialization without profound changes which go much beyond the manufacturing field.

At all events, this does not mean that one should forget that the size of the market represents an objective limitation to the industrial development of some countries of the region, or to certain manufactures in particular. The attempts of economic integration seek for a solution to those restrictions and particularly in Central America results were not paltry. However, results are still far from the planned and potential goals, and the integration agreements

are nowadays facing a critical situation which puts in doubt the perspectives of their effective continuity.

In any case, the increasing international interdependence cannot be left out and the emergence of groups of interest of a different nature whose actions are coordinated at a world level, oblige to think that for Latin America there is no other way but cooperation and regional integration, as well as understanding with other developing areas, in order to find solutions to the obstacles faced in the process of industrialization . Such policies should not follow past orientations or as a reinforcement of the present pattern of industrial development.

3. Technological Challenge.

Technology is another of the subjects present in the debates and proposals. Most countries, specially the larger ones, adopted measures and spent resources to overcome the evident backwardness in this fields, though results are still poor.

The problem is more serious as a real scientific-technical revolution is taken place in the developed countries as a means of overcoming the present crisis. The progress made in the fields of computing, data processing, comunication, use of robots, genetic engineering and biotechnology allows to predict the rising of a new technological industrial pattern. In the meantime Latin America is pressed to solve disequilibria and obstacles faced by a manufacturing system which, in general, lags behind the present technological pattern. The problem is even more difficult in those countries whose manufacturing sector has been dismantled and where it is hard to imagine the re-building of the productive structure of the past, even if the machineries were in condition of being put

into work rapidly. It could be said that such a situation offers a better opportunity to start a renewed and modern industry, but this could only be done by the acquisition of technology or foreign investment; dependence would thus perpetuate if this was carried out without a clear policy to strergthen national autonomy. Besides, it should not be forgotten that external debt will impose restrictions to the availability of resources for industrial development.

Of course autarchy is ruled out since it is neither desirable nor possible in the present context or under the conditions of the regions. Perhaps a certain relative isolation, to any possible extent, would partially diminish the negative impact of the foreign industry. Nonetheless, experience shows that sooner or later some ofthose effects will be suffered by local industry.

Besides, such a policy would make sense to the extent that advantage was taken to promote specialization in certain fields according to the potential of each country. Poverty and backwardness make it indispensable to rise productivity and income in Latin America, and advanced technology is an irreplaceable tool.

Naturally, the goal should not be mastery in all fields of science and technology, but only in those which are a requirement of the national priorities and circunstances. The necessity also emerges of avoiding some negative effects upon nature and human beings of the most complex methods of production. This requires basic technological skills to make adaptations and further complementary developments.

The so called appropiate or intermediate technologies have shown their efficiency in some cases, mainly in agriculture, but only as a means of facing

simple technological challenges in small comunities. It does not seen the proper way to solve more relevant problems, though they should not be left out and it is convenient to continue using them as complementary tools. Moreover, this is justified since it allows the acquisition of skills useful for more complex techniques. In any case, the experience in China at the beginning of the fifties ilustrates the benefits and limitations of this type of technological effort, despite of the differences with respect to the present situation in the region.

It should be added that, if the present tendencies persist, the technological gap between underdevelopment and development is going to widen. This involves serious risks. Firstly, that many of the most important industrial projects in Latin America could fall behind before reaching maturity, since they are located in sectors subject to significant changes. In the same way, without an accurate knowledge of the progress and innovations, there is a danger that subsidiaries may purchase obsolete equipment, as it has happened in the past. This might be specially negative if it occurs in advanced and strategical branches of industry. Finally, there is a chance that foreign capital labour intensive firms become capital intensive and thus return to the countries of origin. The same type technological progress might lead to a loss of competitiveness in some manufacturing exports of the region.

Such challenges claim for systematical and considerable effort on the part of the governments to promote the development and adoption of technology. This is precisely what is being done in the major industrial countries, and there is no argument in favour of leaving this task to the forces of market, since it is seen as a means of fighting inflation, unemployment, energy dependence and productive stagnation. International and specially regional cooperation, in

specific fields, could make important contributions to the technological progress of these countries. Again, the largest countries are in a more favourable position to solve these problems, and could therefore give aid to the rest of the nations.

4. Protection of the domestic market.

This has been one of the main themes in the debate during the last decade. The experiences of external opening have not led to the emergence of internationally competitive industries, as it has been proved. Moreover, those economies where tariffs and other barriers were drastically reduced, registered higher rates of growth in non-tradeable productions: building, domestic trade, banking and other services. Some categories of exports grew, as it was explained before, but they were insufficient to finance the more accelerated growth of imports. On the contrary, countries where the structure of protection was kept, like Brazil, made greater progress as regards exports of manufactures.

However, as it has been widely recognized, the options are not extreme protection or total opening. This a false dilemma. The Latin American experience makes it evident that when defensive barriers are excessive and not selective, they lead to distorsions and inefficiencies of the type already described.

If it is to be admited that industrialization is an inevitable requirement of economic and social development, it should be recognized that its promotion demands a certain level of protection of the domestic market, according to precise objectives of selectivity and efficiency. It should be kept in mind that manufactures in Latin America have to be in competition not only with the production of crafts but also with industrialized economies which are in control

of technological progress. This last one is maybe a crucial factor in the determination of contemporary competitive advantages.

The recent experience in the region points to a notion of comparative advantage different from that of neo-liberalism. In fact, the results of the external opening indicate that they have been absolute advantages, fundamentally associated to the availability of certain natural resources. That is why it is necessary to go beyond the purely static formulations and make use of broader concept which includes those advantages linked to labour force and some basic resources, as well as those derived from the process of industrialization itself and its corresponding technological progress.

It does not seem useless to quote some words of Keynes, from his article "National Self Sufficiency" which are not frequently remembered: "Ideas, knowledge, science, hospitality, travelling: those are the things that because of their own nature should be international. But goods ought to be produced within our country as long as this is reasonable and possible and, above all, financing should be primarily domestic".(43)

This an other aspects, some of which have been analyzed, from the set of challenge faced by Latin American industry to became the impelling force that the region requires. Many of the problems of the industrial sector are hardly solvable if the present bases and structures persist. Thus, for instance, the pattern of technological absorption favours the modernization of local firms through the adoption of labour intensive methods, which leads to a rise of the capital labour ratio that spreads all over the sector, even though this trend may not be coherent with the relative price of factors. Some of the characteristics

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(43) Quoted by Block, Fred, "Los orígenes del desorden económico internacional", FCE, México 1980, page 20.

of the pattern of industrial development are against the growth of employment.

Something similar applies to other matters like the regional descentralization of industry, the management of specific policies for the sector, and others.

The scape of the industrializing efforts is also limited by the lower availability of foreign resources derived from the service of the huge external debt.(44) At the end of 1982, the total debt of eight countries of the region was nearly 300 thousand million dollars, meaning 55% of the debt of 50 underdeveloped countries, according to Morgan Guaranty Trust. It is known that this burden concentrates in Brazil, Mexico and Argentina, though it is also relatively heavy to Chile and other countries of the region. The problem is greater in those cases where the foreign credit was used to rise private consumption, instead of expanding the exporting potential.

Those policies which aim at the reduction of the levels of economic activity in order to free resources with which to pay the interest and principal of the debt, will affect specially activities like manufacturing, so dependent from foreign inputs. That is why some international agencies, mainly GATT, warn that such policy "cannot be sustained for a long time; banks, governments and international agencies should primarily be worried about the improvement of the general economic performance of the indebted countries".

The main problem -continues the statement- is to make the necessary payments to keep the international financial system working "and to ensure a ret income for indebted countries at the level required by a reasonable rate of growth; otherwise, there is a risk of serious political disturbances.

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(44) Lichtensztejn, S. "América Latina en la Dinamica de la crisis financiera internacional", paper presented in a seminar organized by CIDE, Mexico, February 1983.

T A B L E 1

PARTICIPATION OF MANUFACTURES IN THE GDP OF THE SELECTED COUNTRIES

(Percentages)

	1960	1965	1970	1970*	1973	1976	1978	1979*	1980*	1981*
Argentina	28.76	31.48	32.96	35.7	35.98	34.28	32.35	26.05	24.70	22.10
Brasil	25.74	25.50	28.73	25.3	30.89	30.63	30.40	29.71	29.60	28.24
Colombia	19.28	20.24	20.79	18.9	22.01	21.92	21.93	18.55	18.21	17.59
Chile	23.13	25.70	25.22	25.5	26.35	21.07	21.80	22.69	22.40	21.82
México	18.76	20.65	22.44	23.6	22.83	23.06	23.61	25.09	24.82	24.72
Venezuela	11.24	12.90	13.75	11.9	14.98	17.88	18.03	16.64	17.31	17.26
América Latina*	21.7	-	-	24.5	-	-	26.0	-	-	-

SOURCE: UNIDO

* ECLA

RATE OI GROWTH OF MANUFACTURING OUTPUT

TABLE 2a

	ARGENTINA		BRAZIL		COLOMBIA		CHILE		MEXICO		VENEZUELA	
	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78
FOOD BEVERAGES AND TOBACCO	3.09	- 1.29	8.01	5.59	8.22	7.7	2.85	.37	4.93	3.75	2.96	2.7
TEXTILES	3.5	- 0.95	4.51	2.11	7.6	1.55	.67	- 6.73	6.46	3.44	3.05	1.01
WOOD AND FURNITURE	2.39	-13.32	10.16	6.58	5.25	2.33	1.04	- 5.95	3.12	6.83	2.51	4.04
PAPER AND PRINTING	4.48	2.04	8.89	4.0	11.45	1.91	.92	- 2.34	6.21	6.29	5.62	1.99
CHEMICALS	4.87	0.77	11.11	9.54	8.01	5.26	4.31	- 6.5	10.86	3.36	2.43	2.86
PETROCHEMICALS	6.62	0.91	11.74	6.43	6.6	- 0.61	8.56	1.0	11.85	7.87	1.55	- 8.29
NON METALIC MINERALS	5.74	0.21	11.45	9.24	6.25	5.38	4.6	4.2	9.66	5.37	1.16	5.25
BASIC METALS	6.93	- 2.25	11.03	8.19	3.33	2.4	- .98	9.42	7.98	8.48	3.71	.35
METAL PRODUCTS	5.5	- 5.75	11.03	8.19	7.29	9.02	2.07	- 4.27	6.43	4.09	6.83	0
MACHINERY NON ELECTRICAL	9.98	4.46	21.53	5.75	7.29	9.02	4.87	-17.92	10.91	8.36	7.03	5.46
ELECTRICAL MACHINERY	5.9	0.63	9.59	9.19	7.29	9.02	3.53	1.78	10.35	7.41	6.96	6.24
TRANSPORTATION EQUIPMENT	8.9	.56	19.97	6.97	7.29	9.02	3.19	- 5.5	11.85	6.19	2.15	7.03
OTHER MANUFACTURING	4.27	- 1.53	10.16	6.58	7.29	9.02	- .52	- 6.92	11.03	1.97	2.6	2.13
TOTAL MANUFACTURING	4.98	- 0.61	10.16	6.58	7.73	5.43	2.8	- 0.26	7.45	4.72	2.64	- 0.78

SOURCE: U.N. Yearbook of Industrial Statistics, International Financial Statistics G.M.F., World Bank, World Tables.

C U A D R O 2b

Rate of Growth of Manufacturing Output

(Porcentage)

	1979	1980	1981	1982
Argentina	10.2	- 3.8	-16.0	-
Brasil	6.7	7.6	- 6.4	2.0
Chile	7.9	6.2	2.6	-21.9
Colombia	4.2	2.3	- 1.0	-
México	10.6	7.2	7.5	- 2.5
Venezuela	4.2	2.7	0.3	-
América Latina (19 países)	7.8	5.3	- 2.0	-

SOURCES: ECLA: "Estudios Económicos de América", notes 1981, 1982.

C U A D R O 3

RATE OF GROWTH OF DOMESTIC DEMAND

Average annual rate of growth

	Argentina		Brazil		Colombia		Chile		México		Venezuela	
	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78
Food, Beverages and Tobacco	3.45	-4.12	7.45	6.73	9.91	8.78	3.52	-4.55	4.96	3.53	2.68	6.39
Textiles	2.48	-2.23	4.12	2.24	6.85	1.48	0.63	-3.55	7.27	3.4	2.52	4.46
Wood and Furniture	1.94	-12.71	10.5	7.21	4.92	4.23	-.06	-35.89	3.2	6.26	2.11	6.87
Paper and Printing	3.64	1.86	9.01	3.74	10.76	0.49	-.16	-23.92	6.58	5.43	5.01	4.25
Chemicals	4.7	.96	11.59	8.83	7.95	5.84	3.9	-5.19	9.41	3.78	2.18	9.49
Petroquimicals	5.63	-0.01	11.02	5.34	3.65	4.4	7.49	-1.15	19.83	-3.45	-0.13	69.38
Non Metal Minerals	4.7	-0.31	11.53	8.95	5.67	5 36	3.39	-3.23	8.97	6.39	0.26	10.31
Basic Metals	5.75	-6.1	11.91	6.51	3.74	4.79	-3.3	-13.4	8.26	11.61	4.52	9.35
Metal Products	5.09	-5.63	11.45	7.3	6.00	8.57	0.57	-4.55	5.56	4.23	3.95	8.22
Machinery Non Electrical	7.98	4.79	22.04	3.26	2.56	6.2	3.29	-4.37	6.59	4.52	3.98	16.66
Electrical Machinery	6.06	0.77	10.75	7.79	5.06	7.46	2.45	7.19	9.83	5.3	3.93	12.28
Transport Equipment	8.05	0.77	19.64	5.5	5.8	7.94	2.65	-3.2	9.59	4.9	1.59	13.71
Other Manufacturing	4.19	-0.98	11.97	5.05	-2.13	19.67	1.41	5.58	10.44	1.83	1.53	14.56
Total Manufacturing	4.67	-1.61	10.55	6.05	7.07	6.2	3.01	-3.94	7.24	4.48	2.83	10.39

Source: U.N. Yearbook of Internacional Trade Statistics. World Bank, World Tables. U.N. Yearbook of Industrial Statistics. International Financial Statistics I.M.F.

TABLE 4

RATE OF GROWTH OF EXPORTS

Average annual rate of growth

	Argentina		Brazil		Colombia	
	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78
Food, Beverages and Tobacco	0.8	11.18	10.85	0.47	4.05	1.7
Textiles	22.95	11.36	17.11	-1.46	16.92	1.31
Wood and Furniture	20.7	7.04	7.73	-6.04	9.87	-7.64
Paper and Printing	10.96	-4.05	22.16	9.35	17.5	28.03
Chemicals	9.13	3.53	19.58	11.61	13.44	-4.33
Petroquimicals	-14.22	27.48	100.59	-4.85	10.69	-2.34
Non Metal Minerals	26.67	16.63	20.3	16.21	15.14	11.42
Basic Metals	29.56	8.05	8.37	18.24	21.43	-5.0
Metal Products	20.45	9.32	23.9	21.47	17.44	7.78
Machinery Non Electrical	23.58	3.48	20.64	23.04	20.16	11.89
Electrical Machinery	24.48	3.78	31.00	17.94	26.05	16.87
Transport Equipment	47.23	3.08	26.05	36.93	31.47	24.11
Other Manufacturing	22.87	13.25	28.23	6.65	54.75	-20.6

Source: U.N. Yearbook of Foreign Trade Statistics.

Chile		México		Venezuela	
1965-73	1973-78	1965-73	1973-78	1965-73	1973-78
-3.85	39.94	6.43	4.81	2.03	-4.41
-3.61	28.71	2.12	-2.05	21.76	-29.84
18.22	27.03	13.04	8.61	-19.79	-14.5
11.5	29.28	13.18	0.42	37.65	-11.02
3.95	19.09	9.61	4.34	32.98	-6.92
1.15	58.38	-4.55	-14.83	1.55	-14.94
20.42	43.21	10.89	10.06	7.62	1.09
-0.68	11.29	5.0	-4.73	-12.36	25.73
-14.56	28.79	17.01	-3.58	1.28	22.73
-1.07	48.67	25.26	5.19	-13.2	70.93
8.38	13.41	45.41	-19.81	-30.32	26.12
-18.15	26.09	46.53	3.76	51.5	7.38
16.44	24.41	15.94	-5.76	8.62	21.41

TABLE 5

RATE OF GROWTH OF IMPORTS

Average annual rate of growth

	Argentina		Brazil		Colombia	
	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78
Food, Beverages and Tobacco	0.18	6.09	13.9	2.54	6.75	14.85
Textiles	-12.37	-2.59	37.46	-6.59	8.44	-1.29
Wood and Furniture	-1.46	-6.36	23.3	7.39	7.33	9.11
Paper and Printing	-0.28	-1.36	16.64	-2.52	8.40	2.00
Chemicals	4.4	3.27	17.54	3.58	8.64	5.97
Petroquimicals	-3.83	-7.24	6.75	-18.48	-3.43	26.9
Non Metal Minerals	-3.12	-0.79	16.35	4.81	5.35	10.01
Basic Metals	4.03	-21.73	19.56	-7.19	5.91	7.38
Metal Produts	1.38	2.18	21.77	-6.66	3.16	5.92
Machinery Non Electrical	4.26	5.62	23.9	-5.37	0.89	4.76
Electrical Machinery	9.04	2.07	24.31	-0.44	2.53	5.23
Transport Equipment	0.16	6.49	16.58	-3.00	3.7	6.36
Other Manufacturing	6.43	4.69	28.26	-1.96	8.52	2.58
Total Manufacturing	2.14	-1.71	18.56	-2.64	5.05	6.58

Source: U.N. Yearbook of Foreign Trade Statistics.

Chile		México		Venezuela	
1965-73	1973-78	1965-73	1973-78	1965-73	1973-78
4.68	-2.92	9.44	-4.5	-0.46	27.55
0.23	10.18	12.19	-8.92	-5.01	33.96
7.19	-1.35	8.41	1.7	-1.58	21.97
2.2	2.77	13.23	-8.5	3.23	11.82
2.99	2.13	2.99	6.39	1.39	20.11
1.1	-24.98	15.41	-17.65	-0.13	16.74
-1.5	5.16	3.16	18.87	-2.61	24.35
-2.9	0.74	6.68	22.22	5.89	25.06
-5.88	3.89	2.13	2.73	-0.83	19.62
1.9	4.28	3.26	-1.46	3.32	18.78
0.75	14.7	11.58	-10.55	1.73	15.79
1.62	.05	4.26	-2.43	0.78	21.15
3.12	11.48	7.95	-0.9	1.26	18.61
1.53	2.27	6.14	.81	1.46	20.7

TABLE 6

RATE OF GROWTH OF PRODUCTIVITY

Average annual rate of growth

	Argentina		Brazil		Colombia		Chile		México		Venezuela	
	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78	1965-73	1973-78
Food, Beverages and Tobacco	0.14	-1.49	4.20	2.45	3.51	3.08	-2.56	-0.54	3.12	2.03	0.6	-1.82
Textiles	2.04	.5	.03	-0.69	2.07	-1.07	3.03	-2.65	3.71	0.99	1.21	-1.33
Wood and Furniture	-0.55	-2.43	1.61	3.78	1.5	2.54	5.81	-6.05	1.95	5.11	3.32	6.29
Paper and Printing	-0.34	-1.44	2.24	1.23	6.09	-2.56	0.09	-1.64	4.23	5.31	1.25	-6.72
Chemicals	3.69	2.44	7.43	5.89	3.21	2.12	3.24	-4.82	5.54	-0.12	0.55	-11.31
Petroquimicals	3.52	1.94	4.73	2.29	-0.00	-6.2	-5.22	-5.39	12.24	7.87	2.48	-20.04
Non Metal Minerals	3.42	1.88	3.72	6.45	4.99	4.02	0.61	-2.59	5.99	2.06	-0.09	-4.33
Basic Metals	5.61	4.04	6.36	16.8	0.58	0.5	-0.04	3.47	3.42	4.67	-2.9	-17.41
Metal Products	4.18	2.86	6.13	-2.19	3.05	9.42	0.16	-0.85	1.52	2.00	5.0	-1.55
Machinery Non Electrical	7.35	4.66	2.1	0.82	-6.08	8.23	2.45	-9.21	7.08	-2.72	4.19	-8.93
Electrical Machinery	4.02	11.53	4.02	8.03	5.92	2.87	4.06	3.5	3.34	3.43	5.59	-.06
Transport Equipment	6.27	4.05	10.53	4.52	7.89	-0.38	4.29	8.84	3.79	0.79	3.54	4.34
Other Manufacturing	-0.37	-0.5	1.26	3.1	5.09	7.67	4.12	-0.18	10.1	-2.97	1.31	9.5
Total Manufacturing	2.36	1.49	4.08	3.7	3.06	2.31	3.04	0.79	3.8	1.5	1.74	-4.82

Source: U.N. Yearbook of Industrial Statistics. World Bank, World Tables. International Financial Statistics I.M.F. ILO Yearbook of Labour Statistics.

TABLE 7a

COMPOSITION OF THE GDP FOR SELECTED COUNTRIES AND YEARS

(Percentages)

	1960		1965		1970		1973		1976		1978	
	Goods	Services	Goods	Services	Goods	Services	Goods	Services	Goods	Services	Goods	Services
Argentina	52.46	47.53	54.55	45.45	55.81	44.19	56.44	43.56	56.23	43.77	55.38	44.62
Brasil	52.31	47.68	51.72	48.28	50.07	49.92	50.031	49.97	50.033	49.97	50.18	49.81
Chile	40.69	59.30	42.76	57.24	41.70	58.30	41.56	58.43	39.24	60.76	38.52	61.48
Colombia	59.84	40.15	57.62	42.38	57.60	42.40	56.71	43.29	55.15	44.84	54.16	45.83
México	44.38	55.61	44.68	55.32	45.07	54.92	44.53	55.46	44.73	55.26	46.05	53.94
Venezuela	77.04	22.96	72.73	27.27	69.92	30.08	66.41	33.59	57.62	42.37	55.09	44.90

SOURCE: UNIDO

T A B L E 7B

GDP Composition of Selected Countries (Percentages)

		1971	1979	1980	1981
Argentina	Goods		49.5	47.5	46.3
	Basic Services		13.7	14.4	14.9
	Other Services		36.8	38.1	38.9
Brasil	Goods	45.2	44.6	44.4	43.9
	Basic Services	7.8	9.3	9.5	10.1
	Other Services	47.7	-	-	45.8
Chile	Goods	48.3	44.7	44.5	43.9
	Basic Services	8.5	9.8	10.0	10.0
	Other Services	41.8	46.5	46.5	45.8
Colombia	Goods	52.9	48.9	48.4	48.3
	Basic Services	9.1	11.3	11.4	11.4
	Other Services	38.0	39.8	40.2	48.0
México	Goods	43.7	42.5	42.6	42.8
	Basic Services	6.0	8.6	9.0	9.2
	Other Services	50.3	48.9	48.4	48.0
Venezuela	Goods	44.4	38.3	37.7	36.7
	Basic Services	12.9	15.7	16.3	16.3
	Other Services	42.7	47.4	47.4	47.0

NOTE: The percentages per sector for each country may not always esqueal 100% given the method of calculation used ECLA.

TABLE 8

PARTICIPATION OF MANUFACTURES IN THE PRODUCTION OF GOODS

(Percentages)

	1960	1965	1970	1973	1976	1978	1979*	1980*	1981*
Argentina	54.81	57.70	59.06	63.75	60.97	58.42	53.25	52.01	47.76
Brasil	49.21	49.32	57.39	61.75	61.22	60.57	66.57	66.26	64.80
Chile	56.85	60.10	60.47	63.40	53.68	56.60	50.74	50.36	49.60
Colombia	32.22	35.12	36.10	38.81	39.75	40.27	37.90	37.62	36.52
México	42.27	46.21	49.78	51.27	51.55	51.26	59.10	58.22	57.84
Venezuela	14.59	17.73	19.67	22.56	31.03	32.73	37.06	39.56	40.43

SOURCE: UNIDO

* ECLA, "Estudios Económicos de América Latina", for each country, 1981.

TABLE 9

DISTRIBUTION OF LIGHT AND HEAVY INDUSTRIES IN THE SIX SELECTED COUNTRIES, 1960 - 1979

(Percentages)

	ARGENTINA		BRAZIL		CHILE		COLOMBIA		MEXICO		VENEZUELA	
	Light Industries	Heavy Industries	Light Industries	Heavy Industries	Light Industries	Heavy Industries	Light Industries	Heavy Industries	Light Industries	Heavy Industries	Light Industries	Heavy Industries
1960	54.88	45.12	58.89	41.11	36.60	63.40	58.16	41.84	52.94	47.06	36.37	63.63
1965	49.01	50.99	54.67	45.33	33.28	66.72	55.92	44.08	48.47	51.53	32.43	67.57
1970	44.88	55.12	45.53	54.47	34.81	65.19	56.41	43.59	44.94	55.06	33.21	66.79
1973	40.71	59.29	40.19	59.81	32.26	67.74	56.60	43.40	42.51	57.49	31.04	68.96
1976	44.04	55.96	34.47	65.53	32.95	67.05	55.47	44.53	40.01	59.99	35.38	64.62
1979	39.40	60.60	31.32	68.68	27.12	72.88	54.51	45.49	36.18	63.82	36.12*	63.88*

SOURCE: UNIDO

* 1978 Data.

TABLE 10

CORPORATIVE ESTRUCTURE OF THE MANUFACTURING PRODUCTION IN 1975

(PERCENTAGE SHARE IN THE MANUFACTURING ADDED VALUE)

		Argentina	Brazil	Chile	Colombia	México	Venezuela	Market Industrialized Economies*
311	Food products	19.230	13.100	14.916	14.902	12.217	12.454	10.88
313	Beverages	2.094	0.800	1.634	12.400	6.599	6.456	2.88
314	Tobacco	0.571	0.600	1.643	2.699	2.115	1.810	1.08
321	Textiles	9.391	7.600	5.179	12.400	6.703	5.955	6.07
322	Wearing apparel	2.417	1.600	1.000	2.899	2.218	3.246	4.45
323	Leather and fur products	0.651	0.500	0.647	0.801	0.463	0.511	0.61
324	Footwear	0.744	1.000	1.384	0.699	0.947	0.970	0.90
331	Wood and cork products	0.919	2.600	1.574	1.100	1.175	0.075	2.83
332	Furniture and fixtures excluding metal	0.585	2.200	0.358	0.499	0.907	1.431	2.54
341	Paper	2.515	1.800	3.661	3.201	2.939	3.172	3.77
342	Printing and publishing	2.322	2.600	2.035	2.699	2.545	2.540	4.53
351	Industrial Chemicals	4.632	2.500	2.937	5.601	5.093	1.926	4.29
352	Other chemicals	7.391	6.600	4.976	7.101	7.520	6.540	3.78
353	Petroleum refineries	2.562	3.700	13.200	4.800	6.407	22.470	1.45
354	Miscellaneous products of petroleum and coal	0.985	0.400	0.418	0.098	0.351	0.202	0.36
355	Rubber products	2.365	1.900	0.850	1.999	1.767	1.876	1.46
356	Plastic products	1.281	1.800	0.724	1.399	1.809	2.378	1.74
361	Pottery, china and earthenware	0.341	1.500	0.970	0.499	0.383	0.257	0.53
362	Glass	0.767	1.000	0.466	1.100	1.413	1.165	0.95
369	Other non-metallic mineral products	2.615	3.500	1.751	3.500	3.405	2.053	3.08
371	Iron and steel	5.329	6.000	5.938	2.801	6.277	5.841	4.72
372	Non-ferrous metals	1.372	1.400	18.586	0.401	1.921	0.878	1.75
381	Metal products, excluding machinery	6.540	4.000	3.493	4.501	6.061	4.114	7.35
382	Non-electrical machinery	5.733	10.300	2.820	2.302	4.731	1.401	8.55
383	Electrical machinery	4.037	6.900	4.373	2.400	5.648	2.376	7.33
384	Transport equipment	10.981	11.600	3.989	5.499	6.935	5.258	8.47
385	Profesional and scientific equipment, photogra-	0.646	0.500	0.095	0.401	0.593	0.135	1.18
390	Other manufactures. /phic and optical goods.	0.784	1.600	0.384	0.900	0.858	0.604	1.87

* Average of 23 industrialized economies.

SOURCE: UNIDO

TABLE 11

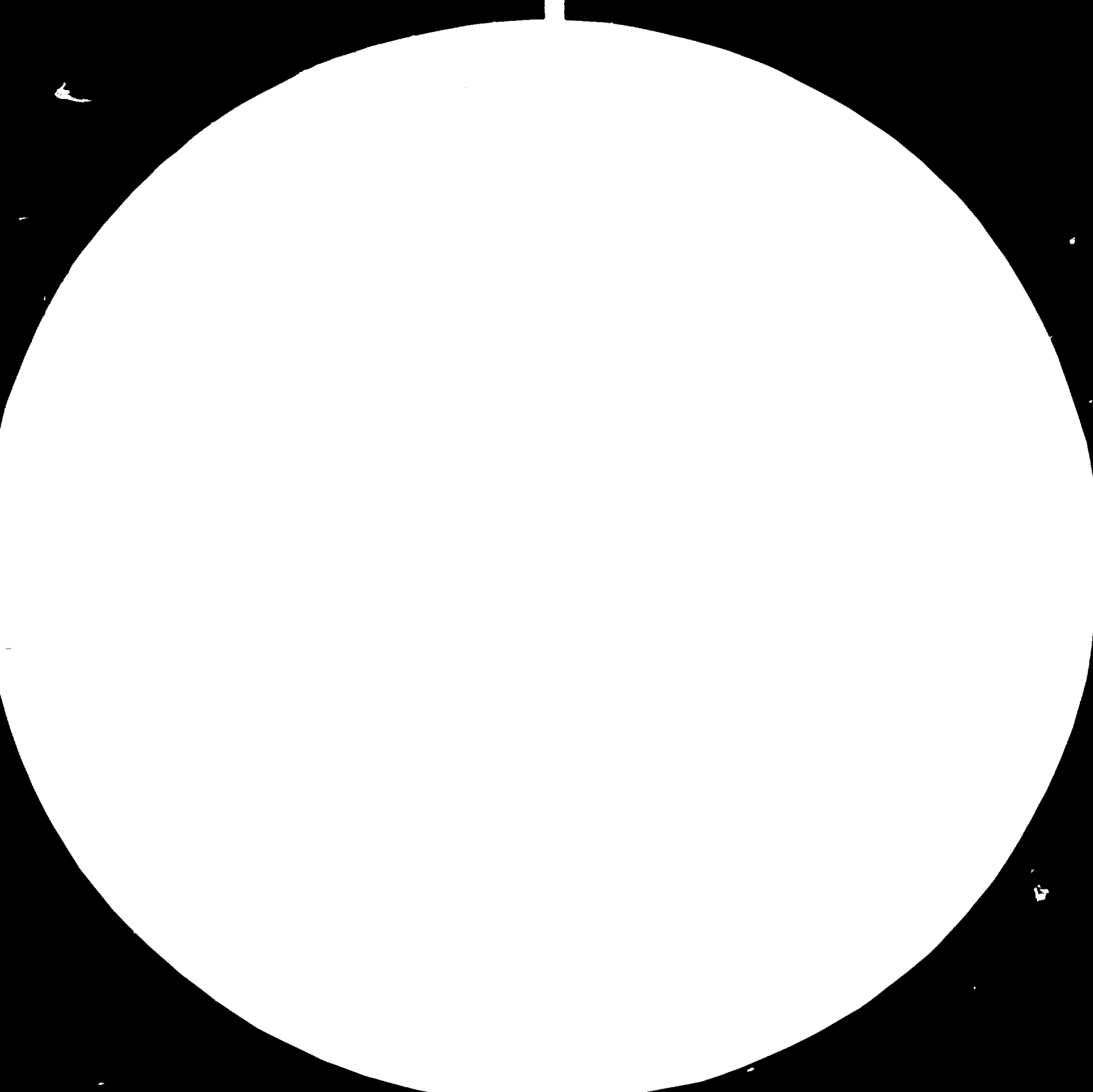
COMPOSITION OF THE MANUFACTURING OUTPUT IN THE SELECTED COUNTRIES

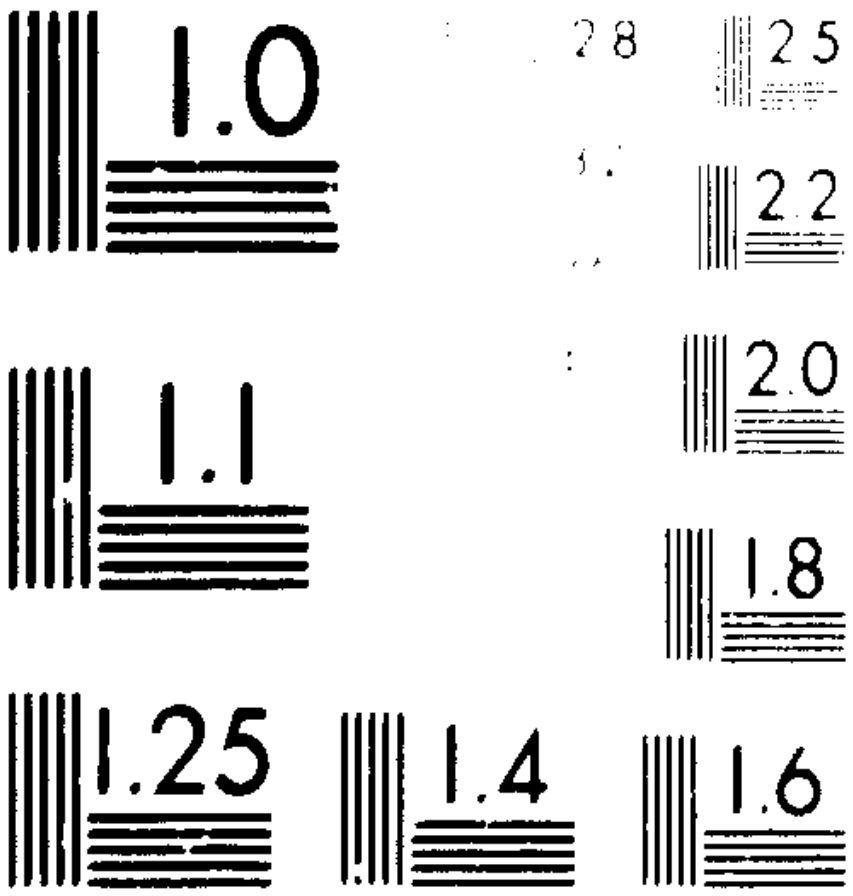
(Percentages)

	ARGENTINA			BRAZIL			COLOMBIA			CHILE			MEXICO			VENEZUELA		
	Mainly durable consumers goods	Mainly intermediate goods	Metal Mechanical	Mainly durable consumers goods	Mainly intermediate goods	Metal Mechanical	Mainly durable consumers goods	Mainly intermediate goods	Metal Mechanical	Mainly durable consumers goods	Mainly intermediate goods	Metal Mechanical	Mainly durable consumers goods	Mainly intermediate goods	Metal Mechanical	Mainly durable consumers goods	Mainly intermediate goods	Metal Mechanical
1960	51.15	24.79	24.06	53.28	31.07	15.65	54.83	34.45	10.72	33.73	41.32	25.35	46.84	37.17	15.99	32.97	61.45	5.58
1965	44.64	29.06	26.29	49.07	31.67	19.26	53.20	32.86	13.94	30.23	49.50	20.27	42.52	36.98	20.50	28.95	62.20	8.85
1970	41.79	31.04	27.17	40.52	33.90	25.58	52.65	34.41	12.94	29.95	48.96	21.09	39.57	39.60	20.83	29.44	60.83	9.73
1973	37.19	32.48	30.33	35.14	33.44	31.42	52.25	33.89	13.86	27.55	51.02	21.43	37.65	40.75	21.60	27.56	63.32	9.12
1976	39.91	32.00	28.09	29.73	35.78	34.49	52.24	32.79	14.97	29.95	56.34	13.71	35.51	41.55	22.94	30.52	58.52	10.96
1979	35.15	34.91	29.94	29.23	36.02	34.75	51.56	30.40	18.04	24.73	56.61	18.66	33.69	40.19	26.12	31.11*	57.92*	10.97*

* 1978 Data

SOURCE: UNIDO




1.0
2.8
2.5
2.2
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2.0
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1.25
1.4
1.6

TABLE 12

RELATIVE WEIGHT OF EACH OF THE SIX SELECTED COUNTRIES (1950-1978)
(Percentages)

	Population		G D P		Degree of Industrialization		Share in the regional industry	
	1950	1978	1950	1978	1950	1978	1950	1978
Argentina	11.5	7.9	23.7	12.8	26	33	30.9	16.1
Brasil	34.8	35.8	21.8	34.2	22	30	23.4	38.1
Chile	4.0	3.2	5.9	3.5	23	24	6.8	3.1
Colombia	7.0	8.5	7.0	6.5	13	18	4.4	4.3
México	17.5	19.6	19.8	23.3	19	26	18.7	22.9
Venezuela	3.4	4.0	5.3	6.9	12	17	3.2	4.5
Six Countries	78.0	79.0	83.5	87.2	21	27	87.4	89.0
Latin America (19 countries)	100.0	100.0	100.0	100.0	20	26	100.0	100.0

SOURCE: ECLA, "La Industrialización de América Latina y la Cooperación Internacional", based on tables 13, 15 and 16.

Imports-Final Demand Ratio

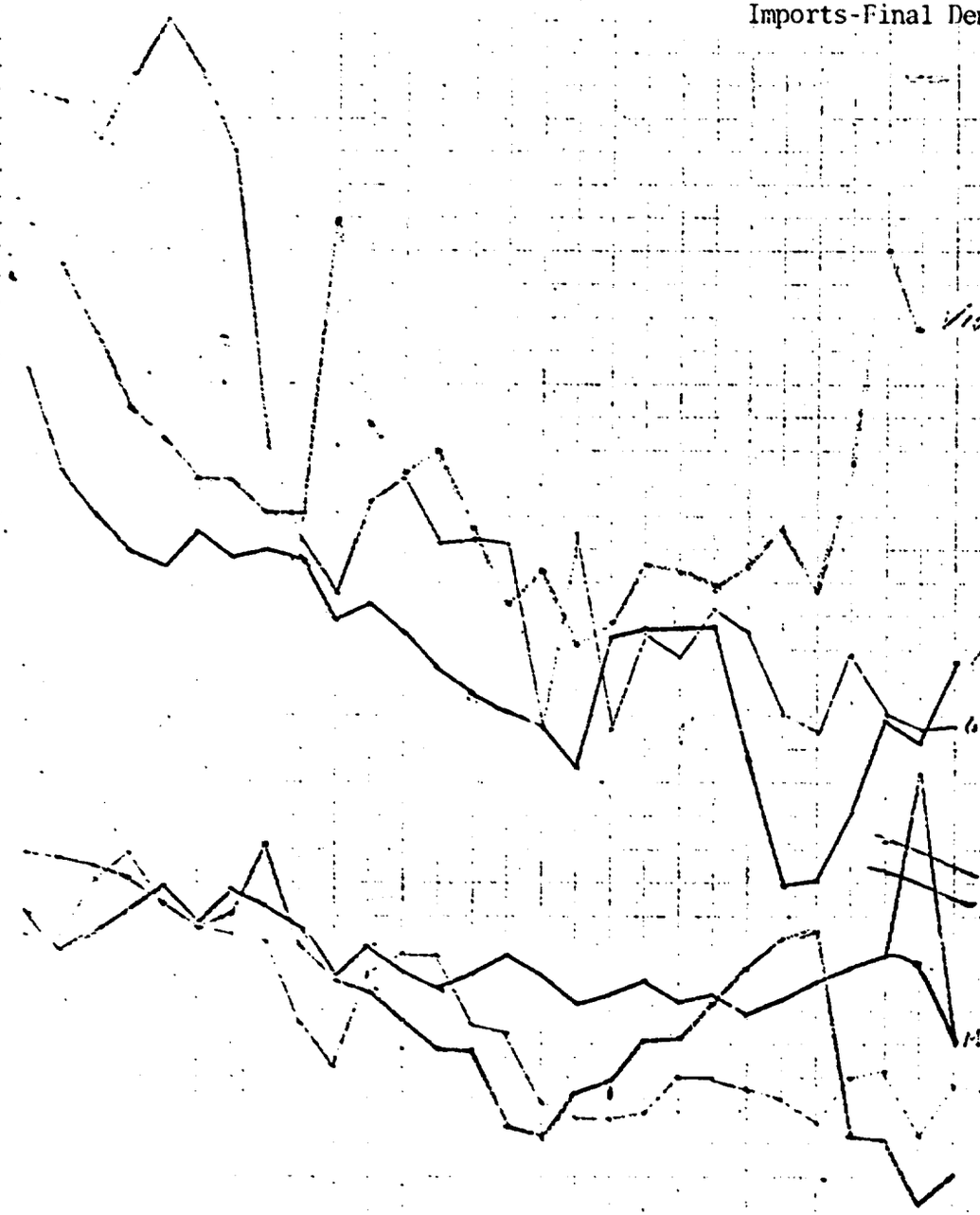

TABLE 13

Manufacturing Sector. Gross Output
SITC* (Branches 5 to 8)
(constant million dollars)

	Argentina 1/	Brazil 2/	Colombia 3/	Chile 4/	México 5/	Venezuela 6/
1950	9821.5	3159.8	486.3	901.7	4402.1	518.4
1951	10063.7	3335.4	502.4	1092.7	4631.6	596.0
1952	9359.1	3521.3	541.9	1188.2	4681.6	717.0
1953	9138.8	3800.1	606.4	1283.7	4681.6	841.2
1954	9931.6	4192.5	676.7	1325.9	5100.8	993.3
1955	10856.5	4615.9	728.0	1257.1	5659.8	1145.4
1956	10636.3	4915.3	789.5	1339.3	6242.1	1238.5
1957	10988.6	5214.8	823.2	1325.9	6661.4	1406.2
1958	11561.2	6071.9	867.1	1365.9	7080.6	1527.2
1959	10063.7	6887.6	952.1	1556.9	7732.8	1775.5
1960	10173.8	7610.5	1013.6	1519.2	8361.6	1775.5
1961	11208.8	8426.3	1073.6	1632.4	8780.9	1909.0
1962	10702.4	9056.2	1160.0	1783.5	9200.1	2089.1
1963	10195.9	9056.2	1220.1	1899.0	10108.5	2277.4
1964	11715.3	9510.5	1293.3	1992.2	11715.6	2560.9
1965	13763.3	9242.0	1366.6	2087.7	12717.1	2762.6
1966	13851.4	10326.3	1464.7	2241.0	13928.3	2830.9
1967	14071.6	10594.8	1513.0	2221.0	14836.7	2967.5
1968	15084.6	12412.2	1622.9	2221.0	16257.4	3104.1
1969	16692.1	13558.4	1745.9	2334.3	17678.2	3206.5
1970	17749.2	15066.1	1904.1	2296.5	19099.0	3411.4
1971	19532.9	16718.3	2056.4	2640.8	19658.0	3650.4
1972	20589.9	19134.6	2246.8	2709.6	21381.6	3821.1
1973	22021.3	22294.5	2456.3	2594.1	23291.5	4162.6
1974	23254.5	23957.0	2589.6	2503.1	24805.4	4299.2
1975	22571.8	24958.7	2616.0	1801.2	25853.5	4386.1
1976	21669.0	28201.1	2799.0	1890.1	26622.2	4957.2
1977	22571.8	28944.6	2929.4	2105.5	27390.8	
1978	20766.1		3165.2	2232.1	29976.1	
1979	23034.3			2412.0	32817.7	

Source: Yearbook of Industrial Statistics, U.N.O., Industrialización y Comercio Exterior (Alejandro Vázquez y Jaime Ros) Economía Mexicana No. 2. The Growth of World Industry U.N.O.

* Standard International Trade Classification.

1/ Base year 1973

2/ Base year 1966

3/ Base year 1966

4/ Base year 1967

5/ Base year 1973

6/ Base year 1968

TABLE 14

Manufacturing Sector. Domestic Demand
SITC* (Branches 5 to 8)

(constant million dollars)

	Argentina 1/	Brazil 2/	Colombia 3/	Chile 4/	México 5/	Venezuela 6/
1950	5899.2	3386.4	851.0	1260.4	4158.5	869.6
1951	6166.9	3588.7	876.1	1448.6	4970.4	974.7
1952	5488.5	3810.6	924.8	1524.8	5018.9	1125.4
1953	5295.3	4126.6	1089.1	1609.1	5070.8	1316.0
1954	5115.9	4557.3	1256.3	1653.7	5124.6	1468.1
1955	7140.0	5020.1	1323.7	1595.5	6210.7	1657.5
1956	6860.2	4976.2	1349.9	1668.7	6991.3	1790.6
1957	7909.8	5684.3	1196.8	1661.9	7487.2	2001.5
1958	10022.9	6543.0	1117.2	1699.8	7911.9	2169.0
1959	9882.0	7458.6	1284.8	1864.4	8495.8	2964.3
1960	10593.4	8157.2	1481.2	1837.4	9362.0	2649.7
1961	12073.7	8959.9	1537.3	1936.8	9703.3	2772.2
1962	11645.2	9761.6	1598.8	2068.0	10118.9	3069.2
1963	10341.2	9843.8	1677.3	2169.4	11131.6	3160.8
1964	11850.3	10046.8	1768.9	2252.3	13130.9	3463.7
1965	14281.9	9703.9	1700.5	2337.1	14147.8	3798.2
1966	14285.7	11109.3	1841.7	2456.2	15290.8	3757.7
1967	14539.7	11466.8	2890.0	1908.7	16387.1	3963.9
1968	15483.6	13691.5	2113.4	1998.7	18027.8	4274.9
1969	17279.2	14967.0	2248.3	2370.5	19370.7	4376.7
1970	18454.6	16845.7	2526.6	2445.0	20966.7	4635.0
1971	20533.0	18984.0	2681.5	2806.5	21317.2	5020.0
1972	21733.1	21982.1	2768.7	2945.9	23241.2	5344.8
1973	22921.7	25656.5	2962.6	3061.7	25203.9	5629.8
1974	24604.5	25185.2	3266.0	3066.9	27146.7	6157.1
1975	24565.1	26218.0	3269.2	2315.5	28785.8	7175.4
1976	23157.1	29093.1	3474.2	2406.0	32423.3	7703.5
1977	24603.4	30250.4	3661.3	2789.7	29802.8	
1978	22607.8					
1979						

Source: Gross output imports and exports tables.

* Standard International Trade Classification.

1/ Base year 1973

2/ Base year 1966

3/ Base year 1966

4/ Base year 1967

5/ Base year 1973

6/ Base year 1968

TABLE 15

Manufacturing Sector. Exports
SITC* (Branches 5 to 8)

(constant million dollars)

	Argentina 1/	Brazil 2/	Colombia 3/	Chile 4/	México 5/	Venezuela 6/
1950	4763.6	360.7	25.8	88.8	382.6	4.5
1951	4763.6	360.7	25.8	103.8	382.6	5.1
1952	4763.6	352.5	25.8	119.3	382.6	5.7
1953	4763.6	344.4	25.8	134.8	382.6	6.4
1954	4763.6	336.5	36.6	141.7	382.6	7.2
1955	4763.6	328.8	24.4	130.5	370.2	8.0
1956	4763.6	685.8	29.7	143.9	370.5	9.0
1957	4171.4	534.1	17.0	141.7	329.3	10.1
1958	2611.1	422.6	13.5	148.2	324.1	11.3
1959	1092.9	343.8	14.3	179.2	309.8	12.7
1960	922.9	420.6	14.9	173.1	285.9	14.2
1961	753.8	444.8	18.5	191.5	306.2	15.9
1962	619.1	254.8	22.9	216.0	314.2	17.9
1963	964.4	164.3	28.5	234.8	385.7	20.0
1964	956.9	157.5	35.3	249.9	326.2	22.5
1965	605.9	169.7	41.0	265.4	351.0	25.2
1966	606.7	124.8	42.5	290.1	408.5	20.9
1967	587.3	130.1	38.7	798.9	385.7	34.8
1968	751.3	98.3	51.4	738.2	472.5	35.8
1969	930.3	120.6	53.7	574.7	563.5	46.0
1970	917.8	160.7	48.1	485.6	599.1	46.7
1971	700.0	161.1	63.9	417.2	703.8	41.0
1972	593.1	229.8	101.8	239.6	863.4	54.7
1973	735.4	325.0	141.4	32.6	1187.3	66.3
1974	800.7	397.9	133.7	12.9	1170.9	110.9
1975	205.5	402.4	82.1	1.4	900.6	78.0
1976	46.4	267.7	83.8	.4	768.	108.5
1977	25.8	249.2	78.6	.3	622.8	82.2
1978	13.1	251.1				82.6
1979		219.6				

Source: Yearbook of International Trade Statistics U.N.O. Statistical Yearbook U.N.O. Financial Statistics I.M.F.

* Standard International Trade Classification.

1/ Base year 1973

2/ Base year 1966

3/ Base year 1966

4/ Base year 1967

5/ Base year 1973

6/ Base year 1968

TABLE 16

Manufacturing Sector. Imports
SITC* (Branches 5 to 8)

(constant million dollars)

	Argentina 1/	Brazil 2/	Colombia 3/	Chile 4/	México 5/	Venezuela 6/
1950	841.3	587.3	390.5	447.5	626.2	355.7
1951	866.8	614.0	399.5	451.7	671.4	383.8
1952	893.0	641.8	408.7	455.9	719.9	414.1
1953	920.1	670.9	508.5	460.2	771.8	446.8
1954	947.9	701.3	616.2	464.5	825.6	482.0
1955	1047.1	733.0	620.1	468.9	921.1	520.1
1956	987.5	746.7	590.1	473.3	1119.7	561.1
1957	1092.6	1003.6	390.6	477.7	1155.1	605.4
1958	1072.8	893.7	323.6	482.2	1155.4	653.1
1959	911.2	914.8	347.0	486.7	1073.8	1221.5
1960	1342.5	967.3	452.7	491.3	1286.3	888.4
1961	1618.7	978.4	482.2	495.9	1228.6	879.1
1962	1561.9	960.2	461.7	500.5	1233.0	998.0
1963	1109.7	952.4	480.7	505.2	1408.8	933.4
1964	1091.9	693.8	510.9	510.0	1741.5	925.3
1965	1124.5	631.6	374.9	514.8	1781.7	1060.8
1966	1041.0	907.8	538.7	505.3	1771.0	947.7
1967	1055.4	1002.1	415.7	486.6	1936.1	1031.2
1968	1150.3	1377.6	541.9	515.9	2242.9	1206.6
1969	1517.4	1529.2	556.1	610.9	2256.0	1216.2
1970	1623.2	1940.3	670.6	634.1	2466.8	1270.3
1971	1700.1	2426.8	689.0	582.9	2363.3	1410.6
1972	1736.3	3077.3	623.7	475.9	2723.0	1578.4
1973	1635.8	3687.0	647.7	500.2	3009.7	1533.5
1974	2150.7	1626.1	810.1	576.7	3512.2	1968.8
1975	2198.8	1661.7	735.3	515.7	3832.9	2867.3
1976	1534.5	1159.7	764.0	516.5	3569.9	2854.8
1977	2057.4	1555.0	810.5	684.5	3034.8	4350.9
1978	1854.0	1401.2				4423.0
1979						

Source: Yearbook of International Trade Statistics U.N.O. Statistical Yearbook U.N.O. Financial Statistics I.M.F.

* Standard International Trade Classification.

1/ Base year 1973

2/ Base year 1966

3/ Base year 1966

4/ Base year 1967

5/ Base year 1973

6/ Base year 1968

TABLE 17

Manufacturing Sector. Import Coefficient of Domestic Demand
SITC* (Branches 5 to 8)

	Argentina	Brazil	Colombia	Chile	México	Venezuela
1950	.143	.173	.459	.355	.151	.409
1951	.141	.171	.456	.317	.135	.394
1952	.163	.168	.442	.299	.143	.368
1953	.174	.163	.467	.286	.152	.340
1954	.154	.154	.490	.281	.161	.328
1955	.147	.146	.468	.294	.148	.314
1956	.144	.150	.437	.284	.160	.313
1957	.138	.177	.326	.287	.154	.302
1958	.107	.137	.290	.284	.146	.301
1959	.092	.123	.270	.261	.126	.412
1960	.127	.119	.306	.267	.137	.335
1961	.134	.109	.314	.256	.127	.317
1962	.134	.098	.289	.242	.122	.325
1963	.107	.097	.290	.235	.127	.295
1964	.092	.069	.289	.226	.133	.267
1965	.079	.065	.220	.220	.126	.279
1966	.073	.082	.293	.206	.116	.252
1967	.073	.087	.220	.255	.118	.260
1968	.074	.101	.256	.258	.124	.282
1969	.088	.102	.247	.258	.116	.278
1970	.088	.115	.265	.259	.118	.274
1971	.083	.128	.257	.208	.111	.281
1972	.080	.140	.225	.162	.117	.295
1973	.071	.144	.219	.163	.123	.272
1974	.087	.065	.248	.188	.129	.320
1975	.090	.063	.225	.223	.133	.400
1976	.066	.040	.220	.215	~~.203~~ .101	.371
1977	.084	.051	.221	.245	.102	
1978	.082					
1979						

Source: Domestic demand and imports tables.

* Standard International Trade Classification.